



Connected 2050: Regional Transportation Plan & Sustainable Communities Strategy

Draft Programmatic Environmental Impact Report
SCH#2020120233

prepared by

Santa Barbara County Association of Governments

260 North San Antonio Road, Suite B

Santa Barbara, California 93110

Contact: Michael Becker, Director of Planning

prepared with the assistance of

Rincon Consultants, Inc.

209 East Victoria Street

Santa Barbara, California 93101

May 2021



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Environmental Scientists | Planners | Engineers

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Executive Summary

This document is a Programmatic Environmental Impact Report (EIR) that identifies and describes potential environmental impacts associated with the Connected 2050: Santa Barbara County Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) proposed by the Santa Barbara County Association of Governments (SBCAG). The Connected 2050 RTP/SCS (Connected 2050) is an update of the 2040 RTP/SCS adopted in 2013. The 2040 RTP/SCS was updated again and then adopted in August 2017 through certification of a supplemental EIR.

Section 21000 of the California Public Resources Code, commonly referred to as the California Environmental Quality Act (CEQA), requires the evaluation of environmental impacts associated with all planning programs or development projects proposed. As such, this EIR is an informational document for use by SBCAG, other agencies, and the general public in their consideration and evaluation of the environmental consequences of implementing Connected 2050.

Project Synopsis

Project Lead Agency

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Project Description

The original RTP was adopted by SBCAG in 1975 and the latest RTP/SCS was adopted in 2013 and updated in 2017. Connected 2050 reflects changes in legislative requirements, local land use policies, and resource constraints. Connected 2050 covers the entire area of Santa Barbara County and includes the cities of Santa Barbara, Carpinteria, Goleta, Lompoc, Buellton, Santa Maria, Solvang, and Guadalupe as well as the unincorporated communities of the County. Capital improvement projects identified in Connected 2050 are located on state highways, county roads and locally owned streets, as well as on transit district property and public utility lands. Some of the improvement projects are intended as maintenance and rehabilitation projects aimed at improving the existing infrastructure and transportation networks (bicycle, pedestrian, bus line, etc.).

The RTP/SCS plans how the Santa Barbara County Region will meet its transportation needs for the 30-year period from 2021 to 2050, considering existing and projected future land use patterns as well as forecast population and job growth. The RTP/SCS plans for and programs the approximately \$11.3 billion in revenues expected to be available to the region from all transportation funding sources over the course of the planning period. It identifies and prioritizes expenditures of this anticipated funding for transportation projects of all transportation modes: highways, streets and roads, transit, rail, bicycle and pedestrian, as well as transportation demand management measures and intelligent transportation systems.

The primary objective of updating Connected 2050 is to comply with applicable regulatory requirements, including changes in legislative requirements that have occurred since the current

2040 RTP/SCS was adopted on August 15, 2013. Connected 2050 is focused on continued implementation of the 2040 RTP/SCS, with minor updates to ensure consistency with federal, state and local planning requirements. Connected 2050 transportation improvements project list will update the 2040 RTP/SCS project list by removing projects that have been completed since 2013, modifying some projects that continue to be on the list based on new information, and adding approximately new minor projects to the list. None of the modified or new projects in Connected 2050 would be substantially different in terms of geographical location, type of project, or size of project to those on the 2040 RTP/SCS list.

In addition, the land use scenario envisioned by Connected 2050 is consistent to that contained in the 2040 RTP/SCS, concentrating forecasted growth in population and employment in the region in urban areas and corridors of the County while preserving the distinct identity of existing cities and towns.

The RTP/SCS is based on a preferred land use and transportation scenario which lays out a pattern of future growth and transportation system investment for the region emphasizing a transit-oriented development and an urban infill approach to land use and housing, located near existing high quality transportation corridors. Accordingly, population and employment growth is allocated principally within existing urban areas near public transit. Allocation of future growth directly addresses jobs-housing balance issues by emphasizing job growth and economic opportunity in the North County and housing growth in the South County.

The preferred scenario consists of three core, inter-related components:

1. A land use plan, including residential densities and building intensities sufficient to accommodate projected population, household and employment growth;
2. A multi-modal transportation network to serve the region's transportation needs; and
3. A "regional greenprint" cataloguing open space, habitat, and farmland as constraints to urban development.
4. The plan identifies transportation system needs consistent with the preferred scenario and includes comprehensive lists of programmed and planned transportation investments that are intended to meet performance goals for mobility, safety, congestion relief, system preservation and environmental protection. In addition to its other components, the preferred scenario also includes an enhanced transit strategy that creates a framework for future transit service expansion at such time as new revenue sources become available. Recognizing the uncertain nature of future new revenue sources, it takes a targeted, balanced and flexible approach to expanding transit service as needed in the future. The enhanced transit strategy commits to transit service expansion as new revenue sources become available, (1) identifying when transit enhancements are actually needed through quantitative triggers, and (2) protecting existing funding for competing local demands, such as street and road maintenance. The enhanced transit strategy is a strategy for the future. It does not change the list of fiscally constrained, programmed and planned transportation projects.

Alternatives

As required by Section 15126.6 of the *CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the proposed project that would attain most of its basic objectives (stated in Section 2.2 of this EIR) but would avoid or substantially lessen any of its significant effects.

As discussed in Chapter 3 of Connected 2050, the proposed project, Scenario 1 (Transit-Oriented Development [TOD]-Infill Development and Enhanced Transit Strategy), consists of a transit-oriented development (TOD) and an infill land use pattern plus an enhanced transit strategy. The alternatives analysis includes certain remaining scenarios as described in Chapter 3 as alternatives to the proposed 2050 RTP/SCS. The preferred scenario, or Connected 2050 as proposed, is summarized in Section 2.0, *Project Description*, of this EIR and the environmental effects of this scenario are addressed in Sections 4.1 through 4.15.

This alternatives analysis herein includes the following alternatives to Connected 2050:

- **Alternative 1: No Project Alternative (RTP/SCS Scenario 1).** Only currently programmed and funded transportation system improvements (the current RTP/SCS's programmed projects list) would be implemented, with no changes to existing allowable land uses. Assumes current sub-regional growth trends continue consistent with the 2019 Regional Growth Forecast. This alternative also assumes the land use pattern described in the 2017 RTP/SCS.
- **Alternative 2: North County-weighted Jobs, South County-weighted Housing Alternative (RTP/SCS Scenario 4).** This scenario begins with existing, adopted land uses, but applies weights to make specific growth distribution assumptions emphasizing job growth in the North County and housing growth in the South County, within existing available land use capacity. It does not continue past trends and does not focus on infill development along transit corridors. Infill occurs only as supported by local plans.
- **Alternative 3: Alternative Transportation Emphasis (RTP/SCS Scenario 5).** This alternative includes implementation of all programmed and planned transportation projects, as well as additional illustrative alternative transportation and transit projects. Illustrative projects are those included in the RTP, but that are conceptual and not tied to a specific funding source. Examples of such illustrative projects include expansion of the Metropolitan Transit District downtown transit center in the City of Santa Barbara, Bicycle Master Plan improvements in the City of Solvang, and construction of numerous active/multi-use paths (pedestrian and bicycle) throughout the SBCAG region. Unlike Connected 2050, which emphasizes infill and transit-oriented development, this alternative assumes current sub-regional growth trends continue consistent with the 2019 Regional Growth Forecast, and the land use scenario assumes existing adopted General Plan land uses. This alternative also assumes that by 2035, all local transit operators will double transit frequencies during peak hours and offer free fares; auto operating costs will be doubled to increase mode share to alternative transportation (bike, walk, and transit).

The proposed project is the environmentally superior project, but in comparison of just the alternatives, the environmentally superior alternative is the No Project Alternative. Therefore, the EIR must identify an environmentally superior alternative among the other alternatives. Alternative 2 could be considered environmentally superior to Connected 2050 primarily because environmental issue areas such as aesthetics, air quality, cultural resources (historic), and noise may see a slight decrease in potential environmental effects due to lower amounts of development in infill areas that may be located near sensitive receptors and/or potential historical resources. Although Alternative 2 would include regionally identified transportation projects, it would not include an SCS that would further concentrate development in urban areas. As such, similar to Alternatives 1 and 3, Alternative 2 would not meet the objectives of the project, including: complying with applicable regulatory requirements; serving regional goals, objectives, policies and plans; and responding to community and regional transportation needs.

Based on this analysis and the analyses conducted for this EIR, no feasible alternatives have been identified that would reduce the significant effects of the project and meet the basic project objectives compared to the proposed project; therefore, the proposed project is environmentally superior.

Areas of Known Controversy

Areas of controversy associated with Connected 2050 are made known through comments received during the Notice of Preparation (NOP) process, as well as input solicited during public scoping meetings and an understanding of the community issues in the region. The EIR scoping process and comments received in response to the NOP did not identify areas of known controversy for Connected 2050. Public comments received during the NOP scoping period are summarized in Section 1.0, *Introduction*.

Issues to be Resolved

Section 15123(b)(3) of the *CEQA Guidelines* requires that an EIR contain a discussion of issues to be resolved including the choice among the project and alternatives, and whether or how to mitigate significant effects. Issues to be resolved include:

- How to address impacts from the SCS land use scenario that must be mitigated by the local land use authority, given that SBCAG does not have jurisdiction over land use regulations.
- How best to require mitigation measures that can be enacted by implementing agencies in a manner to ensure CEQA streamlining for qualifying projects, per SB 375 and other laws, can occur.
- Whether to approve Connected 2050 or an alternative.

Summary of Impacts and Mitigation Measures

Table ES-1 summarizes the environmental impacts, proposed mitigation measures, and level of significance after application of mitigation, as applicable, of the 2050 RTP/SCS for issue areas evaluated in the EIR. Impacts are categorized as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the *CEQA Guidelines*.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under §15091 of the *CEQA Guidelines*.
- **Less than Significant.** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact:** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measure (s)	Residual Impact
Aesthetics		
<p>Impact AES-1. Connected 2050 has the potential to adversely impact scenic resources and obstruct scenic areas from public reviewing areas through site-specific visual obstructions from future land use and transportation projects. Mitigation measures AES-1(a) through AES-1(e) would reduce impacts to the extent feasible, however, impacts would remain significant and unavoidable.</p>	<p>AES-1(a) Tree Protection and Replacement New roadways, extensions and widenings of existing roadways, bridge replacement and enhancements, trails and facility improvement projects shall avoid the removal of existing mature trees to the extent possible consistent with adopted local City and County policies as applicable. The implementing agency of a particular Connected 2050 project shall replace any trees lost at a minimum 2:1 basis and incorporate them into the landscaping design for the roadway when feasible, or as required by local or County requirements. The implementing agency also shall ensure the continued vitality of replaced trees through periodic maintenance (see mitigation measures prescribed in Section 4.3 Biological Resources, Impact B-1).</p> <p>AES-1(b) Design Measures for Visual Compatibility The project sponsor shall require measures that minimize contrasts in scale and massing between the project and surrounding natural forms and developments. Strategies to achieve this include:</p> <ul style="list-style-type: none"> ▪ Siting or designing projects to minimize their intrusion into important viewsheds; ▪ Avoiding large cuts and fills when the visual environment (natural or urban) would be substantially disrupted; ▪ Ensuring that re-contouring provides a smooth and gradual transition between modified landforms and existing grade; ▪ Developing transportation systems to be compatible with the surrounding environments (e.g., colors and materials of construction material; scale of improvements); ▪ Designing and installing landscaping to add natural elements and visual interest to soften hard edges, as well as to restore natural features along corridors where possible after widening, interchange modifications, re-alignment, or construction of ancillary facilities. The implementing agency shall provide a performance security equal to the value of the landscaping/irrigation installation to ensure compliance with landscaping plans; and ▪ Designing new structures to be compatible in scale, mass, character and architecture with existing structures. 	<p>Although identified mitigation would help reduce impacts related to state-designated scenic highway corridors and scenic resources, individual transportation infrastructure projects as well as land use development included in Connected 2050 could still result in obstructions to panoramic views and views of important landscape features or landforms (mountains, wetlands, rivers, rangelands, or important man-made structures) as seen from public viewing areas. Given the extent of planned land use development and the potential for site-specific visual obstructions from future land use and transportation projects, impacts related to the obstruction of scenic areas from public viewing areas and impacts to state-designated scenic highway corridors and scenic resources would be significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<p>AES-1(c) Discouragement of Architectural Features that Block Scenic Views Project sponsors shall design projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Setbacks and acoustical design of adjacent structures shall be preferentially used as mitigation for potential noise impacts arising from increased traffic volumes associated with adjacent land development. The use of sound walls, or any other architectural features that could block views from the scenic highways or other view corridors, shall be discouraged to the extent possible. Where use of sound walls is found to be necessary, walls shall incorporate offsets, accents and landscaping to prevent monotony. In addition, sound walls shall be complementary in color and texture to surrounding natural features.</p> <p>AES-1(d) Recontouring for Adjacent Landforms Where a particular Connected 2050 project affects adjacent landforms, the local jurisdiction in which the project is located shall ensure that recontouring provides a smooth and gradual transition between modified landforms and existing grade to the extent feasible. This requirement can be accomplished through the placement of conditions on the project by the implementing agency during the project specific environmental review.</p> <p>AES-1(e) Landscaping for Landform Variation The local jurisdiction in which a particular project is located shall ensure that associated landscape materials and design enhance landform variation, provide erosion control and blend with the natural setting. This requirement can be accomplished through the placement of conditions on the project by the local jurisdiction during individual environmental review. To ensure compliance with approved landscape plans, the implementing agency shall provide a performance security equal to the value of the landscaping/irrigation installation.</p>	

Impact	Mitigation Measure (s)	Residual Impact
<p>Impact AES-2. Development of proposed transportation improvement projects and land use patterns envisioned under Connected 2050 would contribute to the alteration of the County’s aesthetic character. This would be a significant and unavoidable impact. In the urbanized areas of the county, the project may conflict with applicable zoning and other regulations governing scenic quality. Impacts would remain significant and unavoidable.</p>	<p>Implement Mitigation Measures AES-1(a)-(e), discussed above for Impact AES-1.</p>	<p>Implementation of the above mitigation measures would reduce project-specific impacts to the extent feasible. Nevertheless, the incremental alteration of the area’s current rural or semi-rural character to a more suburban environment is a significant and unavoidable impact. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.</p>
<p>Impact AES-3. Development of proposed transportation improvement projects and land use patterns envisioned under Connected 2050 would result in new sources of light or glare from new light poles, security lighting, landscaping and structure lighting, and lights from vehicles. Land use projects envisioned in Connected 2050 would introduce new or intensified sources of lighting which would adversely affect views in the area. Impacts would be significant and unavoidable.</p>	<p>AES-3(a) Roadway Lighting Roadway lighting shall be minimized to the extent possible, consistent with safety and security objectives, and shall not exceed the minimum height requirements of the local jurisdiction in which the project is proposed. This may be accomplished through the use of back shields, hoods, low intensity lighting, and using as few lights as necessary to achieve the goals of the project.</p> <p>AES-3(b) Lighting Design Measures As part of planning, design, and engineering for projects, project sponsors shall ensure that projects proposed near light-sensitive uses avoid substantial spillover lighting. Potential design measures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▪ Lighting shall consist of cutoff-type fixtures that cast low-angle illumination to minimize incidental spillover of light into adjacent properties and undeveloped open space. Fixtures that project light upward or horizontally shall not be used. ▪ Lighting shall be directed away from habitat and open space areas adjacent to the project site. ▪ Light mountings shall be downcast, and the height of the poles minimized to reduce potential for backscatter into the nighttime sky and incidental spillover of light onto adjacent private properties and undeveloped open space. Light poles will be 20 feet high or shorter. Luminary mountings shall have non-glare finishes. ▪ Exterior lighting features shall be directed downward and shielded in order to confine light to the boundaries of the subject project. Where more intense 	<p>In the absence of regulations specifically addressing light and glare impacts, the aforementioned mitigation measures would limit the use of reflective building materials and the potential spillage of light both upward and onto adjacent properties from exterior lighting fixtures. As a result, the implementation of the identified mitigation measures would reduce impacts related to light and glare to a less than significant level. It is the responsibility of the lead agency implementing specific Connected 2050 projects to conduct project-level environmental review consistent with CEQA and where applicable, incorporate mitigation measures provided herein and developed specifically for the project to reduce impacts.” Therefore, it cannot be guaranteed that all future project-level impacts related to light and glare can be mitigated. Impacts would remain significant and unavoidable.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<p>lighting is necessary for safety purposes, the design shall include landscaping to block light from sensitive land uses, such as residences.</p> <p>AES-3(c) Glare Reduction Measures</p> <p>Implementing agencies shall minimize and control glare from transportation and infill development projects near glare-sensitive uses through the adoption of project design features such as:</p> <ul style="list-style-type: none"> ▪ Planting trees along transportation corridors to reduce glare from the sun; ▪ Creating tree wells in existing sidewalks; ▪ Adding trees in new curb extensions and traffic circles; ▪ Adding trees to public parks and greenways; ▪ Landscaping off-street parking areas, loading areas, and service areas; ▪ Limiting the use of reflective materials, such as metal; ▪ Using non-reflective material, such as paint, vegetative screening, matte finish coatings, and masonry; ▪ Screening parking areas by using vegetation or trees; ▪ Using low-reflective glass; and ▪ Complying with applicable general plan policies, municipal code regulations, city or local controls related to glare ▪ Tree species planted to comply with this measure shall provide substantial shade cover when mature. Utilities shall be installed underground along these routes wherever feasible to allow trees to grow and provide shade without need for severe pruning. 	

Impact	Mitigation Measure (s)	Residual Impact
<p>Cumulative – Aesthetics. As planned cumulative development occurs over time the overall visual environment will change. The combination of forecasted development in the SBCAG region and planned development in neighboring counties will result in a different visual environment than currently exists. The cumulative impacts associated with night sky lighting and changes in the visual environment are considered significant and the contribution of Connected 2050 to these impacts is cumulatively considerable.</p>	<p>Implement Mitigation Measures AES-1(a)-(e) and AES-3(a)-(b).</p>	<p>With implementation of Mitigation Measures AES-1(a)-(e) and AES-3(a)-(b), Connected 2050's contribution to cumulative impacts would remain cumulatively considerable and cumulative impacts would remain significant and unavoidable.</p>
<p>Air Quality</p>		
<p>Impact AQ-1. Connected 2050 would not conflict or obstruct with the goals of SBCAPCD's 2019 Ozone Plan. Connected 2050 would reduce emissions of ozone precursors below 2020 baseline levels. impacts would be less than significant.</p>	<p>None required.</p>	
<p>Impact AQ-2. Construction activities associated with the future transportation improvement projects and implementation of the land use scenario envisioned by Connected 2050 would create fugitive dust and ozone precursor emissions and could violate air quality standards, contribute substantially to existing or projected air quality violations, or result in a cumulatively considerable net increases in PM₁₀ or ozone precursor emissions. This impact would be significant and unavoidable.</p>	<p>AQ-2(a) Application of SBCAPCD Feasible Mitigation Measures For all projects, the implementing agency shall incorporate the most recent SBCAPCD feasible mitigation measures and/or technologies for reducing inhalable particles based on analysis of individual sites and project circumstances. Current SBCAPCD feasible mitigation measures include the following. Additional and/or modified measures may be adopted by SBCAPCD prior to implementation of individual projects under Connected 2050. The most current list of feasible mitigation measures at the time of project implementation shall be used.</p> <ul style="list-style-type: none"> ▪ During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water 	<p>Implementation of Measures AQ-2(a) through AQ-2(c) would be required to reduce these emissions related to short-term construction emissions from individual projects and thus reduce the severity of impacts. However, implementation of these measures would not guarantee that the impact would be reduced to less than significant. Thus, because it cannot be determined if Measures AQ-2(a) through AQ-2(c) would fully mitigate the significant impact, this impact would remain significant and unavoidable.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<p>should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption.</p> <ul style="list-style-type: none"> ▪ Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less. ▪ If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin. ▪ Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads. ▪ After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur. ▪ The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to land use clearance for map recordation and land use clearance for finish grading of the structure. ▪ Prior to land use clearance, the applicant shall include, as a note on a separate informational sheet to be recorded with map, these dust control requirements. All requirements shall be shown on grading and building plans. <p>AQ-2(b) Diesel Equipment Emissions Standards The implementing agency shall ensure, to the maximum extent feasible, that diesel construction equipment meeting CARB Tier 4 emission standards for off-road heavy-duty diesel engines is used. If use of Tier 4 equipment is not feasible, diesel construction equipment meeting Tier 3 (or if infeasible, Tier 2) emission standards shall be used. These measures shall be noted on all construction plans and the implementing agency shall perform periodic site inspections.</p> <p>AQ-2(c) Electric Construction Equipment The implementing agency shall ensure that to the extent feasible, construction equipment utilizes electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.</p>	

Impact	Mitigation Measure (s)	Residual Impact
<p>Impact AQ-3. Implementation of Connected 2050 would result in an overall reduction of on-road vehicle emissions when compared to baseline conditions and the 2050 No Project scenario. Impacts would be less than significant.</p>	<p>None required.</p>	
<p>Impact AQ-4. Construction of projects under Connected 2050 may facilitate increased exposure to hazardous air pollutants and odorous compounds. Implementation of Connected 2050 would not result in significant regional increases in toxic air emissions or odorous compounds when compared to the existing conditions and the future “no project” scenario. However, localized increases may occur as a result of infill and transit-oriented development facilitated by Connected 2050’s land use scenario. Impacts would be significant and unavoidable.</p>	<p>AQ-4 Health Risk Reduction Measures</p> <p>Transportation implementing agencies shall implement the following measures:</p> <ul style="list-style-type: none"> ▪ During project-specific design and CEQA review, the potential localized particulate (PM₁₀ and PM_{2.5}) impacts and their health risks shall be evaluated for the project using procedures and guidelines consistent with U.S. EPA 2015’s <i>Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas</i>. If required based on the project-level hotspot analysis, project-specific mitigation shall be added to the project design concept or scope to ensure that local particulate (PM₁₀ and PM_{2.5}) emissions would not reach a concentration at any location that would cause estimated cancer risk to exceed the 2015 Office of Environmental Health Hazard Assessment (OEHHA) threshold of 10 in one million. Per the U.S. EPA guidance (2015), potential mitigation measures to be considered may include but shall not be limited to: providing a retrofit program for older higher emitting vehicles, anti-idling requirements or policies, controlling fugitive dust, routing traffic away from populated zones and replacing older buses with cleaner buses. These measures can and should be implemented to reduce localized particulate impacts as needed. ▪ Retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with CARB and OEHHA requirements to determine the exposure of nearby residents to TAC concentrations. ▪ If impacts result in increased risks to sensitive receptors above significance thresholds, Plant trees and/or vegetation suited to trapping TACs and/or sound walls between sensitive receptors and the pollution source. This measure would trap TACs emitted from pollution sources such as highways, reducing the amount of TACs to which residents and other sensitive populations would be exposed. <p>In addition, consistent with the general guidance contained in CARB’s Air Quality and Land Use Handbook (April 2005) and Technical Advisory on Strategies to Reduce Air pollution Exposure Near High-Volume Roadways (April 2017), for land</p>	<p>Although implementation of the above mitigation would reduce health risks, individual receptors may still be exposed to substantial hazardous air pollutant concentrations that would have significant health risk effects. Therefore, this impact remains significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<p>use projects, appropriate and feasible measures shall be incorporated into project building design for residential, school and other sensitive uses located within 500 feet, or other distance as determined by the lead agency, of freeways, heavily travelled arterials, railways and other sources of diesel particulate matter, including roadways experiencing significant vehicle delays (CARB 2005). The appropriate measures shall include one or more of the following methods, as determined by a qualified professional, as applicable. The implementing agency shall incorporate health risk reduction measures based on analysis of individual sites and project circumstances. These measures may include:</p> <ul style="list-style-type: none"> ▪ Avoid siting new sensitive land uses within 500 feet of a freeway or railway. ▪ Require development projects for new sensitive land uses to be designed to minimize exposure to roadway-related pollutants to the maximum extent feasible through inclusion of design components including air filtration and physical barriers. ▪ Do not locate sensitive receptors near the entry and exit points of a distribution center. ▪ Locate structures and outdoor living areas for sensitive uses as far as possible from the source of emissions. As feasible, locate doors, outdoor living areas and air intake vents primarily on the side of the building away from the freeway or other pollution source. As feasible, incorporate dense, tiered vegetation that regains foliage year-round and has a long life span between the pollution source and the project. ▪ Maintain a 50-foot buffer from a typical gas dispensing facility (under 3.6 million gallons of gas per year). ▪ Install, operate and maintain in good working order a central heating and ventilation (HV) system or other air take system in the building, or in each individual residential unit, that meets the efficiency standard of the MERV 13. The HV system should include the following features: Installation of a high efficiency filter and/or carbon filter-to-filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85% supply filters should be used. Ongoing maintenance should occur. ▪ Retain a qualified HV consultant or Home Energy Rating Systems (HERS) rater during the design phase of the project to locate the HV system based on exposure modeling from the mobile and/or stationary pollutant sources. ▪ Maintain positive pressure within the building. ▪ Achieve a performance standard of at least one air exchange per hour of fresh outside filtered air. 	

Impact	Mitigation Measure (s)	Residual Impact
<p>Impact AQ-5. Re-entrained dust has the potential to increase airborne PM10 and PM2.5 levels in the SBCAG region. The increase in growth expected through 2050 the horizon year for Connected 2050 and would result in additional vehicle miles traveled compared to baseline conditions, which would add to the particulate emissions levels in the area. However, total re-entrained dust levels would be lower with implementation of Connected 2050 than 2020 existing conditions. Implementation of SBCAPCD control measures would further reduce such emissions. Therefore, impacts would be less than significant with mitigation incorporated.</p>	<p>AQ-5 Project-Level PM₁₀ Emissions Reduction</p> <p>Implementing agencies shall evaluate PM₁₀ emissions as part of project-specific CEQA review and discretionary approval decisions for land use projects within the SBCAG region. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce PM₁₀ emissions below SBCAPCD standards to the extent feasible. PM₁₀ emissions reduction measures may include:</p> <ul style="list-style-type: none"> ▪ Achieve a performance standard of at least 4 air exchanges per hour of recirculation. Achieve a performance standard of 0.25 air exchanges per hour of in unfiltered infiltration if the building is not positively pressurized. ▪ Require project owners to provide a disclosure statement to occupants and buyers summarizing technical studies that reflect health concerns about exposure to highway exhaust emissions. ▪ Implement feasible attenuation measures needed to reduce potential air quality impacts to sensitive receptors such as air filtration systems. <p>Require new residential and commercial construction to apply dust suppressants, including water and non-toxic surfactants, and to comply with the maximum feasible dust and emissions control measures recommended by SBCAPCD, to reduce particulate matter emissions from construction areas.</p> <p>Require new construction projects to use the newest available (Tier 3 or better) construction equipment, which generate lower emissions of diesel particulate matter when operating.</p>	<p>Implementation of the above Mitigation Measure AQ-2(a) and AQ-5 would reduce exposure to sensitive receptors to substantial pollutant concentrations due to construction of Connected 2050. Impacts would be less than significant with mitigation incorporated.</p>

Impact	Mitigation Measure (s)	Residual Impact
<p>Cumulative – Air Quality. Although regional ozone precursors would be reduced with Connected 2050 compared to existing 2020 conditions, regional PM₁₀ emissions would increase beyond existing conditions leading to a significant cumulative impact. Therefore, Connected 2050 would have a cumulatively considerable contribution to regional air quality impacts.</p>	<p>Implement Mitigation Measures AQ-2(a)-(c), AQ-4, and AQ-5.</p>	<p>Connected 2050’s contribution would remain cumulatively considerable after mitigation because it cannot be guaranteed that all future project-level impacts can be mitigated to a less than significant level.</p>
<p>Biological Resources</p>		
<p>Impact BIO-1. Implementation of transportation improvements and the land use scenario envisioned by Connected 2050 may result in impacts to special-status plant and animal species, either directly or through habitat modifications. Impacts would be less than significant with mitigation incorporated.</p>	<p>BIO-1(a) Biological Resources Screening and Assessment On a project-by-project basis, a preliminary biological resource screening shall be performed to determine whether the project has any potential to impact biological resources. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a biological resources assessment (BRA) or similar type of study to document the existing biological resources within the project footprint plus an appropriate buffer determined by a qualified biologist and to determine the potential impacts to those resources. The BRA shall evaluate the potential for impacts to all sensitive biological resources including, but not limited to special-status species, nesting birds, wildlife movement, sensitive plant communities/critical habitat and other resources judged to be sensitive by local, state, and/or federal agencies. Pending the results of the BRA, design alterations, further technical studies (i.e., protocol surveys) and/or consultations with the USFWS, CDFW and/or other local, state, and federal agencies may be required. The following Mitigation Measures [BIO-1(b) through BIO-1(k)] shall be incorporated, only as applicable, into the BRA for projects where specific resources are present, or may be present, and may be impacted by the project. Note that specific surveys described in the mitigation measures below may be completed as part of the BRA where suitable habitat is present.</p> <p>BIO1(b) Special-status Plant Species Surveys If the project-specific BRA determines that special-status plant species may occur on-site, surveys for special-status plants shall be completed prior to any vegetation removal, grubbing, or other construction activity within each segment</p>	<p>Compliance with the above mitigation measures and all existing federal, state and/or local regulations would reduce impacts to special-status species a less than significant level.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<p>(including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally timed to coincide with the blooming period of the target species identified in the project-specific BRA. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency no more than two years before initial ground disturbance. All special-status plant species identified on-site shall be mapped onto a site-specific aerial photograph and topographic map. Surveys shall be conducted in accordance with the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results shall be submitted to the implementing agency, and the CDFW and/or USFWS, as appropriate, for review and approval.</p> <p>BIO-1(c) Special-status Plant Species Avoidance, Minimization, and Mitigation If State listed or California Rare Plant List 1B species are found during special-status plant surveys [pursuant to Mitigation Measure BIO-1(b)], then the project shall be re-designed to avoid impacting these plant species, if feasible. Rare plant occurrences that are not within the immediate disturbance footprint, but are located within 50 feet of disturbance limits shall have bright orange protective fencing installed at least 30 feet beyond their extent, or other distance as approved by a qualified biologist, to protect them from harm.</p> <p>BIO-1(d) Restoration and Monitoring If special-status plants species cannot be avoided and will be impacted by a project implemented under Connected 2050, all impacts shall be mitigated at a minimum ratio of 2:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species as a component of habitat restoration. A restoration plan shall be prepared and submitted to the jurisdiction overseeing the project for approval (e.g., if a state listed plant species will be impacted, the restoration plan shall be submitted to the CDFW for approval). The restoration plan shall include, at a minimum, the following components:</p> <ul style="list-style-type: none"> ▪ Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type); ▪ Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved including specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved]; ▪ Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values); 	

Impact	Mitigation Measure (s)	Residual Impact
	<ul style="list-style-type: none"> ▪ Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan); ▪ Maintenance activities during the monitoring period, including weed removal as appropriate (activities, responsible parties, schedule); ▪ Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year (performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports); ▪ Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type; ▪ An adaptive management program and remedial measures to address any shortcomings in meeting success criteria; ▪ Notification of completion of compensatory mitigation and agency confirmation; and ▪ Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism). 	
	<p>BIO-1(e) Endangered/Threatened Species Habitat Assessment and Protocol Surveys</p> <p>Specific habitat assessment and survey protocols are established for several federally and state Endangered or Threatened species. If the results of the BRA determine that suitable habitat may be present, then any such species’ protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or USFWS protocols prior to issuance of any construction permits. If through consultation with the CDFW and/or USFWS it is determined that protocol habitat assessments/surveys are not required, said consultation shall be documented prior to issuance of any construction permits. Each protocol has different survey and timing requirements, and therefore the applicant(s) for each project shall be responsible for ensuring they understand the protocol requirements.</p>	
	<p>BIO-1(f) Endangered/Threatened Species Avoidance and Minimization</p> <p>The habitat requirements of endangered and threatened species throughout the County are highly variable. The potential impacts from any given project implemented under Connected 2050 are likewise highly variable. However, there are several avoidance and minimization measures that can be applied for a variety of species to reduce the potential for impact, with the final goal of no net loss of</p>	

Impact	Mitigation Measure (s)	Residual Impact
	<p>the species. Project sponsors shall select appropriate measures, as applicable, from the following measures that may be applied to aquatic and/or terrestrial species:</p> <ul style="list-style-type: none"> ▪ Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern within or adjacent to the limits of disturbance shall have highly visible orange construction fencing installed between said area and the limits of disturbance. ▪ All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed between April 1 and October 31, if feasible, to avoid impacts to sensitive aquatic species. ▪ All projects occurring within or adjacent to sensitive habitats that may support federally and/or state Endangered/Threatened species shall have a CDFW and/or USFWS-approved biologist present during all initial ground disturbing/vegetation clearing activities. Once initial ground disturbing/vegetation clearing activities have been completed, said biologist shall conduct daily pre-activity clearance surveys for Endangered/Threatened species. Alternatively, and upon approval by CDFW and/or USFWS, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are being fully implemented. ▪ No Endangered/Threatened species shall be captured and relocated without expressed, authorized permission from the CDFW and/or USFWS. ▪ If at any time during construction of the project an Endangered/Threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. A CDFW/USFWS-approved biologist shall document the occurrence and consult with CDFW and/or USFWS as appropriate. ▪ For all projects occurring in areas where Endangered/Threatened species may be present and are at risk of entering the project site during construction, exclusion fencing shall be placed along the project boundaries prior to start of construction (including staging and mobilization). The placement of the fence shall be at the discretion of the CDFW/USFWS-approved biologist. This fence shall consist of solid silt fencing placed at a minimum of 3 feet above grade and 2 feet below grade and shall be attached to wooden stakes placed at intervals of not more than 5 feet. The fence shall be inspected weekly and 	

Impact	Mitigation Measure (s)	Residual Impact
	<p>following rain events and high wind events and shall be maintained in good working condition until all construction activities are complete.</p> <ul style="list-style-type: none"> ▪ All vehicle maintenance/fueling/staging shall occur a minimum of 100 feet away from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian habitat or water bodies. ▪ No equipment shall be permitted to enter wetted portions of any affected drainage channel. ▪ All equipment operating within streams shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access. ▪ If project activities could degrade water quality, water quality sampling shall be implemented to identify the pre-project baseline, and to monitor during construction for comparison to the baseline. ▪ If water is to be diverted around work sites, a diversion plan shall be submitted (depending upon the species that may be present) to the CDFW, RWQCB, USFWS, and/or NMFS for their review and approval prior to the start of any construction activities (including staging and mobilization). If pumps are used, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system. ▪ At the end of each workday, excavations shall be secured with cover or a ramp provided to prevent wildlife entrapment. ▪ All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling. ▪ The CDFW/USFWS-approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic habitat whenever observed and shall dispatch them in a humane manner and dispose of properly. ▪ If any federal and/or state protected species are harmed, the CDFW/USFWS-approved biologist shall document the circumstances that led to harm and shall determine if project activities should cease or be altered in an effort to avoid additional harm to these species. Dead or injured special-status species shall be disposed of at the discretion of the CDFW and USFWS. All incidences of harm shall be reported to the CDFW and USFWS within 24 hours. 	

Impact	Mitigation Measure (s)	Residual Impact
	<p>BIO-1(g) Non-Listed Special-status Animal Species Avoidance and Minimization</p> <p>Several State Species of Special Concern may be impacted by projects implemented under Connected 2050. The ecological requirements and potential for impacts is highly variable among these species. Depending on the species identified in the BRA, several of the measures identified under BIO-1(f) shall be applicable to the project. In addition, measures shall be selected from among the following to reduce the potential for impacts to non-listed special-status animal species:</p> <ul style="list-style-type: none"> ▪ For non-listed special-status terrestrial amphibians and reptiles, coverboard surveys shall be completed within three months of the start of construction. The coverboards shall be at least four feet by four feet and constructed of untreated plywood placed flat on the ground. The coverboards shall be checked by a qualified biologist once per week for each week after placement up until the start of vegetation removal. All non-listed special-status and common animals found under the coverboards shall be captured and placed in five-gallon buckets for transportation to relocation sites. All relocation sites shall be reviewed by the project sponsor and shall consist of suitable habitat. Relocation sites shall be as close to the capture site as possible but far enough away to ensure the animal(s) is not harmed by construction of the project. Relocation shall occur on the same day as capture. CNDDDB Field Survey Forms shall be submitted to the CDFW for all special-status animal species observed. ▪ Pre-construction clearance surveys shall be conducted within 14 days prior to the start of construction (including staging and mobilization). The surveys shall cover the entire disturbance footprint plus a minimum 200-foot buffer, if feasible, and shall identify all special-status animal species that may occur on-site. All non-listed special-status species shall be relocated from the site either through direct capture or through passive exclusion. A report of the pre-construction survey shall be submitted to SBCAG/and or the local jurisdiction for their review and approval prior to the start of construction. ▪ A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal, to recover special-status animal species unearthed by construction activities. ▪ Upon completion of the project, a qualified biologist shall prepare a Final Compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project. 	

Impact	Mitigation Measure (s)	Residual Impact
	<ul style="list-style-type: none"> <li data-bbox="615 272 1419 760"> <p>▪ If special-status bat species may be present and impacted by the project, a qualified biologist shall conduct presence/absence surveys within 30 days prior to the start of construction presence/absence surveys for special-status bats in consultation with the CDFW where suitable roosting habitat is present and in consultation with the CDFW. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may roost. If active roosts are located, exclusion devices such as netting shall be installed to discourage bats from occupying the site in consultation with the CDFW. If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the size of the hibernaculum and shall be determined through consultations with the CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.</p> <p data-bbox="615 781 1121 805">BIO-1(h) Preconstruction Surveys for Nesting Birds</p> <p data-bbox="615 818 1409 1276">For any construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds (covered by the California Fish and Game Code and the Migratory Bird Treaty Act) shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal. The surveys shall include the entire segment disturbance area plus a 200-foot buffer around each project site. If active nests are located, all construction work shall be conducted outside an established buffer area around the nest. The buffer shall be a minimum of 50 feet for passerine bird species and at least 250 feet for raptor species, but appropriate buffer size will be determined by a qualified biologist. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed, and young have fledged the nest prior to removal of the buffer. A report of these preconstruction nesting bird surveys shall be submitted to SBCAG and/or the local jurisdiction.</p> <p data-bbox="615 1299 1182 1323">BIO-1(i) Monarch Butterfly Avoidance and Minimization</p> <p data-bbox="615 1336 1360 1385">Prior to completion of the final design, a qualified biologist shall review the project for the potential to impact monarch butterflies. If known or potential</p>	

Impact	Mitigation Measure (s)	Residual Impact
	<p>winter roost sites may be impacted, the biologist shall make recommendations to avoid impacts including, but not limited to, relocation/redesign of project features to avoid roost sites, guidance regarding tree removal and trimming at roost sites, and recommendations regarding planting additional roost trees.</p> <p>Between October 1 and March 1, construction shall not occur within 100 feet of known or potential roost sites, if feasible. If construction must occur during this period, a qualified biologist shall survey known and potential roost sites to confirm occupancy by monarch butterflies prior to start of any construction within 100 feet. Multiple surveys may be necessary, and the closest known roost sites shall be used as voucher sites to confirm the timing of butterfly arrival. If monarch butterflies are found at a roost site, construction shall not occur within 100 feet of the roost site until the biologist has determined that the butterflies have left the area. The biologist shall visit the voucher sites to confirm that butterflies have left the region.</p> <p>BIO-1(j) Worker Environmental Awareness Program (WEAP)</p> <p>Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special-status resources that may occur in the project area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction of the project. All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them. The form shall be submitted to SBCAG and/or the local jurisdiction to document compliance.</p> <p>BIO-1(k) Tree Protection</p> <p>If it is determined that construction may impact trees protected by local agencies, the project sponsor shall procure all necessary tree removal permits. A tree protection and replacement plan shall be developed by a certified arborist, as appropriate. The plan shall include, but would not be limited to, an inventory of trees within the construction site, setbacks from trees and protective fencing, restrictions regarding grading and paving near trees, direction regarding pruning and digging within root zone of trees, and requirements for replacement and maintenance of trees. If protected trees will be removed, replacement tree</p>	

Impact	Mitigation Measure (s)	Residual Impact
	<p>plantings of the same or similar species in accordance with local agency standards, but at a minimum ratio of 2:1 (trees planted to trees impacted), shall be installed on-site or at an approved off-site location, and a restoration and monitoring program shall be developed in accordance with Mitigation Measure BIO-1(d) and shall be implemented for a minimum of seven years or until stasis has been determined by certified arborist. If a protected tree will be encroached upon, but not removed, a certified arborist shall be present to oversee all trimming of roots and branches.</p>	
<p>Impact BIO-2. Implementation of transportation improvements and the land use scenario envisioned by Connected 2050 may result in impacts to sensitive habitats, including State or federally protected wetlands. Impacts would be less than significant with mitigation incorporated.</p>	<p>BIO-2(a) Jurisdictional Delineation If projects implemented under Connected 2050 occur within or adjacent to wetland, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the CDFW, USACE, RWQCB, and/or CCC, a qualified biologist shall complete a jurisdictional delineation. The jurisdictional delineation shall determine the extent of the jurisdiction for each of these agencies and shall be conducted in accordance with the requirement set forth by each agency. The result shall be a preliminary jurisdictional delineation report that shall be submitted to the implementing agency, USACE, RWQCB, CDFW, and CCC, as appropriate, for review and approval. If jurisdictional areas are expected to be impacted, then the RWQCB would require a Waste Discharge Requirements (WDR) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature falls under federal jurisdiction). If CDFW asserts its jurisdictional authority, then a Streambed Alteration Agreement pursuant to Section 1600 et seq. of the CFGC would also be required prior to construction within the areas of CDFW jurisdiction. If the USACE asserts its authority, then a permit pursuant to Section 404 of the Clean Water Act would likely be required. The CCC would also require a coastal development permit for projects falling within its jurisdiction.</p> <p>BIO-2(b) Wetland and Riparian Habitat Restored Impacts to jurisdictional wetland and riparian habitat shall be mitigated at a minimum ratio of 2:1 (acres of habitat restored to acres impacted) and shall occur on-site or as close to the impacted habitat as possible. A mitigation and monitoring plan shall be developed by a qualified biologist in accordance with Mitigation Measure BIO-1(d) above and shall be implemented for no less than five years after construction of the segment, or until the SBCAG/local jurisdiction and/or the permitting authority (e.g., CDFW or USACE) has determined that restoration has been successful.</p>	<p>Compliance with the above mitigation measures and existing State, federal and/or local regulations would reduce impacts to a less than significant level.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<p>BIO-2(c) Landscaping Plan</p> <p>If landscaping is proposed for a specific project, a qualified biologist/landscape architect shall prepare a landscape plan for that project. This plan shall indicate the locations and species of plants to be installed. Drought tolerant, locally native plant species shall be used. Noxious, invasive, and/or non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List, and/or California Invasive Plant Council Lists 1, 2, and 4 shall not be permitted. Species selected for planting shall be similar to those species found in adjacent native habitats.</p> <p>BIO-2(d) Sensitive Vegetation Community Avoidance and Mitigation</p> <p>If the results of measure B-1(a) indicates projects implemented under Connected 2050 would impact sensitive vegetation communities, impacts to sensitive communities shall be avoided through final project design modifications.</p> <p>If the implementing agency determines that sensitive communities cannot be avoided, impacts shall be mitigated on-site or offsite at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist. Temporarily impacted areas shall be restored to pre-project conditions. A Restoration Plan shall be developed by a qualified biologist and submitted to the agency overseeing the project for approval.</p> <p>BIO-2(e) Invasive Weed Prevention and Management Program</p> <p>Prior to start of construction for each project, an Invasive Weed Prevention and Management Program shall be developed by a qualified biologist to prevent invasion of native habitat by non-native plant species. A list of target species shall be included, along with measures for early detection and eradication. All disturbed areas shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding will be conducted in areas where construction activities have occurred for at least six weeks since ground disturbing activities ceased. If exotic species invade these areas prior to hydroseeding, weed removal shall occur in consultation with a qualified biologist and in accordance with the restoration plan.</p> <p>BIO-2(f) Wetlands, Drainages and Riparian Habitat Best Management Practices During Construction</p> <p>The following best management practices shall be required for development within or adjacent to wetlands, drainages, or riparian habitat:</p>	

Impact	Mitigation Measure (s)	Residual Impact
	<ul style="list-style-type: none"> ▪ Access routes, staging and construction areas shall be limited to the minimum area necessary to achieve the project goal and minimize impacts to other waters including locating access routes and ancillary construction areas outside of jurisdictional areas. ▪ To control sedimentation during and after project implementation, appropriate erosion control materials shall be deployed to minimize adverse effects on jurisdictional areas in the vicinity of the project. ▪ Project activities within the jurisdictional areas should occur during the dry season (typically between June 1 and November 1) in any given year, or as otherwise directed by the regulatory agencies. ▪ During construction, no litter or construction debris shall be placed within jurisdictional areas. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site. ▪ All project-generated debris, building materials and rubbish shall be removed from jurisdictional areas and from areas where such materials could be washed into them. ▪ Raw cement, concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic species resulting from project-related activities, shall be prevented from contaminating the soil and/or entering wetlands, drainages or riparian habitat. ▪ All refueling, maintenance and staging of equipment and vehicles shall occur at least 100 feet from bodies of water and in a location where a potential spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water source). Prior to the onset of work activities, a plan must be in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should an accidental spill occur. 	

Impact	Mitigation Measure (s)	Residual Impact
<p>Impact BIO-3. Implementation of transportation improvements and the land use scenario envisioned by Connected 2050 may substantially interfere with wildlife movement, including fish migration, and/or impede the use of native wildlife nursery sites. This impact would be significant and unavoidable.</p>	<p>BIO-3(a) Fence and Lighting Design</p> <p>All projects including long segments of fencing and lighting shall be designed to minimize impacts to wildlife. Fencing shall not block or impede wildlife movement through riparian or other natural habitat when feasible. Where fencing is required for public safety concerns, the fence shall be designed to permit wildlife movement by incorporating design features such as:</p> <ul style="list-style-type: none"> ▪ A minimum 16 inches between the ground and the bottom of the fence to provide clearance for small animals; ▪ A minimum 12 inches between the top two wires, or top the fence with a wooden rail, mesh, or chain link instead of wire to prevent animals from becoming entangled; ▪ If privacy fencing is required near open space areas, openings at the bottom of the fence measure at least 16 inches in diameter shall be installed at reasonable intervals to allow wildlife movement. <p>If fencing must be designed in such a manner that wildlife passage would not be permitted, wildlife crossing structures shall be incorporated into the project design as appropriate.</p> <p>Similarly, lighting installed as part of any project shall be designed to be minimally disruptive to wildlife. This may be accomplished through the use of hoods to direct light away from natural habitat, using low intensity lighting, and using a few lights as necessary to achieve the goals of the project.</p> <p><i>BIO-3(b) Maintain Connectivity in Drainages</i></p> <p>No permanent structures shall be placed within any drainage or river that would impede wildlife movement (i.e., no hardened caps or other structures in the stream channel perpendicular to stream flow be left exposed or at depth with moderate to high risk for exposure as a result of natural bed scour during high flow events and thereby potentially create impediments to passage).</p> <p>In addition, upon completion of construction within any drainage, areas of stream channel and banks that are temporarily impacted shall be returned to pre-construction contours and in a condition that allows for unimpeded passage through the area once the work has been complete.</p> <p>If water is to be diverted around work sites, a diversion plan shall be submitted to SBCAG, and/or local jurisdiction for review and approval prior to issuance of project construction permits/ approvals. The diversion shall be designed in a way as to not impede movement while the diversion is in place.</p>	<p>With implementation of the above mitigation measures, potential impacts to wildlife movement and nursery sites would be reduced, but disruption to wildlife movement is still anticipated. Thus, this impact would remain significant and unavoidable.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<p>BIO-3 (c) Construction Best Management Practices to Minimize Disruption to Wildlife</p> <p>The following construction Best Management Practices (BMPs) shall be incorporated into all grading and construction plans in order to minimize temporary disruption of wildlife, which could hinder wildlife movement:</p> <ul style="list-style-type: none"> ▪ Designation of a 20 mile per hour speed limit in all construction areas. ▪ Daily construction work schedules shall be limited to daylight hours only. ▪ Mufflers shall be used on all construction equipment and vehicles shall be in good operating condition. ▪ All trash shall be placed in sealed containers and shall be removed from the project site a minimum of once per week. ▪ No pets are permitted on project site during construction. 	
<p>Impact BIO-4. Implementation of transportation improvements and the land use scenario envisioned by Connected 2050 would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy. This impact would be less than significant.</p>	<p>None required</p>	
<p>Cumulative – Biological Resources. Due to the potential direct and indirect impacts that may occur, Connected 2050 would contribute considerably to this impact and cumulative impacts would be significant.</p>	<p>Implement Mitigation Measures BIO(a)-(c).</p>	<p>With implementation of the above mitigation measures, potential impacts to wildlife movement and nursery sites would be reduced, but disruption to wildlife movement is still anticipated. The contribution of the proposed Connected 2050 to cumulative wildlife movement impacts would therefore remain cumulatively considerable post-mitigation.</p>

Impact	Mitigation Measure (s)	Residual Impact
Cultural Resources		
<p>Impact CR-1. Transportation improvement projects and the land use scenario envisioned by Connected 2050 may result in the alteration or demolition of historical resources throughout the SBCAG region. Potential impacts to historical resources would be significant and unavoidable.</p>	<p>CR-1 Historical Resources Impact Minimization</p> <p>Prior to individual project permit issuance, the implementing agency of a Connected 2050 project involving earth disturbance or construction of permanent above ground structures or roadways shall prepare a map defining the impact zone. This map shall indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known historical resources are located within the impact zone. If a structure greater than 45 years in age is within the identified impact zone, a survey and evaluation of the structure(s) to determine their eligibility for recognition under State, federal, or local historic preservation criteria shall be conducted. The evaluation shall be prepared by an architectural historian, or historical architect meeting the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, Professional Qualification Standards. The evaluation shall comply with CEQA Guidelines section 15064.5(b). Study recommendations shall be implemented, which may include, but would not be limited to, the following:</p> <ul style="list-style-type: none"> ▪ Realign or redesign projects to avoid impacts on known historic resources where possible. ▪ If avoidance of a significant architectural/built environment resource is not feasible, additional mitigation options include, but are not limited to, specific design plans for historic districts, or plans for alteration or adaptive re-use of a historical resource that follows the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring and Reconstructing Historic Buildings. ▪ Comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect historic resources. 	<p>Redevelopment or demolition that may be required to implement transportation improvements and/or infill and other development may result in the permanent loss or damage to historic structures. While implementation of Mitigation Measure CR-1 would reduce impacts to the extent feasible, some project-specific impacts may be unavoidable. Therefore, this impact is significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.</p>

Impact	Mitigation Measure (s)	Residual Impact
<p>Impact CR-2. Construction activity associated with transportation improvement projects, and land use development envisioned by the implementation of Connected 2050 may result in disturbances to archaeological resources throughout the SBCAG region. Potential impacts to archaeological resources would be significant and unavoidable.</p>	<p>CR-2 Archaeological Resources Impact Minimization</p> <p>Before construction activities, implementing agencies shall retain a qualified archaeologist to conduct a record search at the Central Coast Information Center to determine whether the project area has been previously surveyed and whether resources were identified. When recommended by the Information Center, implementing agencies shall retain a qualified archaeologist to conduct archaeological surveys before construction activities. Implementing agencies shall follow recommendations identified in the survey, which may include, but would not be limited to: subsurface testing, designing and implementing a Worker Environmental Awareness Program (WEAP), construction monitoring by a qualified archaeologist, or avoidance of sites and preservation in place. Recommended mitigation measures will be consistent with CEQA Guidelines Section 15126.4(b)(3) recommendations.</p> <p>In the event that evidence of any prehistoric or historic-era subsurface archaeological features or deposits are discovered during construction-related earthmoving activities (e.g., ceramic shard, trash scatters, lithic scatters), all ground-disturbing activity in the area of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. If the find is a prehistoric archaeological site, the appropriate Native American group shall be notified. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a testing plan shall be prepared and implemented. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the implementing agency to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics and other factors, shall recommend additional measures such as the preparation and implementation of a data recovery plan. All cultural resources work shall follow accepted professional standards in recording any find including submittal of standard DPR Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area.</p> <p>Implementing agencies shall comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect archaeological resources.</p>	<p>Implementation of the above measure would reduce impacts to archaeological resources by requiring cultural resource searches and surveys of project areas and providing a procedure for discovered cultural archaeological resources. While implementation of Mitigation Measure CR-2 would reduce impacts to the extent feasible, some project-specific impacts may be unavoidable. Therefore, this impact is significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.</p>

Impact	Mitigation Measure (s)	Residual Impact
<p>Impact CR-3. Construction activity associated with transportation improvement projects, and land use development envisioned by implementation of Connected 2050 may result in disturbances to human remains throughout the SBCAG region. Potential impacts to human remains would be less than significant.</p>	<p>None required</p>	
<p>Cumulative – Cultural Resources. While most cultural resources are typically site-specific, with impacts that are project-specific, others may have regional significance. For historical and archaeological resources, cumulative impacts and the contribution of Connected 2050 to them, would be significant, and the Connected 2050 contribution would be cumulatively considerable.</p>	<p>Implement Mitigation Measures CR-1 and CR-2.</p>	<p>Mitigation measures outlined in this section would reduce impacts associated with Connected 2050 projects. However, the Connected 2050 contribution would remain cumulatively considerable after mitigation because it cannot be guaranteed that all future project-level impacts can be mitigated to a less than significant level.</p>
<p>Energy</p>		
<p>Impact E-1. Future transportation improvement projects and implementation of the land use scenario envisioned by Connected 2050 would not result in significant environmental impact due to the wasteful, inefficient, or unnecessary consumption of energy resources. Impacts would be less than significant.</p>	<p>None required</p>	
<p>Impact E-2. Connected 2050 would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be less than significant.</p>	<p>None required</p>	

Impact	Mitigation Measure (s)	Residual Impact
<p>Cumulative – Energy. The contribution of Connected 2050 to cumulative impacts related to energy consumption would not result in the inefficient use of energy resources. Connected 2050’s impacts related to per capita energy consumption and reliance on fossil fuels would not be a cumulatively considerable contribution to a significant cumulative energy impact and impacts would be less than significant.</p>	<p>None required</p>	
<p>Environmental Justice</p>		
<p>Impact EJ-1. Implementation of Connected 2050 would not lead to disproportionately high and adverse human health or environmental impacts to the minority populations, low-income populations, low community engagement populations and/or populations with low mobility in the SBCAG region. Impacts would be less than significant.</p>	<p>None required</p>	
<p>Impact EJ-2. Mobility benefits derived from Connected 2050, in terms of travel times and accessibility by transit and/or single-occupancy vehicle, would not be substantially less for minority populations, low-income populations, low community engagement populations, and/or populations with low mobility in the SBCAG region. Impacts would be less than significant.</p>	<p>None required</p>	

Impact	Mitigation Measure (s)	Residual Impact
<p>Cumulative – Environmental Justice. While all populations in the SBCAG region would be exposed to the environmental impacts discussed in this EIR, they would not be disproportionate, and Connected 2050’s contribution of exposing EJ communities to environmental impacts would not be cumulatively considerable. The mobility benefits derived from Connected 2050 would not be substantially less for EJ Communities, rather Connected 2050 considers cumulative development in the SBCAG region and would improve mobility benefits for both EJ Communities and non-minority populations.</p>	<p>None required</p>	
<p>Geology and Soils</p>		
<p>Impact GEO-1. Implementation of the proposed transportation improvements and future projects included in land use scenario envisioned in Connected 2050 would not substantially risk exacerbating seismic hazards, including fault rupture, ground-shaking, liquefaction and landslides, that could expose people or structures to substantial adverse effects. Connected 2050 projects could be located on potentially unstable soils or in areas of lateral spreading, subsidence, or high liquefaction potential. Impacts would be Less than significant with mitigation incorporated for projects on unstable soils, in areas with risk of liquefaction,</p>	<p>GEO-1(a) Geotechnical Analysis If a Connected 2050 project is located in an area of moderate to high liquefaction, lateral spreading and/or subsidence potential or in underground areas located in an area of high groundwater potential, the implementing agency shall ensure that these structures are designed based upon site specific geology, soils and earthquake engineering studies conducted by a qualified geotechnical expert. Projects shall follow the recommendations of these studies. Possible design measures include, but would not be limited to: deep foundations, removal of liquefiable materials and dewatering.</p> <p>GEO-1(b) Hillside Stability Evaluation If a Connected 2050 project requires cut slopes over 20 feet in height or is located in areas of bedded or jointed bedrock, the implementing agency shall ensure that hillside stability evaluations and/or specific slope stabilization studies are conducted by a qualified geotechnical expert. Projects shall follow the recommendations of these studies. Possible stabilization methods include buttresses, retaining walls and soldier piles.</p> <p>GEO-1(c) Site Specific Geotechnical Evaluation</p>	<p>Implementation of the above measures would reduce impacts to a less than significant level because individual projects would require geotechnical analysis when located on potentially unstable soils. Site specific geotechnical evaluations and hillside stability evaluation would identify feasible measures to address site specific issues related to unstable soils and geologic hazards and reduce geological hazards impacts to less than significant levels.</p>

Impact	Mitigation Measure (s)	Residual Impact
expansive or compressible soils, or landslide.	If a Connected 2050 project is located in an area of highly expansive soils, the implementing agency shall ensure that a site-specific geotechnical investigation is conducted. The investigation shall identify hazardous conditions and recommend appropriate design factors to minimize hazards. Such measures could include concrete slabs on grade with increased steel reinforcement, removal of highly expansive material and replacement with non-expansive import fill material, or chemical treatment with hydrated lime to reduce the expansion characteristics of the soils.	
Impact GEO-2. Grading associated with transportation improvements and future projects included in the land use scenario envisioned in Connected 2050 could cause soil erosion and loss of topsoil. However, compliance with applicable regulations would ensure that impacts would remain less than significant.	None required.	
Impact GEO-3. Implementation of the proposed transportation improvements and the land use scenario envisioned by Connected 2050 could cause a substantial adverse change in or disturb known and unknown paleontological resources as defined in CEQA guidelines section 15064.5. Impacts to paleontological resources would be significant and unavoidable.	<p>GEO-3 Paleontological Resources Impact Minimization</p> <p>Prior to any ground disturbance, the implementing agency of a Connected 2050 project involving ground disturbing activities (including grading, trenching, foundation work and other excavations) within intact (previously-undisturbed) deposits shall retain a qualified paleontologist, defined as a paleontologist who meets the Society of Vertebrate Paleontology (SVP) standards for Qualified Professional Paleontologist (SVP 2010), to conduct a Paleontological Resources Assessment (PRA). The PRA shall determine the age and paleontological sensitivity of geologic formations underlying the proposed disturbance area, consistent with SVP Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (SVP 2010) guidelines for categorizing paleontological sensitivity of geologic units within a project area. If underlying formations are found to have a high potential (sensitivity) for paleontological resources, the following measures shall apply:</p> <ul style="list-style-type: none"> ▪ Paleontological Mitigation and Monitoring Program. A qualified paleontologist shall prepare a Paleontological Mitigation and Monitoring Program to be implemented during ground disturbance activity. This program shall outline the procedures for construction staff Worker Environmental Awareness Program (WEAP) training, paleontological monitoring extent and duration (i.e., in what locations and at what depths paleontological monitoring 	Implementation of the above mitigation measure would reduce impacts to paleontological resources by requiring a Paleontological Resources Assessment for any projects under Connected 2050 that may impact sensitive paleontological resources. While implementation of Mitigation Measure CR-3 would reduce impacts to the extent feasible, some project-specific impacts may be unavoidable. Therefore, this impact is significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

Impact	Mitigation Measure (s)	Residual Impact
	<p>shall be required), salvage and preparation of fossils, the final mitigation and monitoring report and paleontological staff qualifications.</p> <ul style="list-style-type: none"> ▪ Paleontological Worker Environmental Awareness Program (WEAP). Prior to the start of ground disturbance activity greater than two feet below existing grade, construction personnel shall be informed on the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. ▪ Paleontological Monitoring. Ground disturbing activity with the potential to disturbed geologic units with high paleontological sensitivity shall be monitored on a full-time basis by a qualified paleontological monitor. Should no fossils be observed during the first 50 percent of such excavations, paleontological monitoring could be reduced to weekly spot-checking under the discretion of the qualified paleontologist. Monitoring shall be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources. ▪ Salvage of Fossils. If fossils are discovered, the implementing agency shall be notified immediately, and the qualified paleontologist (or paleontological monitor) shall recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. ▪ Preparation and Curation of Recovered Fossils. Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data and maps. ▪ Final Paleontological Mitigation and Monitoring Report. Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated. The report shall be submitted to 	

Impact	Mitigation Measure (s)	Residual Impact
	the sponsor agency. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.	
<p>Cumulative – Geology and Soils (Paleontological Resources). Implementation of Connected 2050 would result in impacts to paleontological resources within the SBCAG region. Projects approved by counties outside the SBCAG region would also continue to impact paleontological resources. Collectively this adds to the cumulative impact to paleontological resources and therefore Connected 2050’s contribution to this would be cumulatively considerable and significant.</p>	<p>Implement Mitigation Measure CR-3.</p>	<p>While implementation of Mitigation Measure CR-3 would reduce impacts to the extent feasible, some project-specific impacts may be unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.</p>
<p>Greenhouse Gas Emissions</p>		
<p>Impact GHG-1. Construction of the transportation improvement projects and development of future land use projects envisioned by Connected 2050 would generate temporary short-term GHG emissions that may have a significant impact on the environment. Impacts would be significant but mitigable.</p>	<p>GHG-1 Construction GHG Reduction Measures The implementing agency shall incorporate the most recent GHG reduction measures and/or technologies for reducing diesel particulate and NO_x emissions measures for off-road construction vehicles during construction. The measures shall be noted on all construction plans and the implementing agency shall perform periodic site inspections. Current GHG-reducing measures include the following:</p> <ul style="list-style-type: none"> ▪ Use of diesel construction equipment meeting CARB’s Tier 4 certified engines wherever feasible for off-road heavy-duty diesel engines and comply with the State Off-Road Regulation. Where the use of Tier 4 engines is not feasible, Tier 3 certified engines shall be used; where the use of Tier 3 engines are not feasible, Tier 2 certified engines shall be used; ▪ Use of on-road heavy-duty trucks that meet the CARB’s 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation; ▪ All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the five-minute idling limit; 	<p>With implementation of the above mitigation, implementing agencies would reduce short-term GHG emissions from individual projects to the maximum extent feasible. Because construction activities generally result in annual GHG emissions that represent a small proportion of total annual GHGs and implementation of Connected 2050 would result in an overall net reduction in transportation-related GHG emissions in 2050 when compared to existing 2020 conditions (refer to Impact GHG-2), impacts related to GHG emissions associated with construction activity would be less than significant.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<ul style="list-style-type: none"> ▪ Use of electric powered equipment in place of diesel-powered equipment when feasible; ▪ Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and ▪ Use of alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, in place of diesel-powered equipment for 15 percent of the fleet; ▪ Use of materials sourced from local suppliers; and ▪ Recycling of at least 75 percent of construction waste materials. 	
<p>Impact GHG-2. Implementation of Connected 2050 would not result in a significant increase in total GHG emissions from mobile and land use sources compared to 2020 conditions. Impacts would be less than significant.</p>	<p>None required.</p>	
<p>Impact GHG-3. Implementation of Connected 2050 would not Conflict with regional SB 375 per capita passenger vehicle CO₂ emission reduction targets but would potentially conflict with SB 32, the 2017 Scoping Plan, and EOs S-3-05 and B-55-18. Impacts would be significant and unavoidable.</p>	<p>GHG-3 Transportation-Related GHG Reduction Measures</p> <p>The implementing agency shall incorporate the most recent GHG reduction measures and/or technologies for reducing VMT and associated transportation-related GHG emissions. The measures shall be incorporated into construction plans, as appropriate, and the implementing agency shall verify implementation when practicable. Current GHG-reducing measures include the following:</p> <ul style="list-style-type: none"> ▪ Installation of electric vehicle charging stations beyond those required by State and local codes ▪ Utilization of electric vehicles and/or alternatively-fueled vehicles in company fleet ▪ Provision of dedicated parking for carpools, vanpool, and clean air vehicles ▪ Provision of vanpool and/or shuttle service for employees ▪ Implementation of reduced parking minimum requirements ▪ Implementation of maximum parking limits ▪ Provision of bicycle parking facilities beyond those required by State and local codes ▪ Provision of a bicycle-share program ▪ Expansion of bicycle routes/lanes along the project site frontage 	<p>If implementing agencies adopt and require the mitigation described above, impacts would be reduced because transportation-related GHG emissions from land use projects would be reduced. However, implementation of project-level GHG-reducing measures may not be feasible and cannot be guaranteed on a project-by-project basis. Additionally, it is speculative at this time to forecast whether project-level GHG emission reductions would be sufficient to achieve a county-wide reduction in GHG emissions of 40 percent below 1990 levels by 2030. Therefore, this impact would remain significant and unavoidable. No additional feasible mitigation measures are available that would reduce emissions to trajectories consistent with SB 32, EO S-3-05, and EO B-55-18 GHG reduction goals.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<ul style="list-style-type: none"> ▪ Provision of new or improved transit amenities (e.g., covered turnouts, bicycle racks, covered benches, signage, lighting) if project site is located along an existing transit route ▪ Expansion of existing transit routes ▪ Provision of transit subsidies ▪ Expansion of sidewalk infrastructure along the project site frontage ▪ Provision of safe, pedestrian-friendly, and interconnected sidewalks and streetscapes ▪ Provision of employee lockers and showers ▪ Provision of on-site services that reduce the need for off-site travel (e.g., childcare facilities, automatic teller machines, postal machines, food services) ▪ Provision of alternative work schedule options, such as telework or reduced schedule (e.g., 9/80 or 10/40 schedules), for employees ▪ Implementation of transportation demand management programs to educate and incentivize residents and/or employees to use transit, smart commute, and alternative transportation options 	
<p>Cumulative – Greenhouse Gas Emissions. Connected 2050 would potentially conflict with the state’s ability to achieve SB 32, EO S-3-05, and EO B-55-18 GHG reduction targets. Therefore, the project’s contribution to cumulative GHG and climate change impacts, including sea level rise, would be cumulatively considerable.</p>	<p>Implement Mitigation Measures GHG-1 and GHG-3.</p>	<p>No additional feasible mitigation measures are available that would reduce emissions to trajectories consistent with SB 32, EO S-3-05, and EO B-55-18 GHG reduction goals.</p>

Impact	Mitigation Measure (s)	Residual Impact
Hydrology and Water Quality		
<p>Impact HYD-1. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in Connected 2050 could result in substantial eroded sediments and contaminants in runoff, as well as changes in drainage patterns which could degrade surface and ground water quality. However, compliance with federal, state and local regulations would reduce impacts to water quality to less than significant.</p>	<p>None required.</p>	
<p>Impact HYD-2. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in Connected 2050 would increase water demand (including demand for groundwater) in the SBCAG region, which may lead to a decrease in water supplies. This demand may potentially require new or expanded water supplies, entitlements, or facilities and lead to conflicts with sustainable groundwater management plans.</p>	<p>HYD-2(a) Construction Dust Suppression Water Supply All Connected 2050 projects, where feasible, reclaimed and/or recycled water shall be used for dust suppression during construction activities. This measure shall be noted on construction plans and shall be spot checked by the local jurisdiction.</p> <p>HYD-2(b) Landscape Watering In jurisdictions that do not already have an appropriate local regulatory program related to landscape watering, Connected 2050 projects that include landscaping shall be designed with drought tolerant plants and drip irrigation. When feasible, native plant species shall be used. In addition, landscaping associated with proposed improvements shall be maintained using reclaimed and/or desalinated water when feasible.</p> <p>HYD-2(c) Porous Pavement In jurisdictions that do not already have an appropriate local regulatory program related to porous pavement, the sponsor of a Connected 2050 project that involves streetscaping, parking, transit and land use improvements shall ensure that porous pavement materials are utilized, where feasible, to allow for groundwater percolation.</p> <p>HYD-2(d) Water Infrastructure Improvements The sponsor of Connected 2050 projects that would require potable water service shall coordinate with water supply system operators to ensure that the existing water supply systems have the capacity to handle the increase. If the current</p>	<p>Implementation of the above measures would reduce impacts from water supply in the Santa Barbara County region. However, due to the programmatic nature of Connected 2050 a precise, project-level analysis of specific water demand and supply impacts associated with individual transportation and land use projects is not possible at this time. The land use scenario envisioned by Connected 2050 along with transportation projects are water intensive and may result in the need for additional water supply, even with the implementation of mitigation measures. Given the overdraft conditions of area groundwater basins and other regional water supply concerns, impacts would remain significant and unavoidable. No additional feasible mitigation measures to reduce this impact to less-than-significant levels are available.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<p>infrastructure servicing the project site is found to be inadequate, infrastructure improvements for the appropriate public service or utility should be provided by the implementing agency.</p> <p>HYD-2(e) Bioswale Installation The sponsor of a Connected 2050 project, such as new roads or roadway extensions, that would substantially increase impervious surfaces shall ensure that bioswales are installed, where feasible, to facilitate groundwater recharge using stormwater runoff from the project site while improving water quality if not already required by the appropriate jurisdictions local regulatory programs.</p>	
<p>Impact HYD-3. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in Connected 2050 would incrementally increase stormwater flows and change drainage patterns in the SBCAG region.</p>	<p>None required.</p>	
<p>Impact HYD-4. Implementation of transportation improvements and future projects facilitated by the land use scenario envisioned in Connected 2050 could be subject to flood hazards due to storm events, flooding, and/or dam failure, however adherence to existing regulations would ensure impacts to water quality are less than significant.</p>	<p>None required.</p>	

Impact	Mitigation Measure (s)	Residual Impact
<p>Cumulative – Hydrology and Water Quality (Water Supplies). Connected 2050 may impact groundwater supply in the SBCAG region because of the water required for land use projects and some transportation projects. Even with the implementation of mitigation measures, Connected 2050’s contribution to cumulative water supply impacts would be cumulatively considerable.</p>	<p>Implement Mitigation Measures HYD-2(a) through HYD-2(e).</p>	<p>There are no feasible mitigation measures to ensure that there is sufficient water supply to support anticipated growth in the region. Given the overdraft conditions of area groundwater basins and other regional water supply concerns, impacts would remain cumulatively considerable post-mitigation, and thus be significant and unavoidable.</p>
<p>Land Use and Planning</p>		
<p>Impact LU-1. Implementation of proposed transportation improvements and the land use scenario envisioned by Connected 2050 would not physically divide an established community.</p>	<p>None required.</p>	
<p>Impact LU-2. Connected 2050 may not be consistent with every applicable adopted State and local land use policy or regulation adopted for the purpose of avoiding or mitigating environmental effects. This impact would be significant and unavoidable.</p>	<p>Mitigation measures are provided for applicable resources throughout this section of the EIR to reduce impacts.</p>	<p>Impacts for some resources (such as wildfire, noise, transportation) would remain significant and unavoidable in conflict with adopted plans even with implementation of mitigation measures. Such impacts include those related to wildland fire hazard, locating sensitive receptors in areas with unacceptable noise levels, or increases in VMT. No additional feasible mitigation measures are available to reduce significant and unavoidable impacts beyond those identified in this EIR.</p>

Impact	Mitigation Measure (s)	Residual Impact
<p>Impact LU-3. Implementation of transportation improvements and the land use scenario envisioned by Connected 2050 could result in the conversion of prime or non-prime agricultural lands into non-agricultural use or conflict with existing zoning for agriculture, or a Williamson Act contract. This would be a significant and unavoidable impact.</p>	<p>LU-3 Agricultural Resource Impact Avoidance and Minimization Implementing agencies shall implement measures, where feasible based on project-and site-specific considerations that include, but are not limited to those identified below.</p> <ul style="list-style-type: none"> ▪ Require project relocation or corridor realignment, where feasible, to avoid Important Farmland, agriculturally-zoned land and/or land under Williamson Act contract; ▪ Compensatory mitigation at a minimum 1:1 (impacted : replaced) acreage ratio with Important Farmland of equivalent or better quality, where feasible; ▪ Require acquisition of conservation easements on land at least equal in quality and size as mitigation for the loss of Important Farmland; and/or ▪ Institute new protection of farmland in the project area or elsewhere through the use of long-term restrictions on use, such as 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.) or 10-year, annually renewed, Williamson Act contracts (Government Code Section 51200 et seq.). 	<p>Implementation of Mitigation Measure LU-1 would require avoidance or compensation for Important Farmland impacted by specific projects included in Connected 2050, thereby reducing the impact of conversion of Important Farmland to non-agriculture use and conflicts with agricultural zoning and Williamson Act contracts. However, it cannot be known with certainty whether all Important Farmland could be avoided, or whether compensation would completely prevent the loss of Important Farmland. As a result, the aforementioned mitigation would reduce impacts, but impacts would remain significant and unavoidable.</p>
<p>Cumulative – Land Use and Agricultural Resources. Planned growth in counties neighboring the SBCAG region, when combined with the projected growth of the SBCAG cities and counties, could have significant cumulative land use impacts related to either the physical division of communities or conflicts with land use goals, plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects. The cumulative loss of agricultural lands, as well as conflicts with agricultural zoning and Williamson Act contracts, would be a cumulative significant impact.</p>	<p>Implement Mitigation Measure LU-3.</p>	<p>Implementation of Mitigation Measure LU-3 would reduce the contribution of Connected 2050 to cumulative agricultural land impacts. However, as the cumulative impact analysis area urbanizes, total agricultural conversion as well as conflicts with agricultural zoning and Williamson Act contracts could intensify, particularly at the edge of existing cities and communities. Consequently, cumulative impacts to agricultural resources and the regional contribution to them, remain significant and the contribution of Connected 2050 would be cumulatively considerable. Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.</p>

Impact	Mitigation Measure (s)	Residual Impact
Noise		
<p>Impact N-1. Construction activity associated with transportation improvement projects and other land-use development envisioned by Connected 2050 would create temporary noise and vibration level increases in discrete locations throughout the SBCAG region. Construction-related noise and vibration impacts would be less than significant with mitigation incorporated.</p>	<p>N-1 Construction Noise and Vibration Reduction</p> <ul style="list-style-type: none">a. Compliance with local Construction Noise and Vibration Regulations. Project sponsors of Connected 2050 projects shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites without pile driving, appropriate measures shall be implemented to ensure consistency with local noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise.b. Pile Driving. For any project within 3,200 feet of sensitive receptors that requires pilings, the project sponsor shall require caisson drilling or sonic pile driving as opposed to pile driving, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review.c. Construction Equipment Noise and Vibration Control. Project sponsors shall ensure that equipment and trucks used for project construction utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds).d. Impact Equipment Noise Control. Project sponsors shall ensure that impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, use of an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can achieve a reduction of 5 dBA. Whenever feasible, use quieter procedures, such as drilling rather than impact equipment operation.e. Construction Activity Timing Restrictions. The following timing restrictions shall apply to Connected 2050 activates creating noise levels at or above 65 dBA at a nearby dwelling unit, except where timing restrictions are already established in local codes or policies. Construction activities shall be limited to:<ul style="list-style-type: none">▪ Monday through Friday: 7 a.m. to 6 p.m.▪ Saturday: 9 a.m. to 5 p.m.	<p>Mitigation Measures N-1(a)-(e) would assure that construction noise and vibration impacts would not be substantial through a variety of measures to minimize exposure of existing receptors. If a project is located near a sensitive receptor, the project sponsor would ensure that noise and vibration reduction measures are implemented during construction that would reduce noise and vibration levels below local and/or Caltrans standards. With implementation of mandatory local noise and vibration control requirements and Mitigation Measure N-1, construction noise and vibration impacts would be reduced to less than significant.</p>

Impact	Mitigation Measure (s)	Residual Impact
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- f. **Placement of Stationary Noise and Vibration Sources.** Locate stationary noise sources as far from sensitive receptors as possible.
- g. **Physical Impacts Due to Vibration.** Implementing agencies of Connected 2050 projects utilizing heavy construction equipment shall estimate vibration levels generated by construction activities and use the Caltrans vibration damage potential threshold criteria to screen for and screen out projects as to their potential to damage buildings on site or near a project.

Caltrans Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/ Frequent Intermittent Sources
Extremely fragile historic buildings	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older Residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial structures	2.00	0.50

Source: Transportation and Construction Vibration Guidance Manual, April 2020

If construction equipment would generate vibration levels exceeding the threshold criteria, a structural engineer or other appropriate professional shall be retained to ensure vibration levels do not exceed the thresholds during project construction. The structural engineer shall perform the following tasks, at minimum:

- Review the project’s demolition and construction plans
- Survey the project site and vulnerable buildings, including geological testing, if necessary

Impact	Mitigation Measure (s)	Residual Impact
	<ul style="list-style-type: none"> ▪ Prepare and submit a report to the lead agency or other appropriate party containing the following, at minimum: ▪ Any information obtained from the surveys identified above ▪ Any modifications to the estimated vibration thresholds based on building conditions, soil conditions and planned demolition and construction methods to ensure that vibration levels would remain below levels potentially damaging to vulnerable buildings ▪ Specific mitigation measures to be applied during construction to ensure vibration thresholds (or Caltrans guidelines, in lieu of specific limits) are not exceeded, including modeling to demonstrate the ability of mitigation measures to reduce vibration levels below set limits ▪ A monitoring plan to be implemented during demolition and construction that includes post-demolition and post-construction surveys of the vulnerable building(s) and documentation demonstrating that the mitigation measures identified in the report have been applied <p>Examples of mitigation that may be applied during demolition or construction include:</p> <ul style="list-style-type: none"> ▪ Prohibiting of certain types of construction equipment ▪ Specifying lower-impact methods for demolition and construction, such as sawing concrete during demolition ▪ Phasing operations to avoid simultaneous vibration sources ▪ Installing vibration measure devices to guide decision-making <p>The implementing agency shall be responsible for implementing all the mitigation measures recommended in the report as detailed in the report’s monitoring plan.</p>	

Impact	Mitigation Measure (s)	Residual Impact
<p>Impact N-2. Implementation of the Connected 2050 would increase operational (permanent) noise sources including traffic-generated noise levels on highways and roadways which could expose existing and future sensitive receptors to noise in excess of normally acceptable levels. Impacts would be less than significant with mitigation incorporated.</p>	<p>N-2 Traffic Noise Reduction</p> <p>a. Sponsor agencies of a Connected 2050 projects shall complete detailed noise assessments for projects that may impact noise sensitive receptors using applicable guidelines (e.g., FTA Transit Noise and Vibration Impact Assessment for rail and bus projects and the Caltrans Traffic Noise Analysis Protocol for roadway projects). The project sponsor shall ensure that a noise survey is conducted that, at minimum:</p> <ul style="list-style-type: none"> ▪ Determines existing and projected noise levels ▪ Determines the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards ▪ Identifies potential alternate alignments that allow greater distance from, or greater buffering of, noise-sensitive areas ▪ If warranted, recommends methods for mitigating noise impacts, including: <ul style="list-style-type: none"> ▪ Appropriate setbacks ▪ Sound attenuating building design, including retrofit of existing structures with sound attenuating building materials ▪ Use of sound barriers (earthen berms, sound walls, or some combination of the two) <p>b. Where new or expanded roadways or transit are found to expose receptors to noise exceeding normally acceptable levels, the individual project lead agency shall implement techniques as recommended in the project-specific noise assessments. The preferred methods for mitigating noise impacts will be the use of appropriate setbacks and sound attenuating building design, including retrofit of existing structures with sound attenuating building materials where feasible. In instances where use of these techniques is not feasible, the use of sound barriers (earthen berms, sound walls, or some combination of the two) will be considered. Long expanses of walls or fences should be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements should be used, including open grade paving, solid fences, walls, and landscaped berms. Determination of appropriate noise attenuation measures will be assessed on a case-by-case basis during a project’s individual environmental review pursuant to the regulations of the applicable lead agency.</p>	<p>With implementation of Mitigation Measures N-2(a) and (b), operational transportation noise impacts would be reduced to less than significant.</p>

Impact	Mitigation Measure (s)	Residual Impact
<p>Impact N-3. Connected 2050 would result in new truck, bus, and train traffic that could expose sensitive receptors and fragile buildings to excessive vibration levels. rail project vibration as a result of Connected 2050 would not be excessive. However, roadway vibration impacts as a result of Connected 2050 would be less than significant with mitigation incorporated.</p>	<p>N-3 Vibration Mitigation for Transportation Projects</p> <p>Implementing agencies of Connected 2050 projects shall comply with all applicable local vibration and groundborne noise standards, or in the absence of such local standards, comply with guidance provided by the FTA in Transit Noise and Vibration Impact Assessment (FTA 2018) to assess impacts to buildings and sensitive receptors and reduce vibration and groundborne noise. FTA recommended thresholds shall be used except in areas where local standards for groundborne noise and vibration have been established. Methods that can be implemented to reduce vibration and groundborne noise impacts include, but are not limited to:</p> <ul style="list-style-type: none">▪ Bus and Truck Traffic<ul style="list-style-type: none">▫ Constructing of noise barriers▫ Use noise reducing tires and wheel construction on bus wheels▫ Use vehicle skirts (i.e., a partial enclosure around each wheel with absorptive treatment) on freight vehicle wheels	<p>Implementation of mitigation measure N-3 would reduce potential impacts to a less than significant level.</p>
<p>Impact N-4. Connected 2050 envisions land development near transit and other transportation facilities, which may place sensitive receptors in areas with unacceptable noise levels. Impacts would be significant and unavoidable.</p>	<p>N-4 Noise Mitigation for Land Uses</p> <p>If a Connected 2050 land use project is located in an area with exterior ambient noise levels above local noise standards, the implementing agency shall ensure that a noise study is conducted to determine the existing exterior noise levels in the vicinity of the project. If the project would be impacted by ambient noise levels, feasible attenuation measures shall be used to reduce operational noise to meet acceptable standards. In addition, noise insulation techniques shall be utilized to reduce indoor noise levels to thresholds set in applicable State and/or local standards. Such measures may include, but are not limited to: dual-paned windows, solid core exterior doors with perimeter weather stripping, air conditioning system so that windows and doors may remain closed, and situating exterior doors away from roads. The noise study and determination of appropriate mitigation measures shall be completed during the project’s individual environmental review.</p>	<p>Implementation of the above mitigation measure would reduce noise for sensitive land uses near transit. However, even with implementation of Mitigation Measure N-4 noise from buildout of Connected 2050 may continue to impact nearby noise sensitive receptors and exceed acceptable standards. Impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.</p>

Impact	Mitigation Measure (s)	Residual Impact
<p>Cumulative – Noise. Land use development within the SBCAG region combined with the growth outside of its region could potentially contribute to a cumulatively considerable increase in noise and vibration as a result of increased activity resulting from that combined growth.</p>	<p>Implement Mitigation Measures N-1, N-2, N-3, and N-4.</p>	<p>Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.</p>
<p>Transportation and Circulation</p>		
<p>Impact T-1. Connected 2050 would generally be consistent with programs, plans, ordinances and policies affecting the circulation system. This would be a less-than-significant impact.</p>	<p>None required</p>	
<p>Impact T-2. Connected 2050 would result in a VMT per capita reduction of 7% when compared to the regional baseline VMT which does not meet the VMT reduction threshold of 14.3%. This impact would be significant and unavoidable.</p>	<p>T-2a Strategies to reduce VMT from future land use development. Implementing agencies shall require implementation of VMT reduction strategies through transportation demand management (TDM) programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, and other land use project conditions that reduce VMT. Programs shall be designed to reduce VMT from existing land uses, where feasible, and from new discretionary residential or employment land use projects. The design of programs and project-specific mitigation shall focus on VMT reduction strategies that increase travel choices and improve the comfort and convenience of sharing rides in private vehicles, using public transit, biking, or walking. Modifications may include but are not limited to:</p> <ul style="list-style-type: none"> ▪ Provide car-sharing, vanpool, bike sharing, and ride-sharing programs ▪ Implement or provide access to commute reduction programs ▪ Provide a bus rapid transit system ▪ Improve pedestrian or bicycle networks, or transit service ▪ Provide transit passes ▪ Encourage tele-commute programs ▪ Incorporate affordable housing into the project ▪ Increase density ▪ Increase mixed uses within the project area ▪ Incorporate improved pedestrian connections within the project/neighborhood ▪ Incentivize development in low VMT communities 	<p>If the implementing agency adopts this mitigation measure, Impact T-2 would likely be reduced to a less than significant level in the urban areas of the region, although additional state policy actions and funding would be required to close the VMT gap at the state level between what the MPOs could achieve through implementation of their SCSs, and reductions needed to meet state goals. The strategies identified are programmatic, and they would need to be refined and matched to local conditions in any subsequent project level environmental analysis. For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would reduce the impact to less than significant. However, the implementation of project-level VMT-reducing measures may not be feasible and cannot be guaranteed on a project-by-project basis.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<ul style="list-style-type: none"> ▪ Incentivize housing near commercial and offices ▪ Increase access to goods and services, such as groceries, schools, and daycare ▪ Incorporate neighborhood electric vehicle network ▪ Orient the project toward transit, bicycle, and pedestrian facilities ▪ Provide traffic calming ▪ Provide bicycle parking ▪ Limit parking ▪ Separate out parking costs ▪ Provide parking cash-out programs <p>T-2b Strategies to reduce VMT from planned transportation projects.</p> <p>Roadway capacity expansion projects shall include demand management and transportation systems management and operations (TSMO) including the implementation of complementary facilities that expand travel options for transit, rideshare, biking, and walking. Options could include, but are not limited to:</p> <ul style="list-style-type: none"> ▪ Tolling new lanes to encourage carpools and fund transit improvements ▪ Converting existing general-purpose lanes to HOV or HOT lanes ▪ Implementing Intelligent Transportation Systems strategies to improve passenger throughput on existing lanes 	<p>Additionally, it is unlikely that an increase in daily per capita VMT above existing conditions could be fully avoided in 2050, due to factors unrelated to discretionary approvals, such as population growth in the region. Therefore, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.</p>
<p>Cumulative – Transportation (VMT). Connected 2050, nonetheless, increases overall VMT and does not meet the VMT reduction threshold of 14.3 percent below regional baseline levels, as discussed above. This five percent increase in overall VMT, with an anticipated increase in VMT from surrounding regions from just population growth and new development, would lead to a cumulatively considerable increase in VMT.</p>	<p>Implement Mitigation Measures T-2(a) and T-2(b).</p>	<p>Land use development within the SBCAG region combined with the growth outside of its region could potentially contribute to a cumulatively considerable increase in VMT as a result of increased travel demand resulting from that combined growth. As a result, Connected 2050 could result in a cumulatively considerable increase in VMT. Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.</p>

Impact	Mitigation Measure (s)	Residual Impact
Tribal Cultural Resources		
<p>Impact TCR-1. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in Connected 2050 have the potential to impact tribal cultural resources. Although Mitigation Measure TCR-1 would reduce potential impacts to the extent feasible, Impacts would be significant and unavoidable.</p>	<p>TCR-1 Tribal Cultural Resources Impact Minimization Implementing agencies shall comply with AB 52, which requires formal tribal consultation. If the implementing agency, through consultation with identified tribes through the AB 52 process, determines that a project may cause a substantial adverse change to a tribal cultural resource, they shall implement mitigation measures identified in the consultation process required under PRC Section 21080.3.2, or shall implement the following measures where feasible to avoid or minimize the project-specific significant adverse impacts:</p> <ul style="list-style-type: none"> ▪ Avoidance and preservation of the resources in place, including, but not limited to: planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria. ▪ Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following: <ul style="list-style-type: none"> ▫ Protecting the cultural character and integrity of the resource ▫ Protecting the traditional use of the resource ▫ Protecting the confidentiality of the resource ▪ Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places. ▪ Native American monitoring by the appropriate tribe for all projects in areas identified as sensitive for potential tribal cultural resources and/or in the vicinity (within 100 feet) of known tribal cultural resources. ▪ If potential tribal cultural resources are encountered during ground-disturbing activities; work in the immediate area must halt and the appropriate tribal representative(s), the implementing agency, and an archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards for archaeology (National Park Service [NPS] 1983) shall be contacted immediately to evaluate the find and determine the proper course of action. 	<p>Mitigation Measure TCR-1 would require AB 52 compliance and would result in necessary mitigation being identified through tribal consultation to avoid impacts to tribal cultural resources. These measures would protect the resource’s character, traditional use and confidentiality. With such protection, implementation of the above measure would reduce impacts to tribal cultural resources to the extent feasible, however some project-specific impacts may be unavoidable. Therefore, this impact is significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.</p>

Impact	Mitigation Measure (s)	Residual Impact
<p>Cumulative - TCR. Connected 2050 would result in a cumulatively considerable increase in tribal cultural resource impacts.</p>	<p>Implement Mitigation Measure TCR-1.</p>	<p>The increase in growth in previously undisturbed areas contributes to regional impacts on tribal cultural resources. If there may be tribal cultural resources at the location of a project site, tribal consultation in accordance with AB 52 would occur to ensure protection of tribal cultural resources. However, tribal territory often crosses the boundaries of multiple jurisdictions within and outside of the SBCAG region, and there could be several minor impacts to tribal cultural resources that together would result in a significant cumulative impact. Therefore, the potential for cumulative impacts related to tribal cultural resources is significant and Connected 2050’s contribution would be cumulatively considerable. Mitigation Measure TCR-1 would reduce these impacts, but not to less-than-cumulatively-considerable levels.</p>
Wildfire		
<p>Impact WF-1. Connected 2050 includes projects within areas of moderate, high, and very high fire severity zones and near (within 2 miles of) SRAs that could expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Connected 2050 projects could also potentially ignite fires and therefore risk exacerbating the potential for loss or damage from wildfires. Impacts would remain significant and unavoidable.</p>	<p>WF-1(a) Wildfire Risk Reduction</p> <p>If an individual transportation or land use project included in Connected 2050 is located within or less than 2 miles from an SRA or very high fire hazard severity zones, the implementing agency shall require appropriate mitigation to reduce the risk. Examples of mitigation to reduce risk of loss, injury or death from wildlife include, but are not limited to:</p> <ul style="list-style-type: none"> ▪ Require the use of fire-resistant vegetation native to Santa Barbara County and/or the local microclimate of the project site and discourage the use of fire-prone species especially nonnative, invasive species. ▪ Require a fire safety plan be submitted to and approved by the local fire protection agency. The fire safety plan shall include all of the fire safety features incorporated into the project and the schedule for implementation of the features. The local fire protection agency may require changes to the plan or may reject the plan if it does not adequately address fire hazards associated with the project as a whole or the individual phase of the project. 	<p>With implementation of this mitigation, the risk of loss of structures and transportation infrastructure and the risk of injury or death due to wildfires would be reduced. These measures would make structures and transportation infrastructure more fire resistant and less vulnerable to loss in the event of a wildfire. These measures would also reduce the potential for construction of Connected 2050 projects to inadvertently ignite a wildfire. In addition, specific project impacts regarding wildfire risk would be addressed prior to project implementation during the planning and design process. However, it is not possible to prevent a significant risk of wildfires or fully protect people and structures from the risks of</p>

Impact	Mitigation Measure (s)	Residual Impact
	<ul style="list-style-type: none"> ▪ Prohibit certain project construction activities with potential to ignite wildfires during red-flag warnings issued by the National Weather Service for the project site location. Example activities that should be prohibited during red-flag warnings include welding and grinding outside of enclosed buildings. ▪ Require fire extinguishers to be onsite during construction of projects. Fire extinguishers shall be maintained to function according to manufacturer specifications. Construction personnel shall receive training on the proper methods of using a fire extinguisher. <p>WF-1(b) Fire Protection Plan</p> <p>Individual transportation or land use projects included in Connected 2050 shall prepare a Fire Protection Plan that meets SBCFD requirements. The plan shall contain (but not be limited to) the following provisions:</p> <ul style="list-style-type: none"> ▪ All construction equipment shall be equipped with appropriate spark arrestors and carry fire extinguishers. ▪ A fire watch with appropriate firefighting equipment shall be available at the Project site at all times when welding activities are taking place. Welding shall not occur when sustained winds exceed that set forth by the SBCFD unless a SBCFD-approved windshield is on site. ▪ A vegetation management plan shall be prepared to address vegetation clearance around all WTGs and a regularly scheduled brush clearance of vegetation on and adjacent to all access roads, power lines, and other facilities. ▪ Operational fire water tanks shall be installed prior to construction. ▪ Provisions for fire/emergency services access if roadway blockage occurs due to large loads during construction and operation ▪ Cleared, maintained parking areas shall be designated; no parking shall be allowed in non-designated areas. ▪ The need for and/or use of dedicated repeaters for emergency services. ▪ Appropriate Hot work permits (such as cutting and welding permits) shall be obtained from the jurisdictional fire agency. ▪ Compliance with California PRC 4291, 4442, and 4443. <p>WF-1(c) Smoking and Open Fires</p> <p>Smoking and open fires shall be prohibited at individual transportation or land use projects sites included in Connected 2050 during construction and operations. A</p>	<p>wildfires, despite implementation of mitigation WF-1. As well, potential impacts resulting from the aftermath of wildfires potentially exacerbated by Connected 2050 projects cannot be fully mitigated. Therefore, this impact would remain significant and unavoidable. No additional mitigation measures which are able to reduce this impact to less than significant levels are feasible.</p>

Impact	Mitigation Measure (s)	Residual Impact
	<p>copy of the notification to all contractors regarding prohibiting smoking and burning shall be provided to the County.</p> <p>WF-1(d) Red Flag Warning Individual transportation or land use projects included in Connected 2050 shall participate in the Red Flag Warning program with local fire agencies and the National Weather Service. The Applicant shall stop work during Red Flag conditions to reduce the risk of wildlife ignition.</p>	
<p>Cumulative - Wildfire. Connected 2050 would result in a cumulatively considerable increase in wildfire risk.</p>	<p>Implement Mitigation Measure WF-1(a) – WF-1(d).</p>	<p>Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.</p>

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1 Introduction

1.1 Statement of Purpose

This document is a Programmatic Environmental Impact Report (EIR) that identifies and describes potential environmental impacts associated with the Connected 2050: Santa Barbara Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) proposed by the Santa Barbara County Association of Governments (SBCAG). The Connected 2050 RTP/SCS (Connected 2050) is an update of Fast Forward 2040, which was adopted in 2017 through certification of a supplemental EIR.

This section of the EIR describes the following aspects of Connected 2050 and the: project background; purpose and legal authority; EIR background; lead, responsible, and trustee agencies; EIR scope, content, and format; and the environmental review process under the California Environmental Quality Act (CEQA).

1.2 Project Background

The original RTP was adopted by SBCAG in 1975. The most recent comprehensive update to the RTP/SCS occurred in 2013 and a comprehensive program EIR was prepared for the plan (2040 RTP/SCS). A supplemental EIR was then prepared to reflect minor updates to the plan in 2017 (Fast Forward 2040). The 2040 RTP/SCS programmed available transportation funding through the year 2040 and included lists of programmed and planned transportation projects to improve the transportation system during the 2010-2040 planning period. Among these listed projects were highway, road and street projects, pedestrian and bikeway projects, aviation projects, rail projects, and transit projects. As discussed in Chapter 6 of Connected 2050, a number of projects in Fast Forward 2040 have been completed. Most of those transportation projects yet to be completed from have been incorporated into Connected 2050, along with a few additional new projects.

1.3 Purpose and Legal Authority

Section 21000 of the California Public Resources Code, commonly referred to as CEQA, requires the evaluation of environmental impacts associated with all planning programs or development projects proposed. As such, this EIR is an informational document for use by SBCAG, other agencies, and the general public in their consideration and evaluation of the environmental consequences of implementing Connected 2050.

This document is a Program EIR. Section 15168(a) of the CEQA Guidelines states that:

“A Program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) geographically; (2) as logical parts in a chain of contemplated actions; (3) in connection with issuance of rules, regulations, plans, or other general criteria, to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.”

Section 15151 of the CEQA Guidelines provides the following standards related to the adequacy of an Environmental Impact Report:

“An Environmental Impact Report should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among experts. The courts have looked not for perfection; but for adequacy, completeness, and a good faith effort at full disclosure. “

Once a Program EIR has been prepared, subsequent activities under the program must be evaluated to determine what, if any, additional CEQA documentation needs to be prepared. If the Program EIR addresses the program’s effects as specifically and comprehensively as possible, many subsequent activities could be found to be in the Program EIR scope and additional environmental documents may not be required (CEQA Guidelines § 15168(c)). When a Program EIR is relied upon for a subsequent activity, the Lead Agency must incorporate feasible mitigation measures and alternatives developed in the Program EIR into the subsequent activities (CEQA Guidelines Section 15168(c)(3)). If a subsequent activity would have effects not addressed in the Program EIR, the Lead Agency must prepare a new Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or project-level EIR. In this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis.

1.4 Environmental Impact Report Background

In compliance with the *CEQA Guidelines* (Sections 15063 and 15082), SBCAG, as the Lead Agency responsible for Connected 2050, solicited preliminary public agency comments on the project through distribution of a Notice of Preparation (NOP) and receipt of public comments during a scoping meeting held virtually on January 5, 2021, from 12:00 p.m. to 1:00 p.m.

The NOP was distributed to affected agencies and the public for the required 30-day period from December 16, 2020 to January 15, 2021. Table 1-1 summarizes the issues relevant to the EIR that were identified in the NOP comments received (seven agencies/individuals) and the EIR sections where the issues are addressed. The NOP and NOP comments/letters received are included in Appendix A of this EIR.

Table 1-1 NOP Comments and EIR Response

Comment/Request	How and Where it was Addressed
County of Santa Barbara	
As a responsible agency for the project, the County requests analysis of the project pursuant to the requirements of the County's Environmental Assessment Guidelines as well as Appendix G of the CEQA Guidelines.	The EIR includes environmental analysis of the proposed project pursuant to the County's environmental assessment guidelines and Appendix G of the CEQA Guidelines. Please refer to Section 4.0, <i>Environmental Impact Analysis</i> .
The County requests discussion of the County's adopted vehicle miles traveled (VMT) thresholds of significance.	The EIR discusses the project's vehicle miles traveled impacts in accordance with the County's thresholds of significance. Please refer to Section 4.12, <i>Transportation</i> .
The County requests analysis of greenhouse emissions pursuant to potential amendments to the County's greenhouse emission thresholds, if adopted during the January 26, 2021 County of Board of Supervisors meeting.	Please refer to Section 4.8, <i>Greenhouse Gas Emissions and Climate Change</i> , of the EIR.
California Department of Fish and Wildlife	
CDFW requests the EIR maximize consideration for biological resources during subsequent project reviews and to ensure that these reviews are consistent with the Project's planning intent.	Please refer to Section 4.3, <i>Biological Resources</i> , of the EIR for a discussion of potential impacts addressed at a programmatic level, including any potential conflict with existing conditions, regulations, or requirements.
CDFW requests the EIR evaluate potential adverse impacts to mountain lions during and after project construction.	The EIR includes a discussion of potential project impacts related to mountain lions. Please refer to Section 4.3, <i>Biological Resources</i> , of the EIR
CDFW recommends that the Project proponent seek appropriate take authorization under the California Endangered Species Act (CESA) prior to implementing the Project. In addition, CDFW requests biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for a CESA Incidental Take Permit (ITP).	Please refer to Section 4.3, <i>Biological Resources</i> , of the EIR for a discussion of potential impacts and mitigation measures addressed at a programmatic level, including impacts related to CESA.
CDFW requests the EIR include a complete discussion of the purpose and need for, and description of, the proposed Project, including all staging areas and access routes to the construction and staging areas.	Please refer to Section 1.0, <i>Introduction</i> , and Section 2.0, <i>Project Description</i> , for the project description, including a discussion of project objectives.
CDFW requests the EIR include a range of feasible alternatives to project component location and design features to ensure that alternatives to the project are fully considered and evaluated. CDFW requests the alternatives should avoid or otherwise minimize direct and indirect impacts to sensitive biological resources and wildlife movement areas.	The EIR includes a discussion of potential project alternatives in Section 6.0, <i>Alternatives</i> . As this is a programmatic document, project specific components are not addressed but would be addressed in the required project specific CEQA documentation.
CDFW requests the EIR should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the Lake and Streambed Alteration (LSA) Agreement.	The EIR includes a discussion of potential impacts to wetland and riparian resources in Section 4.3, <i>Biological Resources</i> .
CDFW requests the EIR discuss project-related changes in drainage patterns, runoff, and sedimentation.	The EIR includes a discussion of drainage patterns, run off and sedimentation in Section 4.9, <i>Hydrology and Water Quality</i> .

Comment/Request	How and Where it was Addressed
<p>CDFW requests the EIR include an assortment of surveys, database searches, and literature reviews to provide a complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, sensitive, regionally and locally unique species, and sensitive habitats.</p>	<p>The EIR includes a discussion of the background documentation utilized for preparing the biological baseline conditions in Section 4.3, <i>Biological Resources</i>. This includes database searches and literature review.</p>
<p>CDFW requests the EIR provide a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.</p>	<p>The EIR includes a discussion of potential direct, indirect, and cumulative biological resource impacts in Section 4.3, <i>Biological Resources</i>.</p>
<p>CDFW requests the EIR include measures to avoid project impacts to nesting birds.</p>	<p>The EIR includes a discussion of potential impacts towards nesting birds in Section 4.3, <i>Biological Resources</i>.</p>
<p>CDFW requests that if a project requires species to be removed, disturbed, or otherwise handled, the EIR should clearly identify that the designated entity shall obtain all appropriate state and federal permits.</p>	<p>The EIR includes a discussion of necessary and applicable state and federal permits in Section 4.3, <i>Biological Resources</i>. As this is a programmatic document, project specific components are not known at this time.</p>
<p>California Coastal Commission</p>	
<p>The Coastal Commission requests that the EIR include an evaluation of the consistency of the RTP/SCS with the certified local coastal programs in SBCAG’s jurisdiction.</p>	<p>The EIR includes a discussion of the project’s consistency with certified local coastal programs in SBCAG’s jurisdiction. Please refer to individual environmental issues discussed throughout Section 4.0, <i>Environmental Impact Analysis</i>, including Section 4.10, <i>Land Use and Planning</i>.</p>
<p>The Coastal Commissions requests the RTP/SCS and EIR carefully evaluate the vulnerability of existing and proposed transportation infrastructure and housing/jobs investments to the effects of sea level rise and associated hazards.</p>	<p>The EIR discusses the project’s potential to result in climate change impacts. Please refer to Section 4.8, <i>Greenhouse Gas Emissions and Climate Change</i>.</p>
<p>The Coastal Commission requests the EIR evaluate the consistency of the RTP/SCS with Coastal Act Section 30252, in specific that new development should maintain and enhance public access through such actions as facilitating transit service, providing non-automobile options, and providing adequate parking.</p>	<p>The EIR includes a discussion of the project’s consistency with applicable plans, policies, and regulations in Section 4.10, <i>Land Use and Planning</i>, a discussion of alternative transportation in Section 4.12, <i>Transportation</i>, and a discussion of environmental impacts associated with recreational facilities in Section 4.15, <i>Effects Considered Less Than Significant</i>.</p>
<p>The Coastal Commission requests the EIR analyze the potential impacts to marine resources and Environmentally Sensitive Habitat Areas (ESHAs) and the consistency of proposed development with Coastal Act policies.</p>	<p>The EIR includes a discussion of the project’s potential impacts to biological resources, including marine species and ESHAs in Section 4.3, <i>Biological Resources</i>. The EIR includes a discussion of the project’s consistency with applicable plans, policies, and regulations in Section 4.10, <i>Land Use and Planning</i>,</p>
<p>The Coastal Commission requests the EIR describe and analyze the provision of transportation alternatives.</p>	<p>Section 2.0, <i>Project Description</i>, includes a description of the projects contained in the RTP/SCS, which include several alternative transportation projects. The environmental effects of these projects are discussed throughout Section 4 of the EIR.</p>

Comment/Request	How and Where it was Addressed
<p>The Coastal Commission requests the EIR analyze the consistency of the RTP/SCS with Coastal Act requirements related to reducing VMT and protecting air quality, as well as minimizing vehicle miles traveled and expanded passenger rail and alternative transportation options</p>	<p>The EIR includes a discussion of the project's air quality impacts in Section 4.2, <i>Air Quality</i>, and a discussion of VMT and alternative transportation methods in Section 4.12, <i>Transportation</i>.</p>
<p>The Coastal Commission requests the EIR analyze the extent to which proposed transportation, jobs and housing investments would be consistent with Coastal Act policies related to concentration of development.</p>	<p>The EIR includes a discussion of population, housing, and employment growth in the County in Section 4.15, <i>Effects Considered Less Than Significant</i>, and 5.0, <i>Other CEQA</i>.</p>
<p>The Coastal Commission requests the EIR analyze whether any bridges proposed in the RTP/SCS are consistent with the requirement that new bridges and roadways include guardrails designed to preserve visual resources, as well as other Coastal Act policies related to visual resource protection. In addition, the Coastal Commission requests the EIR analyze the consistency of proposed development with restrictions on State Scenic Highways and the Gaviota Coast Plan.</p>	<p>The EIR includes a discussion of the project's potential impact regarding scenic/visual resources and State Scenic Highways in Section 4.1, <i>Aesthetics</i>.</p>
<p>Santa Barbara County Trails Council (Trails Council)</p>	
<p>The Trails Council requests the EIR should include the potential adverse or beneficial impacts of all pending cumulative active transportation projects in the County. In addition, the Trails Council requests the EIR identify typical management measures (e.g., signs, fencing), to ensure that trails and agriculture and protection of cultural and biological resources are adequate.</p>	<p>The EIR addresses the potential environmental impacts, adverse and beneficial, of the planned and programmed projects included in Connected 2050. Specifically identified trail projects in the letter are addressed at a programmatic level if they are in the RTP list of projects. Alternatives and mitigation to address coastal and trail access are addressed to avoid or mitigate identified project impacts. Please refer to individual environmental issues discussed throughout Section 4.0, <i>Environmental Impact Analysis</i>, of the EIR, for a discussion of environmental impacts created by Connected 2050 trail projects, including Section 4.3, <i>Biological Resources</i>, and Section 4.4, <i>Cultural Resources</i>.</p>
<p>The Trails Council requests the EIR identify the beneficial impacts of increased active transportation on public health and well-being to address chronic health issues in Santa Barbara County.</p>	<p>The EIR includes a discussion of active transportation methods in Section 4.12, <i>Transportation</i>.</p>
<p>Native American Heritage Commission (NAHC)</p>	
<p>The NAHC states that the proposed project is subject to the requirements and provisions under Assembly Bill (AB 52) for tribal cultural resources. The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources.</p>	<p>The EIR includes a discussion of consultation efforts with tribes in the area and potential project impacts in Section 4.13, <i>Tribal Cultural Resources</i>.</p>
<p>Northern Chumash Tribal Council (NCTC)</p>	
<p>The NCTC states they support the local tribal governments recommendations for this proposed project.</p>	<p>The EIR includes a discussion of consultation efforts with tribes in the area and potential project impacts in Section 4.13, <i>Tribal Cultural Resources</i>.</p>

Comment/Request	How and Where it was Addressed
<p>Cars Are Basic (CAB)</p> <p>CAB requests the EIR analyze the environmental impacts from the promotion or support of high-density housing development and potential disproportionate impacts on minority populations, specifically the Hispanic population in Santa Barbara County.</p>	<p>The EIR includes a discussion of housing density and other population issues as they pertain to implementation of Connected 2050, in Section 4.15, <i>Effects Considered Less Than Significant</i>, and Section 5.0, <i>Other CEQA</i>. The EIR includes a discussion of disproportionate environmental impacts, as they pertain to environmental justice communities (including minority populations) in Section 4.6, <i>Environmental Justice</i>.</p>
<p>CAB requests the EIR analyze how high-density housing developments spread COVID-19 and should include a comparative analysis between low density housing and high-density housing virus infection rates and rate of virus spread. In addition, CAB requests the EIR analyze risk of COVID-19 infection for commuters of different demographics.</p>	<p>Public health effects related to infectious diseases such as COVID-19 are not specifically included on the environmental checklist in Appendix G of the CEQA Guidelines and public health effects are typically considered under CEQA only insofar as they relate to environmental impacts generated by the project that are the focus of CEQA (e.g. air pollutant emission increases or exposure, hazardous materials exposure risk due to the project, increased noise exposure) rather than exposure to infectious diseases.</p>
<p>CAB requests the EIR analyze the environmental and social justice impacts of Connected 2050 projects and policies. In addition, CAB requests the EIR analyze the environmental impacts from the promotion or support of the tourist and hospitality industry.</p>	<p>Please refer to Section 4.6, <i>Environmental Justice</i>, of the EIR, for a discussion of impacts of Connected 2050 on low-income populations, minority individuals and populations, and low mobility populations.</p>
<p>CAB requests the EIR analyze VMT impacts.</p>	<p>The EIR includes an assessment of VMT at a programmatic level per CEQA guidelines and available modeling data. This includes the evaluation of shifts in modes of transportation being utilized such as bicycle commuting, transit and rail use. Please refer to Section 4.12, <i>Transportation</i>, of the EIR.</p>
<p>CAB requests the EIR analyze alternatives to Connected 2050 projects and policies that provide greater environmental protections and environmental justice when compared to Connected 2050 projects and policies.</p>	<p>The EIR includes a discussion of environmental justice in Section 4.6, <i>Environmental Justice</i>, and a discussion of alternatives to reduce VMT and other impacts are evaluated in Section 6.0, <i>Alternatives</i>. Only alternatives that are determined feasible and have the potential to reduce an identified impact or impacts are evaluated per CEQA guidelines. Alternatives considered and rejected as to not be reasonable or feasible are also discussed.</p>

1.5 Lead, Responsible, and Trustee Agencies

The *CEQA Guidelines* require the identification of “lead,” “responsible,” and “trustee” agencies. SBCAG is the “lead agency” for the proposed project because it has the principal responsibility for approving the project.

A “responsible agency” is a public agency other than the “lead agency” that has discretionary approval authority over certain components of a project (the *State CEQA Guidelines* define a public agency as a State or local agency, but specifically exclude federal agencies from the definition). A “trustee agency” refers to a State agency having jurisdiction by law over natural resources affected by a project which are held in trust for the people of the State of California (for example, the California Department of Fish and Wildlife).

1.6 EIR Scope, Content, and Format

This document includes discussions of environmental impacts related to several issue areas. The analysis of environmental impacts identifies impacts by category: significant and unavoidable (Class I), less than significant with mitigation incorporated (Class II), less than significant (Class III), and beneficial (Class IV). It proposes mitigation measures, where feasible, for identified significant environmental impacts. Environmental topic areas that are addressed in this EIR include:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Environmental Justice
- Geology and Soils
- Greenhouse Gas Emissions/Climate Change
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Transportation and Circulation
- Tribal Cultural Resources
- Wildfire

This EIR has been organized into seven sections, which include:

1. **Introduction.** Provides the statement of purpose, project background, and information about the EIR content and format.
2. **Project Description.** Identifies the project applicant, presents and discusses the project objectives, project locations and specific project characteristics.
3. **Environmental Setting.** Provides a description of the existing physical setting of the SBCAG region, an overview of the progress in implementing Connected 2050, a description of the regional transportation system, and discusses the EIR baseline and approach to direct and cumulative analyses.
4. **Analysis of Environmental Issues.** Describes existing conditions found in the project area and assesses potential environmental impacts that may be generated by implementing the proposed project and cumulative development in Santa Barbara County. These potential project impacts are compared to “thresholds of significance” in order to determine the nature and severity of the direct and indirect impacts. Mitigation measures, intended to reduce adverse, significant impacts below threshold levels, are proposed where feasible. Impacts that cannot be eliminated or mitigated to less-than-significant levels are also identified.

5. **Other CEQA-Required Discussions.** Identifies the spatial, economic, or population growth impacts that may result from implementation of the proposed project, as well as long-term effects of the project and significant irreversible environmental changes.
6. **Alternatives.** Presents and assesses the potential environmental impacts of 3 alternatives (including one no project) analyzed in addition to implementation of Connected 2050.
7. **References/Preparers.** Lists all published materials, federal, State, and local agencies, and other organizations and individuals consulted during the preparation of this EIR. It also lists the EIR preparers.

1.7 Environmental Review Process

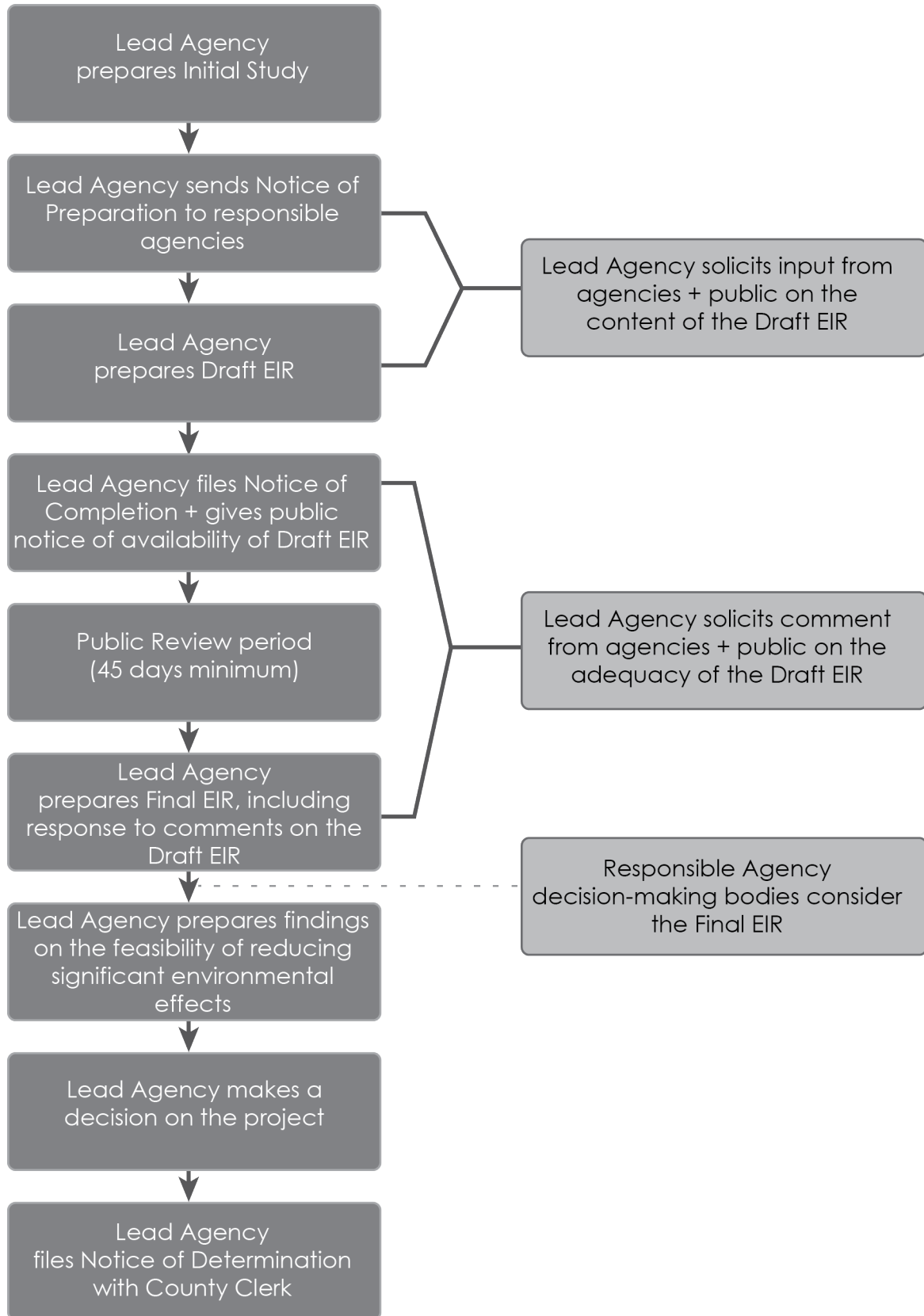
The environmental impact review process, as required under CEQA, is summarized below and similarly illustrated in Figure 1-1. The steps are presented in sequential order.

1. **Notice of Preparation (NOP).** After deciding that an EIR is required, the lead agency (SBCAG) must file a NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (*CEQA Guidelines* Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the County Clerk's office for 30 days. SBCAG filed the NOP with the County Clerk's office on January 15, 2021.
2. **Draft EIR Prepared.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) a discussion of alternatives; g) mitigation measures; and h) discussion of irreversible changes.
3. **Notice of Completion (NOC).** The lead agency must file a NOC with the State Clearinghouse when it completes a Draft EIR and prepare a Public Notice of Availability of a Draft EIR. The lead agency must place the NOC in the County Clerk's office for 30 days (Public Resources Code Section 21092) and send a copy of the NOC to anyone requesting it (*CEQA Guidelines* Section 15087). Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must solicit input from other agencies and the public and respond in writing to all comments received (Public Resources Code Sections 21104 and 21153). The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days unless the State Clearinghouse approves a shorter period (Public Resources Code 21091).
4. **Final EIR.** A Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.
5. **Certification of Final EIR.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project; d) the Final EIR reflects the lead agency's independent judgement and analysis (*CEQA Guidelines* Section 15090).
6. **Lead Agency Project Decision.** The lead agency may a) disapprove the project because of its significant environmental effects; b) require changes to the project to reduce or avoid significant environmental effects; or c) approve the project despite its significant environmental

effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).

7. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (*CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.
8. **Mitigation Monitoring Reporting Program.** When the lead agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
9. **Notice of Determination (NOD).** The lead agency must file a NOD after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). A local agency must file the NOD with the County Clerk. The NOD must be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD starts a 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

Figure 1-1 Environmental Review Process



2 Project Description

This section describes the proposed project (Connected 2050), including the project applicant, the project site and surrounding land uses, major project characteristics, project objectives, and discretionary actions needed for approval.

2.1 Lead Agency

Santa Barbara County Association of Governments
(Regional Transportation Planning Agency or RTPA and Metropolitan Planning Organization or MPO)
260 North San Antonio Road, Suite B
Santa Barbara, California 93110

Contact: Jared Carvalho, Transportation Planner II

2.2 Project Objectives

General Legislative Requirements

The Santa Barbara County Association of Governments (SBCAG), as both the federally-designated metropolitan planning organization (MPO) and the State-designated regional transportation planning agency (RTPA) for Santa Barbara County, is required by both federal and State law to prepare a long-range (at least 20-year) transportation planning document known as a Regional Transportation Plan (RTP). The RTP is an action-oriented document used to achieve a coordinated and balanced regional transportation system.

SBCAG also has the responsibility to prepare a Sustainable Communities Strategy (SCS) as part of the RTP, pursuant to the requirements of the Sustainable Communities and Climate Protection Act (Senate Bill [SB] 375) as adopted in 2008 (discussed further below). The SCS sets forth a forecasted development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, is intended to reduce greenhouse gas (GHG) emissions from passenger vehicles and light trucks to achieve the regional GHG reduction targets set by the California Air Resources Board (CARB).

The California Transportation Commission's (CTC) document *2017 California Regional Transportation Plan Guidelines* serves as the guidance for RTP development. Under both federal and State law, an MPO must update its RTP every five years, however, SBCAG has chosen to update every four years.¹

Sustainable Communities & Climate Protection Act Requirements (SB 375) Requirements

The Sustainable Communities and Climate Protection Act, also known as SB 375 (codified at California Government Code §§ 14522.1, 14522.2, 65080.01, 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588; Public Resources Code §§2161.3, 21155, 21159.28), is a law passed in 2008 by the California legislature that requires each MPO to demonstrate, through the

¹ 23 C.F.R. §450.322(c); Gov. Code §65080(d).

development of an SCS, how its region will integrate transportation, housing, and land use planning to meet the greenhouse gas (GHG) reduction targets set by the State. In addition to creating requirements for MPOs, it also creates requirements for the CTC and CARB. Some of the requirements include the following:

- The CTC must maintain guidelines for the travel demand models that MPOs develop for use in the preparation of their RTPs;
- CARB must develop regional GHG emission reduction targets for automobiles and light trucks for 2020 and 2035 by September 30, 2010 (completed);
- Each MPO must prepare an SCS as part of its RTP to demonstrate how it will meet the regional GHG targets. If an SCS cannot achieve the regional GHG target, the MPO must prepare an Alternative Planning Strategy (APS) showing how it would achieve the targets with alternative development patterns, infrastructure, or transportation measures and policies;
- Each MPO must adopt a public participation plan for development of the SCS that includes informational meetings, workshops, public hearings, consultation, and other outreach efforts (completed);
- Each MPO must prepare and circulate a draft SCS at least 55 days before it adopts a final RTP;
- After adoption, each MPO must submit its SCS to CARB for review; and
- CARB must review each SCS to determine whether, if implemented, it would meet the GHG targets. CARB must complete its review within 60 days.

CARB set targets for the SBCAG region to maintain or reduce greenhouse gas emissions in 2020 and in 2035. These targets apply to the SBCAG region as a whole for all on-road light-duty trucks and passenger vehicles emissions, and not to individual cities or sub-regions. In 2005, GHG emissions from passenger vehicles in the SBCAG region were approximately 18.4 pounds of carbon dioxide equivalent (CO₂e) per capita. CARB set new GHG emission reduction targets for regions statewide in October 2017. The SBCAG GHG emission reduction targets are 13 percent by 2020 and 17 percent by 2035. Emissions modeling for the RTP/SCS incorporates a base year of 2005 for SB 375 GHG emission reduction targets. Connected 2050 includes the years for which the regional targets are required (base year, 2020, and 2035) and the RTP includes additional scenario years (2030 and 2050) to comply with federal law. In addition, the RTP includes estimates of CO₂ per capita for each of the scenario years. As discussed in Section 4.8, *Greenhouse Gas Emissions*, SBCAG has modeled GHG emissions for 2020 for illustrative purposes, though no aspect of Connected 2050 can influence the achievement or lack of achievement of target year 2020 GHG emissions.

SB 375 specifically states that local governments retain their autonomy to plan local General Plan policies and land uses. Connected 2050 provides a regional policy foundation that local governments may build upon, if they so choose. Connected 2050 includes and accommodates the quantitative growth projections for the region. SB 375 also requires that the RTP's forecasted development pattern for the region be consistent with the eight-year regional housing needs as allocated to member jurisdictions through the Regional Housing Needs Allocation (RHNA) process under state housing law. RHNA, itself, is statutorily exempt from CEQA.

In addition, this EIR lays the groundwork for the streamlined review of qualifying development projects within Transit Priority Areas.² Qualifying projects that meet statutory criteria and are

² A Transit Priority Area is an area within ½-mile of high-quality transit: a rail stop or a bus corridor that provides or will provide at least 15-minute frequency service during peak hours by the year 2035.

consistent with Connected 2050 are eligible for streamlined environmental review pursuant to CEQA under SB 375 and other laws.

Fixing America's Surface Transportation Act (FAST Act)

The most recent federal transportation legislation, Fixing America's Surface Transportation (FAST) Act builds on the changes made by MAP-21, and was enacted in 2015. The Moving Ahead for Progress in the 21st Century Act (MAP-21), enacted in 2012, made a number of reforms to the metropolitan and statewide transportation planning processes, including incorporating performance goals, measures, and targets into the process of identifying needed transportation improvements and project selection. The FAST Act includes provisions to support and enhance these reforms. Public involvement remains a hallmark of the planning process.

The FAST Act continues requirements for a long-range plan and a short-term transportation improvement program (TIP), with the long-range statewide and metropolitan plans now required to include facilities that support intercity transportation, including intercity buses. The statewide and metropolitan long-range plans must describe the performance measures and targets that states and MPOs use in assessing system performance and progress in achieving the performance targets. Additionally, the FAST Act requires the planning process to consider projects/strategies to improve the resilience and reliability of the transportation system, address stormwater mitigation, and enhance travel and tourism.

Finally, in an effort to engage all sectors and users of the transportation network, the FAST Act requires that the planning process include public ports and private transportation providers, and further encourages MPOs to consult during this process with officials of other types of planning activities, including tourism and natural disaster risk reduction. MAP-21 and the FAST Act also change criteria for MPO officials to provide transit provider representatives with equal authority and allow the representative to also serve as the representative of a local municipality.

Through the RTP development process, the FAST Act encourages SBCAG to:

- Consult with officials responsible for other types of planning activities that are affected by transportation in the area (including State and local planned growth, economic development, environmental protection, airport operations, and freight movements) or to coordinate its planning process, to the maximum extent practicable, with such planning activities.³

Specifically, the FAST Act requires that the RTP planning process:

Provide for consideration of projects and strategies that will:

- a) Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- b) Increase the safety of the transportation system for motorized and non-motorized users;
- c) Increase the security of the transportation system for motorized and non-motorized users;
- d) Increase the accessibility and mobility of people and for freight;
- e) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;

³ 23 U.S.C. §134(g)(3)(A).

- f) Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- g) Promote efficient system management and operation;
- h) Emphasize the preservation of the existing transportation system.
- i) Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation; and
- j) Enhance travel and tourism. ⁴

Planning Final Rule – FAST Act

On May 27, 2016, the Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning Final Rule was issued, with an effective date of June 27, 2016, for Title 23 CFR Parts 450 and 771 and Title 49 CFR Part 613. This final rule states, “On or after May 27, 2018, an RTPA may not adopt an RTP that has not been developed according to the provisions of MAP-21/FAST Act as specified in the Planning Final Rule.” This rule applies to Connected 2050.

Environmental Justice

SBCAG is required to address social equity and environmental justice in the RTP. The legal basis for environmental justice stems from the Civil Rights Act of 1964, along with Executive Order 12898 (February 1994), which states that “each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.” SBCAG must evaluate how Connected 2050 might impact minority and low-income populations and must ensure that Connected 2050 does not have a disproportionate adverse impact on such populations.

In addition, per 23 C.F.R. Section 450.316(a)(1)(vii), the participation plan that SBCAG must develop and use must describe explicit procedures, strategies, and desired outcomes for “[s]eeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services.”

Regional Transportation Plans

As noted, the procedures for developing RTPs are provided in the CTC’s Regional Transportation Plan Guidelines (2017). The guidelines identify the purpose of an RTP to be as follows:

- Providing an assessment of the current modes of transportation and the potential of new travel options within the region;
- Projecting/estimating the future needs for travel and goods movement;
- Identification and documentation of specific actions necessary to address regional mobility and accessibility needs;
- Identification of guidance and documentation of public policy decisions by local, regional, state and federal officials regarding transportation expenditures and financing and future growth patterns;

⁴ 23 U.S.C. §134(h)(1).

- Identification of needed transportation improvements, in sufficient detail, to serve as a foundation for the: (a) Development of the Federal Transportation Improvement Program (FTIP), and the State Transportation Improvement Program (STIP), (b) Facilitation of the National Environmental Policy Act (NEPA)/404 integration process, and (c) Identification of project purpose and need;
- Employing performance measures that demonstrate the effectiveness of the system of transportation improvement projects in meeting the intended goals;
- Promotion of consistency between the CTP, the regional transportation plan and other plans developed by cities, counties, districts, California Tribal Governments, and state and federal agencies in responding to statewide and interregional transportation issues and needs;
- Providing a forum for: (1) participation and cooperation and (2) facilitation of partnerships that reconcile transportation issues which transcend regional boundaries; and
- Involving community-based organizations as part of the public, Federal, State and local agencies, California Tribal Governments, as well as local elected officials, early in the transportation planning process so as to include them in discussions and decisions on the social, economic, air quality and environmental issues related to transportation.

RTPs must include long-term horizons (at least 20 years) that reflect regional needs, identify regional transportation issues/problems, and develop and evaluate solutions that incorporate all modes of travel. RTPs must also recommend a comprehensive approach that provides direction for programming decisions to meet the identified regional transportation needs. RTPs must also be fully consistent with the requirements of the FAST Act and other federal regulations, including conformity with the 1990 Clean Air Act Amendments and consistency with the Federal Transportation Improvement Program (FTIP).

In addition, Government Code §§ 65050, 65400, 65584.01-04, 65587, 65588 and Public Resources Code §21155 were amended in January 2009 when SB 375 became law, requiring coordinated planning between regional land use and transportation plans to increase efficiency and reduce GHG emissions.

Local Goals and Objectives

The RTP/SCS establishes planning goals and objectives to guide the development of the plan and establish the guiding principles for decision-making. Regional projects and programs are developed, funded, and implemented based on these goals. For each of the five goals there is a subset of objectives that describe what needs to be accomplished to reach the goals. Each goal area also includes performance measures to assess progress towards accomplishing goals and objectives. The plan goals and the associated objectives are described below:

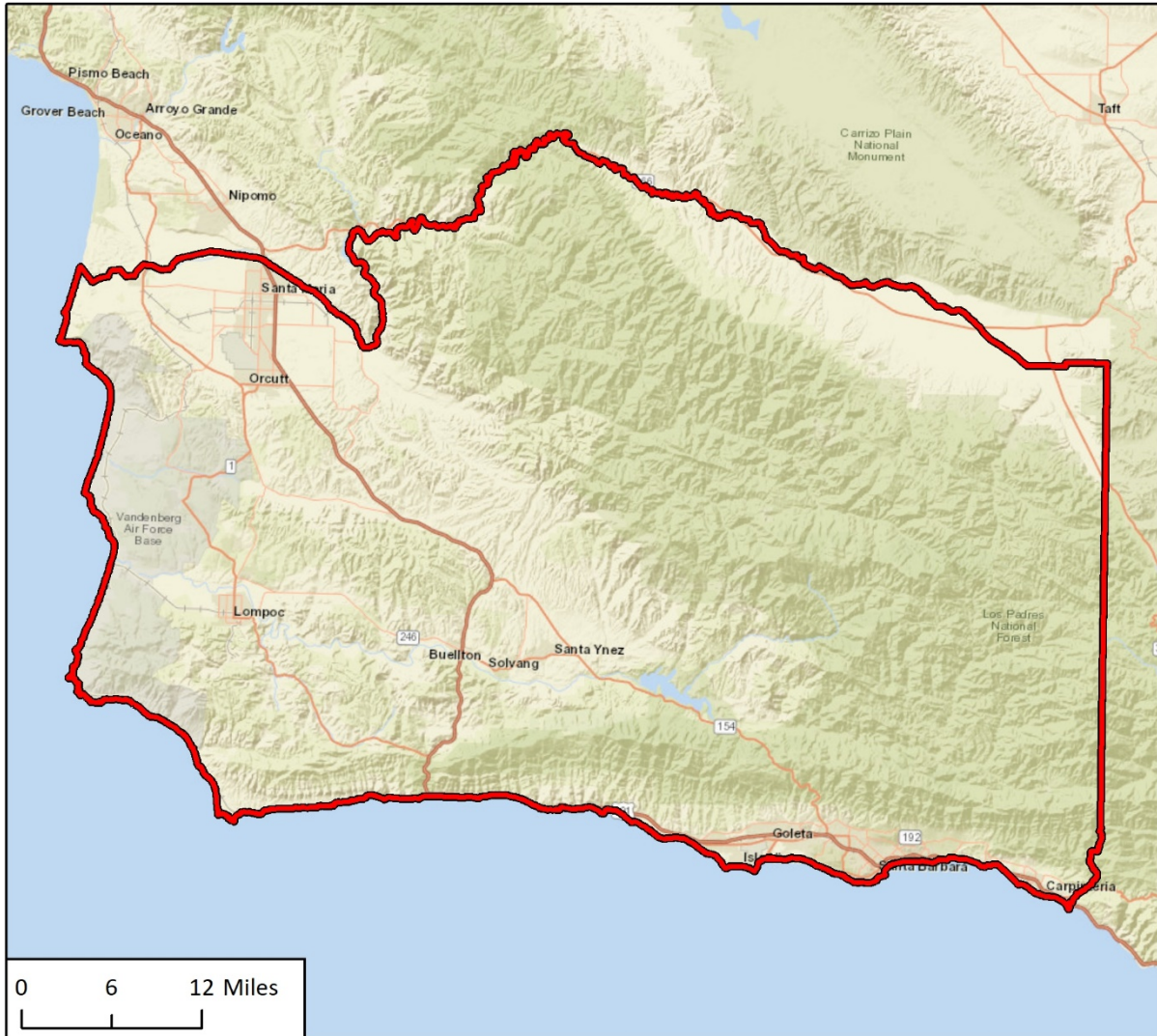
1. **Environment.** Foster patterns of growth, development and transportation that protect natural resources and lead to a healthy environment.
 - Reduce GHG emissions in compliance with CARB regional targets
 - Reduce criteria pollutant emissions
 - Encourage affordable and workforce housing and mixed-use development within urban boundaries
 - Promote transit use and alternative transportation

- Reduce vehicle miles traveled
 - Preserve open space, agricultural land, and sensitive biological resources
2. **Mobility & System Reliability.** Ensure the reliability of travel by all modes.
- Manage congestion at acceptable levels
 - Increase bike, walk, and transit mode share
 - Employ best available transportation system management technologies
 - Work cooperatively with schools and school districts to reduce congestion surrounding schools
3. **Equity.** Ensure that the transportation and housing needs of all socio-economic groups are adequately served.
- Comply with California Department of Housing and Community Development (HCD)/Regional Housing Needs Assessment
 - Support the development of affordable and workforce housing near jobs and educational institutions
 - Support State and federal goals for reducing the frequency and severity of collisions
4. **Health & Safety.** Improve public health and ensure the safety of the regional transportation system.
- Increase public outreach and education
 - Optimize network performance to reduce time lost to commuting
5. **A Prosperous Economy.** Achieve economically efficient transportation patterns and promote regional prosperity and economic growth.
- Encourage measures that bring worker housing closer to job sites
 - Promote a mix of land uses responsive to the needs of businesses, including agriculture and tourism

2.3 Project Location

As discussed in detail in Section 3.0, *Environmental Setting*, Connected 2050 covers the entire area of Santa Barbara County and includes the cities of Santa Barbara, Carpinteria, Goleta, Lompoc, Buellton, Santa Maria, Solvang, and Guadalupe, as well as unincorporated communities in the county (Figure 2-1). As shown in Figure 2-2, the SBCAG region contains four subareas/regions: Santa Maria Valley, Lompoc Valley, Santa Ynez, and South County. Capital improvement transportation projects, identified in Connected 2050, are located on State highways, County roads, and locally owned streets, as well as on transit district property and public utility lands. These projects are shown in Figure 2-7 through Figure 2-10 and described and listed in Table 2-1.

Figure 2-1 SBCAG Regional Location

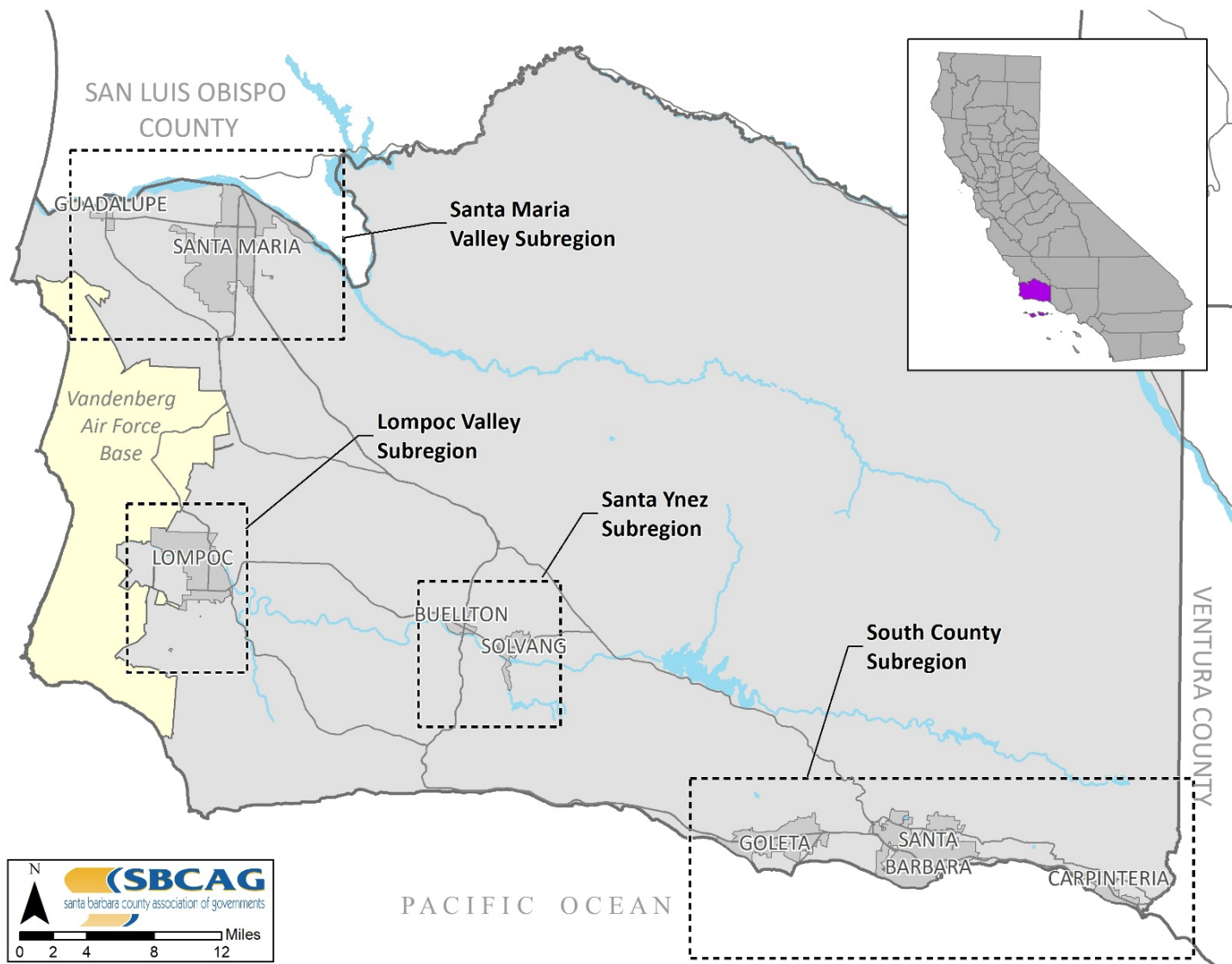


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Fig 2-1 Regional Location

Figure 2-2 SBCAG Subregions



2.4 Project Characteristics

The original RTP was adopted by SBCAG in 1975 and the latest RTP/SCS was adopted in 2013 and updated in 2017. Connected 2050 reflects changes in legislative requirements, local land use policies, and resource constraints.

The RTP/SCS plans how the Santa Barbara County region will meet its transportation needs for the 30-year period from 2020 to 2050, considering existing and projected future land use patterns as well as forecast population and job growth. The RTP/SCS plans for and programs the approximately \$11.3 billion in revenues expected to be available to the region from all transportation funding sources over the course of the planning period. It identifies and prioritizes expenditures of this anticipated funding for transportation projects of all transportation modes: highways, streets and roads, transit, rail, bicycle and pedestrian, as well as transportation demand management measures and intelligent transportation systems.

The RTP/SCS is based on a preferred land use and transportation scenario which lays out a pattern of future growth and transportation system investment for the region emphasizing a transit-oriented development and an urban infill approach to land use and housing, located near existing high quality transportation corridors. Accordingly, population and employment growth is allocated principally within existing urban areas near public transit. Allocation of future growth directly addresses jobs-housing balance issues by emphasizing job growth and economic opportunity in the North County and housing growth in the South County.

The preferred scenario consists of three core, inter-related components:

1. A land use plan, including residential densities and building intensities sufficient to accommodate projected population, household and employment growth;
2. A multi-modal transportation network to serve the region's transportation needs; and
3. A "regional greenprint" cataloguing open space, habitat, and farmland as constraints to urban development.

The plan identifies transportation system needs consistent with the preferred scenario and includes comprehensive lists of programmed and planned transportation investments that are intended to meet performance goals for mobility, safety, congestion relief, system preservation and environmental protection. In addition to its other components, the preferred scenario also includes an enhanced transit strategy that creates a framework for future transit service expansion at such time as new revenue sources become available. Recognizing the uncertain nature of future new revenue sources, it takes a targeted, balanced and flexible approach to expanding transit service as needed in the future. The enhanced transit strategy commits to transit service expansion as new revenue sources become available, (1) identifying when transit enhancements are actually needed through quantitative triggers, and (2) protecting existing funding for competing local demands, such as street and road maintenance. The enhanced transit strategy is a strategy for the future. It does not change the list of fiscally constrained, programmed and planned transportation projects.

The plan is organized into six chapters:

1. **Executive Summary.** Includes an overview of Connected 2050, the preferred scenario and its performance, an explanation of the planning process, and the allocation of transportation funding.

2. **A Vision for the Region: Connecting Communities.** Discusses legal authority, the overall purpose of Connected 2050, and transportation-related issues and challenges faced by the region. In addition, describes existing transportation infrastructure and needs for all modes of transportation. This chapter discusses the goals, objectives, and policies guiding Connected 2050, as well as the performance measures used to gauge its performance.
3. **Sustainable Communities Strategy (SCS).** Describes the alternative scenarios studied, existing land uses, forecast population growth, housing needs, economic and employment conditions, greenhouse gas emissions, and details the preferred scenario and its performance.
4. **Social Equity – Title VI and Environmental Justice.** Identifies communities of minority and low-income populations to ensure these communities are not negatively impacted by future transportation projects and provide benefits to all socioeconomic groups.
5. **Financial Element.** Describes how Connected 2050 allocates and applies existing and new sources of revenue, and fiscal constraints.
6. **Action Element.** Describes programmed and planned transportation projects, the enhanced transit strategy, and illustrative projects.

Of these six chapters of Connected 2050, the Sustainable Communities Strategy, Policy Element, and the Action Element (Chapters 2, 3, and 6) are the three that include provisions with the potential to create physical changes to the environment and are the primary focus for analysis in this EIR. These chapters are described in more detail below.

Chapter 2 – A Vision for the Region (Policy Element)

In Connected 2050, as they were in the 2040 RTP/SCS and Fast Forward 2040, policies have been organized around five major plan goals, including Environment, Mobility and System Reliability, Equity, Health and Safety, and Prosperous Economy. The emphasis of these policies is on a programmatic and performance-oriented goal and policy framework for Connected 2050. Hard copies of Connected 2050 can be found at the offices of SBCAG or an electronic copy at this link: <http://www.sbcag.org/rtp.html>.

Goal 1 Environment

Foster patterns of growth, development and transportation that protect natural resources and lead to a healthy environment.

Policy 1.1 Land Use

The planning, construction, and operation of transportation facilities shall be coordinated with local land use planning and should encourage local agencies to:

- Make land use decisions that adequately address regional transportation issues and are consistent with the RTP/SCS.
- Promote better balance of jobs and housing to reduce long-distance commuting by means of traditional land use zoning, infill development, and other, unconventional land use tools, such as employer-sponsored housing programs, economic development programs, commercial growth management ordinances, average unit size ordinances and parking pricing policies.
- Plan for transit-oriented development consistent with the RTP/SCS by:
 - Concentrating residences and commercial centers in urban areas near rail stations, transit centers and along transit development corridors.

- Designing and building “complete streets” serving all transportation modes that connect high-usage origins and destinations.
- Preserve open space, agricultural land and sensitive biological areas.
- Identify, minimize and mitigate adverse environmental impacts and, in particular, require mitigation of traffic impacts of new land development through on-site and related off-site improvements for all modes of transportation, including incentives to encourage the use of alternative transportation modes.

Policy 1.2 Air Quality

Transportation planning and projects shall be designed to:

- Lead to reductions in greenhouse gas and criteria pollutant emissions, consistent with the air quality goals of the region, including targets for greenhouse gas emissions from passenger vehicles in 2020 and 2035 as required by Senate Bill 375 (SB 375).
- Be in conformity with the Air Pollution Control District Clean Air Plan and the State Implementation Plan (SIP) and meet the National Ambient Air Quality Standards as required by the federal Clean Air Act.

Policy 1.3 Alternative Fuels and Energy

Transportation planning and projects shall:

- Encourage the use of alternative fuels, and the application of advanced transportation and energy technologies to reduce vehicular emission production and energy consumption.
- Promote renewable energy and energy conservation, consistent with applicable federal, State, and local energy programs, goals, and objectives.

Policy 1.4 Aesthetics and Community Character

Transportation planning and projects shall:

- Consider aesthetics and preserve and enhance historic and local community character.
- Preserve and maintain the historic character of existing highway structures and mature plant material unless demonstrated to be infeasible.

Policy 1.5 Regional Greenprint

SBCAG shall pursue development of a coordinated regional approach to mitigate impacts from transportation projects on sensitive biological areas, in collaboration with local governments and federal and State agencies. This approach may include designation of priority conservation areas within the region where mitigation should be targeted.

Goal 2 Mobility and System Reliability

Ensure the reliability of travel by all modes.

Policy 2.1 Access, Circulation and Congestion

The planning, construction, and operation of transportation facilities shall strive to:

- Enhance access, circulation, and mobility throughout the Santa Barbara region and between neighboring regions.
- Reduce congestion, especially on highways and arterials and in neighborhoods surrounding schools in cooperation with schools and school districts.
- Reduce travel times for all transportation modes, with equal or better travel times for transit and rail in key corridors.

Policy 2.2 System Maintenance, Expansion and Efficiency

Transportation planning and projects shall:

- Promote the maintenance and enhancement of the existing highway and roadway system as a high priority.
- Strive to increase the operational efficiency of vehicle usage through appropriate operational improvements (e.g., signal timing, left turn lane channelization, and ramp metering).
- Preserve existing investments in the system by emphasizing life cycle cost principles in investment decisions (i.e., account for capital and annual maintenance costs) in order to reduce overall costs of transportation facilities.
- Promote transportation demand management (TDM), e.g., through appropriate commute incentive programs, to reduce demand and improve efficiency.
- Increase the capacity of the existing highway and roadway system through the provision of additional traffic lanes only when (1) an existing facility is projected in the near term to no longer provide an acceptable level of service as determined by the standards established in the Congestion Management Plan (CMP), and (2) alternative means of capacity enhancement and measures to increase efficiency of usage have been explored.

Policy 2.3 Alternative Transportation Modes

Transportation planning and projects shall:

- Encourage alternatives to single-occupancy vehicle trips and the use alternative transportation modes to reduce vehicle miles traveled and increase bike, walk and transit mode share.
- Provide for a variety of transportation modes and ensure connectivity within and between transportation modes both within and outside the Santa Barbara region. Alternative mode planning and projects shall be compatible with neighboring regions' transportation systems.
- Plan and provide for ancillary support facilities for alternative transportation, such as bicycle parking.
- Promote inter-regional commuter transit and rail service.
- Promote local and inter-city transit.
- Work to complete the California Coastal Trail through provision and implementation of trail segments and connections in coordination with the California State Coastal Conservancy, California Department of Parks and Recreation, California Coastal Commission, Caltrans, and other agencies.

Policy 2.4 Freight and Goods Movement

Transportation planning and projects shall facilitate secure and efficient movement of goods and freight in a manner consistent with the general mobility needs of the region by:

- Making efficient use of existing transportation system.
- Identifying and constructing projects to improve freight movement, including rail and highway projects and projects to improve ground access to airports and rail terminals in the region.
- Regularly collecting and updating information on freight and goods movement and facility needs.
- Addressing freight and goods movement facility improvement needs as a high priority, including needs identified in the Central Coast Coalition Commercial Flows Study, with special focus on the critical US 101 corridor.
- Considering freight and goods movement in the design and planning of all projects.
- Planning for intermodal connectivity (airport, rail, and highway) in freight and goods movement.

Policy 2.5 Transportation System Management Technologies

Transportation planning and projects shall:

- In concert with the California Department of Transportation (Caltrans), the California Highway Patrol, and local public transit and public works agencies, encourage the deployment and use of the best available transportation system management (TSM) and Intelligent Transportation System (ITS) technologies to make travel reliable and convenient, increase transportation system efficiency, and reduce travel demand through the implementation of system and demand management strategies.
- Promote a jointly maintained and enhanced regional ITS architecture consistent with the Central Coast ITS Strategic Deployment Plan.

Policy 2.6 Consistency with Other Plans

The planning, construction, and operation of transportation facilities shall be consistent with relevant plans, including, but not limited to: (1) the California Transportation Plan, (2) SBCAG's Transportation Connections: The Public Transit Human Services Transportation Plan for Santa Barbara County, (3) adopted local General Plans, (4) short-range transit plans, and (5) other regional policies.

Goal 3 Equity

Ensure that the transportation and housing needs of all socio-economic groups are adequately served.

Policy 3.1 Access

The planning, construction, and operation of transportation facilities and of the system as a whole shall:

- Encourage safe and convenient travel for all transportation system users, including the disabled, pedestrians, bicyclists, transit riders, and other vehicles.
- Ensure that the transportation needs of all groups, in particular disadvantaged, low-income, and minority groups, are adequately served and that all groups have equal access to transportation facilities and services.
- Give special attention to the needs of elderly and disabled individuals for improved transportation accessibility and removal of physical barriers, including provisions required under the 1990 Americans with Disabilities Act (ADA).

Policy 3.2 Affordable Housing

SBCAG shall encourage local agencies to:

- Address and plan for forecast regional housing needs for all economic segments of the population.
- Plan for adequate affordable and workforce housing within existing urbanized areas near jobs and public transit.
- Consider transit availability and accessibility as an integral element of land use planning and project permitting, with special emphasis on serving the disabled, elderly, and other transit-dependent communities.
- Recognize that housing provided by colleges and universities is an important component in addressing the region's overall housing needs, which should be taken into account in local agencies' own housing planning.

Policy 3.3 Environmental Justice

The planning process shall be consistent with Title VI of the Civil Rights Act of 1964, SBCAG's 2015 Public Participation Plan, and SBCAG's SB 375 Public Participation Plan (2019).

Goal 4 Health and Safety

Improve public health and ensure the safety of the regional transportation system.

Policy 4.1 Safe Roads and Highways

The planning, construction, and operation of transportation facilities and of the system as a whole shall:

- Enhance safety of all facilities.
- Ensure design of highways and roads safe and convenient for travel by all users including the disabled, pedestrians, bicyclists, transit buses, and vehicles.
- Incorporate night sky-friendly lighting, where appropriate, to enhance safety of transportation facilities.
- Encourage the completion of emergency preparedness plans, which include agency coordination, system security, and safe and efficient mobility—particularly for the elderly and disabled—in times of natural or man-made disasters.
- Maintain consistency with the State Strategic Highway Safety Plan (SHSP).
- Address the resiliency of new projects to possible future impacts resulting from climate change (e.g., sea level rise and inundation of low-lying areas).

Policy 4.2 Public Health

The RTP/SCS shall promote integrated transportation and land use planning that encourages:

- Active transportation (transit, biking and walking).
- Development of "complete streets" serving all transportation modes, including active transportation.

Goal 5 A Prosperous Economy

Achieve economically efficient transportation patterns and promote regional prosperity and economic growth.

Policy 5.1 Commuter Savings

The RTP/SCS shall strive to reduce average commute time and cost by encouraging measures that bring worker housing closer to job sites.

Policy 5.2 - Support Business and Local Investment

The RTP/SCS shall:

- Promote a mix of land uses responsive to the needs of businesses, including agriculture and tourism.
- Support investment by businesses in local communities.
- Encourage the creation of high-paying jobs, especially in areas with an imbalance of housing relative to jobs.

Policy 5.3 Public-Private Partnerships

Promote inter-jurisdictional and public/private partnerships that:

- Encourage the provision of transportation services and transportation infrastructure where common goals are served.
- Help public transit agencies to secure private funding for transportation improvements in exchange for advertising on transit vehicles, bus shelters, benches, and other transportation-related public use items.

Policy 5.4 Transportation Funding

SBCAG and its member agencies should:

- Aggressively seek funding necessary to implement the Plan.
- Support protection of State and federal transportation funding and efforts to increase these revenues for the region.
- Require that new development contribute its fair share of the costs of new transportation infrastructure and system improvements for all modes necessary for such new development, as allowed for by law.
- Make efficient use of funding by maintaining, preserving, or enhancing existing infrastructure for all modes, using low-cost operational improvements, and using performance-based outcomes as the basis for prioritizing and funding projects, where feasible.

Chapter 3 – Sustainable Communities Strategy

The SCS ultimately consists of the preferred land use and transportation scenario selected by SBCAG as best capable of meeting the plan's five goals. Connected 2050 starts with land uses allowed by existing, adopted local General Plans. The preferred scenario then proposes selective intensification of residential and commercial land uses in urban areas proximate to existing transit and forecast population growth is distributed consistent with the assumed pattern of allowable land uses.

The preferred scenario is a Transit-Oriented Development (TOD)/Infill plan in that it strives to accommodate future growth within existing urban areas along transit corridors. The intent of these proposed changes is to shorten trip distances and reduce vehicle miles traveled and emissions by directly addressing regional jobs/housing imbalance by providing more housing on the jobs-rich South County and more jobs in the North County, and promoting more trips, both local and inter-city, by alternative transportation modes, including by foot, bike, or transit. To a large degree, existing General Plans and the long-range land use planning of SBCAG member jurisdictions are already in line with this regional vision for growth. As local agencies update housing elements to comply with the 6th RHNA cycle, the RHNA process will advance the SCS's growth patterns.

Transit and Land Use

The preferred scenario focuses new growth in an urban infill pattern oriented around transit service. For future development meeting the definition of "transit priority project," SB 375 contemplates and provides for streamlined environmental review under CEQA. To qualify for this streamlined review, projects must meet certain residential densities and be within one-half mile of a major transit stop or high-quality transit corridor included in the RTP. A "major transit stop" is defined in relevant part as "a site containing an existing rail transit station...or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." A "high quality transit corridor" is a corridor with fixed route bus service with service intervals no longer than 15 minutes per peak commute hour⁵. In addition to meeting proximity to transit and other criteria, transit priority projects must provide a minimum net residential density of 20 units per acre.

Transit Priority Areas and High-Quality Transit Corridors

Only a few areas in the City of Santa Barbara, City of Goleta, and the unincorporated County have both the required bus headways, rail stations, and residential densities to qualify as planning and transit priority areas under the preferred scenario. These are shown in Figure 2-4. Provided they meet all other requirements, projects with the minimum residential densities within these areas can qualify as "transit priority projects" as defined in Public Resources Code Section 21155(b) that would be eligible for streamlined environmental review under CEQA. Figure 2-4 through Figure 2-6 identify future planning and transit priority project areas.

With the intention of informing future development and transit investment, and in accordance with future application of Senate Bill 375's CEQA streamlining provisions, Connected 2050 also designates certain areas possessing the requisite residential densities, and what qualified as transit priority areas prior to COVID. At such time as future transit enhancements increase bus frequencies sufficiently along these routes to meet the definition of "major transit stop" or "high-quality transit corridor" and requisite, additional programmatic environmental review has been completed, these areas would also be eligible for consideration as planning and transit priority areas. Areas within the vicinity of rail stations meet the definition of transit priority areas and improvements to rail services will not result in changes.

⁵ SBCAG is in the process of updating hours due to the impact of COVID-19. In Connected 2050, SBCAG has provided areas which qualify as a TPA, and what qualified prior to COVID-19, separately.

Figure 2-3 Existing Transit Priority Areas

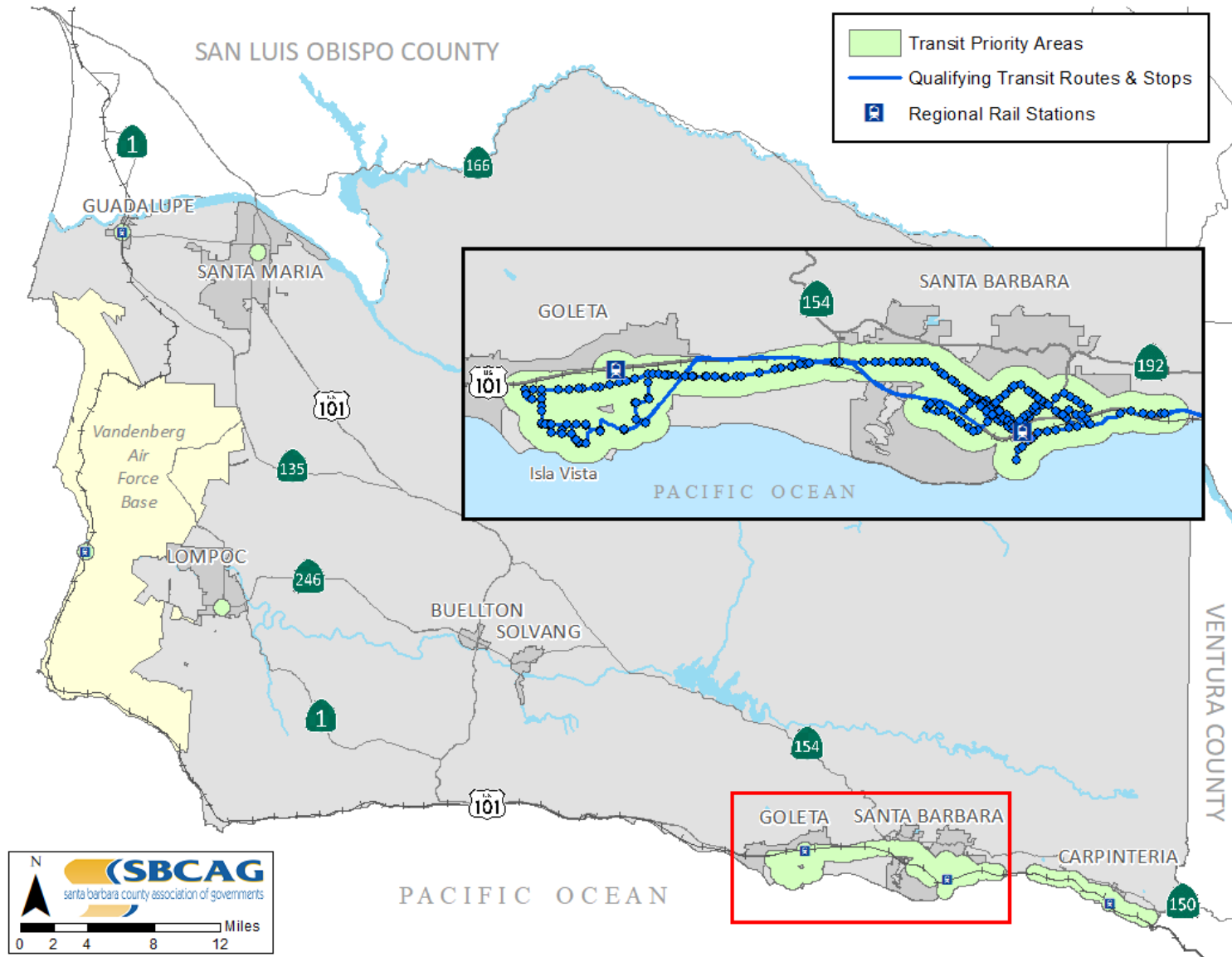


Figure 2-4 Transit Priority Project Areas – South County

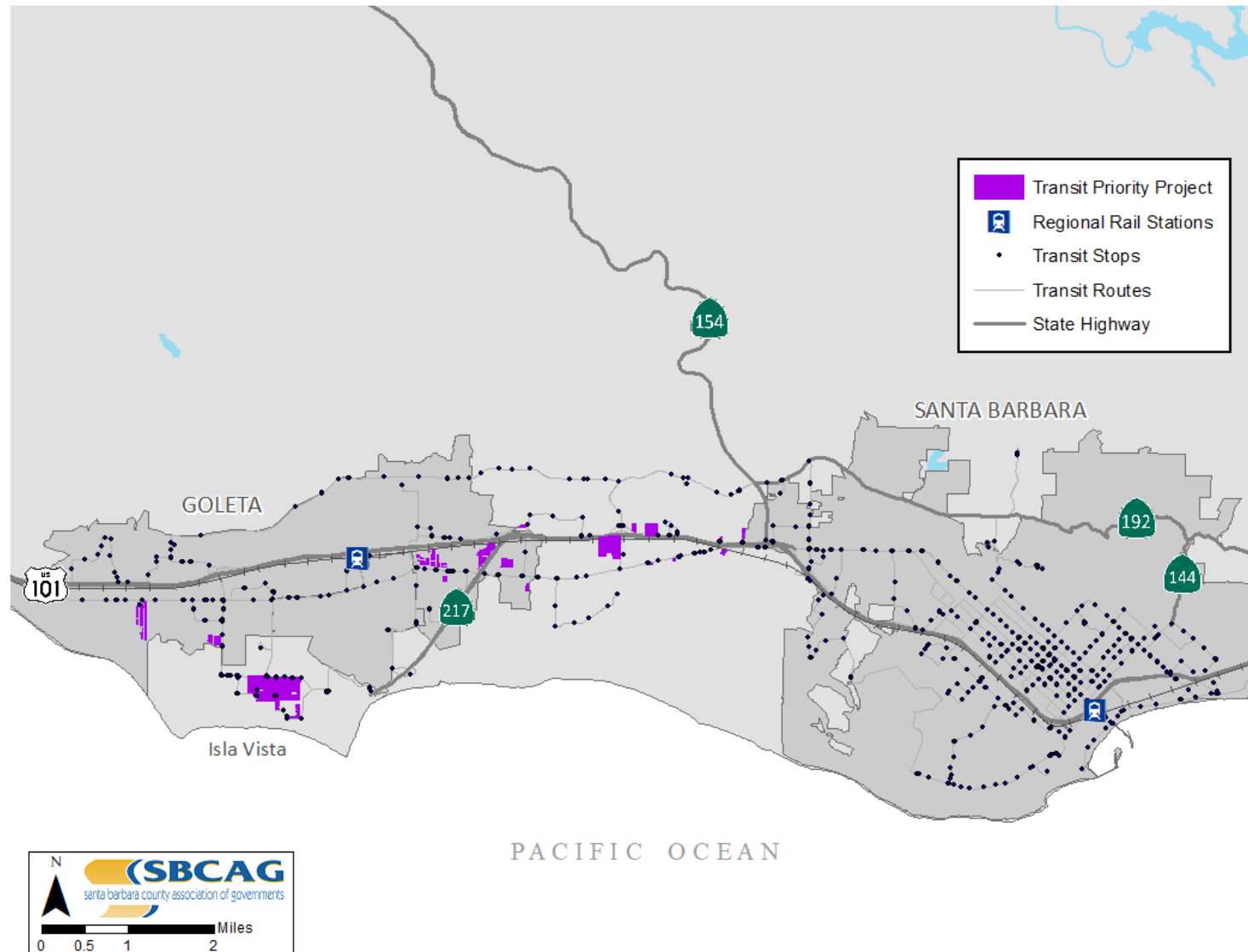


Figure 2-5 Transit Priority Project Areas – North Coast/Santa Maria Region

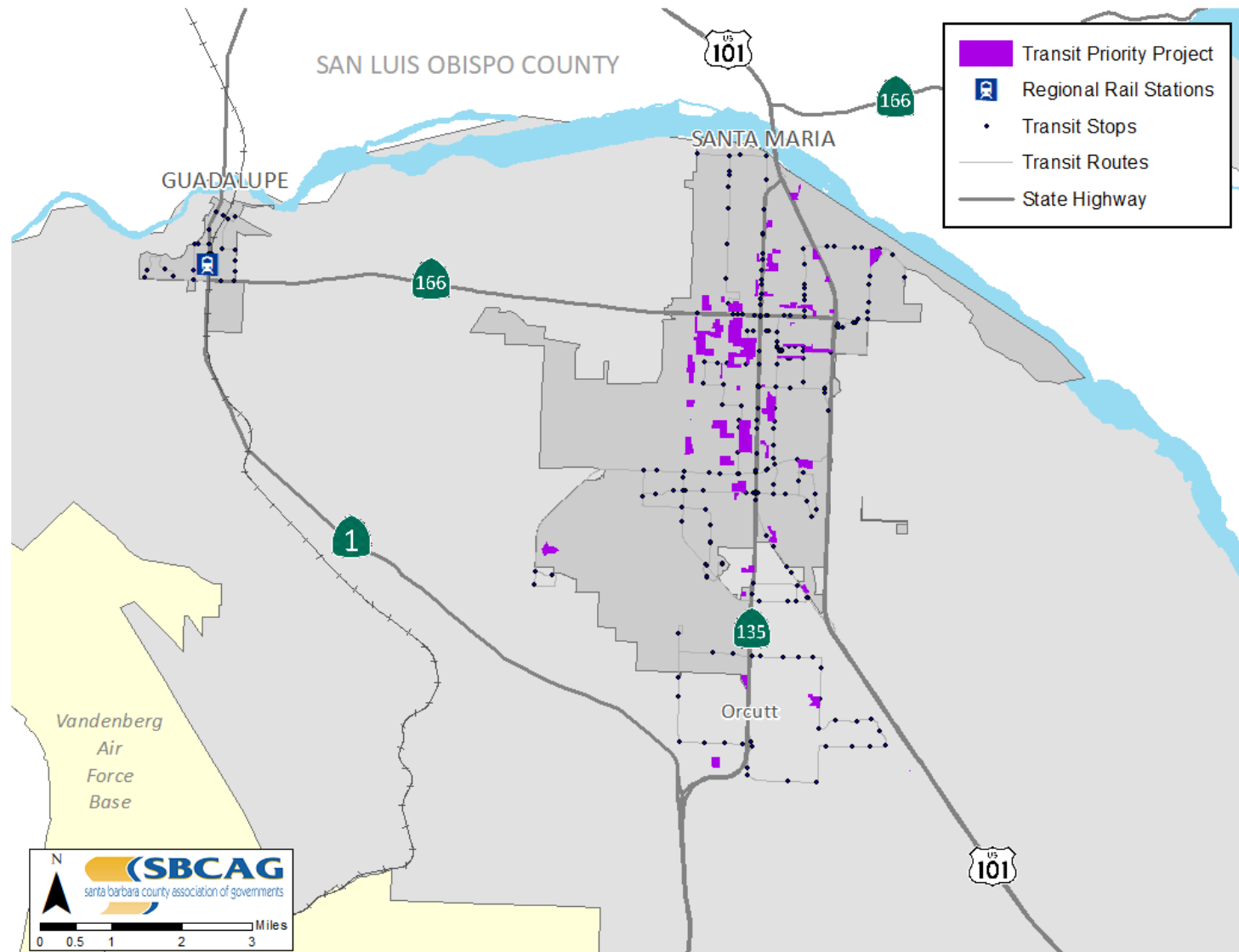
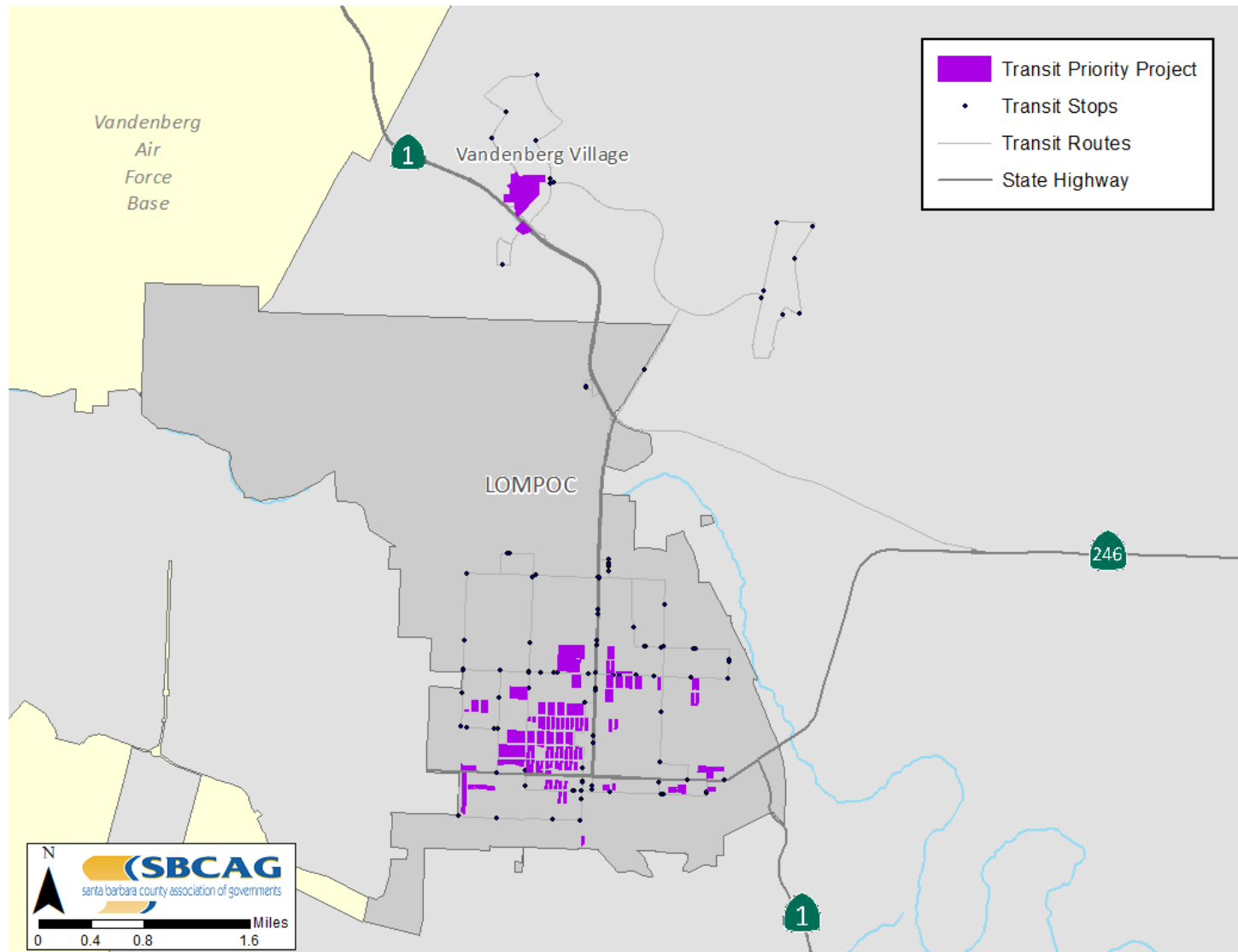


Figure 2-6 Transit Priority Project Areas – Lompoc Region



Chapter 6 - Action Element

The Action Element of Connected 2050 delineates the current program of highway, streets and roadways, bicycle and pedestrian, transit, intelligent transportation systems, transportation demand management, and railroad projects. Included are both “programmed” projects and “planned” projects. For the purposes of the RTP/SCS, “programmed” means that money is programmed for funding, including (for construction projects) money for at least a portion of the construction phase. Although future programming action may be required, there is a plan in place to secure the funding. “Planned” projects have little or no money programmed for funding, but funding sources have been identified and the projects are expected to receive funding within the timeframe of the RTP/SCS. Improvements included in Connected 2050 have been proposed by the various jurisdictions that comprise SBCAG along with the California Department of Transportation (Caltrans).

Connected 2050 Projects

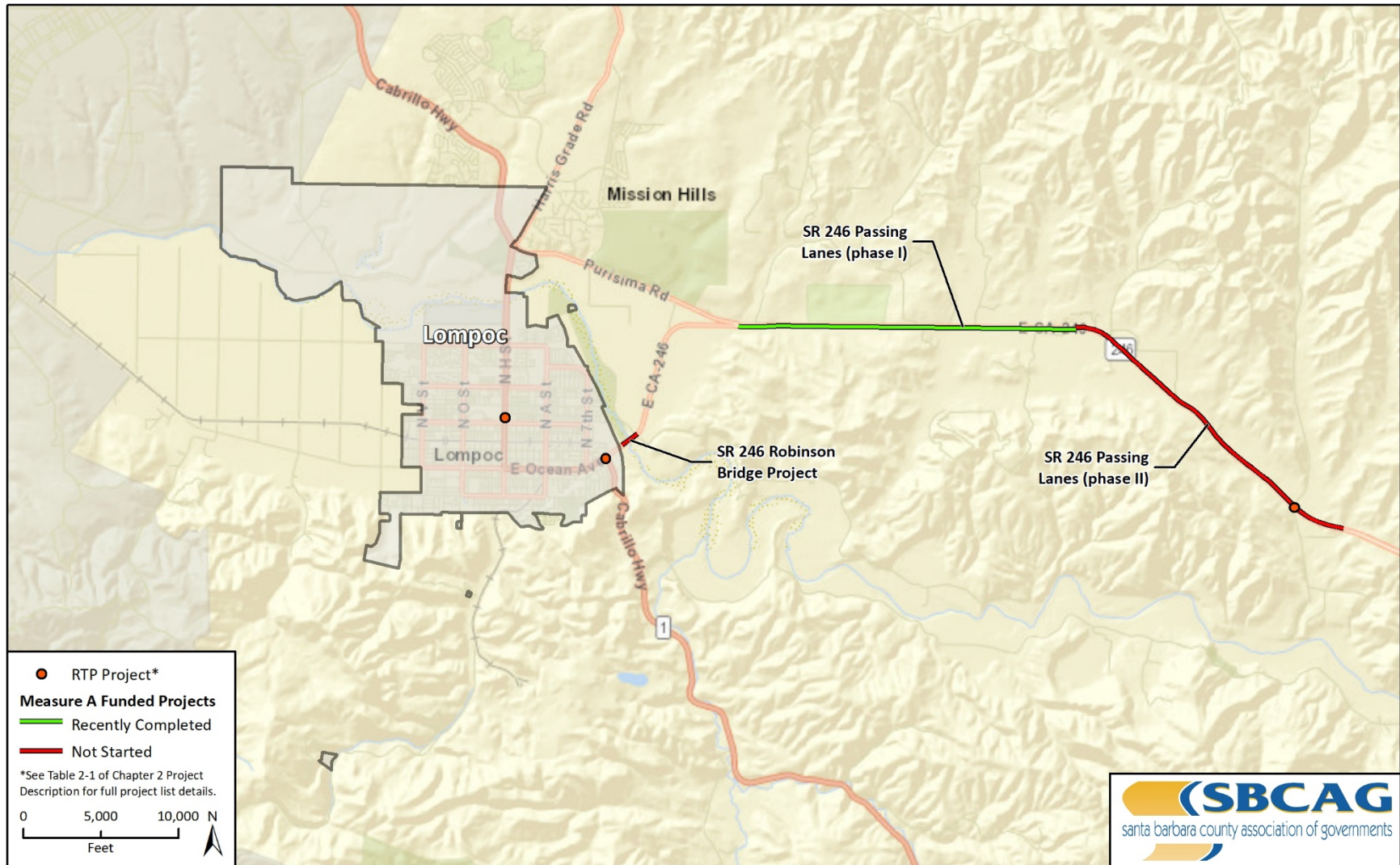
The general location of all physical projects of Connected 2050 are identified in Figure 2-7 through Figure 2-10, and listed in Table 2-1.

The three largest sources of State funding for the SBCAG region include the Transportation Development Act, State Transportation Improvement Program, and State Highway Operations and Protection Program. The Transportation Development Act was signed into law in 1971. It provides two major sources of funding for public transportation: the Local Transportation Fund and the State Transit Assistance fund. Funds for the Local Transportation Fund come from ¼ percent of the general State sales tax. The 1997 passage of Senate Bill 45 created the State Transportation Improvement Program (STIP). The STIP is a five-year capital improvement program of transportation projects on and off the State Highway System. Every two years, the CTC adopts a fund estimate which identifies the amount of new funds available for the programming of transportation projects. The State Highway Operations and Protection Program (SHOPP) helps fund collision reduction, bridge preservation, roadway preservation, roadside preservation, and mobility enhancement projects, and preservation of other transportation facilities related to the State Highway System. SHOPP funds also help repair damage caused by natural disasters, civil unrest, or terrorist acts.

SBCAG has also been successful with competitive grant programs and makes some assumptions regarding continued success. These grant programs include the California Road Repair and Accountability Act of 2017, commonly referred to as SB 1, the Active Transportation Program, and several cap-and-trade funding programs.

The largest source of regional and local funding for the SBCAG region is Measure A, the Road Repair, Traffic Relief and Transportation Safety Measure. Measure A is a one-half cent sales tax for transportation in Santa Barbara County. Measure A is administered by SBCAG, the Local Transportation Authority for Santa Barbara County, and will provide more than an estimated \$1 billion in local sales tax revenues for transportation projects in Santa Barbara County over 30 years (2010 through 2040).

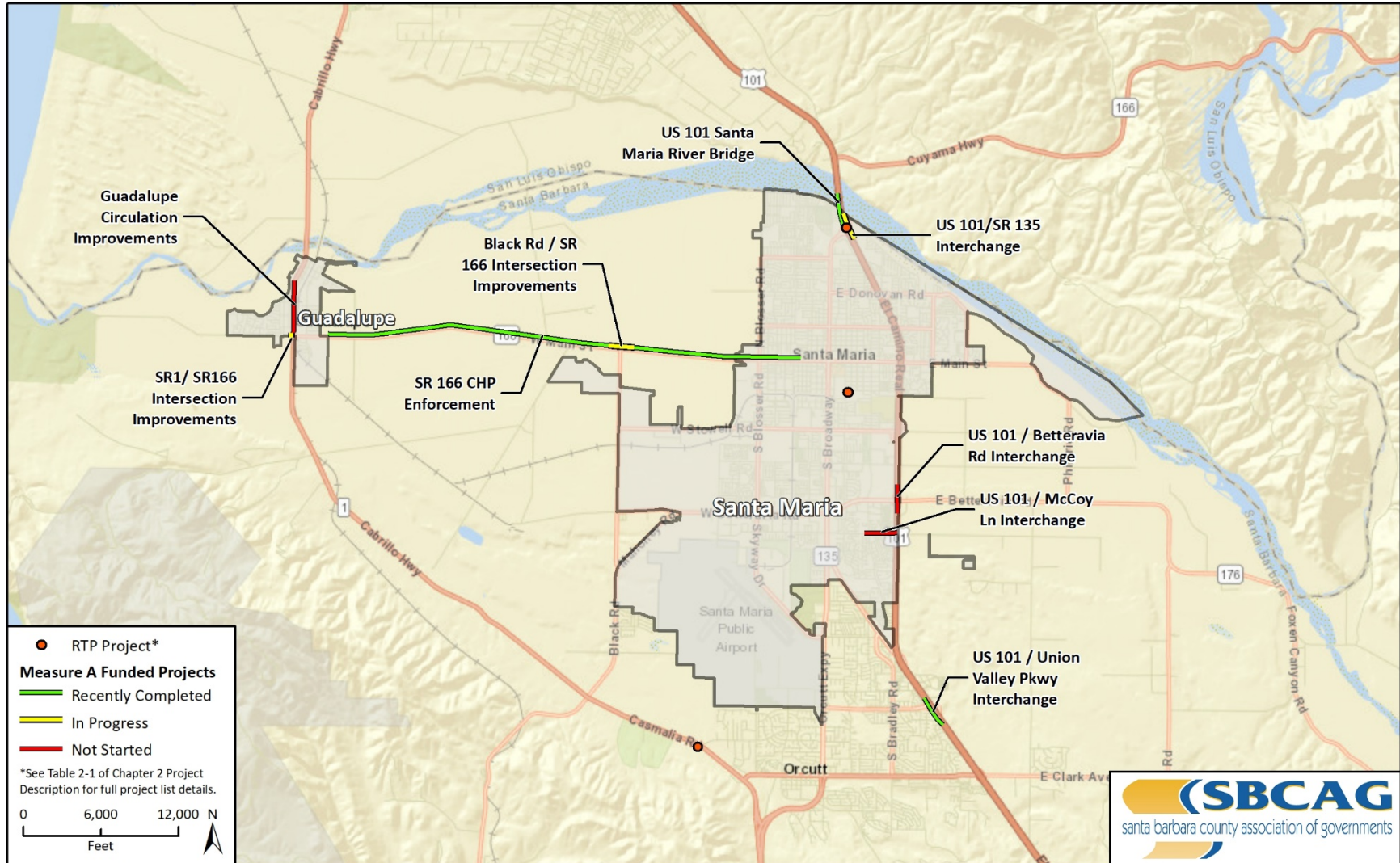
Figure 2-7 General Project Locations – Lompoc Valley Subregion



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 Additional data provided by SBCAG, 2021.

Fig X Projects_1.lompoc Valley

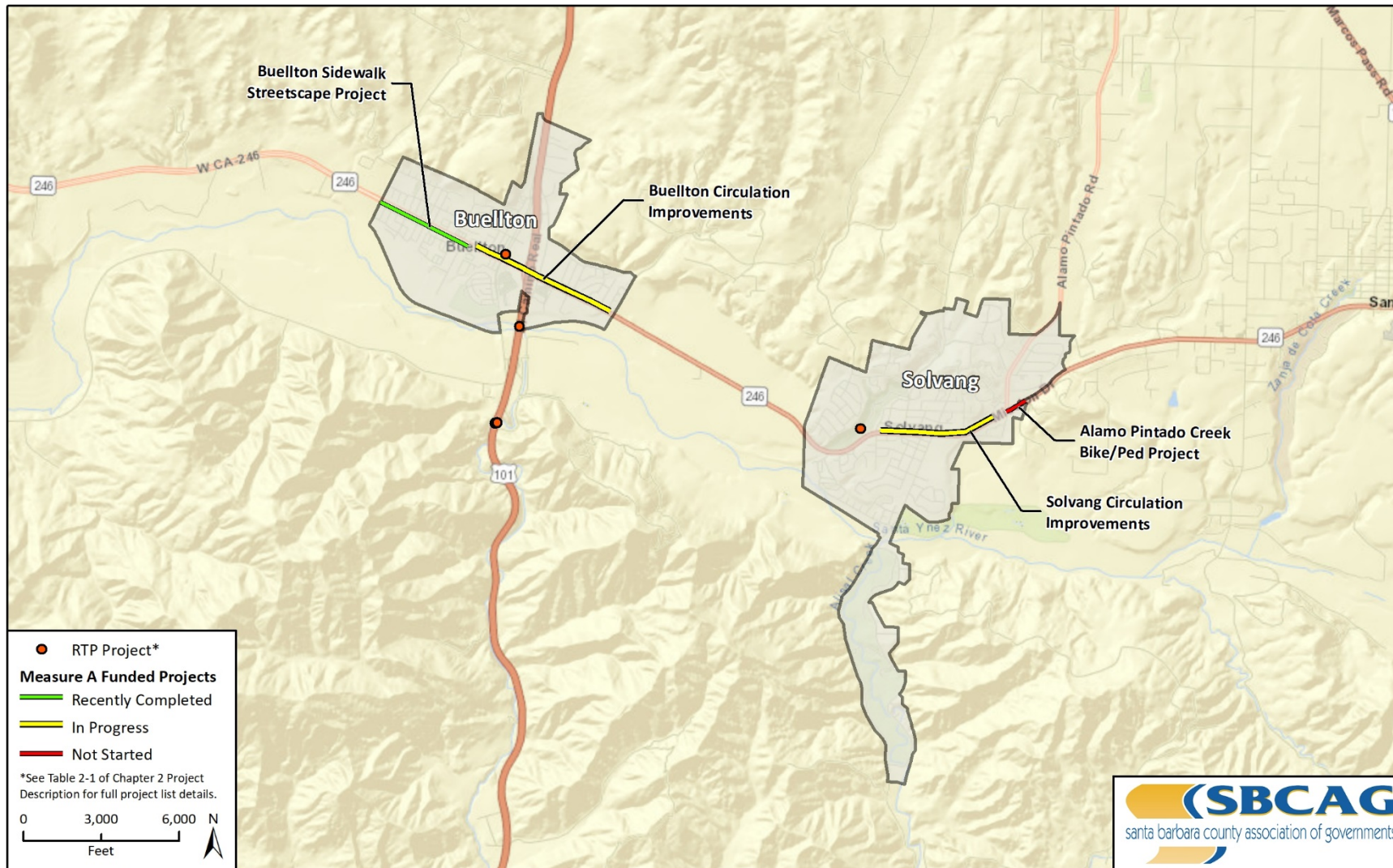
Figure 2-8 General Project Locations - Santa Maria Valley Subregion



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 Additional data provided by SBCAG, 2021.

Fig X Projects_Santa Maria Valley

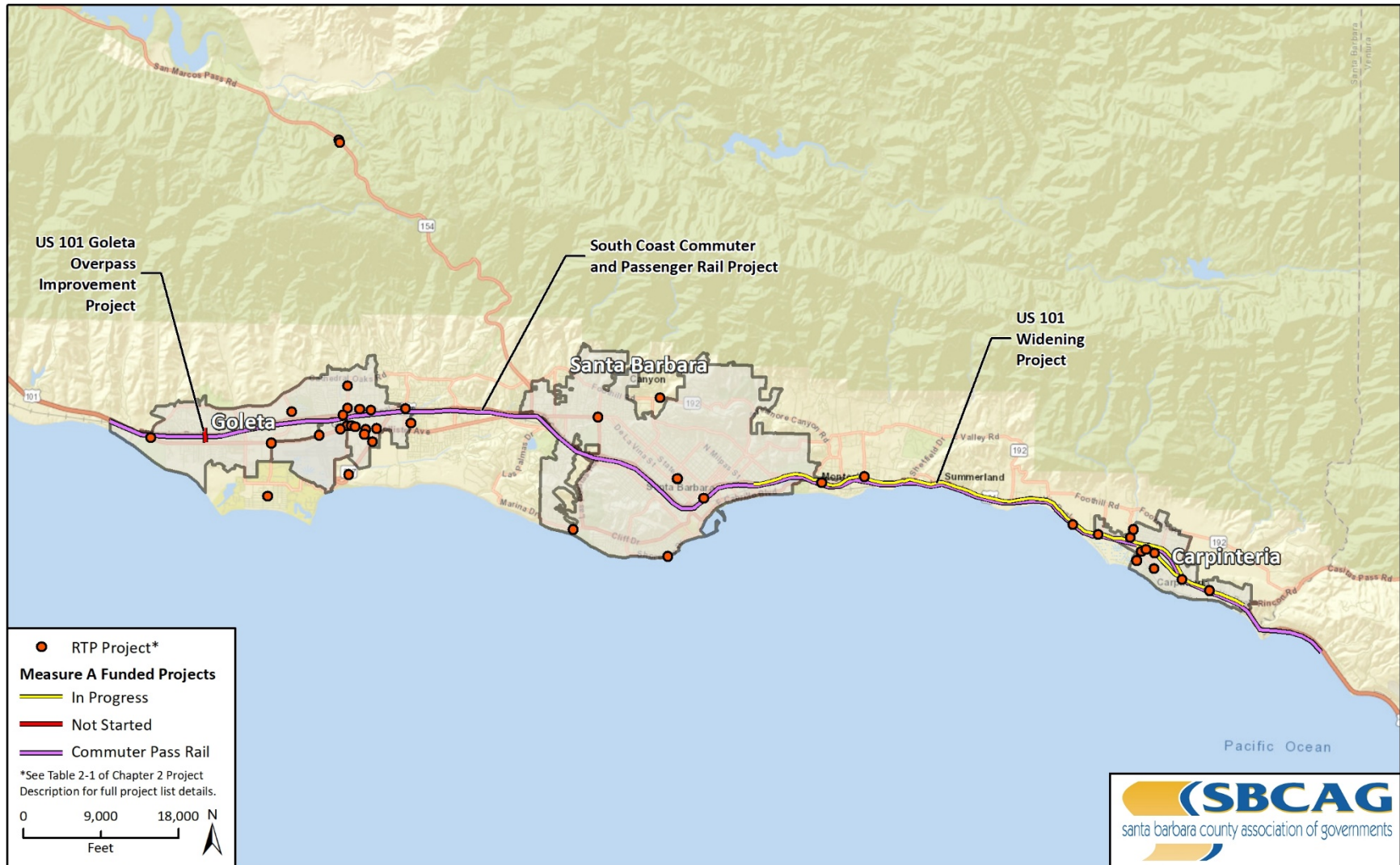
Figure 2-9 General Project Locations - Santa Ynez Subregion



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 Additional data provided by SBCAG, 2021.

Fig X Projects_Santa Ynez

Figure 2-10 General Project Locations - South County Subregion



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Additional data provided by SBCAG, 2021.

Fig X Projects_South County

Table 2-1 Connected 2050 Planned and Programmed Projects

Project Title	Project Type	Description
CALTRANS		
CT-1: SR 246 Passing Lanes – Planting Mitigation (FTIP CT93)(EA 0C641)	HWY	Hwy 246 in Santa Barbara County, near Lompoc, from 0.8 miles east of Cebeda Canyon Road to 0.4 miles east of Tularosa Road and at Hapgood Road (West).
CT-2: South Coast 101 Project Segment 4A	HWY	South Coast 101 HOV Lanes - Carpinteria (Segment 4A) (0N701)
CT-3: South Coast 101 Project Segment 4B	HWY	South Coast 101 HOV Lanes - Padaro (Segment 4B) (0N702)
CT-4: South Coast 101 Project Segment 4C	HWY	South Coast 101 HOV Lanes- Summerland (Segment 4C) (0N703)
CT-5: South Coast 101 Project Segments 4D & 4E	HWY	South Coast 101 HOV Lanes- Montecito/Santa Barbara (Segment 4d-4e)
CT-6: SR 154 Bridge Preventative Maintenance (1C410) (portion of FTIP CT87)	HWY	Preventative bridge maintenance in Santa Barbara Co, Near Los Alamos at the Alamo Pintado Cr Ped Br (Br # 51-0076Y)
CT-7: US 101 Roadside Safety Improvements (1E000)(portion of FTIP CT82)	HWY	Roadside Safety - Pave slopes, relocate roadside facilities away from traffic, install worker access gates, and safety improvements.
CT-8: ADA Pedestrian Infrastructure Improvement (1E040)(portion of FTIP CT81)	BIKE/PED	ADA pedestrian infrastructure – Construct ramps, improve pedestrian travel way in Santa Barbara County on Highway 101 at the Butterfly Lane Undercrossing
CT-9: US 101 Replace Bridge Deck (1F500) (portion of FTIP CT84)	HWY	In Santa Barbara Co near Los Alamos at the SRs 101/135 Separation (Br # 51- 0073R/L)
CT-10: US 101 San Ysidro Road Intersection Improvement	HWY	US 101 San Ysidro Road Intersection Improvement (1k040)
CT-11: US 101 Olive Mill Intersection Improvements	HWY	US 101 Olive Mill Intersection Improvements (1k030)
CT-12: US 101 UP Rail Bridge Replacement and Cabrillo Blvd Bike/Ped Improvements	HWY	US 101 UP Rail Bridge Replacement and Cabrillo Blvd Bike/Ped Improvements
CT-13: SR 135 Signal Modifications	HWY	SR 135 Signal Modifications (1H960)
CT-14: SR 135 Santa Maria CAPM	HWY	SR 135 in Santa Maria pavement preservation project CAPM (1G970)
CT-15: SR 154/ Baseline- Edison Roundabout	HWY	SR 154/ Baseline- Edison Roundabout (1H310)
CT-16: Bridge Preservation – Replace Bridge Rail (1F790)(portion of FTIP CT86)	HWY	Bridge preservation in Santa Barbara County at Nojoqui Creek Bridges (# 51- 0018 L/R)
CT-17: Bridge Seismic Retrofit – Construct Column Shells (1F830) (portion of FTIP CT85)	HWY	Bridge seismic retrofit in Santa Barbara County near Los Alamos at San Antonio Creek Bridge (BR # 51-0006)
CT-18: SR 1 Pavement Preservation – Restore Pavement Condition (1G130)(portion of FTIP CT79)	HWY	Pavement preservation in Santa Barbara County near Santa Maria from Solomon Road to Jct. SRs 166/01
CT-19: Sign Upgrades (1G130)(portion of FTIP CT83)	HWY	State Highways in Santa Barbara and San Luis Obispo Counties

Project Title	Project Type	Description
CT-20: Gaviota Rest Area Water Systems Upgrade (EA 1E010)(portion of FTIP CT60)	HWY	Near Gaviota, at the Gaviota Safety Roadside Rest Area. Upgrade wastewater system.
CT-21: Cold Springs Bridge Maintenance Inspection Access (FTIP CT76)(EA 1C420)	HWY	Near Lake Cachuma at Cold Spring Canyon Bridge No. 51-0037. Install inspection access system below bridge and paint structure.
CT-22: Refugio Bridge Replacement (FTIP CT77) (EA 1C950 Long Lead)	HWY	Near Goleta, at Refugio Road Undercrossing No. 51-0215 L/R. Replace bridges.
CT-23: San Antonio Creek Bridge Scour Mitigation (FTIP CT75)(EA 1 C420 Long Lead)	HWY	Near Lompoc, at San Antonio Creek Bridge No. 51-0237 L/R. Bridge scour mitigation.
CT-24: Replace Bridge (portion of FTIP CT63)(EA 1C360)	HWY	Near Goleta, at the San Jose Creek Bridge # 51-0217. Replace bridge.
CT-25: Salsipuedes Creek Slope Protection Reconstruction (CT#OA050)(portion of FTIP CT90)	HWY	Near Lompoc, at the Salsipuedes Creek. Reconstruct slope protection.
CT-26: Linden Ave/Casitas Pass Interchanges (101 Widening Phase 3)(EA 4482U, 44822)(FTIP CT01, CT94, CT95)	HWY	Reconstruct Linden Ave and Casitas Pass Rd interchanges in Carpinteria. Construct missing link in frontage road system. Reconstruct US 101 bridge over Carpinteria Creek. Includes Measure A funds. Includes mitigation planting and mitigation monitoring.
CT-27: Linden Ave/Casitas Pass Interchanges Landscape Mitigation (EA 44821)	HWY	Landscape Mitigation
CT-28: Goleta Drainages Landscape Mitigation (EA 0G071)	HWY	In and near Goleta from 0.2 mile east to 0.7 mile west of the Fairview Avenue Overcrossing. Landscape mitigation for PPNO 0707.
CT-29: Hwy 154/246 Roundabout Planting (EA 0T001)(FTIP CT89)	HWY	Near Santa Ynez, at and near SR 246 intersection. Landscape mitigation.
CT-30: Milpas - 101 SB Off-ramp Operational Improvement	ST/RDS	At the intersection of the first southbound off-ramp junction at Milpas Street, construct intersection improvements. This project includes all project phases - through construction.
CT-31: SR 246 Santa Ynez River Bridge (Robinson Bridge)	HWY	The project will improve access to Lompoc across the Santa Ynez River by a providing a bridge raised above flood level with wider shoulders that can safely accommodate vehicles, bicycles and pedestrians.
CT-PL-1: US 101 HOV Widening (FTIP CT20)	HWY	Parts of this project are programmed. This project highlights the out-years of the overall project.
CT-PL-2: SR 246 Passing Lanes – East Segment	HWY	East and west bound passing lanes from east of Big Ranch Road to west of Drum Canyon Road, channelization at Drum Canyon and Mail Road, and bridge widening at Santa Rita Creek.
CT-PL-5: US 101 at Glen Annie Operational Improvements	HWY	Operational Improvements northbound on US 101 at Glen Annie Rd. off ramp
CT-PL-6: US 101 at Castillo Improvements	HWY	Reconstruct portions of, or entire interchange of US 101 at Castillo Street
CT-PL-7: US 101 Milpas St SB off-ramp Improvements	HWY	US 101 Milpas St SB off-ramp Improvements

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Project Title	Project Type	Description
CT-PL-8: US 101 / Las Positas Operational Improvements	HWY	US 101 / Las Positas Operational Improvements
CT-PL-9:Goleta Overcrossing	HWY	Goleta Overcrossing
CT-PL-10: Hwy 154 Drainage Improvement	HWY	Hwy 154 Drainage Improvement
CT-PL-11: San Marcos Pass High Friction Surface Treatment	HWY	San Marcos Pass High Friction Surface Treatment (1M370)
CT-PL-12: Lompoc ADA	HWY	Lompoc ADA (1H870)
CT-PL-13: North Buellton CAPM	HWY	North Buellton CAPM (1M100)
CT-PL-14: Bridge replacement - Alamo Pintado	HWY	Bridge replacement - Alamo Pintado
CT-PL-15: Guadalupe ADA	HWY	Guadalupe ADA (1E030)
City of Buellton		
B-1: Street Maintenance	VARIOUS	Supplement local funding to better preserve local transportation assets.
B-2: Alternative Transportation Enhancements	VARIOUS	Enhance the alternative transportation environment by performing sidewalk and concrete repairs, and reducing transit fares for seniors and the disabled, and allocating funds towards the multipurpose trail reserve.
B-3: Regional Transit Support	TRANSIT	Support regional transit services: Wine Country Express and Breeze 200
B-4: North Ave of Flags Park & Ride	TRANSIT	Construction of second Park & Ride facility at the north end of Ave of Flags.
B-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
B-PL-2: Various Traffic Safety Improvements Along Hwy 246	HWY	Removes traffic signals and includes various other traffic calming elements
B-PL-3: Transportation Network Maintenance and Locally – Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded projects
B-PL-4: Santa Ynez Valley Bicycle Master Plan Implementation	BIKE/PED	Implement priority projects listed in the Santa Ynez Valley Bicycle Master Plan
City of Carpinteria		
C-1: Street Maintenance	ST/RDS	Supplement local funding to maintain, improve, or construct roadways and bridges, including: Administration Program, Street Maintenance Program, Right-of-Way Maintenance Program, Transportation, Parking and Lighting Program, Carpinteria Avenue Bridge Replacement Project, Pavement Rehabilitation Project, Pavement Maintenance Project, Parking Lot Number 2 and Cactus Ln Improvements Project, Ped Bridge Inspection Program, and Pavement Management Update.
C-2: Safety Improvements	ST/RDS	Supplement local funding to implement Traffic Safety Program.
C-3: Landscape Maintenance and Urban Forestry	ST/RDS	Supplement local funding to perform Landscape Maintenance Program and Urban Forestry Street Tree Program.

Project Title	Project Type	Description
C-4: Traffic Management and Signal Coordination	ST/RDS	Supplement local funding towards Traffic Operations Program, and to perform traffic Signal Coordination, including: Carpinteria Ave/Palm Ave intersection signalization.
C-5: Storm Damage Repair	ST/RDS	Supplement local funding to repair storm damage as part of the Via Real storm water management project.
C-7: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation environment by performing maintenance, repair, improvement, and engineering of bike and ped facilities, including: the concrete repair and curb ramp program, City of Carpinteria Active Transportation Plan, Bike Path Maintenance Program, Linden Ave sidewalk repair, Bailard Ave Street Improvements, and Linden Ave/ Dorrance Way crossing improvements.
C-8: Safe Routes to School Improvements	BIKE/PED	Construct Safe Routes to School improvements, including: Caitlin Cir to Memorial Park, Ogan Rd & Vallecito Rd, Pear St & Carpinteria Ave, Cramer Rd & Carpinteria Ave.
C-9: Local Transit Support and Improvements	TRANSIT	Support local bus and rail transit services and facilities, including Easy Lift Transportation and HELP of Carpinteria
C-10: Carpinteria Avenue Bridge Replacement Project	ST/RDS	Replace the existing bridge. Does not increase transportation related capacity
C-11: Rincon Trail (FTIP SBCAG29)	BIKE/PED	Construct a multiuse trail from Rincon Park to Carpinteria Avenue (part of the Carpinteria Coastal Vista Trail)
C-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
C-PL-2: Transportation Network Maintenance and Locally – Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded project.
C-PL-3: Regional Active Transportation Plan Implementation	BIKE/PED	Implement high priority projects listed in the Regional Active Transportation Plan.
C-PL-4: Holly Avenue Undercrossing	BIKE/PED	Construct a bicycle and pedestrian undercrossing of UPRR corridor.
C-PL-5: Santa Clause Lane to Carpinteria Avenue Multiuse Trail (FTIP SBCAG27)	BIKE/PED	Construct a multiuse trail from Santa Claus Lane to Carpinteria Avenue adjacent to the Sandylan Area Salt Marsh (part of the Carpinteria Coastal Vista Trail). 2017 FTIP does not provide funding for the project.
C-PL-6: Franklin Creek Multiuse Path	BIKE/PED	Construct a multiuse path along Franklin Creek from Carpinteria Ave to 7th St.
C-PL-7: Third Street Improvements Project	BIKE/PED	Construct a multiuse trail along Third Street from Linden Avenue to the Carpinteria Marsh Park (part of the Carpinteria Coastal Vista Trail).
C-PL-8: Via Real Pedestrian Bridge Replacement	BIKE/PED	Replace existing pedestrian bridge over Santa Monica Creek at Via Real
C-PL-9: El Carro Pedestrian Bridge Replacement	BIKE/PED	Replace existing pedestrian bridge over Santa Monica Creek at El Carro

Santa Barbara County Association of Governments
Connected 2050: Regional Transportation Plan & Sustainable Communities Strategy

Project Title	Project Type	Description
City of Goleta		
Go-1: Street Maintenance and Improvements	ST/RDS	Supplement local funding to better preserve local transportation assets, to include pavement rehabilitation, pavement maintenance, striping and signage, Hollister Ave Bridge project, and Hollister Ave widening.
Go-2: Landscape Maintenance and Urban Forestry	ST/RDS	Supplement local funding to perform landscape maintenance and urban forestry street tree program.
Go-3: Traffic Signal Coordination and Maintenance	ST/RDS	Supplement local funding to perform traffic signal maintenance and traffic signal upgrades.
Go-4: Goleta US 101 Overcrossing	ST/RDS	The project will improve traffic circulation in Goleta by constructing a new overpass of US 101. This project is for pre-construction phases. Construction is a planned project.
Go-5: Active Transportation Enhancements	BIKE/PED	Enhance the active transportation environment by supporting bike and ped projects identified in the Goleta Bicycle and Pedestrian Master Plan; concrete maintenance and access ramps; and safe routes to school improvements.
Go-6: Local Transit Support	TRANSIT	Support local transit services by providing for reduced transit fares for seniors and the disabled using Easy Lift.
Go-7: Storm Damage Repair to Transportation Facilities	ST/RDS	Repair of transportation facilities damaged during storm events. Includes repair of Cathedral Oaks Crib Wall and locations citywide as necessary.
Go-8: Fowler & Ekwil Road Extensions	ST/RDS	Local road improvements & interchange modifications. Construct new east-west roadways extending James Fowler Rd from Fairview Ave to Technology Dr and Ekwil St from Fairview Ave to Kellogg Ave.
Go-9: Hollister Avenue Bridge Replacement	ST/RDS	Remove existing bridge over San Jose Creek and replace with a new, wider bridge with greater hydraulic capacity. Additional width for sidewalks and bike lanes.
Go-10: San Jose Creek Multipurpose Path	BIKE/PED	This project proposes a new Class I adjacent to the San Jose Creek from Calle Real to the Atascadero Creek Bike Path at Goleta Beach. The scope of work includes preliminary engineering, environmental, design, and construction of the segments from Calle Real to Armitos Ave and from Ekwil Street to along SR 217 to the Atascadero Creek Bike Path. The project involves coordination with the Caltrans bridge replacement projects of US 101 over San Jose Creek and SR 217 bridge over San Creek.
Go-11: San Jose Creek Bikeway – Middle Segment 1	BIKE/PED	Construct class I bike path from Jonny D. Wallis Park to Armitos Avenue
Go-12: Old Town Sidewalk Improvement Project (FTIP GOLETA21)	BIKE/PED	A sidewalk improvement program for the residential areas of Old Town. The project will assess sidewalk deficiencies, create a prioritization plan, and install sidewalk improvements. Work is north of Hollister from Fairview to Kellogg and on Pine Avenue south of Hollister.
Go-13: Storke Road Hollister to Market Place Improvements	ST/RDS, BIKE/PED	The project includes transit, bicycle and pedestrian, and roadway improvements along Storke Road south of Hollister Ave. Includes restriping, median reconstruction, bus stop relocations and upgrades.

Project Title	Project Type	Description
Go-14: RRFB's at Chapel and HAWK at Kingston	BIKE/PED	The project will construct pedestrian activated Rectangular Rapid Flashing Beacons (RRFB's) over travel lanes on Hollister Avenue at Orange Avenue and a High Intensity Activated Crosswalk (HAWK) system at Calle Real and Kingston Ave. Work will include new striping, signage and lighting to be placed in existing pavement, and sidewalk improvements.
Go-15: School Zone and Other Crossing Improvements	BIKE/PED	School zone and other crossing location improvements including signage, striping, and/or installation of rectangular rapid flashing beacons or pedestrian hybrid beacons.
Go-16: Goleta Traffic Safety Study	ST/RDS, BIKE/PED	The Goleta Traffic Safety Study will proactively evaluate the transportation network to analyze the safety of bicyclist, pedestrians and vehicle drivers and identify benefits of potential safety countermeasures to help reduce injury and fatal collisions.
Go-17: Hollister Ave Class I Bike Path Lighting	BIKE/PED	Install lighting along the multipurpose path located along the south side of Hollister Avenue from Pacific Oaks to Ellwood School.
Go-18: Goleta Train Depot	TRANSIT, BIKE/PED	Construct new multi-modal train station at the location of existing Amtrak platform, to improve services and facilities and accommodate increase in ridership. Includes expanding parking, bus facilities, and bicycle and pedestrian improvements to S. La Patera Lane.
Go-19: Traffic Signal Improvements and Upgrades	BIKE/PED	Improvements and upgrades to the existing traffic signals and installation of new traffic signals throughout the City.
Go-20: Improvements to Storke Rd/ Hollister Avenue Corridors	ST/RDS, BIKE/PED	Projects include roadway widening, additional of turn lanes, channelization, and bicycle and pedestrian improvements
Go-21: Cathedral Oaks Class I Bike Path	BIKE/PED	Construct a Class I bike path on Cathedral Oaks from Glen Annie to La Patera, 1.63 miles
Go-22: US 101 Interchange Improvements	ST/RDS, BIKE/PED	At Patterson, Storke Rd/Glen Annie, Los Carneros, and Fairview Avenue Interchanges. Widen or replace existing overcrossing and overhead to accommodate additional turn lanes and Class II bike lanes. Ramp intersection improvements. Widen ramps to provide additional turn lanes and/or thru lanes. Signal modifications as necessary to accommodate peds and bikes. Add bike lanes.
Go-23: Intersection Operational Improvements	ST/RDS, BIKE/PED	Intersection improvements at Hollister Ave and Patterson Ave, Los Carneros Road and Hollister Ave, Kellogg Ave and Hollister Ave, Hollister Ave and Pacific Oaks Rd, and Fairview Ave and Calle Real. Includes roadway widening to add turn lanes and/or thru lanes, median modifications, new traffic signals/traffic signal upgrades, bicycle and pedestrian improvements.
Go-24: Roadway Widening and Operation Improvements	ST/RDS	Vehicle capacity modifications, roadway widenings and extensions, realignments, addition of medians, turning and through lanes, restriping, new traffic signals, bicycle and pedestrian improvements at locations throughout the City, including Las Carneros Way, Los Carneros Rd, Calle Koral, Fairview, Phelps Road, Calle Real, Hollister, Cathedral Oaks.

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Project Title	Project Type	Description
Go-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
Go-PL-2: Transportation Network Maintenance and Locally – Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded project.
Go-PL-3: Old Town Goleta: Hollister Avenue Complete Streets Corridor Plan (FTIP GOLETA20)	BIKE/PED	A planning project that will provide a comprehensive, implementation-oriented strategy for creating pedestrian enhancements along the 0.8 miles stretch of Hollister Avenue from Fairview Avenue to SR 217.
Go-PL-4: Vision Zero Plan	ST/RDS, BIKE/PED	Create Vision Zero program for the City
Go-PL-5: Fairview Avenue at Hollister Roundabout	ST/RDS, BIKE/PED	Construct a two-lane roundabout at the intersection
Go-PL-6: Fairview Avenue and Storke Glen Annie Road Corridor Studies	ST/RDS, BIKE/PED	Fairview Avenue and Storke Glen Annie Road Corridor Studies
Go-PL-7: City of Goleta Bicycle and Pedestrian Master Plan Implementation	BIKE/PED	Implement projects identified in City of Goleta's Bicycle and Pedestrian Master Plan. Detailed project lists may be viewed online at https://www.cityofgoleta.org/projects-programs/bicycle-projects/bicycle-pedestrian-master-plan-project .
Go-PL-8: City of Goleta Traffic Safety Study Implementation	ST/RDS, BIKE/PED	Implement projects for improvements identified in the Goleta Traffic Safety Study.
Go-25: US 101 Auxiliary Lanes	HWY	Construct auxiliary lane on US 101 NB between Los Carneros and Storke/Glen Annie Rd on NB US 101 and on US 101 NB and SB between at Fairview Rd to Los Carneros Rd
City of Guadalupe		
Gu-1: Street Maintenance	ST/RDS	Supplement local funding to better preserve local transportation assets, to include: maintenance of streets, curbs, gutters, and drainage facilities, contract paving, and public works garage.
Gu-2: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation environment by performing bike and ped maintenance projects and ADA sidewalk work.
Gu-3: Operating Assistance for Guadalupe Transit	TRANSIT	Transit administration, operations, and maintenance for Guadalupe Transit.
Gu-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
Gu-PL-2: Transportation Network Maintenance and Locally – Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded project.
Gu-PL-3: Regional Active Transportation Plan Implementation	BIKE/PED	Implement high priority projects listed in the Regional Active Transportation Plan.
Gu-PL-4: Bus Replacement and Expansion	TRANSIT	Purchase one bus every 5 years.
Gu-PL-5: Operating Assistance for Guadalupe Transit	TRANSIT	Transit operating assistance for Guadalupe Transit.

Project Title	Project Type	Description
City of Lompoc		
L-1: Street Maintenance	ST/RDS	Supplement local funding to better preserve local transportation assets, to include: street maintenance, engineering, overlays and rehabilitation, and urban forestry.
L-2: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation environment by performing maintenance, repair, improvement, and engineering of bike and ped facilities.
L-3: Local Transit Support	TRANSIT	Support local transit services.
L-4: Operating Assistance for COLT (FTIP LOMPOC9)	TRANSIT	Transit operating assistance for COLT.
L-5: Transit Operations and Maintenance Center (FTIP LOMPOC23)	TRANSIT	Purchase and construction of a new maintenance and operations center for City of Lompoc Transit
L-6: Operating Assistance for Wine Country Express (FTIP LOMPOC13)	TRANSIT	Transit operating assistance for Wine Country Express
L-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
L-PL-2: Circulation Improvements	HWY	Circulation improvements on arterials and/or collectors.
L-PL-3: Central/H St. Intersection Improvements	HWY	Central/H St. intersection widening improvements
L-PL-4: Transportation Network Operation, Maintenance, and Locally Funded Improvements	ST/RDS	Operate and maintain the local transportation network and construct locally-funded projects.
L-PL-5: Bike Path on Southside of Santa Ynez River	BIKE/PED	Location: Southside of SY River from SR 1 (H St) to Riverbend Park. Obtain rights of way, design, and construct class I bike path.
L-PL-6: Class II Bikeways	BIKE/PED	Construct Class 2 Bikeways at Locations: B) A St, Chestnut Ave to Central Ave; D) Floradale Rd/Santa Lucia Canyon Rd, adjacent to Federal Correctional Institution.
L-PL-7: Bus Replacement	TRANSIT	Purchase buses
L-PL-8: Bus Charging Stations and Infrastructure	TRANSIT	Construct bus charging stations and associated necessary infrastructure, planned to be located at the City's new Transit Maintenance Facility, including stations to charge 14 COLT busses, 1 Breeze bus, and 8 Clean Air Express busses.
L-PL-9: Operating Assistance for COLT	TRANSIT	Transit operating assistance for COLT
L-PL-10: Operating Assistance for Wine Country Express	TRANSIT	Transit operating assistance for Wine Country Express
City of Santa Barbara		
SB-1: Street Maintenance	ST/RDS	Supplement local funding to better preserve local transportation assets, to include: pavement maintenance, roadway maintenance, engineering services, bridge preventative maintenance, post bridge construction monitoring, and graffiti abatement.
SB-2: Storm Damage Repair	ST/RDS	Supplement local funding to repair storm damage, including storm drain repair and maintenance.
SB-3: Roadway Drainage Facilities	ST/RDS	Supplement local funding to implement Lower Mission Creek Flood Control project.

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Project Title	Project Type	Description
SB-4: Safety Improvements	ST/RDS	Supplement local funding to implement Traffic Safety/ Capacity Improvements.
SB-5: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation environment by performing maintenance of sidewalks and improving sidewalk access ramps.
SB-6: Local Transit Support	TRANSIT	Local Transit Support for Easy Lift.
SB-7: State Street Smart Corridor – Outer State Street Adaptive Signal Project	ITS	Advanced traffic corridor system. Project #102.
SB-8: Construct Active Transportation Program Awarded Projects (FTIP SBCITY)	BIKE/PED	Projects include: Eastside Green Lanes and Bike Boulevard Gap Closure, Westside Bike Boulevard Gap Closure, Downtown De La Vina Street Safe Crosswalks and Buffered Bike Lanes, U.S. 101 State Street Undercrossing Active Transportation Improvements, Lower Eastside Community Connectivity Active Transportation Plan (Plan Only), and Las Positas and Modoc Roads Class I Construction
SB-9: Preliminary design for HOV HWY 101 Widening Mitigation Projects (Cabrillo at UPRR and Los Patos and Olive Mill Roundabout)	ST/RDS	Replace the Union Pacific Railroad bridge over Cabrillo Boulevard with a bridge meeting contemporary standards and construct capacity improvements on Cabrillo Boulevard at Los Patos. Capacity and operational improvements at the intersection of Cabrillo Boulevard and Los Patos Road. Construct roundabout to accommodate anticipated demand and alleviate existing congestion.
SB-10: Corridor Improvements - Carrillo Street (De la Vina to Miramonte)	ST/RDS	Capacity and operational improvements at the intersection of Olive Mill, Coast Village Road, and US 101 northbound ramps. Build a roundabout to accommodate anticipated demand and alleviate existing congestion."
SB-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
SB-PL-2: Cottage Hospital Access (Las Positas/ Mission SB Aux Lane)	HWY	Location: US 101 between Mission St/Las Positas St. Access Improvements
SB-PL-3: Transportation Network Maintenance and Locally Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded projects.
SB-PL-4: Final design and construction for HOV HWY 101 Widening Mitigation Projects	ST/RDS	Replace the Union Pacific Railroad bridge over Cabrillo Boulevard with a bridge meeting contemporary standards and construct capacity improvements on Cabrillo Boulevard at Los Patos. Capacity and operational improvements at the intersection of Cabrillo Boulevard and Los Patos Road. Construct roundabout to accommodate anticipated demand and alleviate existing congestion.
SB-PL-5: Intersection Improvements – Various Locations	ST/RDS	Capacity and operational improvements at the intersection of Olive Mill, Coast Village Road, and US 101 northbound ramps. Build a roundabout to accommodate anticipated demand and alleviate existing congestion.
SB-PL-6: Class II Bike Lanes and Pedestrian Pathways - Various	BIKE/PED	Capacity and safety improvements at various intersections throughout the City of Santa Barbara. Also includes intersection improvements at Railroad Crossings.
SB-PL-7: Cliff Drive Multiuse Path and Crossing Enhancements	BIKE/PED	Location: Various locations within City of Santa Barbara. Construct class II bike lanes and pedestrian pathways.

Project Title	Project Type	Description
SB-PL-8: Class I Beachway Connection – Leadbetter Beach	BIKE/PED	Create a separate/protected multiuse path along Cliff Drive. Project to include corridor intersection improvements including pedestrian activated flashers and new traffic signals and/or signal modifications along some intersections. Intersection/corridor improvements to nearby schools to connect to the path.
SB-PL-9: Modoc Class I Connection to Las Positas Corridor – Over US 101 through Municipal Golf Course	BIKE/PED	Create a separate/protected bikeway connecting the Beachway through Ledbetter Beach to Shoreline Park
SB-PL-10: BMP Regionally Significant Projects	BIKE/PED	Create a separate/protected bikeway over US 101 from Modoc to State Street
SB-PL-11: Cash-Out Parking Ordinance	TDM	Implement the 2016 City of Santa Barbara Bicycle Master Plan
SB-PL-12: Downtown Parking Pricing Program	TDM	City wide development of a cash-out parking ordinance for employers with more than 20 employees.
SB-PL-13: La Cumbre Jr High Multiuse Path Along Modoc	BIKE/PED	Downtown parking pricing program to charge for public on-street parking
SB-PL-14: Corridor Improvements: Chapala Street	BIKE/PED	Construct multiuse path or separated bike path along Modoc Road between Las Positas Road and Mission Street and along Portesuello Road between Modoc Road and Gillespie Street. Intersection improvements along included to improve school crossings.
SB-PL-15: Corridor Improvements: De la Vina St Road Diet and Pedestrian Crossings	BIKE/PED	Pedestrian and bike improvements along Chapala between Gutierrez and Sola Streets
SB-PL-16: Corridor Improvements: Milpas Street	BIKE/PED	Implement a road diet on De La Vina Street from Constance Avenue to Padre Street. Crossing enhancements included.
SB-PL-17: Corridor Improvements: Westside and Lower Westside Transportation Management Plan Implementation	BIKE/PED	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps
SB-PL-18: Corridor Improvements: Upper State Street	BIKE/PED	Implement bike and pedestrian safety improvements as outlined in the Westside and Lower Westside Transportation Management Plan. Infrastructure projects include sidewalk infill, enhanced crossings, pedestrian scale lighting, bike lanes, and separated bikeways/multiuse paths.
SB-PL-19: Pedestrian Enhancements: Crosswalk Improvements	BIKE/PED	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps
SB-PL-20: Pedestrian Enhancements: Hollister Sidewalk	BIKE/PED	Improve crosswalks at various locations in the City. Improvements may include pedestrian activated flashers and pedestrian safety lighting.
SB-PL-21: Pedestrian Enhancements: Mission Canyon Corridor Improvements	BIKE/PED	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps
SB-PL-22: Pedestrian Enhancements: Montecito St Sidewalk and Railroad Crossing	BIKE/PED	Includes a pedestrian connection along the west side of Los Olivos Street and Mission Canyon Road.

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Project Title	Project Type	Description
SB-PL-23: Pedestrian Enhancements: Lower West Neighborhood Overcrossing	BIKE/PED/HWY	Add safety features to the Montecito Street railroad crossing, as well as complete nearly sidewalk infill along the north side of the train station.
SB-PL-24: Pedestrian Enhancements: School Zone Safety Improvements	BIKE/PED	This project would be a new vehicle bridge crossing Highway 101 at Ortega Street or Cota Street. The vehicle crossing would accommodate traffic, pedestrian, and bicycle traffic to and from the Lower Westside to Downtown, relieving congestion at the Carrillo and Castillo Interchanges.
City of Santa Maria		
SM-1: Roadway Maintenance, Improvement, and Construction	ST/RDS	Supplement local funding to maintain, improve, or construct roadways and bridges.
SM-2: Traffic Safety	ST/RDS	Supplement local funding to construct safety improvements, to include: signage replacements and improvements; street lighting maintenance and improvements; street lighting upgrades - underlit neighborhoods; pavement delineation, traffic signal maintenance and improvements.
SM-3: Highway Improvements	ST/RDS	Supplement local funding for Downtown Multimodal Streetscape Plan (Hwy 135).
SM-4: Alternative Transportation Enhancements	BIKE/PED	Maintenance, repair, construction & improvement of bike/ped facilities, safe routes to school, and ADA facilities; Programs, Education, & Incentives to reduce single occupant auto trips or transportation demand.
SM-5: Operating Assistance for SMAT (FTIP SM010/30)	TRANSIT	Transit Operating Assistance for SMAT, including for nighttime and Saturday service.
SM-6: Bus Replacement and Expansion (FTIP SM025, SM50, SM51)	TRANSIT	Transit bus procurement for fixed route and ADA services. Includes bus purchases for Guadalupe Transit and the Clean Air Express.
SM-7: Bus Stop Improvements (FTIP SM028)	TRANSIT	Bus stop improvements include, but not limited to, bus shelters, bus turnouts, signage and posts, and installation costs.
SM-8: Planning Projects (FTIP SM029)	TRANSIT	Funding for updates to the Short-Range Transit Plan and other service improvement planning projects.
SM-9: Capital Cost of Contracting - SMAT	TRANSIT	This activity would be used to fund the cost of overhaul work performed by the City's transit maintenance contractor
SM-10: SMAT Expansion Bus and Trolley	TRANSIT	This project will provide capital assistance for two expansion trolleys and one expansion bus in accordance with the SRTP and the City's Downtown Specific Plan.
SM-11: Fiber Optic Installation and IT Enhancements	TRANSIT	Install fiber optic communications to improve communications. Enhance SMAT's IT system.
SM-12: Fare Payment Upgrades	TRANSIT	Install a mobile payment, electronic fare media vending machine, and implement a SMART Card system
SM-13: Advanced Public Transportation System (APTS)	ITS	Purchase and installation of an APTS with global positioning system location, automatic voice enunciation, real time arrival displays at major bus stops and transfer locations, automatic passenger counters, real-time maintenance interface, phone and web-based customer interface, dispatching management module, etc.

Project Title	Project Type	Description
SM-14: SLORTA Operating Assistance (FTIP SLORTA1/02)	TRANSIT	Operating assistance for regional transit service provided by San Luis Obispo Regional Transit Authority within the Santa Maria urbanized area, including express service.
SM-15: Voice Enunciators	TRANSIT	Capital assistance from TDA to install voice enunciators on fleet.
SM-16: Security System Infrastructure Maintenance	TRANSIT	Capital assistance to replace security infrastructure that is beyond its useful life.
SM-17: Fleet Electrification	TRANSIT	Design and construction of infrastructure for electric-battery bus fleet and transit properties.
SM-18: STA Bus Replacement	TRANSIT	Replace of bus.
SM-19: Transit Fleet Maintenance Software	TRANSIT	Purchase and install of fleet management software.
SM-20: Digital Photo ID System	TRANSIT	Purchase and installation of digital photo ID system for transit customers for discount passes and ADA ID.
SM-21: Access Control at Bus Properties	TRANSIT	Installation and purchase of card access system at transit properties
SM-22: Bus Wi-Fi	TRANSIT	Installation and purchase of modem on buses for passenger WiFi.
SM-23: ADA Sedan	TRANSIT	Purchase of sedan for ambulatory ADA paratransit service.
SM-24: Electric Bus Replacements	TRANSIT	Purchase of battery-electric buses.
SM-25: Bus Overhaul	TRANSIT	Engine overhaul on select buses to extend useful life.
SM-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
SM-PL-2: 101/135 Interchange Improvements	HWY	Location: Main Street at US 101. Add capacity to approaches and on/off ramps.
SM-PL-3: US 101/Betteravia Interchange Improvements	HWY	The project will improve the operations of intersections at Betteravia Road and US 101 by constructing a northbound loop on ramp in the south east interchange quadrant.
SM-PL-4: US 101 – McCoy Interchange	HWY	The project will connect McCoy Lane to US 101 through a new interchange including northbound and southbound on and off ramps to provide Santa Maria residents and businesses with improved access to the highway.
SM-PL-5: Transportation Network Maintenance and Locally-Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded projects
SM-PL-6: Miller Widening	ST/RDS	Location: Miller St, between Robles St and Stowell Rd. Widen arterials to City standards.
SM-PL-7: Alvin Widening	ST/RDS	Location: Alvin Ave between Curryer St and Miller St. Modify to secondary arterial stands with class II bike lanes.
SM-PL-8: Stowell/College Intersection Improvements	ST/RDS	Location: Stowell Rd at College Dr. Lengthen E/B left turn lane.
SM-PL-9: Betteravia Road Widening	ST/RDS	Location: Betteravia Rd: E St. to SR 135. Purchase ROW, widen to 6 lanes, signalize intersections.
SM-PL-10: A Street Widening	ST/RDS	Location: A Street between McCoy Lane and Stowell Rd - Modify to secondary arterial standard
SM-PL-11: Miller Street Widening	ST/RDS	Location: Miller St from Enos Drive to Stowell Rd - Widen to four lanes w/ channelization and class II bike lane.

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Project Title	Project Type	Description
SM-PL-12: McCoy Lane Extension	ST/RDS	Location: McCoy Ln between A St and Mahoney Rd
SM-PL-13: Foster Road Widening	ST/RDS	Location: Foster Rd between SR 135 and Blosser Rd. Widen to four lanes and construct class II bike lane.
SM-PL-14: Widen Miller Street	ST/RDS	Widen to 4 lanes. Chapel to Alvin
SM-PL-15: Stowell Road	ST/RDS	Widen to 4 lanes between Blosser Road and "A" Street
SM-PL-16: Hanson Way	ST/RDS	Widen to 4 lanes between Route 166 and Stowell Road
SM-PL-17: SR 135/Broadway	ST/RDS	Widen to 6 lanes from Union Valley Parkway to SM Way
SM-PL-18: SR 166/Main Street	ST/RDS	Widen to 4 lanes between Panther Drive and easterly City Limit boundary
SM-PL-19: Depot Street	ST/RDS	Construct secondary arterial standards from Betteravia Rd to Carmen Lane
SM-PL-20: Regional Active Transportation Plan Implementation	BIKE/PED	Implement high priority projects listed in the Regional Active Transportation Plan
SM-PL-21: Bikeway Improvements	BIKE/PED	Location: UVP, Bradley Channel, Jones Trail, Blosser Trail, Seaward Trail, and from Santa Maria River Levee to La Brea. Construct commuter bikeway (Phase II). Project costs include Right-of-way acquisition
SM-PL-22: Breeze Bus Replacement	TRANSIT	Purchase one intercity bus for Breeze
SM-PL-23: US 101/SR-166 (Main Street) Interchange	HWY	Design and construction of interchange.
SM-PL-24: US 101 Corridor Study	HWY	Corridor study to determine transportation projects on US 101 in Northern Santa Barbara County (Santa Maria Way Interchange to Santa Barbara/San Luis Obispo County Line)
SM-PL-25: Bridge Preventative Maintenance	ST/RDS	Design and construction for maintenance of structural features.
SM-PL-26: Betteravia/E Street/Mahoney Road Intersection	ST/RDS	ROW Acquisition, design and construction of Betteravia Road, E Street, and Mahoney Road intersection. Mahoney Road reconstruction to City Limits
SM-PL-27: Signal Connectivity - Fiber Optic Cable	ST/RDS	Connect traffic signals Citywide.
City of Solvang		
Sol-1: Street and Bridge Maintenance	ST/RDS	Supplement local funding to maintain, improve, or construct roadways and bridges, including: slurry sealing, performing pavement overlays and crack sealing, and performing miscellaneous road repairs.
Sol-2: Roadway Drainage Improvements	ST/RDS	Supplement local funding to improve roadway drainage at various locations.
Sol-3: Solvang Circulation Improvements	ST/RDS	Construct locally significant circulation improvements.
Sol-4: S. Alisal Road Circulation & Bikeway Improvements	BIKE/PED	Project includes 1.5 miles of roadway widening, pavement reconstruction, and addition of bicycle sharrows & signage along Alisal Rd from the Santa Ynez River to the southerly City Limits.
Sol-5: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation network by constructing sidewalk infill & repair, ADA sidewalk ramps, and new bike lanes.

Project Title	Project Type	Description
Sol-6: Santa Ynez Valley Transit Fare Subsidy	TRANSIT	Support of the operations of the Santa Ynez Valley Transit Dial-a-Ride service.
Sol-7: Second Street Drainage Improvements (Phase 2)	ST/RDS	Supplement local funding to improve roadway drainage at various locations.
Sol-8: Operating Assistance for SYVT (FTIP SOLVANG02)	TRANSIT	Transit operating assistance for SYVT.
Sol-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
Sol-PL-2: Alisal Road Bridge Pier Repair Project	ST/RDS	Project includes constructing repairs to Piers 4, 5, 6 & 7 per recommendations of 2012 Alisal Bridge Structural Evaluation Report.
Sol-PL-3: Circulation Improvements	ST/RDS	Construct locally significant circulation improvements.
Sol-PL-4: Transportation Network Maintenance and Locally-Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded projects.
Sol-PL-5: Solvang School Sidewalk Project	BIKE/PED	Project includes construction of new sidewalk, crosswalks and ADA access ramps along Fifth Street and Elm Avenue leading to Solvang School.
Sol-PL-6: Fredensborg Canyon Rd/Adobe Creek Culvert Replacement	ST/RDS	Project includes replacing undersized culvert and roadway shoulder improvements.
Sol-PL-7: SR 246 (Mission Drive) East End Bikeway Improvements	BIKE/PED	Project includes Mission Drive shoulder widening and bikeway improvements from Pine Street to Alamo Pintado Road.
Sol-PL-8: SR 246 West End Bikeway Improvements	BIKE/PED	Project includes construction of Class 2 bike lanes along the north and south sides of SR 246 from the westerly City limits to Fifth Street.
Sol-PL-9: SYVT Bus Replacement	TRANSIT	Purchase replacement buses. Replace one or two of six buses every year.
Sol-PL-10: SYVT Operating Assistance	TRANSIT	Operating assistance for SYVT
Sol-PL-11: SYVT Operations Expansion	TRANSIT	Increase service frequency 15% by 2030 and additional 15% by 2040.
Sol-PL-12: SYVT Service Expansion	TRANSIT	Purchase "service expansion" bus to expand SYVT fleet. Add one bus for expansion of SYVT service approximately every 10 years.
County of Santa Barbara		
SBC-1: Street and Bridge Maintenance in the North County	ST/RDS	Supplement local funding to maintain, repair, construct, and improve streets and bridges, including: roadway maintenance and repair; pavement preservation; bridge and large culvert projects
SBC-2: Street and Bridge Maintenance on the South Coast	ST/RDS	Supplement local funding to maintain, repair, construct, and improve streets and bridges, including: roadway maintenance and repair; pavement preservation; bridge and large culvert projects
SBC-3: Traffic Operations in the North County	ST/RDS	Supplement local funding for traffic operations, including the maintenance of signs, striping, and guardrail; intersection and bikeway signals and lighting.
SBC-4: Traffic Operations on the South Coast	ST/RDS	Supplement local funding for traffic operations, including the maintenance of signs, striping, and guardrail; intersection and bikeway signals and lighting.

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Project Title	Project Type	Description
SBC-5: Urban Forestry and Landscaping Maintenance in the North County	ST/RDS	Supplement local funding to perform the Urban Forestry Street Tree Program
SBC-6: Urban Forestry and Landscaping Maintenance on the South Coast	ST/RDS	Supplement local funding to perform the Urban Forestry Street Tree Program
SBC-7: Alternative Transportation Enhancements (North County)	BIKE/PED	Enhance the alternative transportation environment by performing maintenance, repair, construction, and improvement of the bike and ped facilities in the North County, including: sidewalk repair and replacements (Partnership Program), and bike, pedestrian and Safe Routes facilities.
SBC-8: Alternative Transportation Enhancements (South Coast)	BIKE/PED	Enhance the alternative transportation environment by performing maintenance, repair, construction, and improvement of the bike and ped facilities on the South Coast, including: sidewalk repair and replacements (Partnership Program), and bike, pedestrian and Safe Routes facilities.
SBC-9: Safe Routes to School Improvement in the North County	BIKE/PED	Construct Safe Routes to School improvements in the North County, including school zone striping.
SBC-10: Safe Routes to School Improvement on the South Coast	BIKE/PED	Construct Safe Routes to School improvements on the South Coast, including school zone striping.
SBC-11: Reduced Transit Fares for Seniors & Disabled on South Coast	TRANSIT	Support reduced transit fares for seniors and the disabled by providing Easy Lift and other transit matching funds.
SBC-12: Isla Vista Infrastructure Improvements	BIKE/PED	Construct pedestrian and bicycle facilities throughout Isla Vista.
SBC-13: Operating Assistance for Cuyama Transit & Los Alamos Shuttle	TRANSIT	Transit operating assistance for Cuyama Transit and Los Alamos Shuttle (incl. allocation for County administration).
SBC-14: Santa Claus Lane Streetscape Project	ST/RDS	Streetscape improvements to include parking, sidewalks, landscaping and a Park & Ride area.
SBC-15: Orcutt Transportation Improvement Program Capital Projects	ST/RDS	Construct various roadway, intersection, transit, and sidewalk improvements in the Orcutt Community Area included in the OTIP
SBC-16: Orcutt Transportation Improvement Program Bikeway Projects	BIKE/PED	Construct various bikeway projects at development sites throughout Orcutt Community included in the OTIP
SBC-17: Montecito Debris Flow Trail Bridge Replacements	BIKE/PED	Replace three trail bridges in Montecito
SBC-PL-1: Various Transportation Improvement Projects in the North County	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects in the North County
SBC-PL-2: Various Transportation Improvement Projects on the South Coast	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects on the South Coast
SBC-PL-3: Transportation Network Maintenance and Locally-Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded projects
SBC-PL-4: Reconstruct segments of Hollister Ave	ST/RDS	Hollister Ave between San Antonio Rd and US 101/SR 154. Widen to 4 lanes with channelization and bike lanes; reconstruct UPRR overcrossing.

Project Title	Project Type	Description
SBC-PL-5: Clark Ave and Bradley Road Intersection Improvements	ST/RDS	Improve the intersection of Clark Avenue and Bradley Rd. Widen intersection to provide additional left & right turn lanes.
SBC-PL-6: Los Carneros Road Widening	ST/RDS	Widen Los Carneros Rd from El Colegio to Goleta city limits.
SBC-PL-7: Regional Active Transportation Plan Implementation	BIKE/PED	Implement high priority projects listed in the Regional Active Transportation Plan.
SBC-PL-8: Santa Maria Levee Multi Use Trail	BIKE/PED	Along the Santa Maria levee, Santa Maria to Guadalupe. Construct multi-purpose bikeway.
SBC-PL-9: Mission Canyon Corridor Improvements	BIKE/PED	Realign and widen roadway, drainage improvements and reconstruct pedestrian path along Mission from the city limits north to SR 192.
SBC-PL-10: California Coastal Trail (Gaviota Coastal Trail)	BIKE/PED	CA Coastal Trail/Bacara Resort to El Capitan Cyn Rd; Refugio State Beach to Canada San Onofre. Nine miles of state mandated bicycle/pedestrian trail.
SBC-PL-11: Union Valley Parkway Extension - Rodeo Drive	ST/RDS	New local road connection between the Union Valley Parkway/U.S. Highway 101 interchange and the unnamed frontage road, known as Rodeo Drive, on the east side of U.S. Highway 101.
SBC-PL-12: Los Alamos Infrastructure Improvements	BIKE/PED	Construct a variety of bike lane, pedestrian, and parking improvements in the Los Alamos Community Pedestrian Circulation and Parking Plan
SBC-PL-13: Santa Ynez Valley Infrastructure Improvements - Santa Barbara County	BIKE/PED	Construct a variety of bike and pedestrian improvements in the Santa Ynez Valley unincorporated area including: Pine St, Calzada Avenue, Santa Ynez Rd, and Edison St bike lanes.
SBC-PL-14: Eastern Goleta Valley Infrastructure Improvements - Santa Barbara County	BIKE/PED	Construct a variety of bicycle and pedestrian improvements to improve bike and pedestrian connectivity in the Eastern Goleta Valley
SBC-PL-15: Orcutt Trails - Santa Barbara County	BIKE/PED	Construct trails as identified in Orcutt Community Plan
SBC-PL-16: Pt. Sal Trails - Northern Santa Barbara County Coastal Access	BIKE/PED	Construct various trails to Point Sal State Park
SBC-PL-17: Parks Road Maintenance - Santa Barbara County	ST/RDS	Road maintenance for County Park roads
SBC-PL-18: Jalama Beach County Park Coastal Trail Access - Santa Barbara County	BIKE/PED	Trail along coastal blufftop to Jalama Beach County Park
SBCAG		
SBCAG-1: SR 166 Safety & Operations	HWY	Enhance the safety of SR 166 by supporting CHP operations, improving Cuyama bus stops, improving the Black Road intersection, and improving the Hwy 1 intersection.
SBCAG-2: South Coast Bicycle and Pedestrian Program	BIKE/PED	Enhance the alternative transportation environment by providing financial support for various South Coast bicycle and pedestrian programs and projects.
SBCAG-3: South Coast Safe Routes to School Program	BIKE/PED	Enhance the Safe Routes to School environment by construction of various Safe Routes to School projects on the South Coast.

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Project Title	Project Type	Description
SBCAG-4: North County Safe Routes to School, Bicycle and Pedestrian Program	BIKE/PED	Enhance the alternative transportation environment by providing financial support for yet to be identified North County projects.
SBCAG-5: North County Interregional Transit Program	TRANSIT	Support the North County Interregional Transit Program by providing funding for planning and Clean Air Express operations, capital, and marketing.
SBCAG-6: South Coast Interregional Transit Program	TRANSIT	Support the South Coast Interregional Transit Program by providing funding for planning and Coastal Express operations and marketing.
SBCAG-7: South Coast Commuter/Passenger Rail Program	TRANSIT	Support the planning and operations of Pacific Surfliner peak-hour service.
SBCAG-8: Carpool and Vanpool Program Support (North County)	TDM	Support the North County carpool and vanpool programs, including, employer outreach and counseling, carpool matching system management, vanpool formation assistance, community education and outreach, general marketing, and incentives.
SBCAG-9: Carpool and Vanpool Program Support (South Coast)	TDM	Support the North County carpool and vanpool programs, including, employer outreach and counseling, carpool matching system management, vanpool formation assistance, community education and outreach, general marketing, and incentives.
SBCAG-10: Plan, Program & Monitor FY 15/16 – 18/19 (FTIP SBCAG11)	HWY	PPM funding for FY 2015/16 through 2018/19.
SBCAG-11: Operations and Management Improvements on US 101 in Santa Barbara County Study (FTIP SBCAG28)	ITS	Operations and management improvements, including ITS technologies on US 101 in Santa Barbara County (CA 329)
SBCAG-12: US 101 Widening TDM Program (Carpinteria to Santa Barbara)	TDM	Program includes vanpool and carpool incentives, real-time ridesharing, transit marketing, employer outreach, and bicycle safety information.
SBCAG-13: Freeway Service Patrol (FSP)	TDM	A fleet of tow and pickup trucks patrol designated portions (beats) of freeways during morning and afternoon commute hours clearing accidents and removing debris.
SBCAG-14: SAFE: Highway Call Box, Highway Safety and Traffic Reduction Services	TDM	SBCAG operates the highway call box program as a motorist aid system. The call boxes can be used to report accidents, traffic hazards, and other emergencies, and to request assistance for vehicle breakdowns.
SBCAG-15: South Coast Commuter Rail	RAIL	Implement and support commuter rail provided by Amtrak. One peak hour train implemented by 2020 and a second by 2035.
SBCAG-16: Carpinteria Train Station Second Platform and Pedestrian Undercrossing	RAIL	Construct passing siding and second passenger platform to allow for train meets and pedestrian undercrossing to improve safety at the existing Carpinteria train station
SBCAG-17: Goleta Train Storage Expansion	RAIL	Construct additional rail spur to store one additional train at the existing Goleta train station
SBCAG-18: Union Valley Pkwy Barrier Walls	ST/RDS	Barriers Walls along Union Valley Parkway in Santa Maria.
SBCAG-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects

Project Title	Project Type	Description
SBCAG-PL-2: Transit Operating Improvements for Implementing the SCS	TRANSIT	Operational improvements on high performing transit routes from across the region
SBCAG-PL-3: South Coast Regional Transit Operations and Maintenance Facility	SBCAG	Develop a regional transit facility to support the Clean Air Express and Coastal Express intercity bus services
Santa Barbara Metropolitan Transit District		
MTD-1: South Coast Transit Capital Program	TRANSIT	Provide funding for SBMTD capital purchases.
MTD-2: South Coast Transit Operations Program	TRANSIT	Provide funding for SBMTD operations
MTD-3: Operating Assistance for MTD (FTIP MTD1)	TRANSIT	Transit Operating Assistance for MTD
MTD-4: Regional Intermodal Transit Center Rehabilitation	TRANSIT	Rehabilitation of Downtown Santa Barbara Transit Center
MTD-5: Lines 1 & 2 A.M. Peak-Period Enhancement	TRANSIT	Improve P.M. peak-period frequency on MTD Lines 1 & 2 from 15 minutes to 10 minutes
MTD-6: MTD-UCSB Mitigation Agreement	TRANSIT	MTD Line 28 and enhancements to MTD Lines 12x & 24x
MTD-7: Rail Last Mile/First Mile Service	TRANSIT	Amtrak connecting service
MTD-8: Revenue Vehicle Replacement	TRANSIT	40 ft. Gillig Diesel (4)
MTD-9: Bus Refurbishing/Repainting	TRANSIT	Rehabilitation of MTD bus fleets
MTD-10: Goleta Microtransit Pilot	TRANSIT	Pilot microtransit service in Goleta
MTD-11: Goleta Microtransit Pilot	TRANSIT	Pilot microtransit service in Goleta
MTD-12: Terminal 2 - Interim Reactivation	TRANSIT	Reactivate Terminal 2 in Goleta as a secondary bus yard
MTD-13: Line 19x Carpinteria to Santa Barbara City College	TRANSIT	Hwy 101 TMP service between Carpinteria & SBCC
MTD-PL-1: Various Transportation Improvement Projects	TRANSIT	Utilize projected Measure A funds for MTD Transit Operations
MTD-PL-2: Rail Transit Connection, Capital	TRANSIT	Rail Transit Connection, Capital
MTD-PL-3: Rail Transit Connection, Operations	TRANSIT	Rail Transit Connection, Operating
MTD-PL-4: Transit Operating Assistance for MTD	TRANSIT	Transit operating assistance
MTD-PL-5: South Coast Service Expansion, Capital	TRANSIT	South Coast Service Expansion, Capital
MTD-PL-6: South Coast Service Expansion, Operations	TRANSIT	South Coast Service Expansion, Operating
MTD-PL-7: Revenue Vehicle Replacement	TRANSIT	30-ft. Electric Bus (2nd Cycle - 14)
MTD-PL-8: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Hybrid (8)
MTD-PL-9: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Diesel (13)

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Project Title	Project Type	Description
MTD-PL-10: Revenue Vehicle Replacement	TRANSIT	29-ft. Gillig Diesel (11)
MTD-PL-11: Revenue Vehicle Replacement	TRANSIT	29-ft. Gillig Hybrid (3)
MTD-PL-12: Photovoltaic System	TRANSIT	Indirect Bus Battery Charging
MTD-PL-13: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Diesel (5)
MTD-PL-14: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Hybrid (7)
MTD-PL-15: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Diesel (7)
MTD-PL-16: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Diesel (13)
MTD-PL-17: Revenue Vehicle Replacement	TRANSIT	60-ft. Nova Diesel (3)
MTD-PL-18: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Hybrid (8)
MTD-PL-19: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Diesel (13)
MTD-PL-20: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Diesel (5)
MTD-PL-21: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Diesel (3)
MTD-PL-22: Revenue Vehicle Replacement	TRANSIT	40-ft. Gillig Diesel (10)
MTD-PL-23: Expanded Microtransit Pilot	TRANSIT	Expanded pilot microtransit service
MTD-PL-24: Expanded Microtransit Pilot	TRANSIT	Expanded pilot microtransit service
MTD-PL-25: Mobile Pay	TRANSIT	Enhanced Fare Technology
MTD-PL-26: Terminal 2 Rebuild	TRANSIT	Rebuild Terminal 2 as an electric bus facility
Easy Lift		
EL-1: Local Transit Support (South Coast)	TRANSIT	Support local specialized transit services for the elderly and disabled – South Coast.
EL-2: Operating Assistance for Easy Lift	TRANSIT	Transit operating assistance for Easy Lift.
EL-PL-1: Easy Lift FTA 5310 Bus Replacement	TRANSIT	Purchase four vehicles biennially
EL-PL-2: Easy Lift FTA 5310 Bus Expansion	TRANSIT	Purchase two vehicles biennially
EL-PL-3: Operating Assistance for Easy Lift	TRANSIT	Transit Operating Assistance for Easy Lift
Santa Maria Organization of Transportation Helpers		
SMOOTH-1: Local Transit Support (North County)	TRANSIT	Support local specialized transit services for the elderly and disabled – North County.
SMOOTH-2: SMOOTH FTA 5310 Bus Expansion	TRANSIT	Purchase 3 vehicles biennially

Project Title	Project Type	Description
SMOOTH-PL-1: SMOOTH FTA 5310 Bus Replacement	TRANSIT	Purchase two vehicles biennially
SMOOTH-PL-2: SMOOTH FTA 5310 Bus Expansion	TRANSIT	Purchase one vehicle biennially
SMOOTH-PL-3: Operating Assistance for SMOOTH	TRANSIT	Transit Operating Assistance for SMOOTH

Bike/Ped = Bicycle or Pedestrian
 HWY = Highway
 ST/RDS = Street or Roadway
 Transit = Public Transportation Infrastructure
 Various = Project/funding of different types

2.5 Required Approvals

Approval of Connected 2050 is at the discretion of the Santa Barbara County Association of Governments. It should be noted that additional environmental review will have to be conducted by the project sponsor, as the lead agency for the individual projects contained within Connected 2050, prior to project implementation. Depending on the location of the project, future approvals for individual transportation projects identified in Connected 2050 would have to be completed by one or more of the following agencies:

- Santa Barbara County Association of Governments
- California Department of Transportation (Caltrans)
- California Public Utilities Commission's Rail Crossings Engineering Section
- Santa Barbara Metropolitan Transit District (MTD)
- Cities of:
 - Buellton
 - Carpinteria
 - Goleta
 - Guadalupe
 - Lompoc
 - Santa Barbara
 - Santa Maria
 - Solvang
- County of Santa Barbara
- Santa Ynez Band of Chumash Indians
- United States Forest Service
- California Department of State Parks

The relationship of this EIR to future environmental review of individual transportation projects is further discussed in Section 1.0, *Introduction*.

2.6 Relationship to Other Plans and Programs

The RTP provides a sound basis for the allocation of state and federal transportation funds for transportation projects within each California county over the subsequent 20-years. The RTP follows guidelines established by the State of California Transportation Commission to:

- Describe the transportation issues and needs facing the county;
- Identify goals and policies for how SBCAG will meet those needs;
- Identify the amount of money that will be available for identified projects; and
- Include a list of prioritized transportation projects to serve the county’s long-term needs consistent with the funds allocated while considering environmental impacts and planning for future land use.

Connected 2050, prepared by SBCAG has been evaluated for consistency with the goals, policies and objectives currently being implemented by municipal and county planning agencies within the region. A consistency discussion of Connected 2050 and other land use plans and agencies is provided in Section 4.10, *Land Use and Planning*.

Connected 2050 would be implemented with several other existing SBCAG programs designed to reduce adverse impacts to transportation resources, air quality, greenhouse gas (GHG) emissions, and energy. One of the ways SBCAG improves the transportation system, while at the same time improving air quality and stimulating the local economy, is to provide commuters with viable options to driving alone. The following is a summary of programs that SBCAG and partner agencies support:

1. **Carpool Matchlist.** Service Traffic Solutions maintains a database of commuters interested in carpooling and offers a free online Matchlist service that provides an instant list of commuters with a similar commute and schedule.
2. **Vanpool.** SBCAG Traffic Solutions offers vanpool subsidies for newly formed vanpools and maintains a list of Santa Barbara County destined vanpools available to commuters.
3. **Coastal Express.** The Coastal Express is an intercounty transit service operating between Ventura and Santa Barbara Counties that is jointly managed by SBCAG and the Ventura County Transportation Commission (VCTC). The Coastal Express operates seven days a week in both directions.
4. **Clean Air Express.** The Clean Air Express is a weekday commuter bus service offering transportation from Santa Maria, Lompoc, and Buellton to Goleta and Santa Barbara. The Clean Air Express carries over 100,000 passengers annually. It now provides a service connecting Santa Barbara and the Santa Ynez Valley.
5. **EZ Bike.** SBCAG’s Traffic Solutions Division recently launched EZ Bike, a program that has acquired a fleet of electric bikes which are offered to members of the public for test rides of up to four days long. The goal is to encourage mode shift to electric bicycle while allowing for test rides before participants commit to the purchase of an electric bicycle. The program offers discounts to local bike shops for electric bicycle purchases.
6. **Santa Barbara County Transit Services.** Additional transit services in Santa Barbara include:
 - **AMTRAK.** Pacific Surfliner offers five trains a day coming into Santa Barbara from the south, with two continuing to San Luis Obispo, and the Coast Starlight once daily

- **Breeze.** Weekday commuter bus service linking Santa Maria, Vandenberg AFB and Lompoc as well as a service connecting Santa Maria to Los Alamos, Solvang and Buellton.
- **COLT** (City of Lompoc Transit). Serving Lompoc, Vandenberg Village and Mission Hills.
- **Easy Lift.** Provides Dial-a-Ride service on the South Coast from Ellwood (Goleta) through Carpinteria. Dial-a-Ride service is restricted to disabled individuals who are not able to use MTD.
- **Guadalupe Transit.** Providing transportation anywhere within the city of Guadalupe and between Guadalupe and Santa Maria
- **MTD** (Santa Barbara Metropolitan Transit District). Serving Carpinteria, Summerland, Santa Barbara and Goleta.
- **RTA-Route 10** (San Luis Obispo). Serving Santa Maria, Nipomo, Arroyo Grande, Pismo Beach and San Luis Obispo.
- **Santa Ynez Valley Transit.** Serving the unincorporated Santa Ynez Valley, Buellton, and Solvang.
- **SMAT** (Santa Maria Area Transit). Serving Santa Maria, Orcutt and Tanglewood.
- **Wine Country Express.** Provides service between Lompoc, Buellton, and Solvang.

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3 Environmental Setting and Impact Analysis Approach

This section provides a general overview of the environmental setting of the SBCAG region. This section also outlines the EIR baseline and approach to both direct and cumulative impact analyses. More detailed descriptions of the environmental setting for each environmental issue area can be found in Section 4.0, *Environmental Impact Analysis*.

3.1 Regional Setting

Santa Barbara County is located in the central coastal area of California and is bounded by San Luis Obispo County to the north, Ventura County to the east, Kern County to the northeast, and the Pacific Ocean to the south and the west. The geographic center of the County is about 300 miles south of San Francisco and 115 miles from Downtown Los Angeles. The region contains four, main geographical sub-regions, generally referred to as: South County, Santa Maria Valley, Lompoc Valley, and Santa Ynez Valley.

All of the four main sub-regions in Santa Barbara County are linked by U.S. 101 or State Route 1. Approximately half of the remaining undeveloped land in the County lies in the Los Padres National Forest (encompassing approximately 983 square miles) and Vandenberg Air Force Base (approximately 154 square miles). In addition, four Channel Islands lie off coast, and are part of Santa Barbara County.

3.2 Sub-Region Descriptions

The sub-region descriptions discussed herein use SBCAG's 2050 Regional Growth Forecast (RGF) for population estimates. The most recent population data in the RGF is from 2017. It should be noted that sub-regions included in this document refer to large generalized geographical locations, not specific City or other defined boundaries, to provide a description from an environmental setting perspective.

South County – Santa Barbara/Goleta/Carpinteria

The Santa Barbara/Goleta/Carpinteria sub-region is the largest designated urbanized area in the County, covering approximately 130 square miles and a 2017 population of approximately 215,900 persons. This coastal area is characterized by numerous canyons between the foothills of the Santa Ynez Mountains and the Pacific Ocean. This urban area includes the cities of Santa Barbara, Goleta, and Carpinteria, and the unincorporated communities of the Eastern Goleta Valley, Summerland, Montecito, and Isla Vista.

Santa Maria Valley

This sub-region includes the Santa Maria Valley urbanized area. This urban area is the largest retail trade center in the North County. The 2017 population of this area was approximately 153,100 persons. The valley is situated in the northwest corner of the County and is bounded by the Santa Maria River to the north, the Casmalia Hills to the west, the San Rafael Mountains to the east, and

the Solomon Hills to the south. This area includes the cities of Santa Maria and Guadalupe, as well as the unincorporated communities of Orcutt and Los Alamos.

Lompoc Valley

The Lompoc Valley is located in the mid-western portion of the County, adjacent to Vandenberg Air Force Base. Separated from the rest of the region by the Purisima, Santa Rita, Santa Rosa, and White Hills, the valley had a 2017 population of approximately 59,900 persons. The Santa Ynez River traverses the Lompoc Valley in a westerly direction, and eventually drains into the Pacific Ocean. This area includes the City of Lompoc, and the unincorporated communities of Vandenberg Village and Mission Hills.

Santa Ynez Valley

The Santa Ynez Valley is located in the central portion of the County, adjacent to the Lake Cachuma recreational area. This valley is located at the base of several converging mountain ranges, including the San Rafael and Santa Ynez Mountains, and the Purisima and Santa Rita Hills. The Santa Ynez River is located to the south of this valley. The area had a 2017 population of approximately 24,500 persons and includes the cities of Solvang and Buellton and the unincorporated communities of Los Olivos, Ballard, and Santa Ynez.

3.3 Regional Transportation System

The County's regional transportation system consists of a series of highways, major roads, and bikeways, one main rail line and two branch lines, and five airports (US 101 is the backbone of the regional road system, providing access to the County's major urban areas as well as points north and south of the County. Other important components of the County road system include Highway 154 (which connects the South County area to the Santa Ynez Valley), State Route 1 (which connects the Lompoc and Santa Maria Valleys), State Route 166 (which connects Guadalupe to US 101 in Santa Maria as well as Santa Maria with the Cuyama Valley), State Route 135 (which connects US 101 in Los Alamos to Highway 1), and State Route 246 (which connects the Santa Ynez and Lompoc Valleys).

The County has approximately 350 miles of Class I, II, and III bikeways and approximately fifteen transit services serve the region. The transit services are briefly discussed below.

- **South County**
 - Santa Barbara Metropolitan Transit District (SBMTD) provides fixed route service
 - Easy Lift Transportation provides Dial-a-Ride, ADA paratransit service for SBMTD and also serves as the Consolidated Transportation Services Agency (CTSA)

- **North County**
 - Santa Maria Area Transit (SMAT) serves Santa Maria and Orcutt
 - City of Lompoc Transit (COLT) which serves the Lompoc Valley and provides a twice-a-week shuttle to Santa Barbara
 - Santa Ynez Valley Transit (SYVT) serves Buellton, Solvang, Ballard, Los Olivos, and Santa Ynez.
 - Guadalupe Transit includes the Guadalupe Shuttle within Guadalupe and the Guadalupe Flyer between Guadalupe and Santa Maria, and also serves North County

- Cuyama Transit provides deviated fixed route service from the Cuyama Valley to Santa Maria
- Breeze 100 provides service between Santa Maria, Vandenberg Air Force Base, and Lompoc
- Breeze 200 provides service between Santa Maria, Los Alamos, Buellton, and Solvang
- Wine Country Express provides service between Lompoc and the Santa Ynez Valley.
- **Inter-regional and inter-county services**
 - Clean Air Express offers express regional transit service connecting Santa Maria, Lompoc, Buellton, Solvang, Goleta, and Santa Barbara
 - VCTC Coastal Express is provided by the Ventura County Transportation Commission and SBCAG, and offers regional transit service connecting Oxnard, Ventura, Carpinteria, Santa Barbara and Goleta.
 - San Luis Obispo Regional Transit Authority (SLORTA) Route 10 runs on US 101 between San Luis Obispo and Santa Maria.

The Union Pacific Railroad operates one main rail line that runs the full length of the County and is a portion of the Los Angeles to San Francisco route. The Pacific Surfliner run by Amtrak, as of November 7, 2016, added one additional northbound train. The total number of passengers north and southbound trains through Santa Barbara now totals 12 trains (Amtrak Pacific Surfliner schedule, Effective June 1, 2020). The Santa Maria Valley Railroad (SMVR) operates rail freight facilities in the Santa Maria area—an average of two trains per day between Santa Maria and Guadalupe.

Passenger service is provided by Amtrak, which operates two train routes in Santa Barbara County: the Coast Starlight and Pacific Surfliner. The Coast Starlight connects Los Angeles and Seattle and offers one daily train in each direction. The Pacific Surfliner connects San Luis Obispo and San Diego and offers up to five round trips that serve Santa Barbara County.

Aviation facilities in the County include Santa Barbara Municipal Airport, Santa Maria Public Airport, Lompoc Airport, Santa Ynez Airport, and Vandenberg Air Force Base. Santa Barbara and Santa Maria airports offer commercial service; Vandenberg handles occasional military operations; the remaining airports are general aviation facilities. Santa Barbara Airport is the most heavily used airport in the County, with an average of 180,000 annual aircraft operations (Santa Barbara Airport, 2020). The Santa Maria Airport had 34,542 aircraft operations in 2019 (U.S. Department of Transportation, Federal Aviation Administration [FAA] 2020).

3.4 Mitigation Approach, EIR Baseline, Approach for Direct and Cumulative Analyses

3.4.1 Mitigation Approach

This EIR includes proposed mitigation measures to reduce impacts and identifies agencies for implementation of those mitigation measures. SBCAG has lead agency status; and therefore, authority to enforce mitigation measures for projects for which they have discretionary authority. However, SBCAG does not have authority to require recommended mitigation measures be implemented by other implementing agencies (e.g., Caltrans, cities, transit agencies, etc.) that are responsible agencies for this Connected 2050 EIR, but will be lead agencies for future transportation and land use development projects. It is the responsibility of the lead agency implementing specific

Connected 2050 projects to conduct environmental review consistent with CEQA and where applicable, incorporate mitigation measures provided herein and developed specifically for the project to reduce impacts. Project-specific environmental documents may adjust the mitigation measures identified in this EIR as necessary to respond to site-specific conditions.

3.4.2 EIR Baseline

Section 15125 of the CEQA Guidelines states that an EIR “must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation [NOP] is published.” Section 15125 states that this approach “normally constitute[s] the baseline physical conditions by which a lead agency determines whether an impact is significant.”

This EIR evaluates impacts against existing conditions which are generally conditions existing at the time of the release of the NOP (December 2020)¹. It was determined that a comparison to current, existing baseline conditions would provide the most relevant information for the public, responsible agencies and SBCAG decision-makers. For some issue areas, this EIR also includes consideration of impacts against a forecast future baseline condition in addition to the current, existing (2020) baseline conditions, controlling for impacts caused by population growth and other factors that would occur whether or not Connected 2050 is adopted. This future baseline analysis is provided for informational purposes only. It is important to emphasize that population growth, urbanization and volume of average daily traffic generated in the SBCAG region will increase by 2050, with or without implementation of Connected 2050, as a result of a range of demographic and economic factors independent of policy and land use decisions by SBCAG and its member agencies². Therefore, this EIR evaluates potential impacts against both a future baseline and a current baseline standard³. Thus, for these issue areas, a comparison to a future 2050 baseline is provided for informational purposes. However, all impact determinations are based on a comparison to existing 2020 baseline conditions.

Interim Timeframes

2050 is the horizon year of the Connected 2050. While Connected 2050 would be implemented gradually over the planning period, this EIR does not analyze interim time frames because the four-year update cycle of the RTP/SCS prepared by SBCAG already requires short-term adjustments to the Plan. The one exception to this approach is in Section 4.8, *Greenhouse Gas Emissions/Climate Change*, which discusses years 2020, 2035, and 2050, as well as a comparative baseline of 2005, to satisfy statutory requirements and address state goals related to GHG emissions, such as SB 375 (Health & Safety Code, § 38551(b)). A summary of the scenarios considered in the GHG analysis is provided in Section 4.8.2 in Section 4.8, *Greenhouse Gas Emissions/Climate Change*. As previously noted, SBCAG has modeled GHG emissions for 2020 for illustrative purposes, though no aspect of Connected 2050 can influence the achievement or lack of achievement of target year 2020 GHG emissions.

¹ The NOP was circulated during the COVID-19 global pandemic and therefore utilizes December 2020 conditions for baseline environmental conditions that may have altered driving patterns or other conditions from pre-pandemic years.

² Based on an econometric model, SBCAG’s 2019 Regional Growth Forecast predicts the region’s population to increase by 68,200 from 453,500 in 2017 to 521,700 people or 15 percent by 2050. Over the course of the same forecast period, county-wide employment is forecast to increase by 56,900 from 222,300 to 280,700 jobs or 26 percent.

³This baseline approach is consistent with the baseline used in the 2040 RTP/SCS EIR approved in 2013, consistent with *Neighbors for Smart Rail v. Exposition Metro* (2013) 57 Cal. 4th 439

3.4.3 Approach for Direct Impact Analysis

The programmatic nature of Connected 2050 necessitates a general approach to the evaluation of existing conditions and impacts associated with the proposed project. As a programmatic document, this EIR presents a regionwide assessment of the impacts of Connected 2050. These impacts are examined for both transportation network improvements and the regional growth and land use changes forecasted. Because the EIR is a long-term document intended to guide actions over 25 years into the future, program-level and qualitative evaluation is involved. Quantitative analyses are provided where applicable with available information. During future stages in planning and implementation of specific elements of Connected 2050, including land development resulting from regional growth and transportation improvements identified in Connected 2050, project-specific CEQA documents will be prepared by the appropriate project implementation agency.

For analytical purposes, the baseline year examined throughout this EIR is 2020, except where specifically noted, as further described in Section 3.4.2 above.

3.4.4 Approach for Cumulative Analysis

CEQA defines cumulative impacts as “two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts.” Section 15130 of the CEQA Guidelines requires that an EIR evaluate environmental impacts that are individually limited but cumulatively considerable. These impacts can result from the proposed project alone, or together with other projects. The CEQA Guidelines state: “The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present and reasonably foreseeable probable future projects” (CEQA Guidelines, Section 15355). A cumulative impact of concern under CEQA occurs when the net result of combined individual impacts compounds or increases other overall environmental impacts (CEQA Guidelines, Section 15355). In other words, cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. CEQA does not require an analysis of incremental effects that are not cumulatively considerable nor is there a requirement to discuss impacts which do not result in part from the project evaluated in the EIR.

Cumulative Impact Methodology

Chapter 4 includes an analysis of both program specific and cumulative impacts of the proposed project, as required by CEQA. The CEQA Guidelines require the analysis of the cumulative effects of a project in combination with other probable future projects. Section 15130 of the State CEQA Guidelines prescribes two methods for analyzing cumulative impacts: (1) use of a list of past, present, and reasonably anticipated future projects producing related or cumulative impacts; or (2) use of a summary of projections contained in an adopted general plan or related planning document.

This document is a Program EIR that analyzes the effects of cumulative buildout of Connected 2050. Connected 2050 considers the probable future projects described in method 1 above and includes a range of specific land use and transportation projects designed to meet the plan goals and current and projected future needs, and the Draft EIR analyzes the cumulative impacts of these projects. Connected 2050 also constitutes the cumulative scenario described in method 2. Therefore, the cumulative effects of all probable future circulation system improvements and land use projects in the region are included in the analysis of the proposed project’s impacts. These projects are listed in

Table 2-1 of this document and represent all reasonably foreseeable probable future transportation projects within Santa Barbara County. Land use and growth projections for the region, which are the subject of analysis throughout this EIR, are combined with the growth projections for the adjoining counties and accounted for in SBCAG’s traffic modeling. Adjoining counties are listed as follows:

- **Kern County.** Kern County is located southeast of the Plan area, southeast of the southeastern-most corner of Monterey County. Kern County is California’s third largest county in land area, encompassing 8,202 square miles. The County includes 11 incorporated cities, with Bakersfield as the city with the largest population. The remainder of the County is generally characterized as rural (Kern County, 2004). There are no direct road connections between Kern and Santa Barbara counties.
- **San Luis Obispo County.** San Luis Obispo County is located north of the Plan area, south of Monterey County. The County is largely agricultural, with population concentrated in four regions: North County, North Coast, San Luis Obispo and South County (San Luis Obispo County, 2015).
- **Ventura County.** Ventura County is located east/southeast of the Plan area, south of Kern County. Northern Ventura County is largely mountainous with scattered agricultural productions, with the majority of the population predominantly contained in the Cities of Camarillo, Oxnard, Simi Valley, Thousand Oaks, and Ventura.

The area that includes the SBCAG region and the above-referenced adjoining counties is referred to in this analysis as the “cumulative impact analysis area.” As shown in Table 3-1, the population for the cumulative impact analysis area is projected to grow by approximately 250,000 people by 2050.

Table 3-1 Population, Households and Employment Projections of Cumulative Impact Analysis Area, 2020-2050

Adjoining County	Population ²		Households ²		Jobs ²	
	2020	2050	2020	2050	2020	2050
Kern	925,623	1,161,147	270,300	337,000	311,500	389,000
San Luis Obispo	278,746	277,556	108,400	125,800	113,000	140,500
Ventura	852,435	824,721	276,100	302,700	311,700	355,800
Santa Barbara County ³	460,900	521,700	152,000	186,900	231,150	280,700
Total	2,517,704	2,785,124	806,800	952,400	967,350	1,166,000

¹ Long-Term Socio Economic Forecasts by County, Department of Transportation, 2020

² SBCAG 2019 Regional Growth Forecast

The RTP/SCS covers a 30-year period from 2020 to 2050 and is an update of the Fast Forward 2040 RTP/SCS. SBCAG does not propose any land use changes in Connected 2050, but rather the land use patterns envisioned by Connected 2050 are based on the General Plan land use designations of the local agencies (the incorporated cities and the county). The forecasted allocations in the RTP are generally consistent with growth assumptions (e.g., location, density, and intensity of use) utilized in existing general plans or other local adopted plans, however, it does not utilize all available capacity in those plans.

Thus, the cumulative effects of all probable future circulation system improvements and land use projects in the region, as included in the SBCAG model, are included in the analysis of the proposed project's impacts; therefore, in this chapter, when project-specific impacts are judged to be significant, they also by definition are considered "cumulatively considerable" incremental contributions to significant cumulative impacts (See CEQA Guidelines Section 15130(a)). Project-specific impacts assessed in this document represent the cumulative impact of all potential transportation and land use projects in the project area and surrounding regions as provided in the SBCAG model. Mitigation measures proposed for project-specific impacts also represent potentially feasible options for mitigating the proposed project's incremental contribution to significant cumulative effects (See CEQA Guidelines Section 15130(b)(5)).

In some cases, probable future projects outside the SBCAG region in neighboring counties would further contribute to significant cumulative impacts. These include the impacts of vehicle trips originating or terminating outside the region. The SBCAG's regional travel demand model (RTDM) accounts for these trips originating and/or ending outside the SBCAG region. SBCAG, in partnership with San Luis Obispo Council of Governments (SLOCOG) and Ventura County Transportation Commission (VCTC), conducted the Central Coast Origin-Destination Survey (July 2016) to gather information on the travel behavior of people who make regional and inter-regional trips on U.S. 101 in and between Ventura, Santa Barbara and San Luis Obispo counties. The survey was designed to collect origin-destination information, demographic, frequency, trip purpose, and other information about the travel patterns of U.S. 101 users. The data from this study was used to confirm the consistency of SBCAG's regional travel demand model to account for trips originating or terminating outside the region. Therefore, Connected 2050's traffic impact analysis includes the cumulative impact from these out-of-region trips as they are included in the traffic model the analysis is based on. The impacts of these external trips are also reflected in the EIR air quality, GHG, and energy impact analyses.

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4 Environmental Impact Analysis

This section discusses the possible environmental effects of the proposed project for the specific issue areas that were identified through the scoping process as having the potential to experience significant effects. A “significant effect” as defined by the *CEQA Guidelines* §15382:

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

The assessment of each issue area begins with a discussion of the environmental setting related to the issue, which is followed by the impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the “significance thresholds,” which are those criteria adopted by SBCAG and other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. For example, the County of Santa Barbara utilizes the Santa Barbara County *Environmental Thresholds and Guidelines Manual (2021)* for evaluating environmental impacts in the county. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text with the discussion of the effect and its significance. Each bolded impact statement also contains a statement of the significance determination for the environmental impact as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the CEQA Guidelines.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under §15091 of the CEQA Guidelines.
- **Less than Significant.** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact.** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Following each environmental impact discussion is a list of mitigation measures and the residual effects or level of significance remaining after implementation of the measure(s). In cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed and evaluated as a secondary impact. While SBCAG cannot mandate that sponsoring agencies implement the mitigation measures, ongoing interagency consultation during project specific environmental review process would ensure that mitigation contained herein is considered and implemented where applicable. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions. Many sections conclude with a screening-level discussion of specific Connected 2050 transportation projects that may result in identified impacts. The impact analysis concludes with a discussion of cumulative

effects, which are defined and discussed in detail in Section 3.0, *Environmental Setting and Impact Analysis Approach*.

Regarding Mandatory Findings of Significance under CEQA, Section 4.3, *Biological Resources*, describes the potential programmatic and cumulative effects of the project on plant and animal species populations, habitats, communities, and migratory patterns. Section 4.4, *Cultural Resources*, describes potential programmatic and cumulative effects from Connected 2050 on important historical and prehistorical cultural resources, and Section 4.13, *Tribal Cultural Resources*, describes potential programmatic and cumulative effects from Connected 2050 on tribal cultural resources in the SBCAG region. As discussed in these sections, Connected 2050 would result in significant and unavoidable impacts on biological, cultural, or tribal cultural resources as well as considerably contribute towards significant and unavoidable cumulative impacts to these resources. Potential adverse environmental effects to human beings are discussed in Section 4.2, *Air Quality*, Section 4.10, *Land Use and Planning*, Section 4.11, *Noise*, Section 4.12, *Transportation*, Section 4.14, *Wildfire*, and Section 4.15, *Effects Considered Less than Significant*.

Chapter 0.0, *Executive Summary*, of this EIR, summarizes all impacts and mitigation measures that apply to the proposed project.

4.1 Aesthetics

This section analyzes the impacts of Connected 2050 to aesthetics, including the existing visual character of, and scenic views in, Santa Barbara County.

4.1.1 Setting

a. Visual Character of the County

Santa Barbara County is known for its natural scenic resources. The coastal terraces between ocean and mountains; the scenic inland valleys with large expanses of cultivated farmlands and gently rolling hills; and the rugged Los Padres National Forest are all key elements which define the County's scenic resources. The North County is largely rural in character, with distinct compact urban communities separated by substantial public open space and private grazing lands. The South County is defined by a narrow coastal plain between the ocean and the Santa Ynez Mountains. For approximately 25 miles between Ventura County and western Goleta, the South County houses a largely contiguous urbanized area.

The visual character of the County includes ongoing infrastructure improvements along the US 101 in addition to urban development in the region primarily concentrated in existing urban or suburban areas. Sections of the US 101 High Occupancy Vehicle (HOV) Lane Project are currently under construction to provide an additional lane to the US 101 for HOV traffic between Carpinteria and the City of Santa Barbara.

b. Primary Viewing Corridors

The County of Santa Barbara and the State of California have designated scenic corridors on State highways within the County. The Coastal Land Use Plan, adopted in 1982 and republished in 2009 by the County of Santa Barbara, established a View Corridor Overlay land use designation for the portions of US 101 with views of the ocean. The entire US 101 route in Santa Barbara County is also in the State's master plan of highways eligible for "Scenic Highway" designation (Caltrans 2019). The Santa Barbara County Comprehensive Plan Scenic Highways Element (adopted in 1975 and republished in 2009) indicates, consistent with Caltrans' Scenic Highway Mapping System, that two State highways in Santa Barbara County have been officially designated "State Scenic Highways," which include:

- State Route 1 from its intersection with US 101 at Las Cruces north to the southerly city limits of Lompoc
- US 101 from the city of Goleta's western boundary to State Route 1 at Las Cruces
- State Route 154, its entire length

Portions of other State highways traversing the County are in the State's master plan of highways eligible for "Scenic Highway" designation. The eligible highways are:

- State Route 33 from the junction of State Route 166 south into Ventura County
- State Route 166 from the junction of State Route 33 west thru Santa Barbara and San Luis Obispo Counties to its junction with US 101

- US 101, its entire length in Santa Barbara County
- State Route 150 from its junction with US 101 east into Ventura County

4.1.2 Regulatory Setting

Federal Regulations

U.S. Department of Transportation Act, Section 4(f)

Section 4(f) of the Department of Transportation Act (DOT Act) of 1966 (49 U.S.C. § 303) was enacted to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges and historic sites. Section 4(f) requires a comprehensive evaluation of all environmental impacts resulting from federal-aid transportation projects administered by the Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and Federal Aviation Administration (FAA) that involve the use, or interference with use, of the following types of land: Public park lands; Recreation areas; Wildlife and waterfowl refuges; and Publicly- or privately-owned historic properties of federal, state, or local significance.

This evaluation, called the Section 4(f) statement, must be sufficiently detailed to permit the U.S. Secretary of Transportation to determine that:

- There is no feasible and prudent alternative to the use of such land;
- The program includes all possible planning to minimize harm to any park, recreation area, wildlife and waterfowl refuge, or historic site that would result from the use of such lands; or
- If there is a feasible and prudent alternative, a proposed project using Section 4(f) lands cannot be approved the by Secretary; or if there is no feasible and prudent alternative, the proposed project must include all possible planning to minimize harm to the affected lands.

Detailed inventories of the locations and likely impacts on resources that fall into the Section 4(f) category are required in project-level environmental assessments.

In August 2005, Section 4(f) was amended to simplify the process for approval or projects that have only minimal impacts on lands affected by Section 4(f). Under the new provisions, the U.S. Secretary of Transportation may find such a minimal impact if consultation with the State Historic Preservation Officer (SHPO) results in a determination that a transportation project will have no adverse effect on the historic site or that there will be no historic properties affected by the proposed action. In this instance, analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete.

State Regulations

California Scenic Highway Program

Recognizing the value of scenic areas and view from roads in such areas, the State Legislature established the California Scenic Highway Program in 1963 (Streets and Highways Code Sections 260 et seq). This legislation preserves and protects scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The goal of the Scenic Highway Program is to preserve and enhance the natural beauty of California. Under this program, a number of State Routes have been designated as eligible for inclusion as scenic routes. Once the local jurisdiction through which the roadway passes have established a corridor protection program and the

Departmental Transportation Advisory Committee recommends designation of the roadway, the State may officially designate roadways as scenic routes. Interstate highways, State Routes and county roads may be designated as scenic under the program. The Master Plan of State Highways Eligible for Official Scenic Highway Designation maps designated highway segments, as well as those that are eligible for designation. Changes to the map require an act of the State Legislature.

As noted, a corridor protection program must be adopted by the local governments with land use jurisdiction over the area through which the roadway passes as the first step in moving a road from “eligible” to “designated” status. Each designated corridor is monitored by the State and designation may be revoked if a local government fails to enforce the provisions of the corridor protection program. While there are no restrictions on scenic highway projects, local agencies and the California Department of Transportation (Caltrans) must together to coordinate transportation and development projects and ensure the protection of the corridor’s scenic value to the greatest extent possible, including undergrounding all visible electric distribution and communication utilities within 1,000 feet of a Scenic Highway. In some cases, local governments have their own land use and site planning regulations in place to protect scenic values along a designated corridor. At a minimum, each corridor protection program must include:

- Regulation of land use and density of development,
- Detailed land and site planning,
- Control of outdoor advertising devices,
- Control of earthmoving and landscaping and
- Regulation of the design and appearance of structures and equipment.

The Master Plan of State Highways Eligible for Official Scenic Highway Designation requires that proposed realignments and route improvements be evaluated for their impact on the scenic qualities of the corridor as mentioned in Section 4.1.1.b. Primary Viewing Corridors.

California Coastal Act

The California Coastal Act of 1976 (Public Resources Code [PRC] § 30000 et seq.) establishes policies guiding development and conservation along the California coast. Section 30001 of the Coastal Act finds:

1. That the California coastal zone is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced ecosystem.
2. That the permanent protection of the state’s natural and scenic resources is a paramount concern to present and future residents of the state and nation.
3. That to promote the public safety, health and welfare and to protect public and private property, wildlife, marine fisheries and other ocean resources and the natural environment, it is necessary to protect the ecological balance of the coastal zone and prevent its deterioration and destruction.
4. That existing developed uses and future developments that are carefully planned and developed consistent with the policies of this division, are essential to the economic and social well-being of the people of this state and especially to working persons employed within the coastal zone.

According to the California Coastal Act Policy 30251, the scenic and visual qualities of coastal areas shall be considered and protected as resources of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas to minimize

the alteration of natural land forms, to be visually compatible with the character of surrounding areas and, where feasible, to restore and enhance visual quality in development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Caltrans Adopt-a-Highway Program

To improve and maintain the visual quality of California highways, Caltrans administers the Adopt-a-Highway program, which was established in 1989. The program provides an avenue for individuals, organizations, or businesses to help maintain sections of roadside within California's State Highway System. Groups have the option to participate as volunteers or to hire a maintenance service provider to perform the work on their behalf. Adoptions usually span a two-mile stretch of roadside, and permits are issued for five-year periods. Since 1989, more than 120,000 California residents have kept 15,000 shoulder miles of state roadways clean by engaging in litter removal, tree and flower planting, graffiti removal and vegetation removal.

4.1.3 Impact Analysis

a. Methodology and Significance Thresholds

Environmental assessment of a proposed project's impacts to the aesthetic and visual resources of a site begins with identification of the existing visual resources on and off that site, including the site's physical attributes, its relative visibility, and its relative uniqueness. The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. This evaluation measures the existing visual resource against the proposed action, analyzing the nature of the anticipated change.

The *State CEQA Guidelines* (Appendix G) identify the following criteria for determining whether a project's impacts would have a significant impact on the environment. Significant impacts may result if a project would:

- 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 public views or its surroundings (non-urbanized area), or conflict with applicable zoning and other regulations governing scenic quality (urbanized area).¹
- d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

The Visual Aesthetic Impact Guidelines of the County of Santa Barbara *Environmental Thresholds and Guidelines Manual* (2021) identify four specific landscapes of particular value to the County: mountainous areas, urban fringe areas, travel corridors, and coastal areas. The County has adopted Visual Aesthetic Guidelines as part of its CEQA thresholds manual. The guidelines do "not constitute a formal significance threshold, but instead [they] direct the evaluator to the questions which

¹ (Urbanized area is defined by CEQA Section 15987 as: A central city or a group of contiguous cities with a population of 50,000 or more, together with adjacent densely populated areas having a population density of at least 1,000 persons per square mile.)

predict the adversity of impacts to visual resources.” All views addressed in these guidelines pertain to public views, not private views. The questions are as follows:

- 1.a Does the project site have significant visual resources by virtue of surface waters, vegetation, elevation, slope, or other natural or man-made features which are publicly visible?
- 1.b If so, does the proposed project have the potential to degrade or significantly interfere with the public’s enjoyment of the site’s existing visual resources?
- 2.a Does the project have the potential to impact visual resources of the Coastal Zone or other visually important area (i.e., mountainous area, public park, urban fringe, or scenic travel corridor)?
- 2.b If so, does the project have the potential to conflict with the policies set forth in the Local Coastal Plan, the Comprehensive Plan or any applicable community plan to protect identified views?
- 3 Does the project have the potential to create a significantly adverse aesthetic impact through obstruction of public views, incompatibility with surrounding uses, structures, or intensity of development, removal of significant amounts of vegetation, loss of important open space, substantial alteration of natural character, lack of adequate landscaping, or extensive grading visible from public areas?

b. Project Impacts and Mitigation Measures

This section describes generalized impacts associated with proposed transportation improvements and the future land use scenario envisioned under Connected 2050. Table 3 in Section 4.1.2.c. summarizes the specific projects that could result in aesthetic impacts. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the Connected 2050 could result in the impacts as described in the following section.

Threshold:	Would the project have a substantial adverse effect on a scenic vista?
Threshold:	Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Impact AES-1 CONNECTED 2050 HAS THE POTENTIAL TO ADVERSELY IMPACT SCENIC RESOURCES AND OBSTRUCT SCENIC AREAS FROM PUBLIC REVIEWING AREAS THROUGH SITE-SPECIFIC VISUAL OBSTRUCTIONS FROM FUTURE LAND USE AND TRANSPORTATION PROJECTS. MITIGATION MEASURES AES-1(A) THROUGH AES-1(E) WOULD REDUCE IMPACTS TO THE EXTENT FEASIBLE, HOWEVER, IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Construction of the proposed transportation improvements along scenic corridors would create potentially significant, but short-term, temporary visual impacts. These designated corridors primarily include:

- State Route 1 from its intersection with US 101 at Las Cruces north to the southerly city limits of Lompoc
- State Route 154, its entire length
- US 101, its entire length in Santa Barbara County

Impacts would include blockage of views by construction equipment and staging areas, disruption of views by temporary signage and exposure of slopes and removal of vegetation.

In addition, several transportation projects in Connected 2050 would generate short-term impacts from construction on scenic corridors along US 101, as listed in Table 4.1-1.

With regard to long-term aesthetic impacts, implementation of Connected 2050 would generally result in modification to existing transportation facilities within existing highway, roadway, or railroad rights-of-way (Table 4.1-1 lists projects with the potential to result in adverse aesthetic impacts). The design of roadway structures would generally not lead to major impacts on visual resources, although it may result in moderate intrusions. For example, the proposed upgrading of highway signs and lighting on State-designated Scenic Highways would represent a moderate intrusion on the scenic character of the corridor. Further, several of the proposed projects replace existing bridges which may result in an increase of the dimensions and/or stylistic changes to these bridges. Typical impacts may be the result of the modification or removal of existing vegetation, the introduction of more massive road structures, or the introduction of street lighting out of scale with the area. As such, these impacts would be potentially significant.

Compliance with provisions in the California Coastal Act (as implemented through coastal jurisdictions' certified Local Coastal Programs) would help to reduce long-term visual impacts on scenic corridors in the Coastal Zone. Pursuant to Section 30251, permitted development in California's Coastal Zone must be sited and designed "to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas." In addition, Section 30240 of the Coastal Act would require the protection of environmentally sensitive habitat areas, which may have scenic qualities; and in accordance with Section 30253, new development shall not "require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs." When applicable, projects in Connected 2050 would abide by these Coastal Act requirements to preserve natural resources with scenic values.

The future land use scenario envisioned by Connected 2050 is intended to encourage in-fill development and development near existing transportation corridors. This type of development would help to avoid the loss of scenic resources overall by concentrating development within existing urbanized areas when compared to a future scenario without Connected 2050. This land use scenario would intensify the built environment within existing urban areas through planned in-fill development. In addition, this land use scenario would concentrate development near transportation corridors in urban areas, which would further increase the visibility of future in-fill and transit-oriented development from these corridors and potentially impact views of background scenic resources. However, not all projects and development included in Connected 2050 would be infill projects in urbanized areas, and some projects would inevitably be located in rural and other areas in the County.

Connected 2050 includes policies to minimize aesthetic impacts. Policy 1.4 Aesthetics and Community Character, under this policy, transportation planning and projects shall:

- Consider aesthetics and preserve and enhance historic and local community character.
- Preserve and maintain the historic character of existing highway structures and mature plant material unless demonstrated to be infeasible on US 101.

Although projects under Connected 2050 would be subject to existing regulations that would help to minimize aesthetic impacts, specific projects identified in Connected 2050 have the potential to

adversely impact scenic resources when compared to existing conditions. New roadways, or substantial increases in roadway dimensions, are proposed in certain areas. Planned work includes new curb, gutter, and sidewalk at numerous locations, and roadway widening for Class II bike lanes throughout the County. Major projects include a bridge replacement on State Route 217 near Goleta (SH-17), replacing Refugio Road undercrossing bridges on US 101 in Goleta (SH-15), and a new interchange on US 101 at San Ysidro Road near Montecito (SP-16). Such projects could degrade the existing visual condition of the area in which they are proposed, due to the modification or removal of existing vegetation, the introduction of more massive road structures, or the introduction of street lighting out of scale with the area, though depending on project design improvements to scenic resources may also occur. Since Connected 2050 has the potential to adversely impact scenic resources when compared to existing conditions, mitigation measures are required to reduce impacts related to scenic vistas, scenic resources, or scenic highways.

Mitigation Measures

Transportation project sponsor agencies can and should implement, the following mitigation measures. These mitigation measures have been developed for Connected 2050 where applicable for transportation projects that would potentially degrade views from scenic corridors and/or within a state scenic highway. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

AES-1 (a) Tree Protection and Replacement.

New roadways, extensions and widenings of existing roadways, bridge replacement and enhancements, trails and facility improvement projects shall avoid the removal of existing mature trees to the extent possible consistent with adopted local City and County policies as applicable. The implementing agency of a particular Connected 2050 project shall replace any trees lost at a minimum 2:1 basis and incorporate them into the landscaping design for the roadway when feasible, or as required by local or County requirements. The implementing agency also shall ensure the continued vitality of replaced trees through periodic maintenance (see mitigation measures prescribed in Section 4.3 Biological Resources, Impact B-1).

AES-1 (b) Design Measures for Visual Compatibility.

The project sponsor shall require measures that minimize contrasts in scale and massing between the project and surrounding natural forms and developments. Strategies to achieve this include:

- Siting or designing projects to minimize their intrusion into important viewsheds;
- Avoiding large cuts and fills when the visual environment (natural or urban) would be substantially disrupted;
- Ensuring that re-contouring provides a smooth and gradual transition between modified landforms and existing grade;
- Developing transportation systems to be compatible with the surrounding environments (e.g., colors and materials of construction material; scale of improvements);
- Designing and installing landscaping to add natural elements and visual interest to soften hard edges, as well as to restore natural features along corridors where possible after widening, interchange modifications, re-alignment, or construction of ancillary facilities. The implementing

agency shall provide a performance security equal to the value of the landscaping/irrigation installation to ensure compliance with landscaping plans; and

- Designing new structures to be compatible in scale, mass, character and architecture with existing structures.

AES-1(c) Discouragement of Architectural Features that Block Scenic Views.

Project sponsors shall design projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Setbacks and acoustical design of adjacent structures shall be preferentially used as mitigation for potential noise impacts arising from increased traffic volumes associated with adjacent land development. The use of sound walls, or any other architectural features that could block views from the scenic highways or other view corridors, shall be discouraged to the extent possible. Where use of sound walls is found to be necessary, walls shall incorporate offsets, accents and landscaping to prevent monotony. In addition, sound walls shall be complementary in color and texture to surrounding natural features.

AES-1(d) Recontouring for Adjacent Landforms.

Where a particular Connected 2050 project affects adjacent landforms, the local jurisdiction in which the project is located shall ensure that recontouring provides a smooth and gradual transition between modified landforms and existing grade to the extent feasible. This requirement can be accomplished through the placement of conditions on the project by the implementing agency during the project specific environmental review.

AES-1(e) Landscaping for Landform Variation.

The local jurisdiction in which a particular project is located shall ensure that associated landscape materials and design enhance landform variation, provide erosion control and blend with the natural setting. This requirement can be accomplished through the placement of conditions on the project by the local jurisdiction during individual environmental review. To ensure compliance with approved landscape plans, the implementing agency shall provide a performance security equal to the value of the landscaping/irrigation installation.

Significance After Mitigation

Although identified mitigation would help reduce impacts related to state-designated scenic highway corridors and scenic resources, individual transportation infrastructure projects as well as land use development included in Connected 2050 could still result in obstructions to panoramic views and views of important landscape features or landforms (mountains, wetlands, rivers, rangelands, or important man-made structures) as seen from public viewing areas. Given the extent of planned land use development and the potential for site-specific visual obstructions from future land use and transportation projects, impacts related to the obstruction of scenic areas from public viewing areas and impacts to state-designated scenic highway corridors and scenic resources would be significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

Threshold: Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact AES-2 DEVELOPMENT OF PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PATTERNS ENVISIONED UNDER CONNECTED 2050 WOULD CONTRIBUTE TO THE ALTERATION OF THE COUNTY'S AESTHETIC CHARACTER. THIS WOULD BE A SIGNIFICANT AND UNAVOIDABLE IMPACT. IN THE URBANIZED AREAS OF THE COUNTY, THE PROJECT MAY CONFLICT WITH APPLICABLE ZONING AND OTHER REGULATIONS GOVERNING SCENIC QUALITY. IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Some of the proposed transportation improvements would introduce visual features that would alter the existing rural or semi-rural character of the area in which they are proposed. Ancillary facilities constructed along new or existing roads (such as lighting, bus shelters, and signs) would further contribute to the trend toward a more suburban visual character. It should be noted that the majority of the projects included in Connected 2050 would occur in developed areas or adjacent to urban environments. In addition, the land use scenario envisioned by Connected 2050 is intended to encourage in-fill development and development near existing transportation corridors. This type of development would help to avoid impacts to the County's rural character by concentrating development within existing urbanized areas when compared to a future scenario without Connected 2050. However, not all projects and development included in Connected 2050 would be infill projects in urbanized areas, and some projects would inevitably be located in rural and other areas in the County. The land use scenario in Connected 2050 would intensify the existing built environment within existing urban areas through the implementation of in-fill and TOD, as discussed under Impact AES-1, thereby resulting in an overall change in character to a more suburban condition.

The visual effect of roadway projects would be greatest in the more rural areas of the County. A complete listing of projects with potential to alter the rural character of the County is included Table 4.1-1.

The alternative transportation projects in Connected 2050, such as bike lanes and multi-use trails, would complement the scenic character of rural areas and parkland, without substantially intensifying their level of development. Connected 2050 would preserve open space and agricultural land as an objective; implementation of this objective would contribute to preserving the visual character of rural areas. Proposed Policy 1.4 in the Connected 2050 calls for transportation projects to preserve and enhance historic and local community character.

The overall visual effect of planned roadway projects and envisioned land use patterns would contribute to an incremental, but irreversible transformation in visual character from rural to more suburban. Although the projects listed in Table 4.1-1 may not, as individual projects, significantly alter the county's rural character, but in culmination, impacts would continue to be significant and unavoidable.

Mitigation Measures

Mitigation Measures AES-1(a)-(e), discussed above for Impact AES-1, would reduce impacts associated with visual character.

Significance After Mitigation

Implementation of the above mitigation measures would reduce project-specific impacts to the extent feasible. Nevertheless, the incremental alteration of the area's current rural or semi-rural character to a more suburban environment is a significant and unavoidable impact. No additional mitigation measures to reduce this impact to less than significant are feasible.

Threshold: Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Impact AES-3 DEVELOPMENT OF PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PATTERNS ENVISIONED UNDER CONNECTED 2050 WOULD RESULT IN NEW SOURCES OF LIGHT OR GLARE FROM NEW LIGHT POLES, SECURITY LIGHTING, LANDSCAPING AND STRUCTURE LIGHTING, AND LIGHTS FROM VEHICLES. LAND USE PROJECTS ENVISIONED IN CONNECTED 2050 WOULD INTRODUCE NEW OR INTENSIFIED SOURCES OF LIGHTING WHICH WOULD ADVERSELY AFFECT VIEWS IN THE AREA. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

New or intensified lighting from land use development envisioned in Connected 2050, which is focused on compact, in-fill and mixed-use development, would be concentrated in areas with existing sources of light and glare. In these in-fill areas, such increases may not adversely affect nighttime views because existing sources of light, glare, and shadow are already a dominant feature of the urban landscape. However, the intensity of light and glare in these urban areas could increase as a result of infill and mixed-use projects under Connected 2050, depending on site-specific conditions and lighting design associated with new structures/roadways. Because of the potential for increased lighting affecting nighttime views, impacts from land use development would be potentially significant.

Improvements to existing roadways and highways would not significantly increase the amount of light and glare in an area, as these improvements would take place on existing facilities that have existing sources of light and glare. Increases in light and glare from new reflective signage, streetlights, intersection control devices and other improvements would be relatively minor compared to existing conditions. However, the expansion and widening of existing roadways or construction of new roadways would allow a greater volume of vehicles to travel through a given segment of roadway or highway throughout the day, or introduce vehicles into a new area, which would have the potential to introduce new or additional vehicle headlights as new light sources. In addition, some of the new transportation facilities included in Connected 2050 would directly introduce light, including: the replacement/improvements of existing lighting along the various freeways, highways, and bridges, construction of pedestrian lighting along various city streets, bus and transportation facility improvements and installation of lighting along bike paths and trails in Santa Barbara County. The introduction of light and glare could adversely affect day or nighttime views.

New transportation investments would be aligned with planned developments, which would help to reduce aesthetic impacts; however, these projects could potentially introduce glare, light, and shadow to areas where previously no sources of glare, light, and shadow existed. Impacts from glare, light, and shadow related to transportation projects and changes to land use patterns from implementation of Connected 2050 are considered potentially significant.

Mitigation Measures

Transportation project sponsor agencies can and should implement, the following mitigation measures. These mitigation measures have been developed for Connected 2050 where applicable for transportation projects that would result in light and glare impacts. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

AES-3(a) Roadway Lighting

Roadway lighting shall be minimized to the extent possible, consistent with safety and security objectives, and shall not exceed the minimum height requirements of the local jurisdiction in which the project is proposed. This may be accomplished through the use of back shields, hoods, low intensity lighting, and using as few lights as necessary to achieve the goals of the project.

AES-3(b) Lighting Design Measures

As part of planning, design, and engineering for projects, project sponsors shall ensure that projects proposed near light-sensitive uses avoid substantial spillover lighting. Potential design measures include, but are not limited to, the following:

- Lighting shall consist of cutoff-type fixtures that cast low-angle illumination to minimize incidental spillover of light into adjacent properties and undeveloped open space. Fixtures that project light upward or horizontally shall not be used.
- Lighting shall be directed away from habitat and open space areas adjacent to the project site.
- Light mountings shall be downcast, and the height of the poles minimized to reduce potential for backscatter into the nighttime sky and incidental spillover of light onto adjacent private properties and undeveloped open space. Light poles will be 20 feet high or shorter. Luminary mountings shall have non-glare finishes.
- Exterior lighting features shall be directed downward and shielded in order to confine light to the boundaries of the subject project. Where more intense lighting is necessary for safety purposes, the design shall include landscaping to block light from sensitive land uses, such as residences.

AES-3(c) Glare Reduction Measures

Implementing agencies shall minimize and control glare from transportation and infill development projects near glare-sensitive uses through the adoption of project design features such as:

- Planting trees along transportation corridors to reduce glare from the sun;
- Creating tree wells in existing sidewalks;
- Adding trees in new curb extensions and traffic circles;
- Adding trees to public parks and greenways;
- Landscaping off-street parking areas, loading areas, and service areas;
- Limiting the use of reflective materials, such as metal;
- Using non-reflective material, such as paint, vegetative screening, matte finish coatings, and masonry;
- Screening parking areas by using vegetation or trees;

- Using low-reflective glass; and
- Complying with applicable general plan policies, municipal code regulations, city or local controls related to glare
- Tree species planted to comply with this measure shall provide substantial shade cover when mature. Utilities shall be installed underground along these routes wherever feasible to allow trees to grow and provide shade without need for severe pruning.

Significance After Mitigation

In the absence of regulations specifically addressing light and glare impacts, the aforementioned mitigation measures would limit the use of reflective building materials and the potential spillage of light both upward and onto adjacent properties from exterior lighting fixtures. As a result, the implementation of the identified mitigation measures would reduce impacts related to light and glare to a less than significant level. It is the responsibility of the lead agency implementing specific Connected 2050 projects to conduct project-level environmental review consistent with CEQA and where applicable, incorporate mitigation measures provided herein and developed specifically for the project to reduce impacts.” Therefore, it cannot be guaranteed that all future project-level impacts related to light and glare can be mitigated. Impacts would remain significant and unavoidable.

c. Specific Projects That May Result in Impacts

Table 4.1-1 Connected 2050 Planned and Programmed Projects

Project Title	Project Type	Description
CALTRANS		
CT-1: SR 246 Passing Lanes – Planting Mitigation (FTIP CT93)(EA 0C641)	HWY	Hwy 246 in Santa Barbara County, near Lompoc, from 0.8 miles east of Cebeda Canyon Road to 0.4 miles east of Tularosa Road and at Hapgood Road (West).
CT-2: South Coast 101 Project Segment 4A	HWY	South Coast 101 HOV Lanes - Carpinteria (Segment 4A) (0N701)
CT-3: South Coast 101 Project Segment 4B	HWY	South Coast 101 HOV Lanes - Padaro (Segment 4B) (0N702)
CT-4: South Coast 101 Project Segment 4C	HWY	South Coast 101 HOV Lanes- Summerland (Segment 4C) (0N703)
CT-5: South Coast 101 Project Segments 4D & 4E	HWY	South Coast 101 HOV Lanes- Montecito/Santa Barbara (Segment 4d-4e)
CT-9: US 101 Replace Bridge Deck (1F500) (portion of FTIP CT84)	HWY	In Santa Barbara Co near Los Alamos at the SRs 101/135 Separation (Br # 51- 0073R/L)
CT-10: US 101 San Ysidro Road Intersection Improvement	HWY	US 101 San Ysidro Road Intersection Improvement (1k040)
CT-11: US 101 Olive Mill Intersection Improvements	HWY	US 101 Olive Mill Intersection Improvements (1k030)
CT-12: US 101 UP Rail Bridge Replacement and Cabrillo Blvd Bike/Ped Improvements	HWY	US 101 UP Rail Bridge Replacement and Cabrillo Blvd Bike/Ped Improvements
CT-15: SR 154/ Baseline- Edison Roundabout	HWY	SR 154/ Baseline- Edison Roundabout (1H310)

Project Title	Project Type	Description
CT-16: Bridge Preservation – Replace Bridge Rail (1F790)(portion of FTIP CT86)	HWY	Bridge preservation in Santa Barbara County at Nojoqui Creek Bridges (# 51- 0018 L/R)
CT-19: Sign Upgrades (1G130)(portion of FTIP CT83)	HWY	State Highways in Santa Barbara and San Luis Obispo Counties
CT-21: Cold Springs Bridge Maintenance Inspection Access (FTIP CT76)(EA 1C420)	HWY	Near Lake Cachuma at Cold Spring Canyon Bridge No. 51-0037. Install inspection access system below bridge and paint structure.
CT-22: Refugio Bridge Replacement (FTIP CT77) (EA 1C950 Long Lead)	HWY	Near Goleta, at Refugio Road Undercrossing No. 51-0215 L/R. Replace bridges.
CT-23: San Antonio Creek Bridge Scour Mitigation (FTIP CT75)(EA 1 C420 Long Lead)	HWY	Near Lompoc, at San Antonio Creek Bridge No. 51-0237 L/R. Bridge scour mitigation.
CT-24: Replace Bridge (portion of FTIP CT63)(EA 1C360)	HWY	Near Goleta, at the San Jose Creek Bridge # 51-0217. Replace bridge.
CT-25: Salsipuedes Creek Slope Protection Reconstruction (CT#OA050)(portion of FTIP CT90)	HWY	Near Lompoc, at the Salsipuedes Creek. Reconstruct slope protection.
CT-26: Linden Ave/Casitas Pass Interchanges (101 Widening Phase 3)(EA 4482U, 44822)(FTIP CT01, CT94, CT95)	HWY	Reconstruct Linden Ave and Casitas Pass Rd interchanges in Carpinteria. Construct missing link in frontage road system. Reconstruct US 101 bridge over Carpinteria Creek. Includes Measure A funds. Includes mitigation planting and mitigation monitoring.
CT-27: Linden Ave/Casitas Pass Interchanges Landscape Mitigation (EA 44821)	HWY	Landscape Mitigation
CT-28: Goleta Drainages Landscape Mitigation (EA 0G071)	HWY	In and near Goleta from 0.2 mile east to 0.7 mile west of the Fairview Avenue Overcrossing. Landscape mitigation for PPNO 0707.
CT-29: Hwy 154/246 Roundabout Planting (EA 0T001)(FTIP CT89)	HWY	Near Santa Ynez, at and near SR 246 intersection. Landscape mitigation.
CT-31: SR 246 Santa Ynez River Bridge (Robinson Bridge)	HWY	The project will improve access to Lompoc across the Santa Ynez River by a providing a bridge raised above flood level with wider shoulders that can safely accommodate vehicles, bicycles and pedestrians.
CT-PL-1: US 101 HOV Widening (FTIP CT20)	HWY	Parts of this project are programmed. This project highlights the out-years of the overall project.
CT-PL-2: SR 246 Passing Lanes – East Segment	HWY	East and west bound passing lanes from east of Big Ranch Road to west of Drum Canyon Road, channelization at Drum Canyon and Mail Road, and bridge widening at Santa Rita Creek.
CT-PL-6: US 101 at Castillo Improvements	HWY	Reconstruct portions of, or entire interchange of US 101 at Castillo Street
CT-PL-7: US 101 Milpas St SB off-ramp Improvements	HWY	US 101 Milpas St SB off-ramp Improvements
CT-PL-14: Bridge replacement - Alamo Pintado	HWY	Bridge replacement - Alamo Pintado

Santa Barbara County Association of Governments
Connected 2050: Regional Transportation Plan & Sustainable Communities Strategy

Project Title	Project Type	Description
City of Buellton		
B-2: Alternative Transportation Enhancements		Enhance the alternative transportation environment by performing sidewalk and concrete repairs, and reducing transit fares for seniors and the disabled, and allocating funds towards the multipurpose trail reserve.
B-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
City of Carpinteria		
C-1: Street Maintenance	ST/RDS	Supplement local funding to maintain, improve, or construct roadways and bridges, including: Administration Program, Street Maintenance Program, Right-of-Way Maintenance Program, Transportation, Parking and Lighting Program, Carpinteria Avenue Bridge Replacement Project, Pavement Rehabilitation Project, Pavement Maintenance Project, Parking Lot Number 2 and Cactus Ln Improvements Project, Ped Bridge Inspection Program, and Pavement Management Update.
C-3: Landscape Maintenance and Urban Forestry	ST/RDS	Supplement local funding to perform Landscape Maintenance Program and Urban Forestry Street Tree Program.
C-10: Carpinteria Avenue Bridge Replacement Project	ST/RDS	Replace the existing bridge. Does not increase transportation related capacity
C-11: Rincon Trail (FTIP SBCAG29)	BIKE/PED	Construct a multiuse trail from Rincon Park to Carpinteria Avenue (part of the Carpinteria Coastal Vista Trail)
C-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
C-PL-3: Regional Active Transportation Plan Implementation	BIKE/PED	Implement high priority projects listed in the Regional Active Transportation Plan.
C-PL-4: Holly Avenue Undercrossing	BIKE/PED	Construct a bicycle and pedestrian undercrossing of UPRR corridor.
C-PL-5: Santa Clause Lane to Carpinteria Avenue Multiuse Trail (FTIP SBCAG27)	BIKE/PED	Construct a multiuse trail from Santa Claus Lane to Carpinteria Avenue adjacent to the Sandylan Area Salt Marsh (part of the Carpinteria Coastal Vista Trail). 2017 FTIP does not provide funding for the project.
C-PL-6: Franklin Creek Multiuse Path	BIKE/PED	Construct a multiuse path along Franklin Creek from Carpinteria Ave to 7th St.
C-PL-7: Third Street Improvements Project	BIKE/PED	Construct a multiuse trail along Third Street from Linden Avenue to the Carpinteria Marsh Park (part of the Carpinteria Coastal Vista Trail).
C-PL-8: Via Real Pedestrian Bridge Replacement	BIKE/PED	Replace existing pedestrian bridge over Santa Monica Creek at Via Real
C-PL-9: El Carro Pedestrian Bridge Replacement	BIKE/PED	Replace existing pedestrian bridge over Santa Monica Creek at El Carro

Project Title	Project Type	Description
City of Goleta		
Go-1: Street Maintenance and Improvements	ST/RDS	Supplement local funding to better preserve local transportation assets, to include pavement rehabilitation, pavement maintenance, striping and signage, Hollister Ave Bridge project, and Hollister Ave widening.
Go-2: Landscape Maintenance and Urban Forestry	ST/RDS	Supplement local funding to perform landscape maintenance and urban forestry street tree program.
Go-4: Goleta US 101 Overcrossing	ST/RDS	The project will improve traffic circulation in Goleta by constructing a new overpass of US 101. This project is for pre-construction phases. Construction is a planned project.
Go-5: Active Transportation Enhancements	BIKE/PED	Enhance the active transportation environment by supporting bike and ped projects identified in the Goleta Bicycle and Pedestrian Master Plan; concrete maintenance and access ramps; and safe routes to school improvements.
Go-8: Fowler & Ekwil Road Extensions	ST/RDS	Local road improvements & interchange modifications. Construct new east-west roadways extending James Fowler Rd from Fairview Ave to Technology Dr and Ekwil St from Fairview Ave to Kellogg Ave.
Go-9: Hollister Avenue Bridge Replacement	ST/RDS	Remove existing bridge over San Jose Creek and replace with a new, wider bridge with greater hydraulic capacity. Additional width for sidewalks and bike lanes.
Go-10: San Jose Creek Multipurpose Path	BIKE/PED	This project proposes a new Class I adjacent to the San Jose Creek from Calle Real to the Atascadero Creek Bike Path at Goleta Beach. The scope of work includes preliminary engineering, environmental, design, and construction of the segments from Calle Real to Armitos Ave and from Ekwil Street to along SR 217 to the Atascadero Creek Bike Path. The project involves coordination with the Caltrans bridge replacement projects of US 101 over San Jose Creek and SR 217 bridge over San Creek.
Go-11: San Jose Creek Bikeway – Middle Segment 1	BIKE/PED	Construct class I bike path from Jonny D. Wallis Park to Armitos Avenue
Go-12: Old Town Sidewalk Improvement Project (FTIP GOLETA21)	BIKE/PED	A sidewalk improvement program for the residential areas of Old Town. The project will assess sidewalk deficiencies, create a prioritization plan, and install sidewalk improvements. Work is north of Hollister from Fairview to Kellogg and on Pine Avenue south of Hollister.
Go-13: Storke Road Hollister to Market Place Improvements	ST/RDS, BIKE/PED	The project includes transit, bicycle and pedestrian, and roadway improvements along Storke Road south of Hollister Ave. Includes restriping, median reconstruction, bus stop relocations and upgrades.
Go-14: RRFB's at Chapel and HAWK at Kingston	BIKE/PED	The project will construct pedestrian activated Rectangular Rapid Flashing Beacons (RRFB's) over travel lanes on Hollister Avenue at Orange Avenue and a High Intensity Activated Crosswalk (HAWK) system at Calle Real and Kingston Ave. Work will include new striping, signage and lighting to be placed in existing pavement, and sidewalk improvements.

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Go-15: School Zone and Other Crossing Improvements	BIKE/PED	School zone and other crossing location improvements including signage, striping, and/or installation of rectangular rapid flashing beacons or pedestrian hybrid beacons.
Go-17: Hollister Ave Class I Bike Path Lighting	BIKE/PED	Install lighting along the multipurpose path located along the south side of Hollister Avenue from Pacific Oaks to Ellwood School.
Go-18: Goleta Train Depot	TRANSIT, BIKE/PED	Construct new multi-modal train station at the location of existing Amtrak platform, to improve services and facilities and accommodate increase in ridership. Includes expanding parking, bus facilities, and bicycle and pedestrian improvements to S. La Patera Lane.
Go-19: Traffic Signal Improvements and Upgrades	BIKE/PED	Improvements and upgrades to the existing traffic signals and installation of new traffic signals throughout the City.
Go-20: Improvements to Storke Rd/Hollister Avenue Corridors	ST/RDS, BIKE/PED	Projects include roadway widening, additional of turn lanes, channelization, and bicycle and pedestrian improvements
Go-21: Cathedral Oaks Class I Bike Path	BIKE/PED	Construct a Class I bike path on Cathedral Oaks from Glen Annie to La Patera, 1.63 miles
Go-22: US 101 Interchange Improvements	ST/RDS, BIKE/PED	At Patterson, Storke Rd/Glen Annie, Los Carneros, and Fairview Avenue Interchanges. Widen or replace existing overcrossing and overhead to accommodate additional turn lanes and Class II bike lanes. Ramp intersection improvements. Widen ramps to provide additional turn lanes and/or thru lanes. Signal modifications as necessary to accommodate peds and bikes. Add bike lanes.
Go-23: Intersection Operational Improvements	ST/RDS, BIKE/PED	Intersection improvements at Hollister Ave and Patterson Ave, Los Carneros Road and Hollister Ave, Kellogg Ave and Hollister Ave, Hollister Ave and Pacific Oaks Rd, and Fairview Ave and Calle Real. Includes roadway widening to add turn lanes and/or thru lanes, median modifications, new traffic signals/traffic signal upgrades, bicycle and pedestrian improvements.
Go-24: Roadway Widening and Operation Improvements	ST/RDS	Vehicle capacity modifications, roadway widenings and extensions, realignments, addition of medians, turning and through lanes, restriping, new traffic signals, bicycle and pedestrian improvements at locations throughout the City, including Las Carneros Way, Los Carneros Rd, Calle Koral, Fairview, Phelps Road, Calle Real, Hollister, Cathedral Oaks.
Go-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
Go-PL-2: Transportation Network Maintenance and Locally – Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded project.
Go-PL-5: Fairview Avenue at Hollister Roundabout	ST/RDS, BIKE/PED	Construct a two-lane roundabout at the intersection
Go-PL-6: Fairview Avenue and Storke Glen Annie Road Corridor Studies	ST/RDS, BIKE/PED	Fairview Avenue and Storke Glen Annie Road Corridor Studies

Project Title	Project Type	Description
Go-PL-7: City of Goleta Bicycle and Pedestrian Master Plan Implementation	BIKE/PED	Implement projects identified in City of Goleta's Bicycle and Pedestrian Master Plan. Detailed project lists may be viewed online at https://www.cityofgoleta.org/projects-programs/bicycle-projects/bicycle-pedestrian-master-plan-project .
Go-PL-8: City of Goleta Traffic Safety Study Implementation	ST/RDS, BIKE/PED	Implement projects for improvements identified in the Goleta Traffic Safety Study.
Go-25: US 101 Auxiliary Lanes	HWY	Construct auxiliary lane on US 101 NB between Los Carneros and Storke/Glen Annie Rd on NB US 101 and on US 101 NB and SB between at Fairview Rd to Los Carneros Rd
City of Guadalupe		
Gu-2: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation environment by performing bike and ped maintenance projects and ADA sidewalk work.
Gu-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
Gu-PL-2: Transportation Network Maintenance and Locally – Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded project.
City of Lompoc		
L-1: Street Maintenance	ST/RDS	Supplement local funding to better preserve local transportation assets, to include: street maintenance, engineering, overlays and rehabilitation, and urban forestry.
L-2: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation environment by performing maintenance, repair, improvement, and engineering of bike and ped facilities.
L-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
L-PL-2: Circulation Improvements	HWY	Circulation improvements on arterials and/or collectors.
L-PL-3: Central/H St. Intersection Improvements	HWY	Central/H St. intersection widening improvements
L-PL-4: Transportation Network Operation, Maintenance, and Locally Funded Improvements	ST/RDS	Operate and maintain the local transportation network and construct locally-funded projects.
L-PL-5: Bike Path on Southside of Santa Ynez River	BIKE/PED	Location: Southside of SY River from SR 1 (H St) to Riverbend Park. Obtain rights of way, design, and construct class I bike path.
L-PL-6: Class II Bikeways	BIKE/PED	Construct Class 2 Bikeways at Locations: B) A St, Chestnut Ave to Central Ave; D) Floradale Rd/Santa Lucia Canyon Rd, adjacent to Federal Correctional Institution.
L-PL-8: Bus Charging Stations and Infrastructure	TRANSIT	Construct bus charging stations and associated necessary infrastructure, planned to be located at the City's new Transit Maintenance Facility, including stations to charge 14 COLT busses, 1 Breeze bus, and 8 Clean Air Express busses.

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City of Santa Barbara		
SB-1: Street Maintenance	ST/RDS	Supplement local funding to better preserve local transportation assets, to include: pavement maintenance, roadway maintenance, engineering services, bridge preventative maintenance, post bridge construction monitoring, and graffiti abatement.
SB-4: Safety Improvements	ST/RDS	Supplement local funding to implement Traffic Safety/ Capacity Improvements.
SB-5: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation environment by performing maintenance of sidewalks and improving sidewalk access ramps.
SB-7: State Street Smart Corridor – Outer State Street Adaptive Signal Project	ITS	Advanced traffic corridor system. Project #102.
SB-8: Construct Active Transportation Program Awarded Projects (FTIP SBCITY)	BIKE/PED	Projects include: Eastside Green Lanes and Bike Boulevard Gap Closure, Westside Bike Boulevard Gap Closure, Downtown De La Vina Street Safe Crosswalks and Buffered Bike Lanes, U.S. 101 State Street Undercrossing Active Transportation Improvements, Lower Eastside Community Connectivity Active Transportation Plan (Plan Only), and Las Positas and Modoc Roads Class I Construction
SB-9: Preliminary design for HOV HWY 101 Widening Mitigation Projects (Cabrillo at UPRR and Los Patos and Olive Mill Roundabout)	ST/RDS	Replace the Union Pacific Railroad bridge over Cabrillo Boulevard with a bridge meeting contemporary standards and construct capacity improvements on Cabrillo Boulevard at Los Patos. Capacity and operational improvements at the intersection of Cabrillo Boulevard and Los Patos Road. Construct roundabout to accommodate anticipated demand and alleviate existing congestion.
SB-10: Corridor Improvements - Carrillo Street (De la Vina to Miramonte)	ST/RDS	Capacity and operational improvements at the intersection of Olive Mill, Coast Village Road, and US 101 northbound ramps. Build a roundabout to accommodate anticipated demand and alleviate existing congestion."
SB-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
SB-PL-2: Cottage Hospital Access (Las Positas/ Mission SB Aux Lane)	HWY	Location: US 101 between Mission St/Las Positas St. Access Improvements
SB-PL-4: Final design and construction for HOV HWY 101 Widening Mitigation Projects	ST/RDS	Replace the Union Pacific Railroad bridge over Cabrillo Boulevard with a bridge meeting contemporary standards and construct capacity improvements on Cabrillo Boulevard at Los Patos. Capacity and operational improvements at the intersection of Cabrillo Boulevard and Los Patos Road. Construct roundabout to accommodate anticipated demand and alleviate existing congestion.
SB-PL-5: Intersection Improvements – Various Locations	ST/RDS	Capacity and operational improvements at the intersection of Olive Mill, Coast Village Road, and US 101 northbound ramps. Build a roundabout to accommodate anticipated demand and alleviate existing congestion.
SB-PL-6: Class II Bike Lanes and Pedestrian Pathways - Various	BIKE/PED	Capacity and safety improvements at various intersections throughout the City of Santa Barbara. Also includes intersection improvements at Railroad Crossings.

Project Title	Project Type	Description
SB-PL-7: Cliff Drive Multiuse Path and Crossing Enhancements	BIKE/PED	Location: Various locations within City of Santa Barbara. Construct class II bike lanes and pedestrian pathways.
SB-PL-8: Class I Beachway Connection – Leadbetter Beach	BIKE/PED	Create a separate/protected multiuse path along Cliff Drive. Project to include corridor intersection improvements including pedestrian activated flashers and new traffic signals and/or signal modifications along some intersections. Intersection/corridor improvements to nearby schools to connect to the path.
SB-PL-9: Modoc Class I Connection to Las Positas Corridor – Over US 101 through Municipal Golf Course	BIKE/PED	Create a separate/protected bikeway connecting the Beachway through Ledbetter Beach to Shoreline Park
SB-PL-10: BMP Regionally Significant Projects	BIKE/PED	Create a separate/protected bikeway over US 101 from Modoc to State Street
SB-PL-14: Corridor Improvements: Chapala Street	BIKE/PED	Construct multiuse path or separated bike path along Modoc Road between Las Positas Road and Mission Street and along Portesuello Road between Modoc Road and Gillespie Street. Intersection improvements along included to improve school crossings.
SB-PL-15: Corridor Improvements: De la Vina St Road Diet and Pedestrian Crossings	BIKE/PED	Pedestrian and bike improvements along Chapala between Gutierrez and Sola Streets
SB-PL-16: Corridor Improvements: Milpas Street	BIKE/PED	Implement a road diet on De La Vina Street from Constance Avenue to Padre Street. Crossing enhancements included.
SB-PL-17: Corridor Improvements: Westside and Lower Westside Transportation Management Plan Implementation	BIKE/PED	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps
SB-PL-18: Corridor Improvements: Upper State Street	BIKE/PED	Implement bike and pedestrian safety improvements as outlined in the Westside and Lower Westside Transportation Management Plan. Infrastructure projects include sidewalk infill, enhanced crossings, pedestrian scale lighting, bike lanes, and separated bikeways/multiuse paths.
SB-PL-19: Pedestrian Enhancements: Crosswalk Improvements	BIKE/PED	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps
SB-PL-20: Pedestrian Enhancements: Hollister Sidewalk	BIKE/PED	Improve crosswalks at various locations in the City. Improvements may include pedestrian activated flashers and pedestrian safety lighting.
SB-PL-21: Pedestrian Enhancements: Mission Canyon Corridor Improvements	BIKE/PED	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps
SB-PL-22: Pedestrian Enhancements: Montecito St Sidewalk and Railroad Crossing	BIKE/PED	Includes a pedestrian connection along the west side of Los Olivos Street and Mission Canyon Road.
SB-PL-23: Pedestrian Enhancements: Lower West Neighborhood Overcrossing	BIKE/PED/HWY	Add safety features to the Montecito Street railroad crossing, as well as complete nearly sidewalk infill along the north side of the train station.

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SB-PL-24: Pedestrian Enhancements: School Zone Safety Improvements	BIKE/PED	This project would be a new vehicle bridge crossing Highway 101 at Ortega Street or Cota Street. The vehicle crossing would accommodate traffic, pedestrian, and bicycle traffic to and from the Lower Westside to Downtown, relieving congestion at the Carrillo and Castillo Interchanges.
City of Santa Maria		
SM-4: Alternative Transportation Enhancements	BIKE/PED	Maintenance, repair, construction & improvement of bike/ped facilities, safe routes to school, and ADA facilities; Programs, Education, & Incentives to reduce single occupant auto trips or transportation demand.
SM-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
SM-PL-2: 101/135 Interchange Improvements	HWY	Location: Main Street at US 101. Add capacity to approaches and on/off ramps.
SM-PL-3: US 101/Betteravia Interchange Improvements	HWY	The project will improve the operations of intersections at Betteravia Road and US 101 by constructing a northbound loop on ramp in the south east interchange quadrant.
SM-PL-4: US 101 – McCoy Interchange	HWY	The project will connect McCoy Lane to US 101 through a new interchange including northbound and southbound on and off ramps to provide Santa Maria residents and businesses with improved access to the highway.
SM-PL-5: Transportation Network Maintenance and Locally-Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded projects
SM-PL-6: Miller Widening	ST/RDS	Location: Miller St, between Robles St and Stowell Rd. Widen arterials to City standards.
SM-PL-7: Alvin Widening	ST/RDS	Location: Alvin Ave between Curryer St and Miller St. Modify to secondary arterial stands with class II bike lanes.
SM-PL-8: Stowell/College Intersection Improvements	ST/RDS	Location: Stowell Rd at College Dr. Lengthen E/B left turn lane.
SM-PL-9: Betteravia Road Widening	ST/RDS	Location: Betteravia Rd: E St. to SR 135. Purchase ROW, widen to 6 lanes, signalize intersections.
SM-PL-10: A Street Widening	ST/RDS	Location: A Street between McCoy Lane and Stowell Rd - Modify to secondary arterial standard
SM-PL-11: Miller Street Widening	ST/RDS	Location: Miller St from Enos Drive to Stowell Rd - Widen to four lanes w/ channelization and class II bike lane.
SM-PL-12: McCoy Lane Extension	ST/RDS	Location: McCoy Ln between A St and Mahoney Rd
SM-PL-13: Foster Road Widening	ST/RDS	Location: Foster Rd between SR 135 and Blosser Rd. Widen to four lanes and construct class II bike lane.
SM-PL-14: Widen Miller Street	ST/RDS	Widen to 4 lanes. Chapel to Alvin
SM-PL-15: Stowell Road	ST/RDS	Widen to 4 lanes between Blosser Road and "A" Street
SM-PL-16: Hanson Way	ST/RDS	Widen to 4 lanes between Route 166 and Stowell Road
SM-PL-17: SR 135/Broadway	ST/RDS	Widen to 6 lanes from Union Valley Parkway to SM Way
SM-PL-18: SR 166/Main Street	ST/RDS	Widen to 4 lanes between Panther Drive and easterly City Limit boundary
SM-PL-19: Depot Street	ST/RDS	Construct secondary arterial standards from Betteravia Rd to Carmen Lane

Project Title	Project Type	Description
SM-PL-20: Regional Active Transportation Plan Implementation	BIKE/PED	Implement high priority projects listed in the Regional Active Transportation Plan
SM-PL-21: Bikeway Improvements	BIKE/PED	Location: UVP, Bradley Channel, Jones Trail, Blosser Trail, Seaward Trail, and from Santa Maria River Levee to La Brea. Construct commuter bikeway (Phase II). Project costs include Right-of-way acquisition
SM-PL-23: US 101/SR-166 (Main Street) Interchange	HWY	Design and construction of interchange.
SM-PL-24: US 101 Corridor Study	HWY	Corridor study to determine transportation projects on US 101 in Northern Santa Barbara County (Santa Maria Way Interchange to Santa Barbara/San Luis Obispo County Line)
SM-PL-25: Bridge Preventative Maintenance	ST/RDS	Design and construction for maintenance of structural features.
SM-PL-26: Betteravia/E Street/Mahoney Road Intersection	ST/RDS	ROW Acquisition, design and construction of Betteravia Road, E Street, and Mahoney Road intersection. Mahoney Road reconstruction to City Limits
SM-PL-27: Signal Connectivity - Fiber Optic Cable	ST/RDS	Connect traffic signals Citywide.
City of Solvang		
Sol-1: Street and Bridge Maintenance	ST/RDS	Supplement local funding to maintain, improve, or construct roadways and bridges, including: slurry sealing, performing pavement overlays and crack sealing, and performing miscellaneous road repairs.
Sol-2: Roadway Drainage Improvements	ST/RDS	Supplement local funding to improve roadway drainage at various locations.
Sol-3: Solvang Circulation Improvements	ST/RDS	Construct locally significant circulation improvements.
Sol-4: S. Alisal Road Circulation & Bikeway Improvements	BIKE/PED	Project includes 1.5 miles of roadway widening, pavement reconstruction, and addition of bicycle sharrows & signage along Alisal Rd from the Santa Ynez River to the southerly City Limits.
Sol-5: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation network by constructing sidewalk infill & repair, ADA sidewalk ramps, and new bike lanes.
Sol-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
Sol-PL-2: Alisal Road Bridge Pier Repair Project	ST/RDS	Project includes constructing repairs to Piers 4, 5, 6 & 7 per recommendations of 2012 Alisal Bridge Structural Evaluation Report.
Sol-PL-3: Circulation Improvements	ST/RDS	Construct locally significant circulation improvements.
Sol-PL-4: Transportation Network Maintenance and Locally-Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded projects.
Sol-PL-5: Solvang School Sidewalk Project	BIKE/PED	Project includes construction of new sidewalk, crosswalks and ADA access ramps along Fifth Street and Elm Avenue leading to Solvang School.
Sol-PL-6: Fredensborg Canyon Rd/Adobe Creek Culvert Replacement	ST/RDS	Project includes replacing undersized culvert and roadway shoulder improvements.

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Sol-PL-7: SR 246 (Mission Drive) East End Bikeway Improvements	BIKE/PED	Project includes Mission Drive shoulder widening and bikeway improvements from Pine Street to Alamo Pintado Road.
Sol-PL-8: SR 246 West End Bikeway Improvements	BIKE/PED	Project includes construction of Class 2 bike lanes along the north and south sides of SR 246 from the westerly City limits to Fifth Street.
County of Santa Barbara		
SBC-1: Street and Bridge Maintenance in the North County	ST/RDS	Supplement local funding to maintain, repair, construct, and improve streets and bridges, including: roadway maintenance and repair; pavement preservation; bridge and large culvert projects
SBC-2: Street and Bridge Maintenance on the South Coast	ST/RDS	Supplement local funding to maintain, repair, construct, and improve streets and bridges, including: roadway maintenance and repair; pavement preservation; bridge and large culvert projects
SBC-3: Traffic Operations in the North County	ST/RDS	Supplement local funding for traffic operations, including the maintenance of signs, striping, and guardrail; intersection and bikeway signals and lighting.
SBC-4: Traffic Operations on the South Coast	ST/RDS	Supplement local funding for traffic operations, including the maintenance of signs, striping, and guardrail; intersection and bikeway signals and lighting.
SBC-5: Urban Forestry and Landscaping Maintenance in the North County	ST/RDS	Supplement local funding to perform the Urban Forestry Street Tree Program
SBC-6: Urban Forestry and Landscaping Maintenance on the South Coast	ST/RDS	Supplement local funding to perform the Urban Forestry Street Tree Program
SBC-7: Alternative Transportation Enhancements (North County)	BIKE/PED	Enhance the alternative transportation environment by performing maintenance, repair, construction, and improvement of the bike and ped facilities in the North County, including: sidewalk repair and replacements (Partnership Program), and bike, pedestrian and Safe Routes facilities.
SBC-8: Alternative Transportation Enhancements (South Coast)	BIKE/PED	Enhance the alternative transportation environment by performing maintenance, repair, construction, and improvement of the bike and ped facilities on the South Coast, including: sidewalk repair and replacements (Partnership Program), and bike, pedestrian and Safe Routes facilities.
SBC-10: Safe Routes to School Improvement on the South Coast	BIKE/PED	Construct Safe Routes to School improvements on the South Coast, including school zone striping.
SBC-14: Santa Claus Lane Streetscape Project	ST/RDS	Streetscape improvements to include parking, sidewalks, landscaping and a Park & Ride area.
SBC-15: Orcutt Transportation Improvement Program Capital Projects	ST/RDS	Construct various roadway, intersection, transit, and sidewalk improvements in the Orcutt Community Area included in the OTIP
SBC-16: Orcutt Transportation Improvement Program Bikeway Projects	BIKE/PED	Construct various bikeway projects at development sites throughout Orcutt Community included in the OTIP

Project Title	Project Type	Description
SBC-17: Montecito Debris Flow Trail Bridge Replacements	BIKE/PED	Replace three trail bridges in Montecito
SBC-PL-1: Various Transportation Improvement Projects in the North County	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects in the North County
SBC-PL-2: Various Transportation Improvement Projects on the South Coast	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects on the South Coast
SBC-PL-4: Reconstruct segments of Hollister Ave	ST/RDS	Hollister Ave between San Antonio Rd and US 101/SR 154. Widen to 4 lanes with channelization and bike lanes; reconstruct UPRR overcrossing.
SBC-PL-5: Clark Ave and Bradley Road Intersection Improvements	ST/RDS	Improve the intersection of Clark Avenue and Bradley Rd. Widen intersection to provide additional left & right turn lanes.
SBC-PL-6: Los Carneros Road Widening	ST/RDS	Widen Los Carneros Rd from El Colegio to Goleta city limits.
SBC-PL-8: Santa Maria Levee Multi Use Trail	BIKE/PED	Along the Santa Maria levee, Santa Maria to Guadalupe. Construct multi-purpose bikeway.
SBC-PL-9: Mission Canyon Corridor Improvements	BIKE/PED	Realign and widen roadway, drainage improvements and reconstruct pedestrian path along Mission from the city limits north to SR 192.
SBC-PL-10: California Coastal Trail (Gaviota Coastal Trail)	BIKE/PED	CA Coastal Trail/Bacara Resort to El Capitan Cyn Rd; Refugio State Beach to Canada San Onofre. Nine miles of state mandated bicycle/pedestrian trail.
SBC-PL-11: Union Valley Parkway Extension - Rodeo Drive	ST/RDS	New local road connection between the Union Valley Parkway/U.S. Highway 101 interchange and the unnamed frontage road, known as Rodeo Drive, on the east side of U.S. Highway 101.
SBC-PL-12: Los Alamos Infrastructure Improvements	BIKE/PED	Construct a variety of bike lane, pedestrian, and parking improvements in the Los Alamos Community Pedestrian Circulation and Parking Plan
SBC-PL-13: Santa Ynez Valley Infrastructure Improvements - Santa Barbara County	BIKE/PED	Construct a variety of bike and pedestrian improvements in the Santa Ynez Valley unincorporated area including: Pine St, Calzada Avenue, Santa Ynez Rd, and Edison St bike lanes.
SBC-PL-14: Eastern Goleta Valley Infrastructure Improvements - Santa Barbara County	BIKE/PED	Construct a variety of bicycle and pedestrian improvements to improve bike and pedestrian connectivity in the Eastern Goleta Valley
SBC-PL-15: Orcutt Trails - Santa Barbara County	BIKE/PED	Construct trails as identified in Orcutt Community Plan
SBC-PL-16: Pt. Sal Trails - Northern Santa Barbara County Coastal Access	BIKE/PED	Construct various trails to Point Sal State Park
SBC-PL-17: Parks Road Maintenance - Santa Barbara County	ST/RDS	Road maintenance for County Park roads
SBC-PL-18: Jalama Beach County Park Coastal Trail Access - Santa Barbara County	BIKE/PED	Trail along coastal blufftop to Jalama Beach County Park

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SBCAG		
SBCAG-1: SR 166 Safety & Operations	HWY	Enhance the safety of SR 166 by supporting CHP operations, improving Cuyama bus stops, improving the Black Road intersection, and improving the Hwy 1 intersection.
SBCAG-2: South Coast Bicycle and Pedestrian Program	BIKE/PED	Enhance the alternative transportation environment by providing financial support for various South Coast bicycle and pedestrian programs and projects.
SBCAG-3: South Coast Safe Routes to School Program	BIKE/PED	Enhance the Safe Routes to School environment by construction of various Safe Routes to School projects on the South Coast.
SBCAG-11: Operations and Management Improvements on US 101 in Santa Barbara County Study (FTIP SBCAG28)	ITS	Operations and management improvements, including ITS technologies on US 101 in Santa Barbara County (CA 329)
SBCAG-12: US 101 Widening TDM Program (Carpinteria to Santa Barbara)	TDM	Program includes vanpool and carpool incentives, real-time ridesharing, transit marketing, employer outreach, and bicycle safety information.
SBCAG-13: Freeway Service Patrol (FSP)	TDM	A fleet of tow and pickup trucks patrol designated portions (beats) of freeways during morning and afternoon commute hours clearing accidents and removing debris.
SBCAG-14: SAFE: Highway Call Box, Highway Safety and Traffic Reduction Services	TDM	SBCAG operates the highway call box program as a motorist aid system. The call boxes can be used to report accidents, traffic hazards, and other emergencies, and to request assistance for vehicle breakdowns.
SBCAG-15: South Coast Commuter Rail	RAIL	Implement and support commuter rail provided by Amtrak. One peak hour train implemented by 2020 and a second by 2035.
SBCAG-16: Carpinteria Train Station Second Platform and Pedestrian Undercrossing	RAIL	Construct passing siding and second passenger platform to allow for train meets and pedestrian undercrossing to improve safety at the existing Carpinteria train station
SBCAG-17: Goleta Train Storage Expansion	RAIL	Construct additional rail spur to store one additional train at the existing Goleta train station
SBCAG-18: Union Valley Pkwy Barrier Walls	ST/RDS	Barriers Walls along Union Valley Parkway in Santa Maria.
SBCAG-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects

4.1.4 Cumulative Impacts

The analysis in this section examines impacts of Connected 2050 on aesthetics/visual resources throughout the SBCAG region and is cumulative in nature. Some types of impacts to aesthetic resources are localized and not cumulative in nature. For example, the creation of glare or shadows at one location is not worsened by glare or shadows created at another location. Rather these effects are independent and the determination as to whether they are adverse is specific to the project and location where they are created. Projects that block a view or affect the visual quality of a site also result in localized impacts. The impact occurs specific to a site or area and remains independent from another project elsewhere that may block a view or degrade the visual environment of a specific site.

There are two types of aesthetic impacts that may be additive in nature and thus cumulative: night sky lighting and overall changes in the visual environment as the result of increasing urbanization of large areas. As development in one area, such as a relatively large city adjoining agricultural land like Santa Barbara, Santa Maria and Lompoc increases and possibly expands over time and meets or connects with development in an adjoining ex-urban area, the effect of night sky lighting experienced outside of the region may increase in the form of larger and/or more intense nighttime glow in the viewshed. Although growth envisioned in the Connected 2050 is primarily focused on infill areas, development outside of those geographies with long-distance views may result in nighttime lighting becoming more visible, covering a larger area and/or appearing in new areas as a result of projected development under Connected 2050.

With regard to the visual environment experienced throughout the cumulative impact analysis area (SBCAG region and adjoining San Luis Obispo, Kern and Ventura counties), as planned cumulative development occurs over time the overall visual environment will change. The combination of forecasted development in the SBCAG region and planned development in neighboring counties will result in a different visual environment than currently exists. The cumulative impacts associated with night sky lighting and changes in the visual environment are considered significant and the contribution of Connected 2050 to these impacts is cumulatively considerable. Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.

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4.2 Air Quality

This section analyzes the impacts of Connected 2050 on local and regional air quality. Both temporary impacts relating to construction activities and long-term impacts associated with population and employment growth and associated growth in vehicle traffic and energy consumption are discussed. Greenhouse gas emissions are analyzed in Section 4.8, *Greenhouse Gas Emissions/Climate Change*.

4.2.1 Setting

a. Climate and Meteorology

Connected 2050 is located within the South Central Coast Air Basin (SCCAB), which includes all of San Luis Obispo, Santa Barbara, and Ventura counties. The Santa Barbara County portion of the SCCAB is under the jurisdiction of the Santa Barbara County Air Pollution Control District (SBCAPCD). The climate of the SCCAB is strongly influenced by its proximity to the Pacific Ocean and the location of the high-pressure cell in the northeastern Pacific. With a Mediterranean-type climate, the project area is characterized by warm, dry summers and cool winters with occasional rainy periods.

Cool, humid marine air causes frequent fog and low clouds along the coast, generally during the night and morning hours in the late spring and early summer months. Santa Barbara County is subject to a diurnal cycle in which daily onshore winds from the west and northwest are replaced by mild offshore breezes flowing from warm inland valleys during night and early morning hours. This alternating cycle can create a situation where suspended pollutants are swept offshore at night, and then carried back onshore the following day. Dispersion of pollutants is further degraded when the wind velocity for both day and nighttime breezes is low. The region is also subject to seasonal "Santa Ana" winds. These are typically hot, dry northerly winds which blow offshore at 15 to 20 miles per hour (mph), but can reach speeds in excess of 60 mph.

Two types of temperature inversions (warmer air on top of cooler air) are created in the area: subsidence and radiational. The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high-pressure area to the low pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but it is most evident during the summer months. Radiational, or surface, inversions are formed by the more rapid cooling of air near the ground during the night, especially during winter. This type of inversion is typically lower (0 to 500 feet at Vandenberg Air Force Base, for example) and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed, with the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion. Table 4.2-1 shows the average climate within the SBCAG region.

Table 4.2-1 Santa Barbara County Climate Conditions

Temperature Condition	Amount
Average annual rainfall	18 inches
Average annual maximum temperature	71°F
Average annual minimum temperature	50°F
Warmest month	August
Coolest month	January
Average annual mean temperature	61°F
Average wind speed	7 miles per hour
Predominant wind direction	North

°F = degrees Fahrenheit

Note: Averages are based on the period of record from January 1893 to June 2016 with the exception of average annual mean temperature. Wind Speed and direction data averages are based on the period on record from January 1980 to December 2016.

Source: WeatherSpark 2016, Western Regional Climate Center 2016

b. Current Air Quality

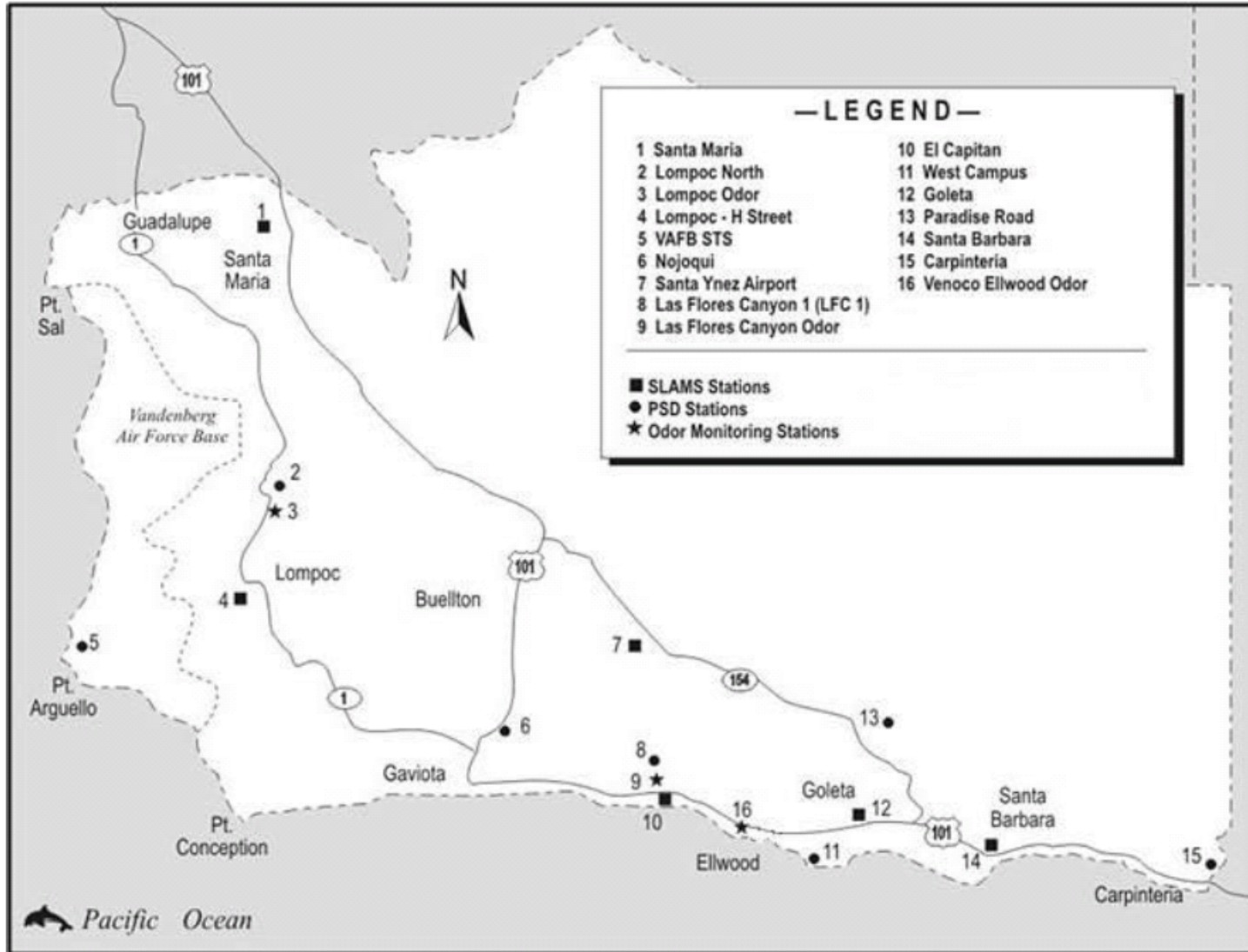
Monitoring of ambient air pollutant concentrations is conducted by the CARB, SBCAPCD, and industry. Monitors operated by the CARB and SBCAPCD are part of the State and Local Air Monitoring System (SLAMS). The SLAMS stations are located to provide local and regional air quality information. Monitors operated by industry, at the direction of the SBCAPCD, are called Prevention of Significant Deterioration (PSD) stations. PSD stations are required by the SBCAPCD to ensure that new and modified sources under SBCAPCD permit do not interfere with the County’s ability to attain or maintain air quality standards. Figure 4.2-1 shows the locations of all monitoring stations in Santa Barbara County that were in operation in 2015.

The SBCAPCD is required to monitor air pollutant levels to assure that the air quality standards are met and, if they are not, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in “attainment” or “non-attainment.” Countywide historical data on the number of State 8-hour and State 1-hour ozone exceedances between 1990 and 2015 is provided in Figure 4.2-2 which shows fewer exceedances occurring over time.

Santa Barbara County’s air quality improved dramatically over the years as evidenced by the declining number of state 1-hour and 8-hour ozone exceedances. An exceedance is a measured concentration at a monitoring station that surpasses the standard. As displayed in Figure 4.2-2, 1-hour ozone exceedances have decreased from a high of 37 days in 1990 to zero days in six out of the last nine years. The number of 8-hour ozone exceedance days range from a high of 101 days in 1991 to zero days in 2018. This represents a significant milestone as 2018 is the first year in which the County did not exceed the 8-hour ozone standard. These improvements in air quality have occurred despite a 20 percent increase in countywide population since 1990.

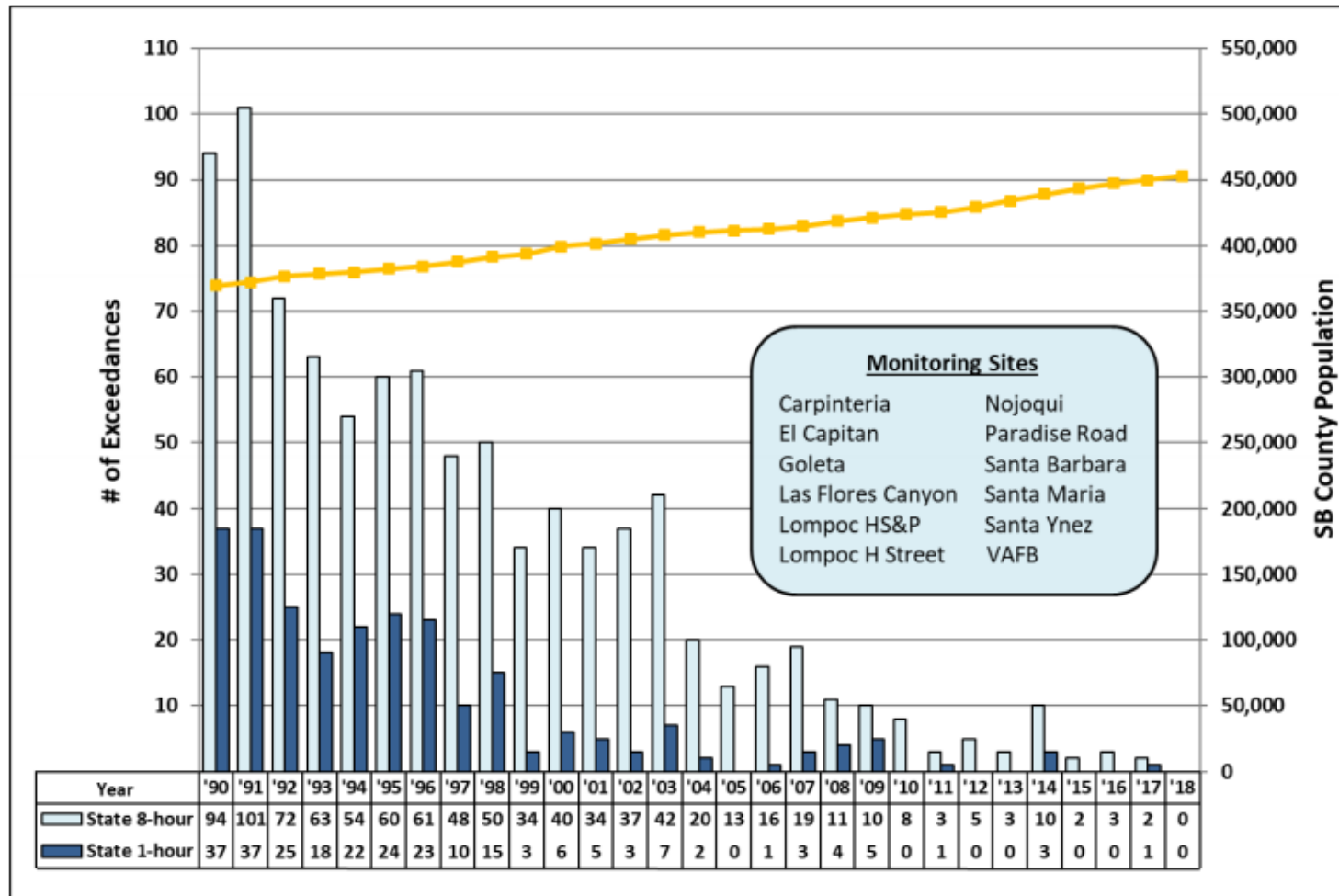
In summary, the County is currently classified as in attainment for State 8-hour ozone standard, but still in a non-attainment area for the State PM₁₀ standard (SBCAPCD 2019).

Figure 4.2-1 Santa Barbara County Air Quality Monitoring Stations (2015)



Source: SBCAPCD Annual Air Monitoring Network Plan (July 2015)

Figure 4.2-2 Historical Santa Barbara County Ozone Exceedances (2019)



⁵ Population data in Figure 2-1 is from the State of California Department of Finance.

c. Air Quality Attainment Plan

The FCAA Amendments of 1990 set a schedule for the attainment of the NAAQS. States are required to prepare a State Implementation Plan (SIP) to develop strategies to bring about attainment of the standards. In addition, the California Clean Air Act (CCAA) of 1988 requires areas that exceed the California ambient air quality standards to plan for the eventual attainment of the State standards. Under both the 1990 Amendments to the FCAA and the 1988 CCAA, the level of Santa Barbara County's ozone originally resulted in the county being classified as a "moderate" non-attainment area.

The 2019 Ozone Plan (2019 Plan) is the ninth triennial update to the initial state Air Quality Attainment Plan adopted by the Santa Barbara County Air Pollution Control District Board of Directors in 1991 (other updates were done in 1994, 1998, 2001, 2004, 2007, 2010, 2013, and 2016). Each of the plan updates have implemented an "every feasible measure" strategy to ensure continued progress toward attainment of the state ozone standards. Since 1992, Santa Barbara County has adopted or amended more than 25 control measures aimed at reducing emissions from stationary sources of air pollution. These measures have substantially reduced ozone precursor pollutants, which includes nitrogen oxides (NO_x) and reactive organic compounds (ROCs).

For the last four years, Santa Barbara County had three or fewer exceedances of the state 8-hour ozone standard, and the County was designated as nonattainment-transitional in April 2017. This designation means that SBCAPCD is getting close to attaining the standard and must determine whether additional control measures are necessary to accomplish expeditious attainment of the state standard.

In the past, SBCAPCD has prepared air quality attainment plans that have addressed the federal ozone standard, the state ozone standards, or both. This 2019 Plan addresses the state ozone standards only. This is because SBCAPCD is designated "attainment" for the federal 8-hour ozone standard of 0.070 ppm, which was promulgated by the U.S. Environmental Protection Agency (EPA) in December 2015. The federal attainment designation for Santa Barbara County was finalized in April 2018.

d. Sources of Air Pollution

Air pollutant emissions in the SCCAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories:

- Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat.
- Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products.

Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and can also be divided into two major subcategories:

- On-road sources may be legally operated on roadways and highways.
- Off-road sources include aircraft, ships, trains, and self-propelled construction equipment.

Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

e. Air Pollutants of Primary Concern

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS) for “criteria pollutants” and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide, volatile organic compounds (VOC)/reactive organic gases (ROC),¹ nitrogen oxides (NO_x), particulate matter with diameters of up to ten microns (PM₁₀) and up to 2.5 microns (PM_{2.5}), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between ROC and NO_x. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog). The characteristics, sources and effects of criteria pollutants are discussed in the following subsections. The following subsections describe the characteristics, sources, and health and atmospheric effects of air pollutants of primary concern.

Ozone

Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and ROC. ROC are composed of non-methane hydrocarbons (with some specific exclusions), and NO_x is composed of different chemical combinations of nitrogen and oxygen, mainly nitric oxide and nitrogen dioxide. NO_x are formed during the combustion of fuels, while ROC are formed during combustion and evaporation of organic solvents. As a highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while high ROC and NO_x levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional rather than local scale, ozone is considered a regional pollutant. In addition, because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans, including changes in breathing patterns, reduction of breathing capacity, increased susceptibility to infections, inflammation of lung tissue, and some immunological changes (U.S. EPA 2020). Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

Carbon monoxide is a localized pollutant that is found in high concentrations only near its source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is the incomplete combustion of petroleum fuels by automobile traffic. Therefore, elevated concentrations are usually only found near areas of high traffic volumes. Other sources of carbon monoxide include the incomplete combustion of petroleum fuels at power plants and fuel combustion from wood stoves and fireplaces during the winter. The health effects of carbon monoxide are related to its affinity for hemoglobin in the blood. Carbon monoxide causes a number of health problems, including aggravation of some heart diseases (e.g., angina), reduced tolerance for exercise, impaired mental function, and impaired fetal development. At high levels of exposure, carbon monoxide reduces the

¹ CARB defines VOC and ROC similarly as, “any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate,” with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROC and VOC are considered comparable in terms of mass emissions, and the term ROC is used in this EIR.

amount of oxygen in the blood, leading to mortality (U.S. EPA 2020). Carbon monoxide tends to dissipate rapidly into the atmosphere; consequently, violations of the NAAQS and/or CAAQS for carbon monoxide are generally associated with localized carbon monoxide “hotspots” that can occur at major roadway intersections during heavy peak-hour traffic conditions.

Nitrogen Dioxide

Nitrogen dioxide is a by-product of fuel combustion; the primary sources are motor vehicles and industrial boilers and furnaces. The principal form of NO_x produced by combustion is nitric oxide, but nitric oxide reacts rapidly to form nitrogen dioxide, creating the mixture of nitric oxide and nitrogen dioxide commonly called NO_x . Nitrogen dioxide is an acute irritant that can aggravate respiratory illnesses and symptoms, particularly in sensitive groups (U.S. EPA 2020). A relationship between nitrogen dioxide and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility (U.S. EPA 2021). It can also contribute to the formation of PM_{10} and acid rain.

Sulfur Dioxide

Sulfur dioxide is included in a group of highly reactive gases known as “oxides of sulfur.” The largest sources of sulfur dioxide emissions are from fossil fuel combustion at power plants (73 percent) and other industrial facilities (20 percent). Smaller sources of sulfur dioxide emissions include industrial processes such as extracting metal from ore and the burning of fuels with a high sulfur content by locomotives, large ships, and off-road equipment. Sulfur dioxide is linked to a number of adverse effects on the respiratory system, including aggravation of respiratory diseases, such as asthma and emphysema, and reduced lung function (U.S. EPA 2021).

Particulate Matter

Suspended atmospheric PM_{10} and $\text{PM}_{2.5}$ is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. Both PM_{10} and $\text{PM}_{2.5}$ are directly emitted into the atmosphere as by-products of fuel combustion and wind erosion of soil and unpaved roads. Particulate matter is also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with PM_{10} and $\text{PM}_{2.5}$ can be very different. PM_{10} is generally associated with dust mobilized by wind and vehicles while $\text{PM}_{2.5}$ is generally associated with combustion processes as well as formation in the atmosphere as a secondary pollutant through chemical reactions. $\text{PM}_{2.5}$ is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems (CARB 2020a). More than half of $\text{PM}_{2.5}$ that is inhaled into the lungs remains there. These materials can damage health by interfering with the body’s mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance (South Coast Air Quality Management District 2005). Suspended particulates can also reduce lung function, aggravate respiratory and cardiovascular diseases, increase mortality rates, and reduce lung function growth in children (U.S. EPA 2021).

Lead

Lead is a metal found naturally in the environment, as well as in manufacturing products. The major sources of lead emissions historically have been mobile and industrial sources. However, as a result of the U.S. EPA’s regulatory efforts to remove lead from gasoline, atmospheric lead concentrations

have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred prior to 1990 due to the removal of lead from gasoline sold for most highway vehicles. Lead emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least in part as a result of national emissions standards for hazardous air pollutants (U.S. EPA 2013). As a result of phasing out leaded gasoline, metal processing currently is the primary source of lead emissions. The highest level of lead in the air is generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. The health impacts of lead include behavioral and hearing disabilities in children and nervous system impairment (U.S. EPA 2021).

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness, or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engine exhaust that contains solid material known as diesel particulate matter (DPM). More than 90 percent of DPM is less than one micron in diameter (about 1/70th the diameter of a human hair) and thus is a subset of PM_{2.5}. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs (CARB 2020b).

TACs are different than criteria pollutants because ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., long duration) and acute (i.e., severe but of short duration) adverse effects on human health. The California Air Resources Board's (ARB's) *Air Quality and Land Use Handbook: A Community Health Perspective* recommends that local agencies avoid siting new, sensitive land uses within specific distances of potential sources of TACs, such as freeways and high-traffic roads, distribution centers, railroads and ports (ARB 2005). Connected 2050 would result in potential land uses including sensitive receptors to these sources of TACs as the transit-oriented land use scenario would encourage development near major transit-oriented areas to reduce VMT in the region.

4.2.2 Regulatory Setting

a. Federal and State Regulations

Federal and California Clean Air Acts

The federal Clean Air Act (CAA) governs air quality in the United States and is administered by the U.S. EPA at the federal level. Air quality in California is also governed by regulations under the California CAA, which is administered by CARB at the state level. At the regional and local levels, local air districts such as the SCCAB typically administer the federal and California CAA. As part of implementing the federal and California CAA, the U.S. EPA and CARB have established ambient air quality standards (AAQS) for major pollutants at thresholds intended to protect public health. Table 4.2-2 summarizes the CAAQS and the NAAQS. The CAAQS are more restrictive than the

NAAQS for several pollutants, including the one-hour standard for carbon monoxide, the 24-hour standard for sulfur dioxide, and the 24-hour standard for PM10.

California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. Depending on whether the standards are met or exceeded, the local air basin is classified as in “attainment” or “non-attainment.” Once a nonattainment area has achieved the air quality standards for a particular pollutant, it may be redesignated to an attainment area for that pollutant. To be redesignated, the area must meet air quality standards and have a 10-year plan for continuing to meet and maintain air quality standards, as well as satisfy other requirements of the federal CAA. Areas that have been redesignated to attainment are called maintenance areas. Some areas are unclassified, which means insufficient monitoring data are available; unclassified areas are considered to be in attainment. The Santa Barbara County portion of the SCCAB is classified as a nonattainment area for the State PM10 standards, while San Luis Obispo and Ventura counties, outside the project area, are classified as in attainment for the State PM10 standards. The SCCAB is classified as in attainment (or unclassifiable/attainment) for all other State and federal standards.

Table 4.2-2 Current Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standards
Ozone	1-Hour	–	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
	1-Hour	0.10 ppm	0.18 ppm
Sulfur Dioxide	Annual	–	–
	24-Hour	–	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM ₁₀	Annual	–	20 µg/m ³
	24-Hour	150 µg/m ³	50 µg/m ³
PM ₂₅	Annual	12 µg/m ³	12 µg/m ³
	24-Hour	35 µg/m ³	–
Lead	30-Day Average	–	1.5 µg/m ³
	3-Month Average	0.15 µg/m ³	–
Visibility Reducing Particles	8-Hour	–	Extinction of 0.23 per kilometer*
Sulfates	24-Hour	–	25 µg/m ³
Hydrogen Sulfide	1-Hour	–	0.03 ppm (42 µg/m ³)
Vinyl Chloride	24-Hour	–	0.01 ppm 0.02 (26 µg/m ³)

ppm = parts per million;

µg/m³ = micrograms per cubic meter

* In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: CARB 2016a.

4.2.3 Impact Analysis

a. Methodology and Significance Thresholds

This analysis follows the guidance and methodologies recommended in the CEQA Appendix G thresholds, SBCAPCD's *Scope and Content of Air Quality Sections in Environmental Documents* (2015), and the County of Santa Barbara *Environmental Thresholds and Guidelines Manual* (2021). While there is some overlap in the thresholds from these three sources, each has been individually listed below because thresholds from these sources may be applicable to individual transportation and/or land use projects under Connected 2050.

Pursuant to the *State CEQA Guidelines*, air quality impacts related to the proposed project would be significant if the project would:

- 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 nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative guidelines for ozone precursors);
- d) Expose sensitive receptors to substantial pollutant concentrations; and/or
- e) Create objectionable odors affecting a substantial number of people.

According to the SBCAPCD *Scope and Content of Air Quality Sections in Environmental Documents* (updated April 2015), a proposed project would have a significant air quality impact on the environment if operation of the project would:

- a) Emit (from all project sources, both stationary and mobile) more than the daily trigger for offsets or Air Quality Impact Analysis set in the SBCAPCD New Source Review Rule, for any pollutant (i.e., 240 lbs/day for ROC; 80 lbs/day for PM₁₀; there is no daily operational threshold for CO since it is an attainment pollution);
- b) Emit more than 25 lbs/day of NO_x or ROC from motor vehicle trips only;
- c) Cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone);
- d) Exceed the SBCAPCD health risk public notification thresholds adopted by the SBCAPCD Board (10 excess cancer cases in a million for cancer risk and/or a Hazard Index of greater than (1.0) for non-cancer risk);
- e) Be inconsistent with the latest adopted federal and State air quality plans for Santa Barbara County.

The County of Santa Barbara has established its own CEQA thresholds. According to the County's *Environmental Thresholds and Guidelines Manual*, a significant adverse air quality impact may occur when a project, individually or cumulatively, triggers any one of the following:

- a) Interferes with progress toward the attainment of the ozone standard by releasing emissions which equal or exceed the established long-term quantitative thresholds for NO_x and ROC;

- b) Equals or exceeds the state or federal ambient air quality standards for any criteria pollutants (as determined by modeling);
- c) Generates emissions which may affect sensitive receptors (e.g., children, elderly or acutely ill);
- d) Generates toxic or hazardous air pollutants in amounts which may increase cancer risk for the affected population;
- e) Generates an odor or other air quality nuisance problem impacting a considerable number of people;

Short-Term Emissions Methodology

The SBCAPCD has not adopted significance thresholds for construction-related emissions. However, according to the SBCAPCD's *Scope and Content of Air Quality Sections in Environmental Documents*, on a project-level, construction-related NO_x, ROC, PM₁₀, and PM_{2.5} emissions from diesel- and gasoline-powered equipment, paving and other activities, should be quantified. SBCAPCD uses 25 tons per year for ROC or NO_x as a guideline for determining the significance of construction impacts for individual projects.

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing and type of project. Air quality impacts can nevertheless be acute during construction periods, resulting in significant localized impacts to air quality. Construction-related emissions are speculative at the RTP/SCS level because such emissions are dependent on the characteristics of individual development projects. However, because construction of Connected 2050 would generate temporary criteria pollutant emissions, primarily due to the operation of construction equipment and truck trips, a qualitative analysis is provided.

Long-Term Emissions Methodology

The methodology for determining the significance of air quality impacts compares baseline conditions in 2020 to the future 2050 conditions, as required in CEQA Section 15126.2(a). The analysis of air quality also includes a comparison between the expected future conditions Connected 2050 and the expected future conditions if no Connected 2050 project were adopted ("No Project" scenario). With respect to long-term impacts, because Connected 2050 itself does not directly generate the emissions, County thresholds associated with "new" or Indirect Source Review do not apply to Connected 2050 as a program. However, State and federal clean air laws require that emissions of pollutants for which national or State ambient air quality standards are violated be reduced from current levels. Therefore, the project's long-term impacts to air quality will be considered significant if Connected 2050 could result in mobile source emissions that significantly exceed existing levels. In this case, the pollutants of concern are ozone precursors (NO_x and ROC) and fine particulate matter, as these are the primary pollutants associated with vehicle transportation.

Projected air emissions from mobile sources were calculated using the EMFAC 2017 model with data for vehicle miles traveled (VMT) from the RTP/SCS traffic analysis completed by Fehr and Peers (2020), which calculated the various scenarios using the County's Traffic Demand Model (as further described in Section 4.12, *Transportation and Circulation*). Vehicle trips, VMT, and VMT by speed class distributions were provided for the 2020 existing conditions and 2050 projections with and without the project. The VMT by speed bin data was then entered into the EMFAC2017 model for analysis. The EMFAC emissions factors are established by CARB and accommodate certain mobility

assumptions (e.g., vehicle speed, delay times, average trip lengths, and total travel time). Projected vehicle emissions for the year 2050 under Connected 2050 were compared to 2020 existing conditions and with future conditions under the 2050 No Project scenario.

Health Impacts

Short-term and long-term exposure to criteria pollutants and TACs may result in adverse health effects, based on the information presented in Table 8. As discussed in that table, these effects may include: aggravated asthma, increases in respiratory symptoms like coughing and difficult or painful breathing, chronic bronchitis, decreased lung function, increased cancer risk, heart attack and premature death.

The ambient air quality standards are health-based standards. Therefore, in this impact analysis, when the proposed Plan would result in a new violation of a particulate standard or substantially contribute to an existing violation, it would also contribute to these adverse health effects. Health impacts of TACs are discussed separately under Impact AQ-4.

b. Project Impacts and Mitigation Measures

This section describes generalized air quality impacts associated with Connected 2050. Specific projects may generate air quality impacts during construction and operation. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could result in air quality impacts as described in the following sections.

Threshold: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact AQ-1 CONNECTED 2050 WOULD NOT CONFLICT OR OBSTRUCT WITH THE GOALS OF SBCAPCD'S 2019 OZONE PLAN. CONNECTED 2050 WOULD REDUCE EMISSIONS OF OZONE PRECURSORS BELOW 2020 BASELINE LEVELS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The policies and land use patterns facilitated by Connected 2050 are projected to reduce emissions of ozone precursors below 2020 baseline levels and the 2050 "No Project" alternative, as discussed in Impact AQ-3 (see Table 4.2-5) which are consistent with the goals and policies of SBCAPCD's 2019 Ozone Plan. This decrease in emissions is due to the proposed transportation improvements and land use projects envisioned by Connected 2050, which among other strategies, would improve alternative transportation options and reduce congestion. To accommodate future growth in the region while reducing emissions, the strategy of Connected 2050 is to increase density along transit corridors to encourage active and public transportation and selectively increase residential and commercial land use capacity within high quality transit corridors. Shifting a greater share of future growth and density to these transit corridors would improve transit access and multimodal connections (refer to Section 4.12, *Transportation and Circulation*). This would result in reduced overall vehicle miles traveled which would reduce regional criteria air pollutant emissions and TAC emissions from mobile sources. The goals of the 2019 Ozone Plan are to reduce precursor pollutants, which includes NOx and ROCs within the SBCAG region. Connected 2050 would achieve that goal by implementing the strategies within the 2019 Ozone Plan as demonstrated in Impact AQ-2, in addition to reducing emissions below 2020 baseline levels. Therefore, implementation of

Connected 2050 would not conflict with or obstruct implementation of the AQMP, and this impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold:	Would construction of the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?
Threshold:	Would construction of the project 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?

Impact AQ-2 CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE FUTURE TRANSPORTATION IMPROVEMENT PROJECTS AND IMPLEMENTATION OF THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 WOULD CREATE FUGITIVE DUST AND OZONE PRECURSOR EMISSIONS AND COULD VIOLATE AIR QUALITY STANDARDS, CONTRIBUTE SUBSTANTIALLY TO EXISTING OR PROJECTED AIR QUALITY VIOLATIONS, OR RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASES IN PM₁₀ OR OZONE PRECURSOR EMISSIONS. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

There are three primary sources of short-term emissions that would be generated by construction of future transportation projects under Connected 2050. These sources include:

- Operation of construction vehicles (i.e., scrapers, loaders, dump trucks);
- The creation of fugitive dust during clearing and grading; and
- The use of asphalt or other oil-based substances during the final construction phases, which also generate nuisance odors.

The significance of daily emissions, particularly ROC and NO_x emissions, generated by construction equipment utilized to build RTP-SCS transportation improvements would depend on the quantity of equipment used and the hours of operation. The significance of fugitive dust (PM_{2.5} and PM₁₀) emissions would depend upon the following factors:

- The aerial extent of disturbed soils;
- The length of disturbance time;
- Whether existing structures are demolished;
- Whether excavation is involved (including the potential removal of underground storage tanks); and
- Whether transport of excavated materials offsite is necessary.

Intersection improvements, such as signalization, re-striping, or signal coordination, are small-scale projects and are not expected to generate significant short-term emissions. However, other RTP-SCS projects as well as future development facilitated by the SCS land use scenario may involve grading and paving, or the construction of permanent facilities. For example, substantial grading and paving would be required for large highway improvements such as the on-going US 101 Widening Project. The precise quantity of emissions would need to be determined at the time of proposed construction of a given transportation improvement or development project. These emissions would be compared to SBCAPCD's construction thresholds, as listed in Significance Thresholds in Section 1.1.2(a). Although any individual improvement or development project may not generate

significant short-term emissions, it is probable that several projects would be under construction simultaneously, generating cumulative construction emissions that could impact air quality. Short-term impacts would be significant because construction emissions could violate air quality standards, contribute substantially to existing or projected air quality violations, or result in a cumulatively considerable net increases in PM or ozone precursor emissions. Implementation of mitigation measures for individual projects would reduce PM and ozone precursor emissions. However, this impact would remain significant and unavoidable.

Mitigation Measures

The following mitigation measures developed for Connected 2050 program where applicable for transportation projects that result in fugitive dust and ozone precursor emissions. Cities and counties in the SBCAG region can and shall implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

AQ-2(a) Application of SBCAPCD Feasible Mitigation Measures

For all projects, the implementing agency shall incorporate the most recent SBCAPCD feasible mitigation measures and/or technologies for reducing inhalable particles based on analysis of individual sites and project circumstances. Current SBCAPCD feasible mitigation measures include the following. Additional and/or modified measures may be adopted by SBCAPCD prior to implementation of individual projects under Connected 2050. The most current list of feasible mitigation measures at the time of project implementation shall be used.

- During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 mph. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption.
- Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.
- If importation, exportation and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.
- Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.
- After clearing, grading, earth moving or excavation is completed, treat the disturbed area by watering, or revegetating, or by spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.
- The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District prior to land use clearance for map recordation and land use clearance for finish grading of the structure.

- Prior to land use clearance, the applicant shall include, as a note on a separate informational sheet to be recorded with map, these dust control requirements. All requirements shall be shown on grading and building plans.

AQ-2(b) Diesel Equipment Emissions Standards

The implementing agency shall ensure, to the maximum extent feasible, that diesel construction equipment meeting CARB Tier 4 emission standards for off-road heavy-duty diesel engines is used. If use of Tier 4 equipment is not feasible, diesel construction equipment meeting Tier 3 (or if infeasible, Tier 2) emission standards shall be used. These measures shall be noted on all construction plans and the implementing agency shall perform periodic site inspections.

AQ-2(c) Electric Construction Equipment

The implementing agency shall ensure that to the extent feasible, construction equipment utilizes electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.

Significance After Mitigation

Implementation of Measures AQ-2(a) through AQ-2(c) would be required to reduce these emissions related to short-term construction emissions from individual projects and thus reduce the severity of impacts. However, implementation of these measures would not guarantee that the impact would be reduced to less than significant. Thus, because it cannot be determined if Measures AQ-2(a) through AQ-2(c) would fully mitigate the significant impact, this impact would remain significant and unavoidable.

Threshold:	Would construction of the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?
Threshold:	Would operation of the project 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?

Impact AQ-3 IMPLEMENTATION OF CONNECTED 2050 WOULD RESULT IN AN OVERALL REDUCTION OF ON-ROAD VEHICLE EMISSIONS WHEN COMPARED TO BASELINE CONDITIONS AND THE 2050 NO PROJECT SCENARIO. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Projected on-road vehicle emissions on the SBCAG transportation network for the years 2020 and 2050 under Connected 2050 were compared to existing conditions as defined by SBCAG's 2020 baseline. Projected on-road vehicle emissions on the SBCAG transportation network for the years 2020 and 2050 under Connected 2050 were also compared with those projected under the future "No Project" scenario, which accounts for future growth but in which the transportation improvements identified in Connected 2050 are not implemented.

The on-road vehicle source emissions estimates for Connected 2050 were estimated using the EMFAC2017 emission inventory model developed by the California Air Resources Board. Table 4.2-3 shows the results of the long-term emissions analysis based on annual VMT, which were calculated for each scenario using SBCAG's regional transportation model.

Table 4.2-3 Regional Air Pollutant Emissions

Scenario	VMT	ROC (tons/day)	NO _x (tons/day)	PM _{2.5} (tons/day)*	PM ₁₀ (tons/day)*
2020 Baseline	11,066,811	1.09	5.13	0.31	0.69
2050 No Project	13,124,116	0.33	1.67	0.30	0.74
2050 with RTP-SCS	10,987,202	0.28	1.43	0.25	0.63

* PM2.5 and PM10 includes tire wear and brake wear emissions

Notes: The on-road mobile source criteria pollutant emissions estimates for Connected 2050 were calculated using CARB’s EMFAC2017 emission inventory model. VMT data were extracted from Fehr and Peers who utilized the SBCAG’s Traffic Demand Model (as further described in Section 4.12, *Transportation and Circulation*) and include pass-through trips from vehicles travelling through the County that do not have an origin or destination within the county. PM₁₀ and NO_x emissions are presented above using winter values and ROC emissions are presented above using winter values to provide a conservative estimate based on the seasons in which individual criteria pollutant emissions are highest.

Source: See Appendix B for EMFAC2017 modeling results

As shown in Table 4.2-3, projected VMT and associated Connected 2050 emissions for ROC, NO_x, PM_{2.5} and PM₁₀ emissions would not increase from SBCAG’s 2020 baseline. In addition, transportation improvements and land use patterns identified in Connected 2050 would result in an overall reduction of on-road vehicle emissions when compared to the “No Project” scenario.

As previously noted, Santa Barbara County is currently not in attainment for PM₁₀ standards. As shown in Table 4.2-3 under the “No Project” scenario, emissions levels for ozone precursors are forecast to decline despite projected future growth. These estimates are consistent with the state-wide continuing downward trend as result of CARB rules designed to reduce emissions from cars and trucks. NO_x emissions are primarily sourced from trucks and are lower due in part to the impact of the recession on heavy-duty truck activity and associated emissions, as well as the impact of CARB rules designed to reduce NO_x emissions from diesel trucks and buses. ROC emissions are primarily due to gasoline vehicles and are lower due to improvements in vehicle emission rates (CARB 2013). PM₁₀ emissions are also generally consistent with state-wide trends.

As shown in Table 4.2-3 data indicates that emission levels for ozone precursors and PM₁₀ criteria pollutants would be reduced by 0.06 tons/day from the 2020 baseline with the implementation of Connected 2050 compared to the “No Project” scenario levels. This decrease in emissions is due to the transportation improvements and future land use scenario envisioned by the RTP/SCS, which encourages infill and TOD. This strategy is intended to increase residential and commercial land use capacity within existing transit corridors, shifting a greater share of future growth to these corridors ultimately increasing density, improving circulation and multi-modal connections, and leading to lower average VMT, which would have a beneficial effect on air quality.

In addition to the specific transportation improvements and land use scenario identified Connected 2050 also includes several policies that would contribute to a reduction of air pollutants. Table 4.2-4 summarizes the Connected 2050 goals and policies that promote improvements to air quality.

Table 4.2-4 Connected 2050 Goals and Policies that Promote Air Quality Improvements

RTP Policy	Description
1.2	<ul style="list-style-type: none"> ▪ Lead to reductions in greenhouse gas and criteria pollutant emissions, consistent with the air quality goals of the region, including targets for greenhouse gas emissions from passenger vehicles in 2020 and 2035 as required by SB 375. ▪ Be in conformity with the SBCAPCD Clean Air Plan and the State Implementation Plan (SIP) and meet the National Ambient Air Quality Standards as required by the federal Clean Air Act.
1.3	<ul style="list-style-type: none"> ▪ Encourage the use of alternative fuels, and the application of advanced transportation and energy technologies to reduce vehicular emission and energy consumption.
2.1	<ul style="list-style-type: none"> ▪ Enhance access, circulation, and mobility throughout the Santa Barbara region and between neighboring regions. ▪ Reduce congestion, especially on highways and arterials and in neighborhoods surrounding schools in cooperation with schools and school districts. ▪ Reduce travel times to acceptable levels for all transportation modes, with equal or better travel times for transit and rail in key corridors.
2.2	<ul style="list-style-type: none"> ▪ Strive to increase the operational efficiency of vehicle usage through appropriate operational improvements (e.g., signal timing, left turn lane channelization, and ramp metering). ▪ Promote transportation demand management (TDM), e.g., through appropriate commute incentive programs, to reduce demand and improve efficiency.
2.3	<ul style="list-style-type: none"> ▪ Encourage alternatives to single-occupancy vehicle trips and the use alternative transportation modes to reduce vehicle miles traveled and increase bike, walk and transit mode share. ▪ Provide for a variety of transportation modes and ensure connectivity within and between transportation modes both within and outside the Santa Barbara region. Alternative mode planning and projects shall be compatible with neighboring regions' transportation systems. ▪ Plan and provide for ancillary support facilities for alternative transportation, such as bicycle parking. ▪ Promote inter-regional commuter transit and rail service. ▪ Promote local and inter-city transit.
3.1	<ul style="list-style-type: none"> ▪ Encourage safe and convenient travel for all transportation system users, including the disabled, pedestrians, bicyclists, transit riders, and other vehicles.
4.2	<ul style="list-style-type: none"> ▪ Encourage active transportation (transit, biking and walking). ▪ Encourage development of "complete streets" serving all transportation modes, including active transportation.

As a result of these goals and policies, Connected 2050 would result in fewer emissions of ozone precursors and PM₁₀ when compared to existing conditions. In addition, Connected 2050 would result in fewer emissions of ozone precursors and PM₁₀ when compared to the future "No Project" scenario. Connected 2050 also includes several goals and policies that would contribute to a reduction of air pollutant emissions. Therefore, long-term operational impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact AQ-4 CONSTRUCTION OF PROJECTS UNDER CONNECTED 2050 MAY FACILITATE INCREASED EXPOSURE TO HAZARDOUS AIR POLLUTANTS AND ODOROUS COMPOUNDS. IMPLEMENTATION OF CONNECTED 2050 WOULD NOT RESULT IN SIGNIFICANT REGIONAL INCREASES IN TOXIC AIR EMISSIONS OR ODOROUS COMPOUNDS WHEN COMPARED TO THE EXISTING CONDITIONS AND THE FUTURE “NO PROJECT” SCENARIO. HOWEVER, LOCALIZED INCREASES MAY OCCUR AS A RESULT OF INFILL AND TRANSIT ORIENTED DEVELOPMENT FACILITATED BY CONNECTED 2050’S LAND USE SCENARIO. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Diesel particulate matter is classified as the primary airborne carcinogen in the State. CARB reports that diesel particulate matter represents about 70 percent of the potential cancer risk from vehicle travel on a typical urban freeway. As discussed above, the significance threshold for long-term public health risk is set at 10 excess cancer cases in a million for cancer risk. For non-cancer risk (i.e., chronic or acute risk), the significance level is set at a hazard index of greater than 1.0. If a formal health risk assessment shows that a significant impact results, mitigation measures to reduce the predicted levels of toxic air pollutants from the facility to a less than significant level may be imposed by the lead agency. In addition, diesel exhaust has a distinct odor, which is primarily a result of hydrocarbons and aldehydes contained in diesel fuel. In addition to the health risks associated with diesel exhaust, the odors associated with diesel exhaust could be a nuisance to nearby receptors.

Since exposure of toxic air contaminants is primarily based on local parameters (e.g., average daily traffic on local roadway segments and wind direction in relation to source and receptor), health risks adjacent to high volume roadways and transportation facilities would remain higher than regional averages. To assess the impact of diesel on regional roadways, an analysis of on-road mobile source diesel PM_{2.5} and PM₁₀ emissions (primary) and diesel NO_x, SO_x, and CO (as surrogates for secondary PM₁₀) is shown in Table 4.2-5, which compares the existing conditions in 2020 and 2050 conditions with implementation of Connected 2050. The conditions in 2050 without implementation of Connected 2050 are also shown for informational purposes. Projected emissions for 2050 with implementation of Connected 2050 would result in lower diesel NO_x emissions by 0.22 tons/day, the same amount of diesel PM_{2.5}, PM₁₀, SO_x emissions, and a 0.01 tons/day increase in CO emissions when compared to the 2020 SBCAG baseline. Since on-road mobile emissions with implementation of Connected 2050 would decrease or remain the same for pollutants compared to existing 2020 conditions, with only a minor increase in CO emissions (a pollutant for which the SCCAB is in attainment), impacts related to diesel particulate matter exposure and associated health risks and nuisance odors at the regional level would be less than significant.

Table 4.2-5 On-Road Mobile Source Diesel Toxics Comparison

Scenario	Diesel PM _{2.5} (tons/day)	Diesel PM ₁₀ (tons/day) ¹	Diesel NO _x (tons/day)	Diesel SO _x (tons/day)	Diesel CO (tons/day)
2020 SBCAG Baseline	0.07	0.13	2.92	0.01	0.65
2050 No Project	0.05	0.12	1.22	0.01	0.60
2050 RTP/SCS	0.04	0.10	1.05	0.01	0.51

¹ PM₁₀ includes tire wear and brake wear emissions.

Source: On-road mobile source diesel toxics emissions were calculated by SBCAG using EMFAC. Refer to Appendix B for calculations.

While overall toxic air contaminant concentrations, health risks and associated odors within any given distance of mobile sources in the region would generally decrease with implementation Connected 2050 (refer to Table 4.2-5), exposure is primarily based on local parameters such as average daily traffic (ADT) on local roadway segments, or wind direction in relation to source and receptor. As such, the health risks and nuisance odors adjacent to high volume roadways and transportation facilities (e.g., State Highway 1 and U.S. Highway 101) would remain higher than regional averages. See Section 4.12, *Transportation and Circulation*, for a description of high-volume roadways and transportation facilities, such as railways, in the SBCAG region.

The population residing close to freeways or busy roadways may experience adverse health effects beyond those typically found in urban areas. In the *Air Quality and Land Use Handbook: A Community Health Perspective* (CARB 2011), CARB recommends avoiding siting new sensitive land uses, such as residences, schools, daycare centers, playgrounds, or medical facilities, within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day. Although no high capacity urban or rural roadways exist in the SBCAG region, there are several major highway and state routes (Highway 1, 33, 101, 135, 150, 154, 166, 192, 246). Additional non-cancer health risk attributable to proximity to freeways was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70 percent drop-off in particulate pollution levels at 500 feet (CARB 2005). As discussed above, proximity to freeways increases cancer risk and exposure to particulate matter. Similarly, proximity to heavily travelled transit corridors and intersections would expose residents to higher levels of diesel particulate matter and carbon monoxide.

Vehicle delay, especially along corridors near sensitive residential receptors, increases idling emissions and associated health risks for nearby receptors. This increase in delay is largely a result of population growth that is anticipated throughout the region by 2050. As described in Section 4.12, *Transportation and Circulation*, although Connected 2050 would reduce daily vehicle hours of delay in the region as a whole in 2050 when compared to conditions without Connected 2050, this would nevertheless increase daily vehicle hours of delay compared to the 2050 baseline.

As discussed in Section 2.0, *Project Description*, as a result of Connected 2050 policies and land use scenario, the anticipated growth pattern would concentrate population adjacent to transit and other transportation facilities that could result in more people being exposed to elevated health risks and nuisance odors as compared to areas of the region more distant from such facilities. The location and pattern of the proposed Connected 2050 growth would influence travel behavior. A compact growth pattern served by an efficient and diverse transportation system facilitates a reduction in automotive travel and increases walking, bicycling and transit use—all of which reduce individual vehicle trips and associated vehicle delay (refer to Section 4.12, *Transportation and Circulation*). Reduced vehicle delay and vehicle trips are directly linked to reduced regional criteria air pollutant emissions and toxic air emissions from mobile sources.

It is important to note that a variety of other factors contribute to the decline in contaminant emissions compared to existing conditions, including vehicle technology, cleaner fuels and fleet turnover. However, in order to achieve the greatest VMT reductions from a compact growth pattern, development also must necessarily be in relatively close proximity to public transit and major roadway corridors such as Highway 1 or U.S. Highway 101. Although the precise location and density of such development is not known at this time, Connected 2050 could result in new sensitive receptors close to existing and new hazardous air pollutant sources, potentially resulting in the exposure of sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors. Therefore, impacts would be significant. The siting of new sensitive receptors

would be subject to an individual jurisdiction's land use approval processes and would be analyzed on an individual project basis and subject to mitigation measures identified below.

Mitigation Measures

The transportation project sponsor agencies can and should implement, the following mitigation measures developed for Connected 2050 where applicable for transportation projects. Cities and counties in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

AQ-4 Health Risk Reduction Measures

Transportation implementing agencies shall implement the following measures:

- During project-specific design and CEQA review, the potential localized particulate (PM₁₀ and PM_{2.5}) impacts and their health risks shall be evaluated for the project using procedures and guidelines consistent with U.S. EPA 2015's *Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas*. If required based on the project-level hotspot analysis, project-specific mitigation shall be added to the project design concept or scope to ensure that local particulate (PM₁₀ and PM_{2.5}) emissions would not reach a concentration at any location that would cause estimated cancer risk to exceed the 2015 Office of Environmental Health Hazard Assessment (OEHHA) threshold of 10 in one million. Per the U.S. EPA guidance (2015), potential mitigation measures to be considered may include but shall not be limited to: providing a retrofit program for older higher emitting vehicles, anti-idling requirements or policies, controlling fugitive dust, routing traffic away from populated zones and replacing older buses with cleaner buses. These measures can and should be implemented to reduce localized particulate impacts as needed.
- Retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with CARB and OEHHA requirements to determine the exposure of nearby residents to TAC concentrations.
- If impacts result in increased risks to sensitive receptors above significance thresholds, Plant trees and/or vegetation suited to trapping TACs and/or sound walls between sensitive receptors and the pollution source. This measure would trap TACs emitted from pollution sources such as highways, reducing the amount of TACs to which residents and other sensitive populations would be exposed.

In addition, consistent with the general guidance contained in CARB's Air Quality and Land Use Handbook (April 2005) and Technical Advisory on Strategies to Reduce Air pollution Exposure Near High-Volume Roadways (April 2017), for land use projects, appropriate and feasible measures shall be incorporated into project building design for residential, school and other sensitive uses located within 500 feet, or other distance as determined by the lead agency, of freeways, heavily travelled arterials, railways and other sources of diesel particulate matter, including roadways experiencing significant vehicle delays (CARB 2005). The appropriate measures shall include one or more of the following methods, as determined by a qualified professional, as applicable. The implementing agency shall incorporate health risk reduction measures based on analysis of individual sites and project circumstances. These measures may include:

- Avoid siting new sensitive land uses within 500 feet of a freeway or railway.
- Require development projects for new sensitive land uses to be designed to minimize exposure to roadway-related pollutants to the maximum extent feasible through inclusion of design components including air filtration and physical barriers.
- Do not locate sensitive receptors near the entry and exit points of a distribution center.
- Locate structures and outdoor living areas for sensitive uses as far as possible from the source of emissions. As feasible, locate doors, outdoor living areas and air intake vents primarily on the side of the building away from the freeway or other pollution source. As feasible, incorporate dense, tiered vegetation that regains foliage year-round and has a long life span between the pollution source and the project.
- Maintain a 50-foot buffer from a typical gas dispensing facility (under 3.6 million gallons of gas per year).
- Install, operate and maintain in good working order a central heating and ventilation (HV) system or other air take system in the building, or in each individual residential unit, that meets the efficiency standard of the MERV 13. The HV system should include the following features: Installation of a high efficiency filter and/or carbon filter-to-filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85% supply filters should be used. Ongoing maintenance should occur.
- Retain a qualified HV consultant or Home Energy Rating Systems (HERS) rater during the design phase of the project to locate the HV system based on exposure modeling from the mobile and/or stationary pollutant sources.
- Maintain positive pressure within the building.
- Achieve a performance standard of at least one air exchange per hour of fresh outside filtered air.
- Achieve a performance standard of at least 4 air exchanges per hour of recirculation. Achieve a performance standard of 0.25 air exchanges per hour of unfiltered infiltration if the building is not positively pressurized.
- Require project owners to provide a disclosure statement to occupants and buyers summarizing technical studies that reflect health concerns about exposure to highway exhaust emissions.
- Implement feasible attenuation measures needed to reduce potential air quality impacts to sensitive receptors such as air filtration systems.

Significance After Mitigation

Although implementation of the above mitigation would reduce health risks, individual receptors may still be exposed to substantial hazardous air pollutant concentrations that would have significant health risk effects. Therefore, this impact remains significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

Threshold: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-5 RE-ENTRAINED DUST HAS THE POTENTIAL TO INCREASE AIRBORNE PM10 AND PM2.5 LEVELS IN THE SBCAG REGION. THE INCREASE IN GROWTH EXPECTED THROUGH 2050 THE HORIZON YEAR FOR CONNECTED 2050 AND WOULD RESULT IN ADDITIONAL VEHICLE MILES TRAVELED COMPARED TO BASELINE CONDITIONS, WHICH WOULD ADD TO THE PARTICULATE EMISSIONS LEVELS IN THE AREA. HOWEVER, TOTAL RE-ENTRAINED DUST LEVELS WOULD BE LOWER WITH IMPLEMENTATION OF CONNECTED 2050 THAN 2020 EXISTING CONDITIONS. IMPLEMENTATION OF SBCAPCD CONTROL MEASURES WOULD FURTHER REDUCE SUCH EMISSIONS. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Re-entrained dust refers to roadway dust that is “kicked up” by moving vehicles on paved and unpaved roadways. This type of dust would be generated by roadway activity. In addition, dust from construction activity would add to regional dust levels. The synergistic effects of road dust (typically measured as PM₁₀) with ozone and the hazardous constituents of re-entrained road dust itself (carcinogens, irritants, pathogens) may affect human health by contributing to respiratory illnesses such as asthma and allergies. Although motor vehicle emission control advances have allowed vehicle tailpipe emissions of some pollutants to decrease over the last 20 years, the number of vehicles in use and the amount of vehicle activity has continued to increase. This would suggest that re-entrained road dust has increased as well, as the amount of re-entrained dust is related to the number of vehicles on a road.

Table 4.2-6 compares total particulate emissions for the existing conditions in 2020 and 2050 conditions with implementation of Connected 2050. The conditions in 2050 without implementation of Connected 2050 are also shown for informational purposes. As shown in Table 4.2-6, total particulate emissions would be lower with implementation of Connected 2050 compared to existing conditions.

Table 4.2-6 On-Road Mobile Source Diesel Toxics Comparison

Scenario	PM ₁₀ Emissions (tons/day)	PM _{2.5} Emissions (tons/day)	Total PM (PM ₁₀ + PM _{2.5}) Emissions (tons/day)
2020 Baseline	0.07	0.13	0.20
2050 No Project	0.05	0.12	0.17
2050 RTP/SCS	0.04	0.10	0.14

Source: Regional emissions were calculated by SBCAG using EMFAC. Total PM includes both PM₁₀ and PM_{2.5}. Mobile source emissions were calculated by SBCAG using EMFAC. Refer to Appendix B of Connected 2050 for complete methodology.

In 2003, the California Legislature enacted Senate Bill 656 (SB 656) to reduce public exposure of airborne particulate matter. SB 656 required CARB to develop and adopt by January 1, 2005 a list of readily available, feasible and cost-effective control measures that could be employed by CARB and local air districts (i.e., SBCAPCD) to reduce PM₁₀ and PM_{2.5}. In response to SB 656, SBCAPCD identified several control measures aimed at reducing PM₁₀ and PM_{2.5} emissions. The most applicable measures to mobile emissions are included in Mitigation Measure AQ-2(a) and AQ-5 that would encourage the use of dust suppressants, including watering or gravel, applying non-toxic surfactants on unpaved roads and related equipment staging areas, recommending speed limits, limiting access to infrequently used unpaved roads or parking areas and in situations involving high volumes of traffic (>100 vehicles per day), considering paving on a case by case basis. Projects would

be required to comply with the fugitive dust control measures as mentioned in Mitigation Measure AQ-2(a) and AQ-5. Therefore, compliance with SBCAPCD Fugitive Dust Control Measures in Mitigation Measure AQ-2(a) and AQ-5 would further reduce re-entrained road dust and impacts would be less than significant because sensitive receptors would not be exposed to substantial pollutant concentrations associated with re-entrained road dust.

Mitigation Measures

AQ-5 Project-Level PM₁₀ Emissions Reduction

Implementing agencies shall evaluate PM₁₀ emissions as part of project-specific CEQA review and discretionary approval decisions for land use projects within the SBCAG region. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce PM₁₀ emissions below SBCAPCD standards to the extent feasible. PM₁₀ emissions reduction measures may include:

- Require new residential and commercial construction to apply dust suppressants, including water and non-toxic surfactants, and to comply with the maximum feasible dust and emissions control measures recommended by SBCAPCD, to reduce particulate matter emissions from construction areas.
- Require new construction projects to use the newest available (Tier 3 or better) construction equipment, which generate lower emissions of diesel particulate matter when operating.

Significance After Mitigation

Implementation of the above Mitigation Measure AQ-2(a) and AQ-5 would reduce exposure to sensitive receptors to substantial pollutant concentrations due to construction of Connected 2050. Impacts would be less than significant with mitigation incorporated.

c. Specific RTP Projects That May Result in Impacts

Connected 2050 transportation projects listed in Section 2.0, *Project Description*, would have the potential to result in air quality impacts. All projects that include a construction component would associate with Impact AQ-1. Projects that include roadway, rail, and transit features and/or expansions would associate with Impacts AQ-2 through AQ-3. Additional specific analysis described in the above mitigation measures would need to be conducted as individual projects are designed and implemented to determine the magnitude of impacts. Mitigation measures discussed above could apply to each of these specific projects.

4.2.4 Cumulative Impacts

As discussed in Section 3, *Environmental Setting*, the cumulative impact analysis area includes the SBCAG planning region as well as three adjoining counties: Kern, San Luis Obispo and Ventura Counties. The SBCAG planning region falls within the jurisdiction of SBCAPCD, while the adjoining counties fall within the jurisdiction of the San Joaquin Valley Air Pollution Control District, San Luis Obispo Air Pollution Control District, or the Ventura County Air Pollution Control District. Each of these three air districts has prepared an air quality plan to improve conditions and meet federal and state air quality standards. While each air district is primarily responsible for regulating its own emissions, the transport of emissions in one area can affect another area's ability to achieve

attainment of pollutant standards. All three air districts currently exceed at least one federal and/or state air quality standard. Construction activities associated with transportation projects under Connected 2050, as well as the land use projects envisioned by Connected 2050, would create fugitive dust and ozone precursor emissions and have the potential to result in temporary adverse impacts on air quality. Although regional ozone precursors would be reduced with Connected 2050 compared to existing 2020 conditions, regional PM₁₀ emissions would increase beyond existing conditions leading to a significant cumulative impact. Therefore, Connected 2050 would have a cumulatively considerable contribution to regional air quality impacts. Connected 2050's contribution would remain cumulatively considerable after mitigation because it cannot be guaranteed that all future project-level impacts can be mitigated to a less than significant level.

4.3 Biological Resources

This section describes the existing biological resources within Santa Barbara County and evaluates the significance of the changes in biological resources that would result from implementation of the proposed Connected 2050, and feasible mitigation measures to reduce these potential impacts. Sources utilized in this discussion include data provided by the U.S. Fish and Wildlife Service (USFWS), the California Native Plant Society (CNPS), and the California Department of Fish and Wildlife (CDFW).

4.3.1 Setting

4.3.1.1 Habitats

Santa Barbara County contains a wide diversity of tree (hardwood and coniferous forests, oak woodlands), shrub (chaparrals, coastal scrubs), and herbaceous (grasslands, arid beach dunes) habitat types. Seventeen habitats are mapped using the California Department of Fish and Wildlife (CDFW) California Wildlife Habitat Relationships (CWHR) habitat classification system within three miles of construction projects outlined in Connected 2050 (CDFW 2014). A description of each of the habitats adapted from *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988) is presented below. The vegetation classifications from *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009) that most closely resemble those classified by the CWHR are also presented in each description. It should be noted that these habitats are generalized, and that site-specific variation is likely to be present. Also note that the CWHR classification system maps habitats from a broad perspective and that in many areas it is expected that two or more habitats may blend with one another. Habitats which occur within populated areas can also show variation because of a greater exposure to anthropogenic influences such as the introduction of exotic plant species.

Tree-Dominated Habitats

Santa Barbara County is home to a variety of hardwood, coniferous, and mixed woodlands and forests. These tree-dominated habitats can support diverse wildlife populations. Riparian habitats are generally the terrestrial areas adjacent to freshwater bodies forming a vegetated corridor from stream edge to floodplain edge. Riparian habitats occur in and along the county's four major rivers (Santa Ynez, Santa Maria, Cuyama, and Sisquoc), as well as along the many creeks, streams, arroyos, and ravines in the county. Riparian areas are rich in wildlife species, providing foraging, migration, roosting, and nesting/breeding habitat. The following are descriptions of types of tree-dominated habitats that occur within three miles of construction projects outlined in Connected 2050.

Blue Oak Woodland

Generally, these woodlands have an over story of scattered trees, although the canopy can be nearly closed. The canopy is dominated by broad-leaved trees 5 to 15 meters (16 to 50 feet) tall, commonly forming open savanna-like stands on dry ridges and gentle slopes. Blue oak (*Quercus douglasii*) is typically the dominant tree species. Shrubs such as poison oak (*Toxicodendron diversilobum*), California coffee berry (*Rhamnus californicus*), buckbrush (*Ceanothus cuneatus*), and redberry (*Rhamnus crocea*) are often present but rarely extensive and often occur on rock outcrops. Typical understory is composed of an extension of Annual Grassland vegetation described below

Blue oak woodland typically corresponds to the *Quercus douglasii* alliance as described by Sawyer et al. (2009).

Montane Hardwood-Coniferous Forest

These forests include both conifers and hardwoods, often as a closed forest. To be considered montane hardwood-coniferous forest, at least one-third of the trees must be conifer and at least one-third must be broad-leaved. Species composition varies by geographic region, but in the Central Coast region of California common tree species include coast live oak (*Quercus agrifolia*), big leaf maple (*Acer macrophyllum*), Pacific madrone (*Arbutus menziesii*), tanoak (*Lithocarpus densiflorus*), canyon live oak (*Quercus chrysolepis*), Coulter pine (*Pinus coulteri*), and coastal redwood (*Sequoia sempervirens*). The habitat often occurs in a mosaic-like pattern with small pure stands of conifers interspersed with small stands of broad-leaved trees. Most of the broad-leaved trees are sclerophyllous evergreen, but winter-deciduous species also occur. Relatively little understory occurs under the dense, bilayered canopy. However, considerable ground and shrub cover can occur in ecotones or following disturbance. Montane hardwood-coniferous forest can correspond to multiple alliances as described by Sawyer et al. (2009) depending upon the species composition. These alliances can include, but are not limited to, *Arbutus menziesii* alliance, *Pinus coulteri* alliance, *Lithocarpus densiflorus* alliance, *Quercus chrysolepis* alliance, and *Sequoia sempervirens* alliance.

Montane Riparian Forest

The vegetation of montane riparian forest habitats is variable and often structurally diverse. Usually, these riparian areas occur as a narrow, often dense grove of broad-leaved, winter deciduous trees with a sparse understory. At high mountain elevations, more shrubs tend to occur in the understory. In the Coast Range, big leaf maple (*Acer macrophyllum*) and California bay laurel (*Umbellularia californica*) are typical dominants of montane riparian habitat. Montane riparian forest can correspond to the *Acer macrophyllum* alliance and *Umbellularia californica* alliance as described by Sawyer et al. (2009).

Valley Oak Woodland

This habitat can range in structure from savanna-like to forest-like stands. The canopies tend to be partially closed and comprised mostly of winter-deciduous, broad-leaved species such as valley oak (*Quercus lobata*). Dense stands typically grow in valley soils along natural drainages and decrease with the transition from lowlands to uplands.

Shrubs are also associated with this habitat in lowland areas, especially along drainages. Valley oak stands with little or no grazing tend to develop a partial shrub layer of bird disseminated species, such as poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), and California coffeeberry (*Frangula californica*). Ground cover consists of a well-developed carpet of annual grasses and forbs such as species of wild oat (*Avena* sp.), bromes (*Bromus* sp.), and ryegrass (*Lolium* sp.). Valley oak woodland typically corresponds to the *Quercus lobata* alliance as described by Sawyer et al. (2009).

Coastal Oak Woodland

Coastal oak woodlands are common to mesic coastal foothills of California. The woodlands do not form a continuous belt but occur in a mosaic closely associated with mixed chaparral, coastal scrub and annual grasslands. South of Sonoma County these woodlands are commonly dominated by coast live oak (*Quercus agrifolia*). At drier sites other species such as blue oak and foothill pine

(*Pinus sabiniana*) may also be interspersed. The understory of dense stands tends to be composed of shade tolerant shrubs and herbaceous plant species such as California blackberry (*Rubus ursinus*), miner's lettuce (*Claytonia perfoliata*) and toyon. In areas with more open canopies the understory may be more dominated by grassland and shrub species such as California black berry (*Rubus ursinus*), and poison oak. Coastal oak woodland typically corresponds to the *Quercus agrifolia* alliance as described by Sawyer et al. (2009).

Eucalyptus Forest

This habitat type ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus forms a dense stand with a closed canopy. Blue gum eucalyptus (*Eucalyptus globulus*) and red gum eucalyptus (*E. camaldulensis*) are the most common eucalyptus species found in these stands. The understory of these areas tends to have extensive patches of leaf litter but may include species such as poison oak.

Valley Foothill Riparian

This habitat type is associated with drainages, particularly those with low velocity flows, flood plains, and gentle topography. This habitat is generally comprised of a sub-canopy tree layer dominated by cottonwoods (*Populus* sp.), sycamore (*Platanus racemosa*), and/or valley oak and an understory shrub layer typically consisting of willows (*Salix* spp.) and/or mulefat (*Baccharis salicifolia*). Valley foothill riparian can correspond to multiple alliances as described by Sawyer et al. (2009) depending upon the species composition. These alliances can include, but are not limited to, *Platanus racemosa* alliance, and the various *Populus* alliances depending upon dominant species present.

Shrub Dominated Habitats

Shrub-dominated habitats, such as chaparral and coastal scrub, are comprised primarily of woody, evergreen shrubs and occupy most of the hills and lower mountain slopes in Santa Barbara County. The following are descriptions of shrub-dominated habitats that occur within three miles of construction projects outlined in Connected 2050.

Chamise-Redshank Chaparral

This habitat type can range from nearly pure stands of chamise (*Adenostoma fasciculatum*) or redshank (*A. sparsifolium*) to a mixture of both. Mature Chamise-Redshank Chaparral is single layered, generally lacking well-developed herbaceous ground cover and over story trees. Shrub canopies frequently overlap, producing a nearly impenetrable canopy of interwoven branches. Redshank stands tend to be slightly taller and more open than chamise dominated stands. Fire occurs regularly in Chamise-Redshank Chaparral and influences habitat structure. Chamise-redshank chaparral typically corresponds to the *Adenostoma fasciculatum* alliance and *Adenostoma sparsifolium* alliance as described by Sawyer et al. (2009).

Coastal Scrub

This habitat type is typically dominated by shrub species with mesophytic leaves and shallow root systems. This habitat type can differ in composition depending upon proximity to the coastline. California sagebrush (*Artemisia californica*) tends to be common in all coastal scrub habitats. From Mount Diablo to Santa Barbara County, black sage and California buckwheat (*Eriogonum*

fasciculatum) become more abundant in mesic areas. In drier areas from Santa Barbara County to Orange County, purple sage (*Salvia leucophylla*) is more prevalent in the species composition of this habitat type. Coastal scrub can correspond to multiple alliances as described by Sawyer et al. (2009) depending upon the species composition. These alliances can include, but are not limited to, *Artemisia californica* alliance, *Baccharis pilularis* alliance and the *Salvia mellifera* alliance.

Mixed Chaparral

This habitat type occurs on the hills and lower mountain slopes in Santa Barbara County. Mixed Chaparral is a structurally homogeneous brushland type dominated by shrubs with thick, stiff, heavily cutinized evergreen leaves. Shrub height and crown cover vary with age since last burn, precipitation, aspect, and soil type. At maturity, cismontane Mixed Chaparral typically is a dense, nearly impenetrable thicket. On poor sites, serpentine soils or transmontane slopes, shrub cover may be considerably reduced, and shrubs may be shorter.

Leaf litter and standing dead material may accumulate in stands that have not burned for several decades. One locally important sub type of maritime chaparral, Burton Mesa chaparral is a unique form of chaparral restricted to the aeolian sands of the Orcutt soils formation north of Lompoc. Of the 39% of original Burton Mesa chaparral that remains, two-thirds is found on Vandenberg Air Force Base. Areas of Burton Mesa chaparral also occur within the State-owned Burton Mesa Ecological Reserve which surrounds the community of Vandenberg Village north of the City of Lompoc. Because it is characterized by a high number of endemic species, unusual oaks, and a rich herbaceous understory, Burton Mesa chaparral has been recognized by the County as a valuable biological resource. Mixed chaparral can correspond to multiple alliances as described by Sawyer et al. (2009) depending upon the species composition. These alliances can include, but are not limited to, *Arctostaphylos (purissima, rudis)* alliance, *Ceanothus cuneatus* alliance and the *Arctostaphylos glauca* alliance.

Herbaceous Dominated Habitats

These habitats are generally comprised of areas dominated by grasses and other non-woody species. The majority of this habitat in Santa Barbara County is comprised of native and non-native grasslands. Native grasslands, which are dominated by perennial bunch grasses such as purple needlegrass (*Nassella pulchra*), tend to be patchy. A 1989 study commissioned by the County reported that native grassland areas are rare in the County except on the Channel Islands and inside Gaviota State Park. Native grasslands are considered rare by both the County and State. The following are descriptions of the herbaceous dominated habitats that occur within three miles of construction projects outlined in Connected 2050.

Annual Grasslands

This habitat type is composed primarily of non-native annual herbs and forbs and typically lacks shrub or tree cover. The physiognomy and species composition of annual grasslands is highly variable and also varies considerably on a temporal scale. Grazing is a common land use within this habitat type. Common grass species include wild oats (*Avena* sp.), soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and red brome (*Bromus madritensis*). Common forb species can include species of filaree (*Erodium* sp.), and bur clover (*Medicago* sp.). California poppy can also be quite common in this habitat type. Annual grassland can correspond to multiple alliances as described by Sawyer et al. (2009) depending upon the species composition. These

alliances can include, but are not limited to, *Avena (barbata, fatua)* semi-natural stands and *Bromus (diandrus, hordeaceous)* – *Brachypodium distachyon* semi-natural stands.

Developed and Sparsely/Non-Vegetated Habitats

Developed and sparsely/non- vegetated habitats are abundant in Santa Barbara County. Developed habitats are usually sparsely or non-vegetated and are associated with urban and agricultural areas and are highly disturbed. Species that occur in these areas are typically adapted to anthropogenic disturbance and/or comprised of ornamental species. Sparsely vegetated habitats also tend to be associated with rock outcrops, cliffs and beaches. The following are descriptions of developed and sparsely/non- vegetated habitats that occur within three miles of construction projects or development in urban infill areas near high-quality transportation corridors as outlined in Connected 2050.

Cropland

This habitat type is characterized by areas in active agriculture and is an entirely man-made habitat. The structure of vegetation can vary in size, shape, and growing pattern. The dominant cropland use is row crops, including large acreages of strawberry patches. The extent of vineyards within the County is also substantial and is growing.

Urban

This habitat type is completely man-made, comprising residential, commercial, and industrial developed areas. Plant species within urban habitats are typically comprised of ornamental and other non-native invasive plant species, with large developed areas lacking vegetation.

Barren

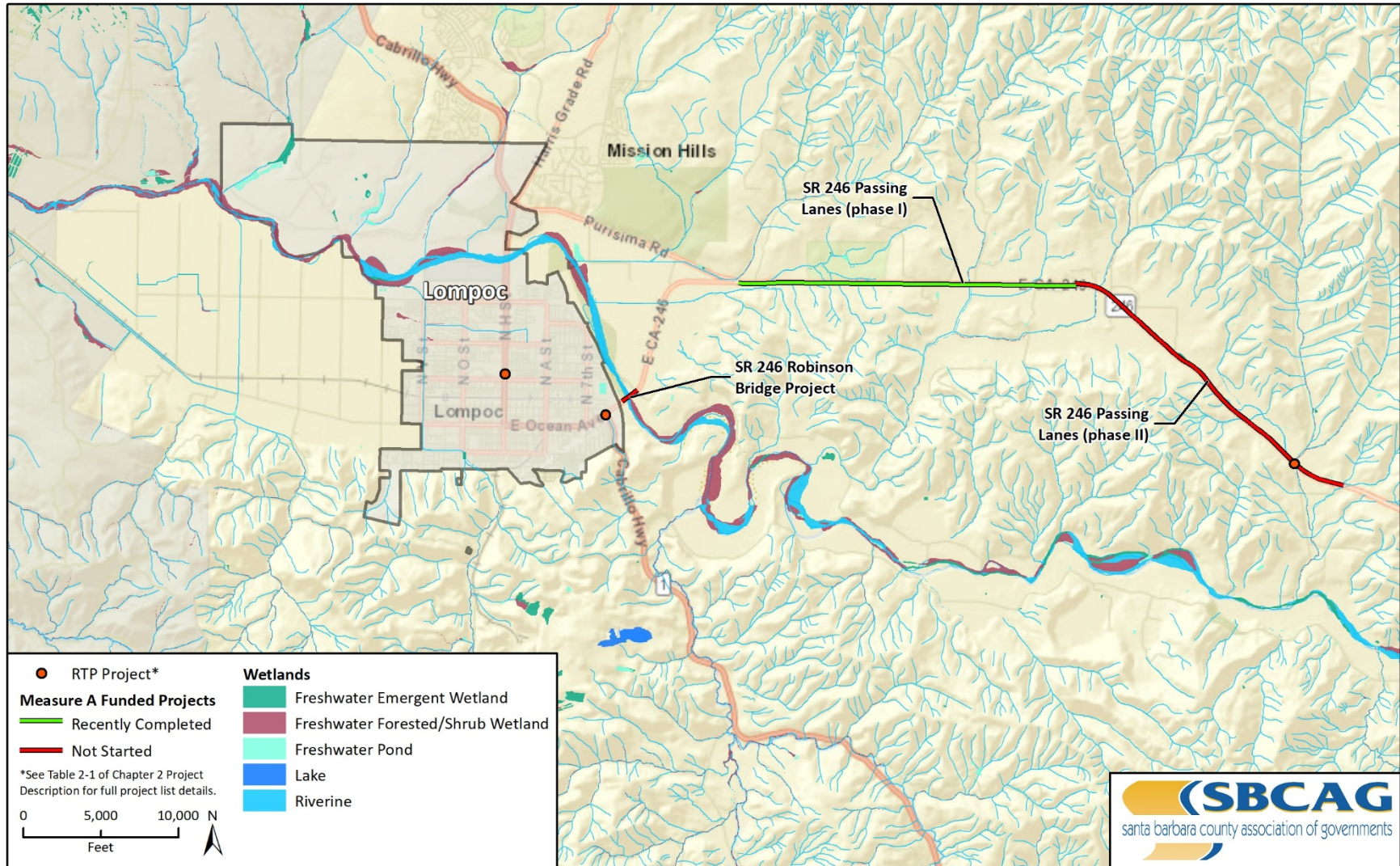
This habitat type is defined by the absence of vegetation. Any habitat with less than 2 percent total vegetation cover and less than 10 percent cover by tree or shrub species is defined as barren. Structure and composition of the substrate is largely determined by the region of the state as well as surrounding environment. An example of a barren habitat is a beach, particularly the shoreline where the wave action prevents establishment of plants.

4.3.1.2 Drainages and Wetlands

Drainages

Four primary watersheds occur within the County: Santa Maria, which includes the Cuyama and Sisquoc watersheds; San Antonio Creek; Santa Ynez; and South Coast, which is composed of approximately 50 short, steep watersheds. The headwaters of the principal watersheds are generally undeveloped, and the middle and lower sections are often developed with urban or agricultural uses. The four major rivers draining these watersheds are the Santa Maria, Sisquoc, Cuyama, and Santa Ynez. Several creeks are associated with each one of these watersheds (Figure 4.3-1 through Figure 4.3-4). The drainages within these watersheds are of biological importance as they provide valuable foraging habitat, breeding habitat, and movement habitat for a wide variety of animal species, including sensitive species such as steelhead – Southern California distinct population segment (DPS) (*Oncorhynchus mykiss*), California red-legged frog (*Rana draytonii*), and southwestern willow flycatcher (*Empidonax traillii extimus*).

Figure 4.3-1 Wetland Features in Lompoc Valley Subregion

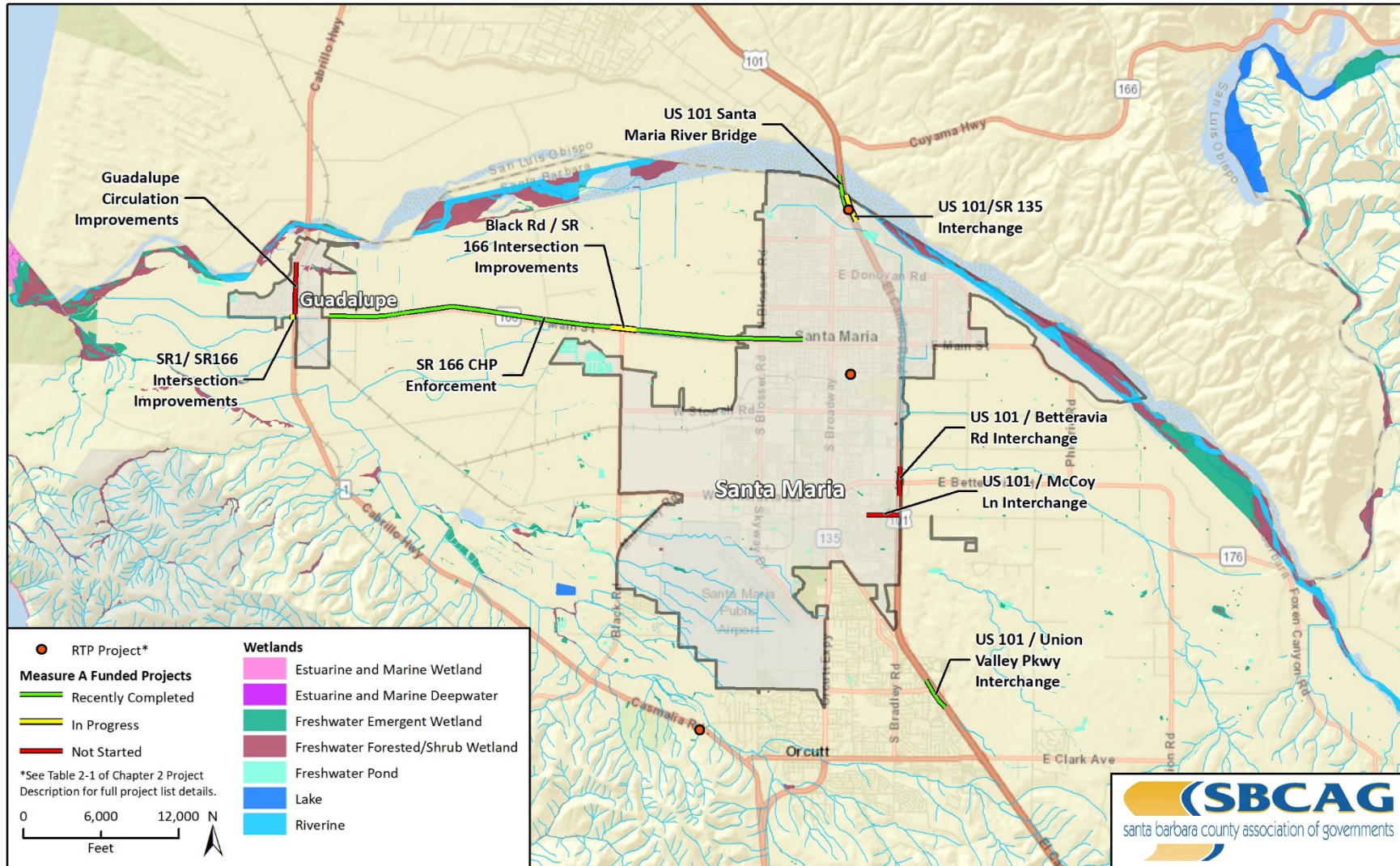


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 Hydrology data provided by USFWS & USGS, 2020. Additional data provided by SBCAG, 2021.



Fig 4.3-X Wetland Features_Lompoc Valley

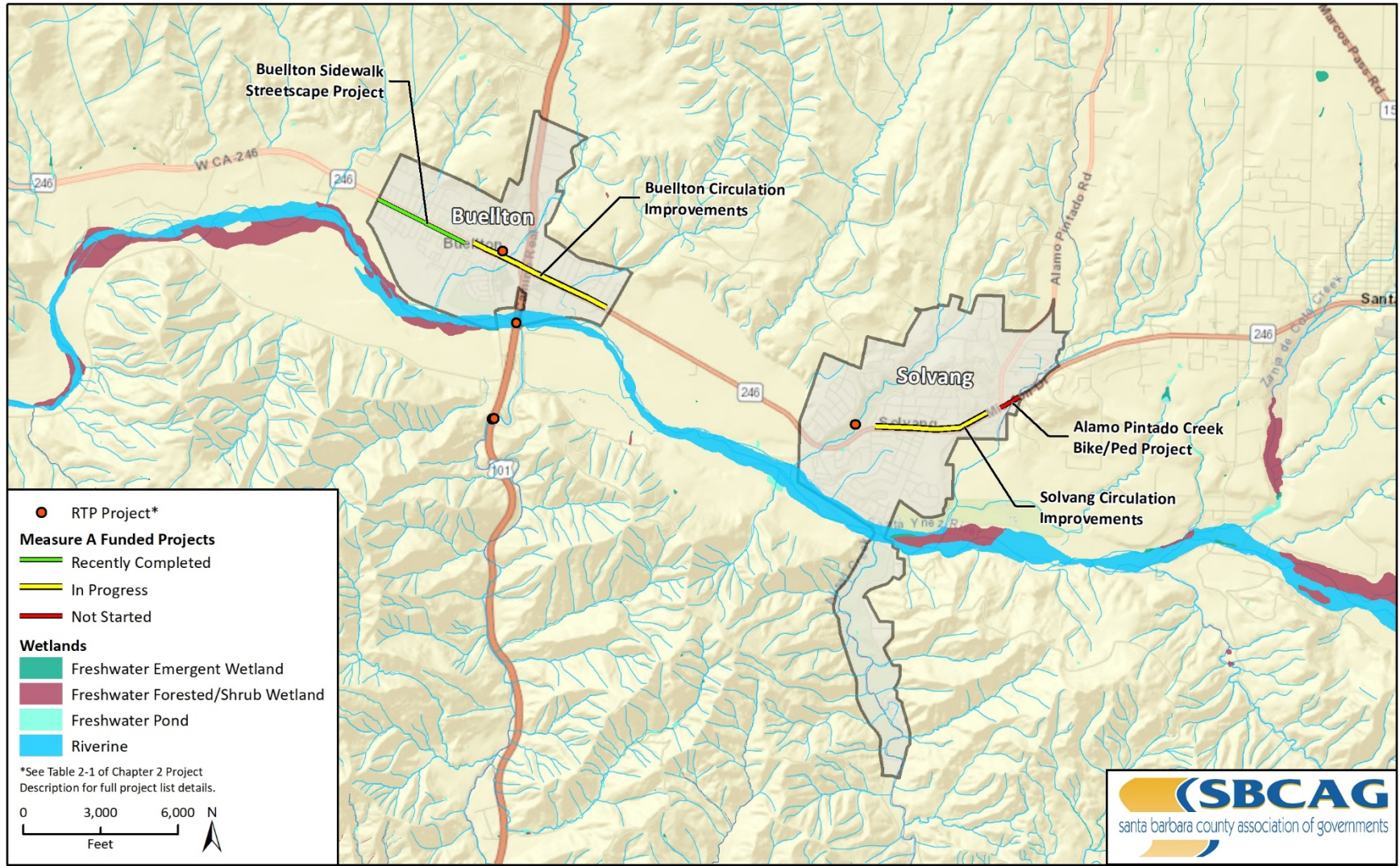
Figure 4.3-2 Wetland Features in Santa Maria Valley Subregion



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 Hydrology data provided by USFWS & USGS, 2020. Additional data provided by SBCAG, 2021.

Fig 4.3-X Wetland Features, Santa Maria Valley

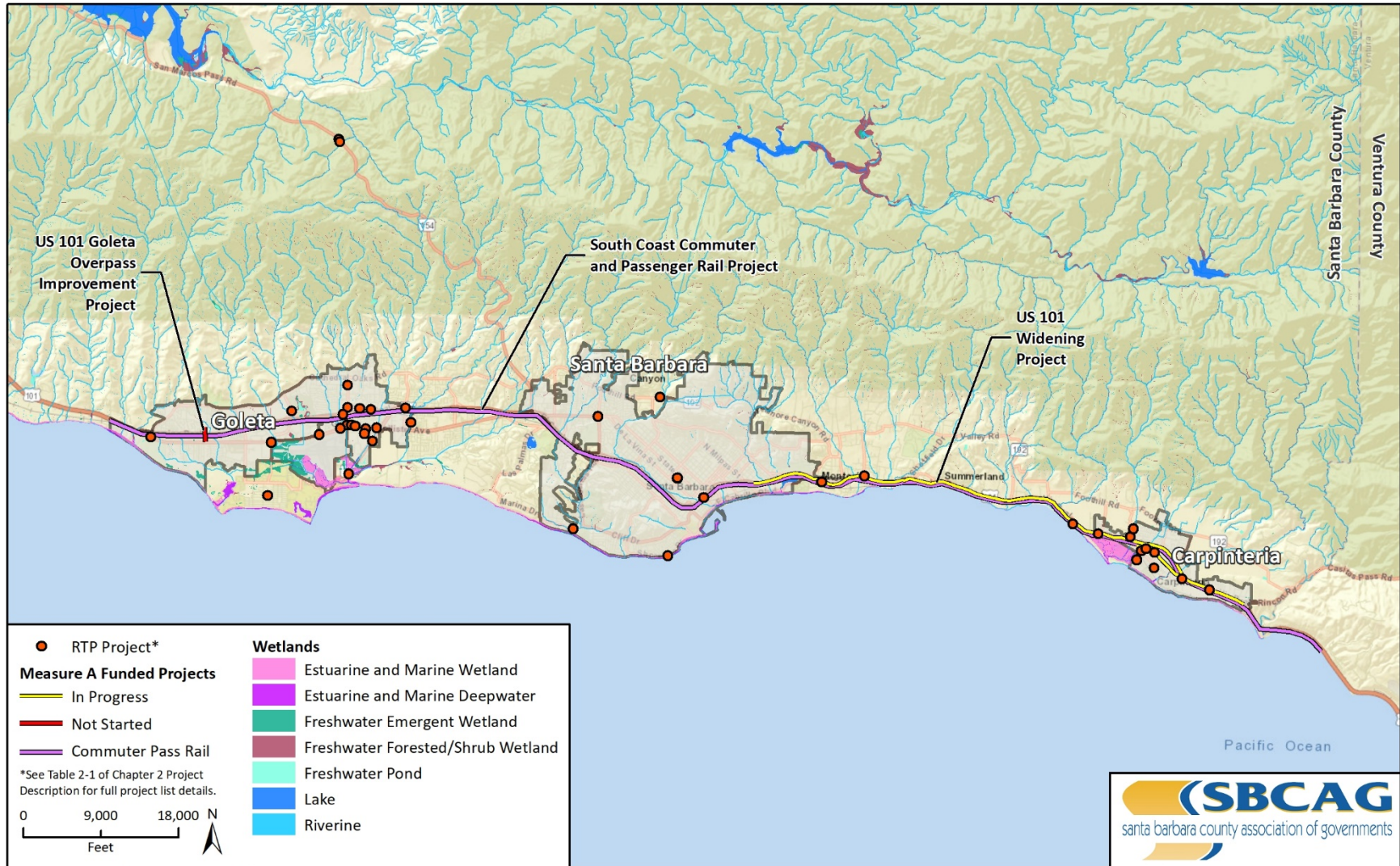
Figure 4.3-3 Wetland Features in Santa Ynez Subregion



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 Hydrology data provided by USFWS & USGS, 2020. Additional data provided by SBCAG, 2021.

Fig 4.3-X Wetland Features_Santa Ynez

Figure 4.3-4 Wetland Features in South Coast Subregion



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 Hydrology data provided by USFWS & USGS, 2020. Additional data provided by SBCAG, 2021.

Fig 4.3-X Wetland Features_South County

Wetlands and Aquatic Habitats

Wetlands are regarded as important biological resources both because of their rarity in southern California and because they serve a variety of functional values. Several types of wetlands exist in the County, including coastal salt marshes, vernal pools, and riparian habitats.

Vernal Pools

These seasonal wetlands are small depressions that fill with water during the winter, gradually drying during the spring and becoming completely dry in the summer. These pools are found in only a few places in the world outside of California. Vernal pool vegetation is characterized by herbaceous plants that begin their growth as aquatic or semi-aquatic plants and transition to a dry land environment as the pool dries. Most vernal pool plants are annual herbs. Wildlife species supported by vernal pools include the California tiger salamander (*Ambystoma californiense*), western spadefoot (*Spea hammondi*), and vernal pool fairy shrimp (*Branchinecta lynchi*).

In addition to vernal pools, several areas within three miles of Connected 2050 construction projects contain wetlands mapped by the USFWS National Wetlands Inventory (NWI; USFWS 2021a). Saline emergent wetland, freshwater emergent wetland, and lacustrine habitats are also mapped by the CWHR. A general description of each of the classifications is provided below.

Estuarine and Marine Deep-Water Wetlands

These deep-water wetlands are composed of estuarine or marine systems. Estuarine systems are composed of tidal habitats and adjacent tidal wetlands that are influenced by water runoff from, and often semi-enclosed by, land. They are located along low-energy coastlines and have variable salinity. Marine systems of this type are generally open ocean and occur along high energy coastlines with salinities exceeding 30 parts per thousand (ppt) and little or no dilution except outside the mouths of estuaries.

Estuarine and Marine Wetlands

These wetlands are composed of estuarine and marine systems as described above; however, they are not deep-water. These areas can be subtidal or intertidal with a variety of vegetated and non-vegetated bottoms. Beaches, bars and flats are also included. One type of estuarine and marine wetland, saline emergent wetland, is mapped by the CWHR. Saline emergent wetlands are characterized as salt or brackish marshes consisting mostly of perennial graminoids and forbs, the latter often succulent and suffrutescent, along with algal mats on moist soils and at the base of vascular plant stems. The component plants occur sometimes in zones but more often in patches or as a sequence of overlapping species along an elevation gradient. Vegetation coverage is complete or nearly so except where creeks and ponds are present or following disturbance.

Freshwater Emergent Wetlands

Freshwater emergent wetlands include all non-tidal waters dominated by emergent herbaceous plant species, mosses, and/or lichens. Wetlands of this type are also low in salinity. Wetlands which lack vegetation can be included in this class if they are less than 20 acres, do not have an active wave-formed or bedrock shoreline feature, have a low water depth less than 6.6 feet. This wetland type is also mapped by the CWHR. Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes.

Dominant vegetation is generally perennial monocots. All emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment. The vegetation may vary in size from small clumps to vast areas covering several kilometers. The acreage of Fresh Emergent Wetlands in California has decreased dramatically since the turn of the century due to drainage and conversion to other uses, primarily agriculture.

Freshwater Forested/Shrub Wetlands

These wetlands include non-tidal waters which are dominated by trees and shrubs, with emergent herbaceous plants, mosses and/or lichens. Wetlands which lack vegetation can be included in this class if they also exhibit the same criteria as described for freshwater emergent wetlands. The vegetation found in freshwater forested/shrub wetlands are generally dominated by woody vegetation such as shrubs and trees.

Freshwater Ponds

Freshwater ponds include non-tidal waters with vegetative cover along its edges such as trees, shrubs, emergent herbaceous plants, mosses, and/or lichens. Freshwater ponds can be man-made or natural and typically consist of an area of standing water with variable amounts of shoreline. These wetlands and deep-water habitats are dominated by plants that grow on or below the surface of the water. This wetland type is also mapped by the CWHR and categorized as lacustrine habitat which includes vernal pools.

Lakes

Lakes are a lacustrine system which includes wetlands and deep-water habitats that are located in a topographic depression or dammed river channel. These areas tend to be greater than 20 acres. Vegetation cover within this habitat is generally less than 30 percent and often occurs in the form of emergent or surface vegetation. Substrates are composed of at least 25 percent cover of particles smaller than stones. This wetland type is also mapped by the CWHR and categorized as lacustrine habitat which also includes vernal pools.

Riverine

Riverine habitats are a riverine system which includes all wetlands and deep-water habitats contained in natural or artificial channels that contain periodically or continuously flowing water. This system may also form a connecting link between two bodies of standing water. Substrates generally consist of rock, cobble, gravel or sand.

4.3.1.3 Special-status Species

For the purpose of this EIR, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS under the federal Endangered Species Act; those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW; and plants with a California Rare Plant Rank (CRPR) of 1, 2, 3, and 4, which are defined as:

- **List 1A** = Plants presumed extinct in California;
- **List 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);

- **List 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened);
- **List 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened, or no current threats known);
- **List 2** = Rare, threatened or endangered in California, but more common elsewhere;
- **List 3** = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);
- **List 4.1** = Plants of limited distribution (watch list), seriously endangered in California;
- **List 4.2** = Plants of limited distribution (watch list), fairly endangered in California (20-80 percent occurrences threatened); and
- **List 4.3** = Plants of limited distribution (watch list), not very endangered in California.

Queries of the USFWS Information, Planning and Conservation System (IPaC; USFWS 2021b), the CDFW California Natural Diversity Database (CNDDDB) (CDFW 2021a), and CNPS *Online Inventory of Rare, Threatened and Endangered Plants of California* (CNPS 2021) were conducted. Connected 2050. These queries were conducted to obtain comprehensive information regarding state and federally listed species considered to have potential to occur within Santa Barbara County.

Sensitive Communities and Critical Habitat

Several natural communities considered sensitive by the CDFW occur within Santa Barbara County (CDFW 2021a). The CNDDDB lists seventeen natural communities that occur with Santa Barbara County. Of those, fifteen communities considered sensitive by the CDFW are mapped within Connected 2050 construction project locations. Federally designated critical habitat for fifteen species also occurs in Santa Barbara County (Figure 4.3-5 through Figure 4.3-8). Connected 2050 construction projects occur in federally designated critical habitats for eleven species. These sensitive communities and critical habitats are also listed in Table 4.3-1.

Table 4.3-1 Sensitive Communities and Critical Habitats Documented within Santa Barbara County

Communities Considered Sensitive by the CDFW

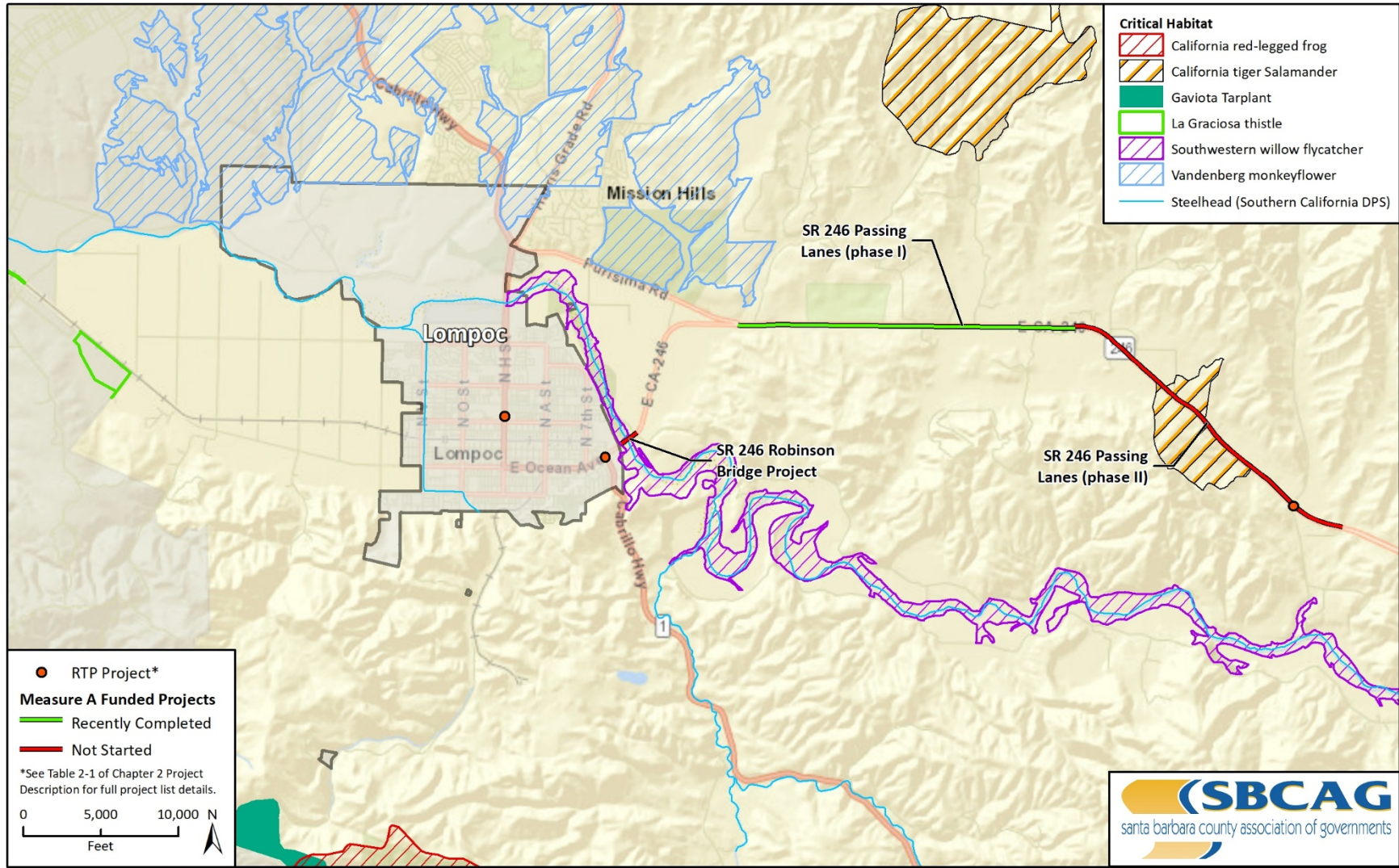
Central Coast Arroyo Willow Riparian Forest
Central Dune Scrub
Central Foredunes
Central Maritime Chaparral
Coastal and Valley Freshwater Marsh
Northern Coastal Salt Marsh
Southern California Coastal Lagoon
Southern California Steelhead Stream
Southern California Threespine Stickleback Stream
Southern Coast Live Oak Riparian Forest
Southern Coastal Salt Marsh
Southern Cottonwood Willow Riparian Forest
Southern Dune Scrub
Southern Vernal Pool
Southern Willow Scrub
Torrey Pine Forest
Valley Needlegrass Grassland

Critical Habitats

Steelhead – Southern California DPS (*Oncorhynchus mykiss irideus*)
Arroyo toad (*Anaxyrus californicus*)
California condor (*Gymnogyps californianus*)
Least Bell's vireo (*Vireo bellii pusillus*)
California red-legged frog (*Rana draytonii*)
California tiger salamander (*Ambystoma californiense*)
Gaviota Tarplant (*Deinandra increscens* ssp. *villosa*)
La Graciosa thistle (*Cirsium scariosum* var. *loncholepis*)
Western snowy plover (*Charadrius alexandrinus nivosus*)
Lompoc yerba santa (*Eriodictyon capitatum*)
Tidewater goby (*Eucyclogobius newberryi*)
Southwestern willow flycatcher (*Empidonax traillii extimus*)
Vandenberg monkeyflower (*Mimulus vandenbergensis*)
Ventura Marsh Milk-vetch (*Astragalus pycnostachyus* var. *lanoissimus*)
Vernal pool fairy shrimp (*Branchinecta lynchi*)

Sources: CNDDB (CDFW 2021a); USFWS IPaC (2021b)

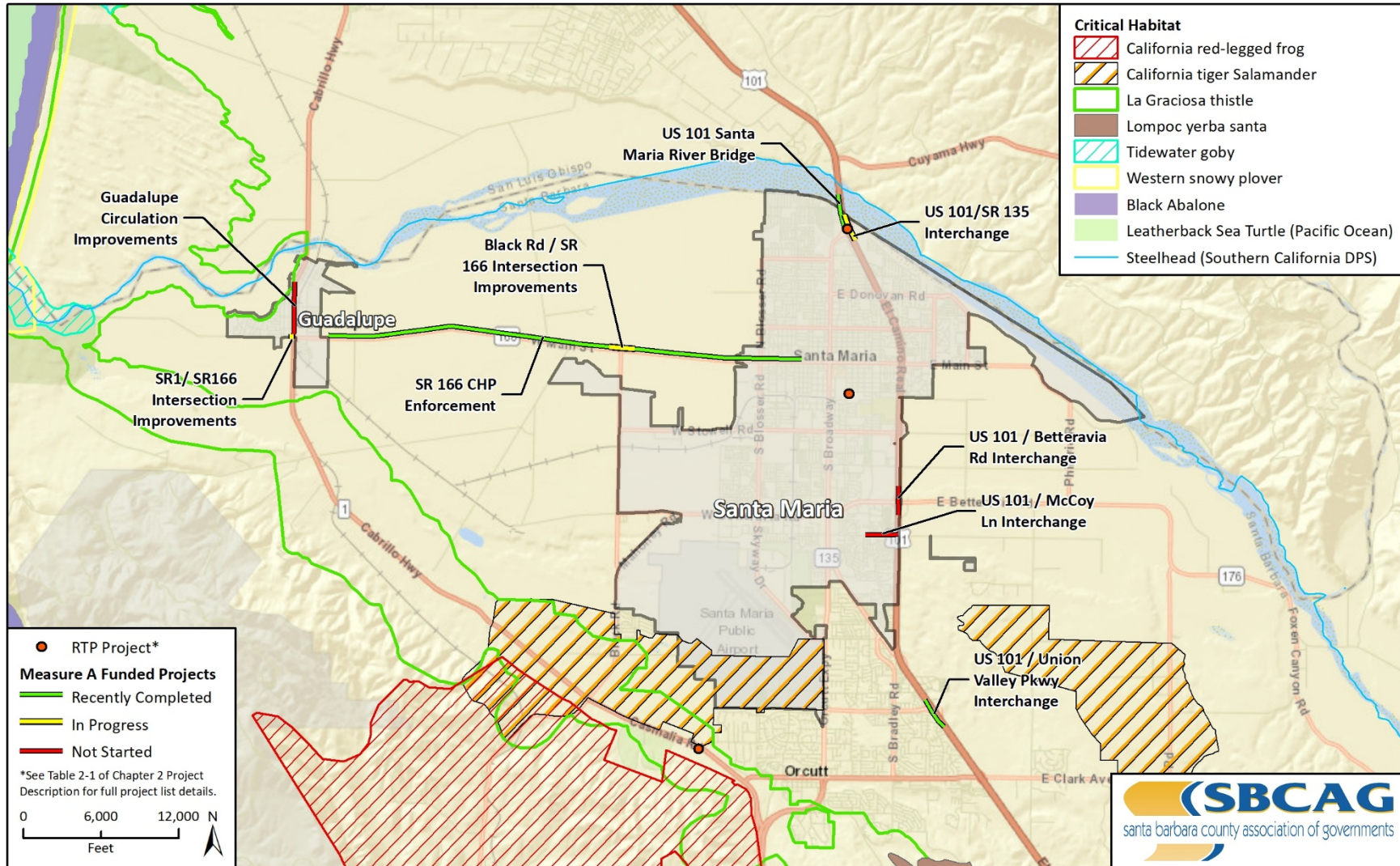
Figure 4.3-5 Critical Habitat in Lompoc Valley Subregion



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 Critical habitat data provided by USFWS & NOAA, 2020. Additional data provided by SBCAG, 2021.

Fig 4.3-X Critical Habitat_Lompoc Valley

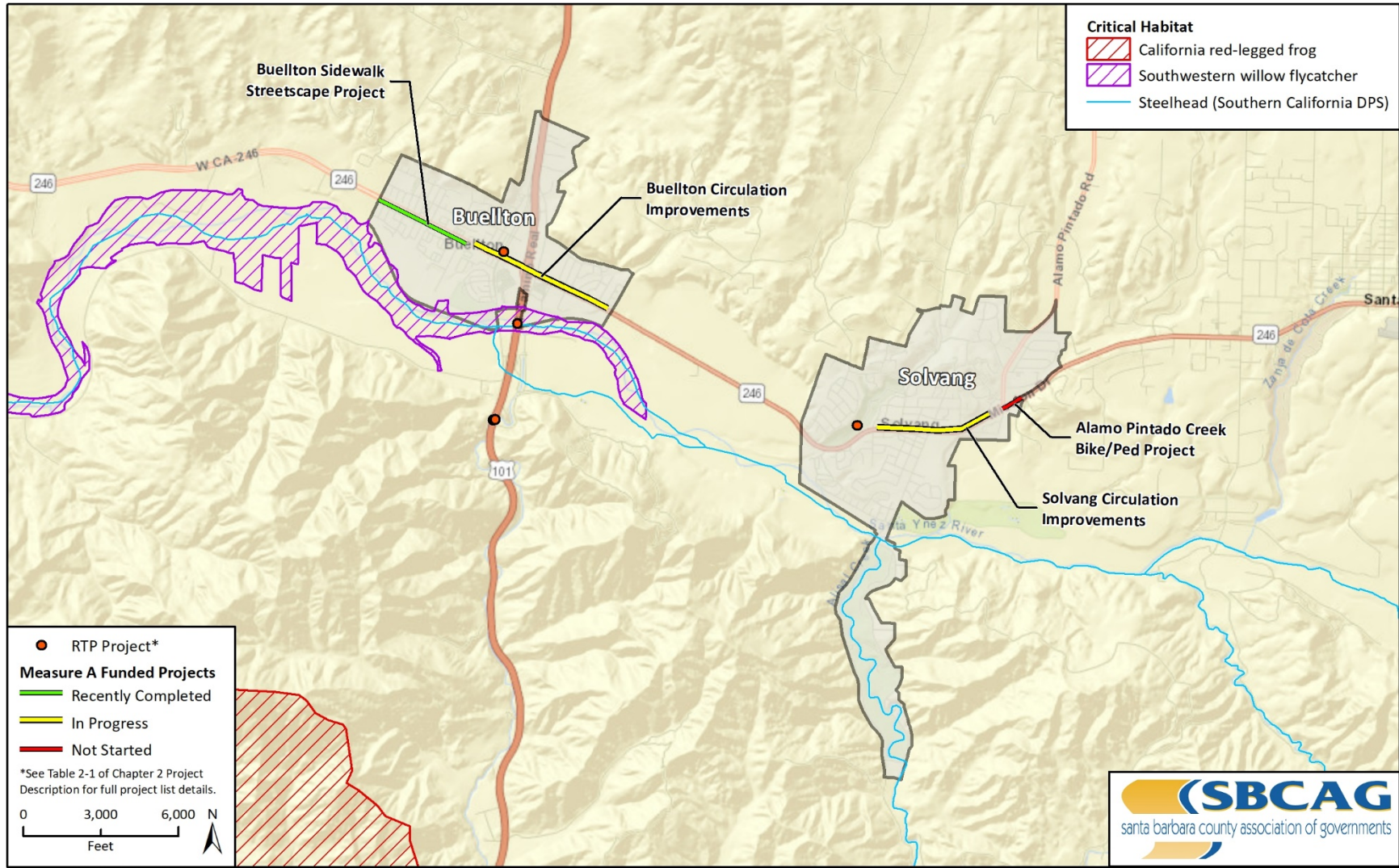
Figure 4.3-6 Critical Habitat in Santa Maria Valley Subregion



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 Critical habitat data provided by USFWS & NOAA, 2020. Additional data provided by SBCAG, 2021.

Fig 4.3-X Critical Habitat_Santa Maria Valley

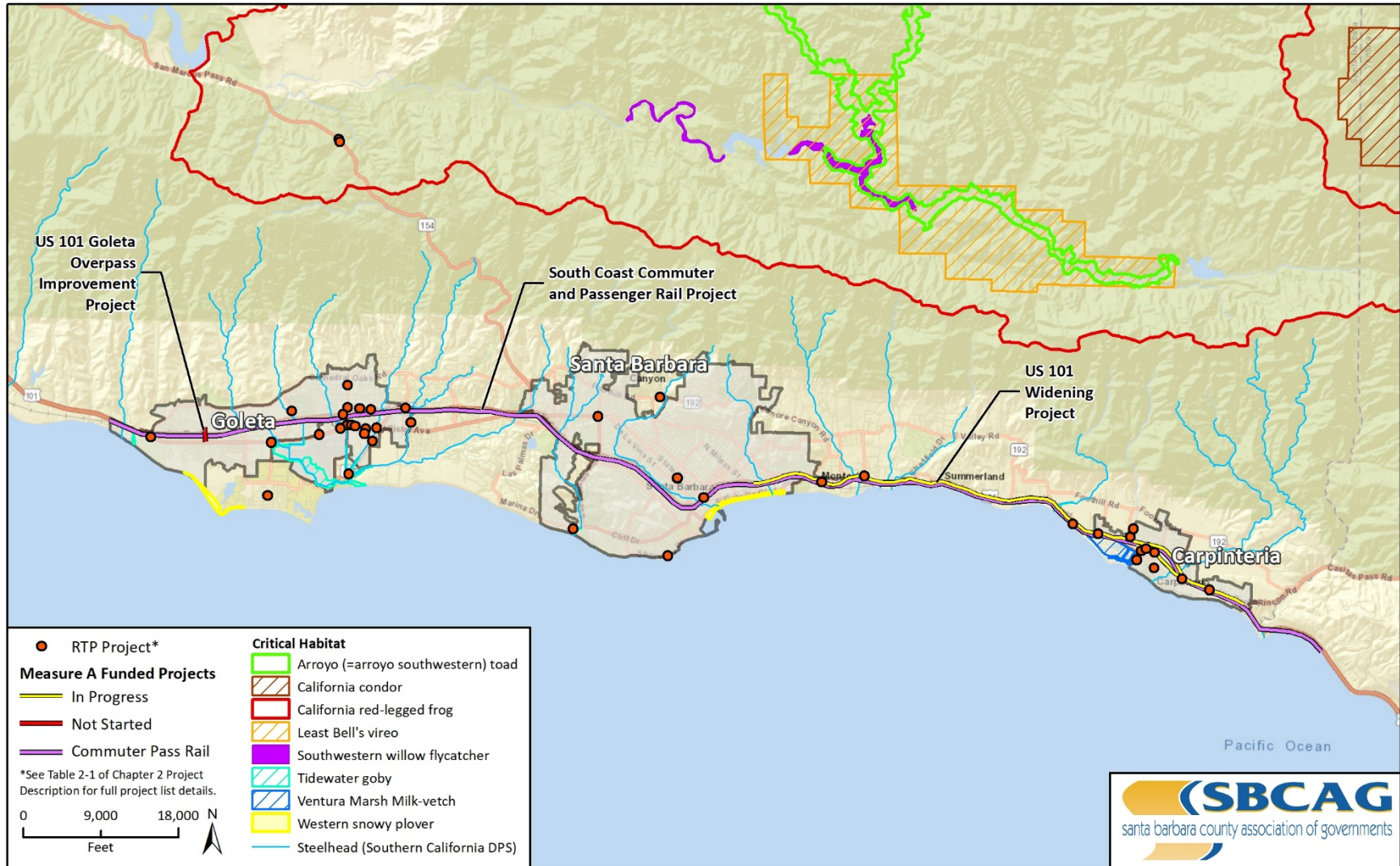
Figure 4.3-7 Critical Habitat in Santa Ynez Subregion



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 Critical habitat data provided by USFWS & NOAA, 2020. Additional data provided by SBCAG, 2021.

Fig 4.3-X Critical Habitat_Santa Ynez

Figure 4.3-8 Critical Habitat in South Coast Subregion



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 Critical habitat data provided by USFWS & NOAA, 2020. Additional data provided by SBCAG, 2021.

Fig 4.3-X Critical Habitat_South County

Special-status Plants and Animals

Santa Barbara County is home to several species protected by federal and state agencies. Important animal species can be found in a variety of habitats the County of Santa Barbara hosts. The CNDDDB (CDFW 2021a), CNPS (2021), and USFWS IPaC (2021b) together list 292 special-status plant and animal species that occur within Santa Barbara County. Of the 292 special-status species documented by the CNDDDB, 113 special-status plant species and seventy-seven special-status animal species have been documented by the CNDDDB within Santa Barbara County. The status, habitat requirements, and whether the species has been documented by the CNDDDB in the vicinity of Connected 2050 construction projects are presented in Appendix C.

Wildlife Movement Corridors

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Wildlife movement corridors can be both large and small scale. The mountainous regions of Santa Barbara County may support wildlife movement on a regional scale while riparian corridors may provide more local scale opportunities for wildlife movement throughout the County. The CDFW Biogeographical Information and Observation System (BIOS; CDFW 2021b) mapped two essential connectivity areas within Santa Barbara County. One is located near the coastline in the western portion of the County from south of Guadalupe to south of Lompoc. The other is located over a large area of the mountainous regions of southeastern Santa Barbara County. Three important movement corridors are also identified from the report, *Missing Linkages: Restoring Connectivity to the California Landscape* (Penrod et al. 2001). All three are located in the western part of Santa Barbara County and are associated with the Santa Ynez River, San Antonio Creek/Purissima Hills and along the south coast near Gaviota respectively. These areas are identified as important movement corridors for species such as steelhead, mountain lion, riparian birds, and other small carnivores.

4.3.2 Regulatory Setting

Federal, state, and local authorities under a variety of statutes and guidelines share regulatory authority over biological resources. The primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, which in this instance is the County of Santa Barbara (County). The CDFW is a trustee agency for biological resources throughout the State under the California Environmental Quality Act (CEQA) and also has direct jurisdiction under the California Fish and Game Code (CFGC), which includes, but is not limited to, resources protected by the State of California under the California Endangered Species Act (CESA).

a. Federal Regulations

United States Fish and Wildlife Service

The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 *et seq.*). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in “take” of any federally listed threatened or endangered species are required to obtain permits from the USFWS and/or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. “Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

National Marine Fisheries Service

The NMFS is a component of the National Oceanic and Atmospheric Administration (NOAA) and has jurisdiction over projects in which federally- listed marine or anadromous fish may be affected, including steelhead and tidewater goby.

United States Army Corps of Engineers

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other “waters of the United States.” Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetlands. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge into wetlands or other “waters of the United States” that are hydrologically connected and/or demonstrate a significant nexus to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetlands is met through compensatory mitigation involving creation or enhancement of similar habitats.

b. State Regulations

California Department of Fish and Wildlife

The CDFW derives its authority from the California Fish and Game Code (CFG). The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 *et. seq.*) prohibits take of State-listed threatened and endangered species. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW additionally prohibits take for species designated as Fully Protected under the CFGC under various sections.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (CFGC Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands, and these species are considered sensitive as described under the CEQA Appendix G thresholds of significance. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (CFGC Section 1900 *et seq.*). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 *et seq.* of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) and each of nine local Regional Water Quality Control Boards (RWQCB) has jurisdiction over “waters of the State” pursuant to the Porter-Cologne Water Quality Control Act which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, *Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction*). The local RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the CWA for waters subject to federal jurisdiction.

California Coastal Commission

The mission of the California Coastal Commission (CCC) is to “protect, conserve, restore, and enhance environmental and human-based resources of the California coast and ocean for

environmentally sustainable and prudent use by current and future generations.” CCC policies, as codified under the California Coastal Act of 1976, are implemented through Coastal Development Permits issued under Local Coastal Programs administered by counties and cities that lie within the coastal zone. The California Coastal Act of 1976 contains specific policies aimed at preserving biological resources, such as wetlands, riparian habitat, and marine habitat.

California Department of Transportation - California Streets and Highways Code Section 156.3

Assessments and remediation of potential barriers to fish passage for transportation projects using State or federal transportation funds are required. Such assessments must be conducted for any projects that involve stream crossings or other alterations and must be submitted to the CDFW.

c. Local Regulations

Local Jurisdictions General Plans

A discussion of the various General Plans adopted within Santa Barbara County and how they pertain to the protection of biological resources is presented below.

County of Santa Barbara

The Santa Barbara County Comprehensive Plan contains the Conservation 1979 and Land Use 1980 Elements which include policies to protect biological resources. The Conservation element contains policies regarding the protection of habitats including: Coastal Strand and Marine Habitats, Chaparral and Scrub Habitats, Grassland, Woodland and Savanna, Forest Habitats, Riparian Forests and Woodlands, Introduced Trees and Scrubs, Swampy Habitats, and Aquatic Habitats. The land use element contains the following goal regarding biological resources:

Environment: Environmental constraints on development shall be respected. Economic and population growth shall proceed at a rate that can be sustained by available resources.

The County’s Comprehensive Plan and Local Coastal Plan also include various policies designed to protect biological values. Additionally, community plans within Santa Barbara County and the general plans of the cities in the County further protect biological resources. With regard to riparian habitats, development or intrusion within the habitat itself or within County-defined setbacks (generally within 50 feet in urban areas, within 100 feet in rural areas, and within 200 feet of major rivers) may require avoidance or mitigation.

The County specifically protects native specimen trees. In particular, rare native trees that are low in number or isolated in distribution may be particularly significant. Significance evaluation is done on a case-by-case basis and considers tree size, numbers, location, and relationship to habitat.

Santa Barbara County also protects certain non-native trees that provide habitat value for important animal species. Monarch butterfly habitat includes the protection of eucalyptus trees. Protection includes setbacks (50 feet from butterfly roosting trees in the Coastal Plan Policy) and timing of disturbance. Non-native trees may also provide turkey vulture and raptor roosts. These trees provide resting and/or breeding locations for turkey vultures and birds of prey. County protective measures for vulture roosts include setbacks similar to butterfly trees.

City of Santa Maria

The Resources Management Element of the City of Santa Maria General Plan 1996 includes a goal to protect the biological resources found within the city. The following goal is applicable to projects in Santa Maria pursuant to Connected 2050:

Goal 3: Preserve natural biological resources and expand the Santa Maria Urban Forest.

City of Buellton

The Conservation and Open Space Element of the City of Buellton General Plan 2025 includes goals to protect the biological resources found within the city. The following goals are applicable to projects in Buellton pursuant to Connected 2050:

Goal 1: Protect the town's natural, cultural, visual, and historical resources.

Goal 8: Protect resources (such as creeks, sensitive habitat, and agriculture), and be sensitive to the factors which allow these resources to remain viable.

Goal 9: Preserve and protect important oak trees within the City

City of Lompoc

The Conservation and Open Space Element of the City of Lompoc 2035 General Plan includes a goal to protect the biological resources found within the city. The following goals are applicable to projects in Lompoc pursuant to Connected 2050:

Goal 1: Protect native plant and animal habitats in recognition of their biological, educational, and scientific values.

City of Solvang

The Conservation and Open Space Element of the City of Solvang General Plan 1988 includes a goal to protect the biological resources found within the city. The following goal is applicable to projects in Solvang pursuant to Connected 2050:

Goal 3.1: To Protect and conserve the City's natural and cultural resources.

City of Goleta

The Conservation Element of the City of Goleta General Plan/Coastal Land Use Plan 2006 includes policies to protect the biological resources found within the city. The following policies are applicable to projects in Goleta pursuant to Connected 2050:

Policy CE 1: Environmentally Sensitive Habitat Area Designations and Policy

Policy CE 2: Protection of Creeks and Riparian Areas

Policy CE 3: Protection of Wetlands

Policy CE 4: Protection of Monarch Butterfly Habitat Areas

Policy CE 5: Protection of Other Terrestrial Habitat Areas

Policy CE 8: Protection of Special-Status Species

Policy CE 9: Protection of Native Woodlands

City of Santa Barbara

The Environmental Resources Element (which includes the 1979 Conservation Element) of the City of Santa Barbara General Plan 2011 includes goals to protect the biological resources found within the city. The following goals are applicable to projects in Santa Barbara pursuant to Connected 2050:

2011 Environmental Resources Element

Sustainable Resource Use. Protect and use natural resources wisely to sustain their quantity and quality, minimize hazards to people and property, and meet present and future service, health and environmental needs

1979 Conservation Element

Goal 1: Enhance and preserve the city's critical ecological resources in order to provide a high-quality environment necessary to sustain the City's ecosystem.

City of Guadalupe

The Conservation and Open Space Element of the City of Guadalupe General Plan: Revised 2002 includes a goal to protect the biological resources found within the city. The following goal is applicable to projects in Guadalupe pursuant to Connected 2050:

Goal 3: To preserve, enhance, and utilize the natural environment consistent with human needs.

City of Carpinteria

The Open Space, Recreation, and Conservation Element of the City of Carpinteria General Plan/Local Coastal Plan 2003 includes objectives to protect the biological resources found within the city. The following objectives are applicable to projects in Carpinteria pursuant to Connected 2050:

Objective OSC-1: Protect, preserve and enhance local natural resources and habitats.

Objective OSC-2: Preserve and restore the natural resources of the Carpinteria Bluffs.

Objective OSC-3: Preserve and restore wetlands such as the Carpinteria Salt Marsh.

Objective OSC-6: Preserve the natural environmental qualities of creekways and protect riparian habitat.

Objective OSC-7: Conserve native plant communities.

Objective OSC-8: Protect and conserve Monarch butterfly tree habitat.

Local Coastal Plans

The following jurisdictions have adopted Local Coastal Plans: County of Santa Barbara, City of Santa Barbara, City of Carpinteria, and City of Goleta. In November 2016, the Santa Barbara County adopted the Gaviota Coast Plan, and the California Coastal Commission certified the coastal portion on November 7, 2018. The policies presented in these plans are meant to protect natural resources from activities occurring within the coastal zone.

Local Ordinances

Some resources are afforded protection via local ordinances such as those that address riparian setbacks, environmentally sensitive habitat setbacks, and impacts to trees.

4.3.3 Impact Analysis

a. Methodology and Significance Thresholds

Data used for this analysis included aerial photographs, topographic maps, the CNDDDB, the CNPS online inventory of rare and endangered plants, accepted scientific texts to identify species and to generally characterize the existing conditions of the project sites. Federal special-status species inventories maintained by the USFWS were reviewed in conjunction with the CNDDDB and CNPS online inventory. Potential areas of disturbance associated with construction projects or land use development as discussed in Connected 2050, were compared to the identified biological resource occurrences to determine whether an impact may occur.

Data on biological resources were collected from numerous sources, including relevant literature, maps of natural resources, and data on special-status species and sensitive habitat information obtained from the CDFW CNDDDB (2021a), CDFW BIOS (2021b), CWHR (CDFW 2014), CNPS online *Inventory of Rare and Endangered Plants of California* (2021), and the USFWS IPaC (2021a). The USFWS NWI (2021b) and Critical Habitat Mapper (2021c) were also queried.

Significance Thresholds

Pursuant to the *CEQA Guidelines*, potentially significant impacts to biological resources would result if Connected 2050 would:

- 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 Game 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 Game or U.S. Fish and Wildlife Service.
- 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.

In addition to the *CEQA Guidelines*, the County of Santa Barbara *Environmental Thresholds and Guidelines Manual* (2021) contains criteria for determining the significance of an impact to biological resources. Disturbance to habitats or species may be significant, based on substantial

evidence in the record, if they substantially impact significant resources for either the short- or the long-term in the following ways:

- Substantially reduce or eliminate species diversity or abundance.
- Substantially reduce or eliminate quantity or quality of nesting areas.
- Substantially limit reproductive capacity through losses of individuals or habitat.
- Substantially fragment, eliminate, or otherwise disrupt foraging areas and/or access to food sources.
- Substantially limit or fragment range and movement (geographic distribution or animals and/or seed dispersal routes).
- Substantially interfere with natural processes, such as fire or flooding, upon which the habitat depends.

The manual states that environmental impact analysis and mitigation needs to include federal and State biological resource regulations (i.e., the federal and State Endangered Species Acts, National Environmental Policy Act, Clean Water Act Section 404, Bald Eagle Protection Act, Migratory Bird Treaty Act, Executive Order 11990 [wetlands protection], Rivers and Harbors Act Section 10, Marine Protection, Sanctuary and Research Act, Marine Mammal Protection Act, and Section 1601 and 1603 Stream Alteration Agreements). In addition, requirements for the protection of biological resources listed in the Comprehensive Plan Conservation Element, Environmental Resource Management Element, Land Use Element, Community Plans, and Local Coastal Plans should also be included for projects in the unincorporated area of Santa Barbara County.

Additional County guidelines are provided for specific biological communities. These are used in conjunction with the general impact assessment guidelines described above.

Wetlands

Based on the County guidelines, the following types of project-created impacts may be considered significant:

- Projects that result in a net loss of important wetland area or wetland habitat value, either through direct or indirect impacts to wetland vegetation, degradation of water quality, or would threaten the continuity of wetland-dependent animal or plant species are considered to have a potentially significant effect on the environment.
- Wildlife access, use, and dispersal in wetland habitats are key components of their ecosystem value. Projects that substantially interrupt wildlife access, use and dispersal in wetland areas, would typically be considered to have potentially significant impacts.
- The hydrology of wetlands systems must be maintained if their function and values are to be preserved. Therefore, maintenance of hydrological conditions, such as the quantity and quality of runoff, must be assessed in project review.

Coastal Salt Marsh

Based on the County guidelines, the following types of project-related impacts may be considered significant:

- Substantial alteration of tidal circulation or decrease of tidal prism;
- Adverse hydrological changes, substantial increase in sedimentation, introduction of toxic elements or alteration of ambient water temperature;

- Creation of indirect impacts such as noise and turbidity that affects sensitive animal species, especially during critical periods such as breeding and nesting;
- Disruption of wildlife dispersal corridors; and
- Disturbance or removal of substantial amounts of marsh habitats.

Vernal Pools

Based on the County guidelines, the following types of project-related impacts may be considered significant:

- Direct removal of a vernal pool or vernal pool complex;
- Direct or indirect adverse hydrologic changes such as altered freshwater input, changes in the watershed area or runoff quantity and/or quality, substantial increase in sedimentation, introduction of toxic elements or alteration of ambient water temperature;
- Disruption of a larger plant community (e.g., grassland) within which a vernal pool(s) occur;
- Isolation or fragmentation of contiguous habitat which would disrupt animal movement patterns or seed dispersal routes;
- Activities that would increase the chance of exotic plant invasion;
- Activities that would increase the vulnerability of species to local extirpation.

Riparian Habitats

Based on the County guidelines, the following types of project-related impacts may be considered significant:

- Direct removal of riparian vegetation;
- Disruption of riparian wildlife habitat, particularly animal dispersal corridors and or understory vegetation;
- Intrusion within the upland edge of the riparian canopy (generally within 50 feet in urban areas, within 100 feet in rural areas, and within 200 feet of major rivers), leading to potential disruption of animal migration, breeding, etc. through increased noise, light and glare, and human or domestic animal intrusion;
- Disruption of a substantial amount of adjacent upland vegetation where such vegetation plays a critical role in supporting riparian-dependent wildlife species (e.g., amphibians), or where such vegetation aids in stabilizing steep slopes adjacent to the riparian corridor, which reduces erosion and sedimentation potential; and
- Construction activity that disrupts critical time periods (nesting, breeding) for fish and other wildlife species.

Native Grasslands

Native grasslands are defined as an area where native grassland species comprise 10% or more of the total relative cover. Based on the County guidelines, the following types of project-related impacts may be considered significant:

- Removal or severe disturbance to a patch or patches of native grasses greater than ¼ acre; or
- Removal or severe disturbance to native grassland patches that are part of a larger significant native grassland.

Oak Woodlands and Forests

Based on the County guidelines, project-created impacts on oak woodlands and forests may be considered significant due to changes in habitat value and species composition such as the following:

- Habitat fragmentation;
- Removal of understory;
- Alteration to drainage patterns;
- Disruption of the canopy; or
- Removal of a significant number of trees that would cause a break in the canopy or disruption in animal movement in and through the woodland.

Individual Native Trees

Based on the County guidelines, the following types of project- related impacts may be considered significant:

- Impacts to native specimen trees, regardless of size. Specimen trees are defined as mature trees that are healthy and structurally sound and have grown into the natural stature particular to the species;
- Impacts to rare native trees, which are very low in number or isolated in distribution; or
- The loss of 10% or more of the trees of biological value on a project site.

The following section presents a programmatic-level discussion of the potential for impacts to sensitive biological resources from implementation of Connected 2050. Impacts related to Threshold 5 regarding Habitat Conservation Plans are addressed in Section 4.15, *Effects Considered Less than Significant* of this EIR.

b. Project Impacts and Mitigation Measures

The following section presents a programmatic-level discussion of the potential for impacts to sensitive biological resources from implementation of Connected 2050. Impacts and associated mitigation measures would apply in Santa Barbara County and all cities within the County. Section 4.3.3 summarizes the impacts associated with capital improvement projects proposed in Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible at this time. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could result in the impacts as described in the following section.

Threshold 1: Would the project 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?

Impact BIO-1 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 MAY RESULT IN IMPACTS TO SPECIAL-STATUS PLANT AND ANIMAL SPECIES, EITHER DIRECTLY OR THROUGH HABITAT MODIFICATIONS. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

For the purposes of this analysis, special-status plant and wildlife species include those designations described under 4.3.1.3 above, plus locally important species including protected trees. Most of the capital improvements proposed under Connected 2050 consist of minor expansions of existing facilities that would not involve construction in environmentally sensitive habitat areas. However, several projects could affect areas occupied by special-status plant and wildlife species. The projects that could impact such species are listed in Table 4.3-2 below. As mentioned above, there are 292 special-status species known to occur or with potential to occur with the County of Santa Barbara. Sixty-five of these species are given high levels of protection by the federal government through listing under FESA or by the State government through listing under CESA or Fully Protected (wildlife only). The remaining species shown in Tables A-1 and A-2 in Appendix C are protected through CEQA and/or through local ordinances. Most special-status species have very limited ranges within the County and are associated with sensitive habitats, such as riparian habitats and drainages.

Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts of individual transportation projects on special-status species is not possible at this time. However, some special-status species are expected to be encountered at the locations where projects administered under Connected 2050 would occur, and it is assumed that certain resources would not be avoided and that potentially significant impacts would occur.

Several projects such as those that occur over or in the vicinity of rivers and creeks are within suitable habitat for species such as California red-legged frog (Federally Threatened and State Species of Special Concern) and steelhead – Southern California DPS (Federally Endangered and State Species of Special Concern). Bridge replacement sites proposed under Connected 2050 may contain potentially suitable habitat for California red-legged frog and steelhead. For example, the stretch of the Santa Ynez River under the Alisal Road Bridge, included areas of deep, calm backwaters with extensive emergent vegetation which can be considered suitable for California red-legged frogs as well as steelhead. Also, many of the creeks and rivers found within the County, including those mentioned above, are considered accessible by steelhead and currently support or have historically supported steelhead populations (USFWS 2021b).

In addition to the rivers and creeks that may be impacted as described above, future transportation projects under Connected 2050 could impact upland habitats and the sensitive species that may occupy them. For example, coast horned lizards (*Phrynosoma blainvillii*), a State Species of Special Concern, may be present in scrub, grassland and some woodland habitats near roads where projects could occur, and several special-status bat species may be affected by proposed projects where they occur under bridges or similar structures, or in native habitat adjacent to construction areas. Furthermore, the wide variety of habitats within Connected 2050 area can support many species of nesting birds, including sensitive species such as the State Fully Protected white-tailed kite (*Elanus luecurus*) and the State Species of Special Concern burrowing owl (*Athene cunicularia*). Disturbance

of special-status plants could result in reductions in local population size, habitat fragmentation, or lower reproductive success.

Direct impacts to special-status species include injury or mortality occurring during implementation of projects under Connected 2050. Direct impacts also include habitat modification and loss such that it results in the mortality or otherwise alters the foraging and breeding behavior substantially enough to cause injury. Indirect impacts could occur due to the spread of invasive non-native species that out-compete native species and/or alter habitat towards a state that is unsuitable for special-status species. For example, the spread of certain weed species can reduce the biodiversity of native habitats, potentially eliminating special-status plant species and reduce the availability of suitable forage and breeding sites for special-status wildlife species. Indirect impacts could also result due to increased access by humans and domestic animals, particularly in areas where trails may be planned. Increased human and domestic animal (especially dogs) presence foster the spread of non-native invasive plant species and disrupt the normal behaviors of animal species.

In addition to direct and indirect impacts as a result of transportation improvement projects, Connected 2050 also contains a future land use scenario that envisions urban infill development and transit-oriented development (TOD) as part of the overall land use development within the SBCAG region. Therefore, it is still possible that special-status plant and wildlife species could be impacted within the County. Many special-status wildlife species are associated with creeks even in the most densely developed urban areas, such as steelhead and tidewater goby (*Eucyclobius newberryi*). Both native and non-native trees and shrubs throughout urban areas may support nesting birds and other sensitive species such as monarch butterflies (*Danaus plexippus*). Impacts would be potentially significant.

Mitigation Measures

For transportation projects under SBCAG jurisdiction, SBCAG shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects that would result in biological impacts. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

BIO-1(a) Biological Resources Screening and Assessment

On a project-by-project basis, a preliminary biological resource screening shall be performed to determine whether the project has any potential to impact biological resources. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a biological resources assessment (BRA) or similar type of study to document the existing biological resources within the project footprint plus an appropriate buffer determined by a qualified biologist and to determine the potential impacts to those resources. The BRA shall evaluate the potential for impacts to all sensitive biological resources including, but not limited to special-status species, nesting birds, wildlife movement, sensitive plant communities/critical habitat and other resources judged to be sensitive by local, state, and/or federal agencies. Pending the results of the BRA, design alterations, further technical studies (i.e. protocol surveys) and/or consultations with the USFWS, CDFW and/or other local, state, and federal agencies may be required. The following Mitigation Measures [BIO-1(b) through BIO-1(k)] shall be incorporated, only as applicable, into the BRA for projects where specific resources are present, or may be present, and

may be impacted by the project. Note that specific surveys described in the mitigation measures below may be completed as part of the BRA where suitable habitat is present.

BIO1(b) Special-status Plant Species Surveys

If the project-specific BRA determines that special-status plant species may occur on-site, surveys for special-status plants shall be completed prior to any vegetation removal, grubbing, or other construction activity within each segment (including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally timed to coincide with the blooming period of the target species identified in the project-specific BRA. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency no more than two years before initial ground disturbance. All special-status plant species identified on-site shall be mapped onto a site-specific aerial photograph and topographic map. Surveys shall be conducted in accordance with the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results shall be submitted to the implementing agency, and the CDFW and/or USFWS, as appropriate, for review and approval.

BIO-1(c) Special-status Plant Species Avoidance, Minimization, and Mitigation

If State listed or California Rare Plant List 1B species are found during special-status plant surveys [pursuant to Mitigation Measure BIO-1(b)], then the project shall be re-designed to avoid impacting these plant species, if feasible. Rare plant occurrences that are not within the immediate disturbance footprint, but are located within 50 feet of disturbance limits shall have bright orange protective fencing installed at least 30 feet beyond their extent, or other distance as approved by a qualified biologist, to protect them from harm.

BIO-1(d) Restoration and Monitoring

If special-status plants species cannot be avoided and will be impacted by a project implemented under Connected 2050, all impacts shall be mitigated at a minimum ratio of 2:1 (number of acres/individuals restored to number of acres/individuals impacted) for each species as a component of habitat restoration. A restoration plan shall be prepared and submitted to the jurisdiction overseeing the project for approval (e.g., if a state listed plant species will be impacted, the restoration plan shall be submitted to the CDFW for approval). The restoration plan shall include, at a minimum, the following components:

- Description of the project/impact site (i.e., location, responsible parties, areas to be impacted by habitat type);
- Goal(s) of the compensatory mitigation project [type(s) and area(s) of habitat to be established, restored, enhanced, and/or preserved including specific functions and values of habitat type(s) to be established, restored, enhanced, and/or preserved];
- Description of the proposed compensatory mitigation site (location and size, ownership status, existing functions and values);
- Implementation plan for the compensatory mitigation site (rationale for expecting implementation success, responsible parties, schedule, site preparation, planting plan);
- Maintenance activities during the monitoring period, including weed removal as appropriate (activities, responsible parties, schedule);

- Monitoring plan for the compensatory mitigation site, including no less than quarterly monitoring for the first year (performance standards, target functions and values, target acreages to be established, restored, enhanced, and/or preserved, annual monitoring reports);
- Success criteria based on the goals and measurable objectives; said criteria to be, at a minimum, at least 80 percent survival of container plants and 30 percent relative cover by vegetation type;
- An adaptive management program and remedial measures to address any shortcomings in meeting success criteria;
- Notification of completion of compensatory mitigation and agency confirmation; and
- Contingency measures (initiating procedures, alternative locations for contingency compensatory mitigation, funding mechanism).

BIO-1(e) Endangered/Threatened Species Habitat Assessment and Protocol Surveys

Specific habitat assessment and survey protocols are established for several federally and state Endangered or Threatened species. If the results of the BRA determine that suitable habitat may be present, then any such species' protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or USFWS protocols prior to issuance of any construction permits. If through consultation with the CDFW and/or USFWS it is determined that protocol habitat assessments/surveys are not required, said consultation shall be documented prior to issuance of any construction permits. Each protocol has different survey and timing requirements, and therefore the applicant(s) for each project shall be responsible for ensuring they understand the protocol requirements.

BIO-1(f) Endangered/Threatened Species Avoidance and Minimization

The habitat requirements of endangered and threatened species throughout the County are highly variable. The potential impacts from any given project implemented under Connected 2050 are likewise highly variable. However, there are several avoidance and minimization measures that can be applied for a variety of species to reduce the potential for impact, with the final goal of no net loss of the species. Project sponsors shall select appropriate measures, as applicable, from the following measures that may be applied to aquatic and/or terrestrial species:

- Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern within or adjacent to the limits of disturbance shall have highly visible orange construction fencing installed between said area and the limits of disturbance.
- All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed between April 1 and October 31, if feasible, to avoid impacts to sensitive aquatic species.
- All projects occurring within or adjacent to sensitive habitats that may support federally and/or state Endangered/Threatened species shall have a CDFW and/or USFWS-approved biologist present during all initial ground disturbing/vegetation clearing activities. Once initial ground disturbing/vegetation clearing activities have been completed, said biologist shall conduct daily pre-activity clearance surveys for Endangered/Threatened species. Alternatively, and upon approval by CDFW and/or USFWS, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are being fully implemented.

- No Endangered/Threatened species shall be captured and relocated without expressed, authorized permission from the CDFW and/or USFWS.
- If at any time during construction of the project an Endangered/Threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. A CDFW/USFWS-approved biologist shall document the occurrence and consult with CDFW and/or USFWS as appropriate.
- For all projects occurring in areas where Endangered/Threatened species may be present and are at risk of entering the project site during construction, exclusion fencing shall be placed along the project boundaries prior to start of construction (including staging and mobilization). The placement of the fence shall be at the discretion of the CDFW/USFWS-approved biologist. This fence shall consist of solid silt fencing placed at a minimum of 3 feet above grade and 2 feet below grade and shall be attached to wooden stakes placed at intervals of not more than 5 feet. The fence shall be inspected weekly and following rain events and high wind events and shall be maintained in good working condition until all construction activities are complete.
- All vehicle maintenance/fueling/staging shall occur a minimum of 100 feet away from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian habitat or water bodies.
- No equipment shall be permitted to enter wetted portions of any affected drainage channel.
- All equipment operating within streams shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access.
- If project activities could degrade water quality, water quality sampling shall be implemented to identify the pre-project baseline, and to monitor during construction for comparison to the baseline.
- If water is to be diverted around work sites, a diversion plan shall be submitted (depending upon the species that may be present) to the CDFW, RWQCB, USFWS, and/or NMFS for their review and approval prior to the start of any construction activities (including staging and mobilization). If pumps are used, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system.
- At the end of each workday, excavations shall be secured with cover or a ramp provided to prevent wildlife entrapment.
- All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.
- The CDFW/USFWS-approved biologist shall remove invasive aquatic species such as bullfrogs and crayfish from suitable aquatic habitat whenever observed and shall dispatch them in a humane manner and dispose of properly.
- If any federal and/or state protected species are harmed, the CDFW/USFWS-approved biologist shall document the circumstances that led to harm and shall determine if project activities should cease or be altered in an effort to avoid additional harm to these species. Dead or injured special-status species shall be disposed of at the discretion of the CDFW and USFWS. All incidences of harm shall be reported to the CDFW and USFWS within 24 hours.

BIO-1(g) Non-Listed Special-status Animal Species Avoidance and Minimization

Several State Species of Special Concern may be impacted by projects implemented under Connected 2050. The ecological requirements and potential for impacts is highly variable among these species. Depending on the species identified in the BRA, several of the measures identified under BIO-1(f) shall be applicable to the project. In addition, measures shall be selected from among the following to reduce the potential for impacts to non-listed special-status animal species:

- For non-listed special-status terrestrial amphibians and reptiles, coverboard surveys shall be completed within three months of the start of construction. The coverboards shall be at least four feet by four feet and constructed of untreated plywood placed flat on the ground. The coverboards shall be checked by a qualified biologist once per week for each week after placement up until the start of vegetation removal. All non-listed special-status and common animals found under the coverboards shall be captured and placed in five-gallon buckets for transportation to relocation sites. All relocation sites shall be reviewed by the project sponsor and shall consist of suitable habitat. Relocation sites shall be as close to the capture site as possible but far enough away to ensure the animal(s) is not harmed by construction of the project. Relocation shall occur on the same day as capture. CNDDDB Field Survey Forms shall be submitted to the CDFW for all special-status animal species observed.
- Pre-construction clearance surveys shall be conducted within 14 days prior to the start of construction (including staging and mobilization). The surveys shall cover the entire disturbance footprint plus a minimum 200-foot buffer, if feasible, and shall identify all special-status animal species that may occur on-site. All non-listed special-status species shall be relocated from the site either through direct capture or through passive exclusion. A report of the pre-construction survey shall be submitted to SBCAG/and or the local jurisdiction for their review and approval prior to the start of construction.
- A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal, to recover special-status animal species unearthed by construction activities.
- Upon completion of the project, a qualified biologist shall prepare a Final Compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project.
- If special-status bat species may be present and impacted by the project, a qualified biologist shall conduct presence/absence surveys within 30 days prior to the start of construction presence/absence surveys for special-status bats in consultation with the CDFW where suitable roosting habitat is present and in consultation with the CDFW. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may roost. If active roosts are located, exclusion devices such as netting shall be installed to discourage bats from occupying the site in consultation with the CDFW. If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), bat boxes shall be installed near the project site. The number of bat boxes installed will depend on the size of the hibernaculum and shall be determined through consultations with the CDFW. If a maternity colony has become established, all construction activities shall be postponed within a 500-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.

BIO-1(h) Preconstruction Surveys for Nesting Birds

For any construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds (covered by the California Fish and Game Code and the Migratory Bird Treaty Act) shall be conducted by a qualified biologist no more than 14 days prior to vegetation removal. The surveys shall include the entire segment disturbance area plus a 200-foot buffer around each project site. If active nests are located, all construction work shall be conducted outside an established buffer area around the nest. The buffer shall be a minimum of 50 feet for passerine bird species and at least 250 feet for raptor species, but appropriate buffer size will be determined by a qualified biologist. Larger buffers may be required depending upon the status of the nest and the construction activities occurring in the vicinity of the nest. The buffer area(s) shall be closed to all construction personnel and equipment until the adults and young are no longer reliant on the nest site. A qualified biologist shall confirm that breeding/nesting is completed, and young have fledged the nest prior to removal of the buffer. A report of these preconstruction nesting bird surveys shall be submitted to SBCAG and/or the local jurisdiction.

BIO-1(i) Monarch Butterfly Avoidance and Minimization

Prior to completion of the final design, a qualified biologist shall review the project for the potential to impact monarch butterflies. If known or potential winter roost sites may be impacted, the biologist shall make recommendations to avoid impacts including, but not limited to, relocation/redesign of project features to avoid roost sites, guidance regarding tree removal and trimming at roost sites, and recommendations regarding planting additional roost trees.

Between October 1 and March 1, construction shall not occur within 100 feet of known or potential roost sites, if feasible. If construction must occur during this period, a qualified biologist shall survey known and potential roost sites to confirm occupancy by monarch butterflies prior to start of any construction within 100 feet. Multiple surveys may be necessary, and the closest known roost sites shall be used as voucher sites to confirm the timing of butterfly arrival. If monarch butterflies are found at a roost site, construction shall not occur within 100 feet of the roost site until the biologist has determined that the butterflies have left the area. The biologist shall visit the voucher sites to confirm that butterflies have left the region.

BIO-1(j) Worker Environmental Awareness Program (WEAP)

Prior to initiation of construction activities (including staging and mobilization), all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special-status resources that may occur in the project area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction of the project. All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them. The form shall be submitted to SBCAG and/or the local jurisdiction to document compliance.

BIO-1(k) Tree Protection

If it is determined that construction may impact trees protected by local agencies, the project sponsor shall procure all necessary tree removal permits. A tree protection and replacement plan

shall be developed by a certified arborist, as appropriate. The plan shall include, but would not be limited to, an inventory of trees within the construction site, setbacks from trees and protective fencing, restrictions regarding grading and paving near trees, direction regarding pruning and digging within root zone of trees, and requirements for replacement and maintenance of trees. If protected trees will be removed, replacement tree plantings of the same or similar species in accordance with local agency standards, but at a minimum ratio of 2:1 (trees planted to trees impacted), shall be installed on-site or at an approved off-site location, and a restoration and monitoring program shall be developed in accordance with Mitigation Measure BIO-1(d) and shall be implemented for a minimum of seven years or until stasis has been determined by certified arborist. If a protected tree will be encroached upon, but not removed, a certified arborist shall be present to oversee all trimming of roots and branches.

Significance After Mitigation

Compliance with the above mitigation measures and all existing federal, state and/or local regulations would reduce impacts to special-status species a less than significant level.

Threshold 2:	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
Threshold 3:	Would the project have a substantial adverse effect on state or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact BIO-2 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 MAY RESULT IN IMPACTS TO SENSITIVE HABITATS, INCLUDING STATE OR FEDERALLY PROTECTED WETLANDS. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts of individual transportation projects on sensitive habitats is not possible at this time. However, several of the projects that may be implemented under Connected 2050 have the potential to impact sensitive habitats, as mapped on Figure 4.3-1 through Figure 4.3-8. The extent and severity of the impacts is not known at this time, but some examples of potential impacts include culvert improvements or construction and reconstruction/widening of bridges over rivers and creeks, including the Santa Ynez River, and Santa Rita, San Pedro, Salsipuedes, San Jose and Tecolotito Creeks. Riparian vegetation along these rivers and creeks consists mainly of red willow (*Salix laevigata*) with scattered sycamores and coast live oaks at project sites located on the Santa Ynez River, Santa Rita Creek, San Pedro Creek, and Salsipuedes Creek. These types of projects would have potential to impact riparian areas, as well as the water bodies.

In addition, projects such as multi-use trails and bike paths may also involve development along riparian corridors. Riparian areas provide wildlife habitat, and movement corridors, enabling both terrestrial and aquatic organisms to move along river systems between areas of suitable habitat. Construction of the proposed facilities could have both direct impacts due to disturbance of riparian flora and fauna and indirect impacts due to increased erosion and sedimentation, which would adversely affect downstream water quality.

Several projects also involve the extension or widening of existing roadways into upland habitats in and around Lompoc, Santa Maria, Goleta, and the Santa Ynez Valley. These areas could also contain sensitive habitats, such as Burton Mesa chaparral.

Direct impacts to sensitive habitats include loss of habitat during construction of the project. Indirect impacts include habitat degradation due to introduction of invasive plant species incidentally from construction equipment and through selection of invasive landscape plants, as well as through erosion of disturbed areas.

The future land use scenario envisioned by Connected 2050 would emphasize development within existing urbanized areas as part of the overall land use development within the SBCAG region, with some development potentially occurring in more undisturbed areas. As a result, future land use development could result in impacts to riparian habitat or sensitive habitat, with areas that have been relatively free of ground disturbance containing sensitive native habitats such as coastal dune scrub or coast live oak woodland. Furthermore, some areas mapped by CWHR as somewhat disturbed habitats, such as annual grasslands, may at the local scale include sensitive native vegetation with unique assemblages of native plants, such as areas dominated by native wildflowers, vernal pools and native grasslands. Impacts would be potentially significant.

In conclusion, implementation of Connected 2050 would have substantial adverse impacts on sensitive habitats, including federally-protected wetlands and this impact is therefore significant.

Mitigation Measures

For transportation projects under SBCAG jurisdiction, SBCAG shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

The preference is that projects take all practicable measures to avoid impacts to sensitive habitats, but in the event avoidance is not feasible, the following mitigation measures are required for projects identified in Table 4.3-2, and future land use pursuant to Connected 2050.

BIO-2(a) Jurisdictional Delineation

If projects implemented under Connected 2050 occur within or adjacent to wetland, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the CDFW, USACE, RWQCB, and/or CCC, a qualified biologist shall complete a jurisdictional delineation. The jurisdictional delineation shall determine the extent of the jurisdiction for each of these agencies and shall be conducted in accordance with the requirement set forth by each agency. The result shall be a preliminary jurisdictional delineation report that shall be submitted to the implementing agency, USACE, RWQCB, CDFW, and CCC, as appropriate, for review and approval. If jurisdictional areas are expected to be impacted, then the RWQCB would require a Waste Discharge Requirements (WDR) permit and/or Section 401 Water Quality Certification (depending upon whether or not the feature falls under federal jurisdiction). If CDFW asserts its jurisdictional authority, then a Streambed Alteration Agreement pursuant to Section 1600 et seq. of the CFGC would also be required prior to construction within the areas of CDFW jurisdiction. If the USACE asserts its authority, then a permit pursuant to Section 404 of the Clean Water Act would likely be required. The CCC would also require a coastal development permit for projects falling within its jurisdiction.

BIO-2(b) Wetland and Riparian Habitat Restored

Impacts to jurisdictional wetland and riparian habitat shall be mitigated at a minimum ratio of 2:1 (acres of habitat restored to acres impacted) and shall occur on-site or as close to the impacted habitat as possible. A mitigation and monitoring plan shall be developed by a qualified biologist in accordance with Mitigation Measure BIO-1(d) above and shall be implemented for no less than five years after construction of the segment, or until the SBCAG/local jurisdiction and/or the permitting authority (e.g., CDFW or USACE) has determined that restoration has been successful.

BIO-2(c) Landscaping Plan

If landscaping is proposed for a specific project, a qualified biologist/landscape architect shall prepare a landscape plan for that project. This plan shall indicate the locations and species of plants to be installed. Drought tolerant, locally native plant species shall be used. Noxious, invasive, and/or non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List, and/or California Invasive Plant Council Lists 1, 2, and 4 shall not be permitted. Species selected for planting shall be similar to those species found in adjacent native habitats.

BIO-2(d) Sensitive Vegetation Community Avoidance and Mitigation

If the results of measure B-1(a) indicates projects implemented under Connected 2050 would impact sensitive vegetation communities, impacts to sensitive communities shall be avoided through final project design modifications.

If the implementing agency determines that sensitive communities cannot be avoided, impacts shall be mitigated on-site or offsite at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist. Temporarily impacted areas shall be restored to pre-project conditions. A Restoration Plan shall be developed by a qualified biologist and submitted to the agency overseeing the project for approval.

BIO-2(e) Invasive Weed Prevention and Management Program

Prior to start of construction for each project, an Invasive Weed Prevention and Management Program shall be developed by a qualified biologist to prevent invasion of native habitat by non-native plant species. A list of target species shall be included, along with measures for early detection and eradication. All disturbed areas shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding will be conducted in areas where construction activities have occurred for at least six weeks since ground disturbing activities ceased. If exotic species invade these areas prior to hydroseeding, weed removal shall occur in consultation with a qualified biologist and in accordance with the restoration plan.

BIO-2(f) Wetlands, Drainages and Riparian Habitat Best Management Practices During Construction

The following best management practices shall be required for development within or adjacent to wetlands, drainages, or riparian habitat:

- Access routes, staging and construction areas shall be limited to the minimum area necessary to achieve the project goal and minimize impacts to other waters including locating access routes and ancillary construction areas outside of jurisdictional areas.

- To control sedimentation during and after project implementation, appropriate erosion control materials shall be deployed to minimize adverse effects on jurisdictional areas in the vicinity of the project.
- Project activities within the jurisdictional areas should occur during the dry season (typically between June 1 and November 1) in any given year, or as otherwise directed by the regulatory agencies.
- During construction, no litter or construction debris shall be placed within jurisdictional areas. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site.
- All project-generated debris, building materials and rubbish shall be removed from jurisdictional areas and from areas where such materials could be washed into them.
- Raw cement, concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic species resulting from project-related activities, shall be prevented from contaminating the soil and/or entering wetlands, drainages or riparian habitat.
- All refueling, maintenance and staging of equipment and vehicles shall occur at least 100 feet from bodies of water and in a location where a potential spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water source). Prior to the onset of work activities, a plan must be in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should an accidental spill occur.

Significance After Mitigation

Compliance with the above mitigation measures and existing State, federal and/or local regulations would reduce impacts to a less than significant level.

Threshold 4: Would the project 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?

Impact BIO-3 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 MAY SUBSTANTIALLY INTERFERE WITH WILDLIFE MOVEMENT, INCLUDING FISH MIGRATION, AND/OR IMPEDE THE USE OF NATIVE WILDLIFE NURSERY SITES. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts of individual transportation projects on wildlife movement and nurseries is not currently possible. In general, the capital improvement projects envisioned in Connected 2050 involve expansion of existing facilities in urbanized or already developed areas, rather than extension of infrastructure into undeveloped portions of the county. Several individual projects would, however, increase human activity in areas where sensitive biological resources could occur. In particular, several of the proposed bridge, trail and bikeway projects in the Lompoc, Goleta, and Carpinteria areas could increase human activity in the vicinity of riparian areas, wildlife nurseries or corridors, and potentially sensitive coastal habitats.

Direct impacts to wildlife include increased noise and human presence during construction, as well as increased trash which may attract predators to the project site and discourage wildlife use of

surrounding natural habitat. Indirect impacts include invasion of natural habitats by non-native species and increased presence of humans and domestic animals over the long-term. In addition, transportation improvement projects could include new segments of fencing or walls that could hinder wildlife movement.

The future land use scenario envisioned by Connected 2050 would encourage infill development and TOD as part of the overall land use development within the SBCAG region. This land use scenario focuses future development within existing urbanized areas. The majority of the future infill and TOD development projects would be placed on parcels that provide limited or no wildlife movement. However, even the elimination of limited wildlife movement could further isolate areas of native habitat occupied by both sensitive and common native wildlife species. Impacts related to transportation projects as identified in Table 4.3-2 and impacts related to the future land use scenario envisioned by Connected 2050 would be potentially significant.

Mitigation Measures

For transportation projects under SBCAG jurisdiction, SBCAG shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures. These mitigation measures have been developed for Connected 2050 where applicable for transportation projects that would result in biological impacts. The County and cities in the SBCAG region can and should implement these measures, where relevant to infill, TOD, and transportation projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

Mitigation Measures BIO-3(a) through BIO-3(c) address the potential for impacts due to invasive plant species. In addition, the following measures are required for projects listed in Table 4.3-2.

BIO-3(a) Fence and Lighting Design

All projects including long segments of fencing and lighting shall be designed to minimize impacts to wildlife. Fencing shall not block or impede wildlife movement through riparian or other natural habitat when feasible. Where fencing is required for public safety concerns, the fence shall be designed to permit wildlife movement by incorporating design features such as:

- A minimum 16 inches between the ground and the bottom of the fence to provide clearance for small animals;
- A minimum 12 inches between the top two wires, or top the fence with a wooden rail, mesh, or chain link instead of wire to prevent animals from becoming entangled;
- If privacy fencing is required near open space areas, openings at the bottom of the fence measure at least 16 inches in diameter shall be installed at reasonable intervals to allow wildlife movement.

If fencing must be designed in such a manner that wildlife passage would not be permitted, wildlife crossing structures shall be incorporated into the project design as appropriate.

Similarly, lighting installed as part of any project shall be designed to be minimally disruptive to wildlife. This may be accomplished through the use of hoods to direct light away from natural habitat, using low intensity lighting, and using a few lights as necessary to achieve the goals of the project.

BIO-3(b) Maintain Connectivity in Drainages

No permanent structures shall be placed within any drainage or river that would impede wildlife movement (i.e., no hardened caps or other structures in the stream channel perpendicular to stream flow be left exposed or at depth with moderate to high risk for exposure as a result of natural bed scour during high flow events and thereby potentially create impediments to passage).

In addition, upon completion of construction within any drainage, areas of stream channel and banks that are temporarily impacted shall be returned to pre-construction contours and in a condition that allows for unimpeded passage through the area once the work has been complete.

If water is to be diverted around work sites, a diversion plan shall be submitted to SBCAG, and/or local jurisdiction for review and approval prior to issuance of project construction permits/ approvals. The diversion shall be designed in a way as to not impede movement while the diversion is in place.

BIO-3 (c) Construction Best Management Practices to Minimize Disruption to Wildlife

The following construction Best Management Practices (BMPs) shall be incorporated into all grading and construction plans in order to minimize temporary disruption of wildlife, which could hinder wildlife movement:

- Designation of a 20 mile per hour speed limit in all construction areas.
- Daily construction work schedules shall be limited to daylight hours only.
- Mufflers shall be used on all construction equipment and vehicles shall be in good operating condition.
- All trash shall be placed in sealed containers and shall be removed from the project site a minimum of once per week.
- No pets are permitted on project site during construction.

Significance After Mitigation

With implementation of the above mitigation measures, potential impacts to wildlife movement and nursery sites would be reduced, but disruption to wildlife movement is still anticipated. Thus, this impact would remain significant and unavoidable.

Threshold 5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-4 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 WOULD NOT CONFLICT WITH ANY LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES, SUCH AS A TREE PRESERVATION POLICY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Protected trees and other biological resources which are protected by city and/or county ordinances and/or policies would to be encountered at the locations where projects administered under Connected 2050 would occur and therefore there is potential for conflict with local ordinances and/or policies. Most of the transportation projects in Connected 2050 are expansions or maintenance of existing roads. Because ground disturbances would be fairly limited as a result, the

removal of native trees and disturbances to other biological resources protected by local policies or ordinances would likely be minimal for most projects.

In addition to potential conflicts with local policies and/or ordinances that may result from transportation improvement projects, Connected 2050 also contains a future land use scenario that emphasizes infill development and TOD. This land use scenario focuses future development concentrated in existing urbanized areas, although some development would occur in more undisturbed areas. This would reduce impacts to biological resources that are protected by city or county ordinances; however, there still remains the potential for conflict with local policies and ordinances from development associated with the future land use scenario.

All future development projects as part of the future land use scenario as well as the transportation projects proposed for implementation under Connected 2050 would be required to follow city and county development requirements, including compliance with local policies, ordinances and applicable permitting procedures related to protection biological resources. Project-level analysis would identify significant conflicts with local policies and ordinances as well as minimize, mitigate or avoid those impacts through the design, siting and permitting process; and provide mitigation for any significant impacts as a condition of project approval and permitting. Therefore, the potential for development projects under the future land use scenario as well as proposed transportation projects to conflict with local policies or ordinances protecting biological resources is considered less than significant.

Mitigation Measures

No mitigation measures are required.

c. Specific RTP Projects That May Result in Impacts

Table 4.3-2 identifies those projects that may create biological resource impacts. Projects that may have potential impacts are illustrated on Figure 2-6 through Figure 2-9 in Section 2.0, *Project Description*. The individual projects listed below could create significant biological impacts but would not necessarily do so. Additional specific analysis will need to be conducted as the individual projects are implemented in order to determine the actual magnitude of impact. Mitigation measures discussed above could apply to these specific projects.

Table 4.3-2 Connected 2050 Projects with Potential to Impact Biological Resources

Project Title	Project Type	Description
CALTRANS		
CT-PL-7: US 101 Milpas St SB off-ramp Improvements	HWY	US 101 Milpas St SB off-ramp Improvements
CT-PL-8: US 101 / Las Positas Operational Improvements	HWY	US 101 / Las Positas Operational Improvements
CT-PL-9: Goleta Overcrossing	HWY	Goleta Overcrossing
CT-PL-10: Hwy 154 Drainage Improvement	HWY	Hwy 154 Drainage Improvement
CT-PL-11: San Marcos Pass High Friction Surface Treatment	HWY	San Marcos Pass High Friction Surface Treatment (1M370)
CT-PL-12: Lompoc ADA	HWY	Lompoc ADA (1H870)
CT-PL-13: North Buellton CAPM	HWY	North Buellton CAPM (1M100)

Santa Barbara County Association of Governments
Connected 2050: Regional Transportation Plan & Sustainable Communities Strategy

Project Title	Project Type	Description
CT-PL-14: Bridge replacement - Alamo Pintado	HWY	Bridge replacement - Alamo Pintado
CT-PL-15: Guadalupe ADA	HWY	Guadalupe ADA (1E030)
CT-13: SR 135 Signal Modifications	HWY	SR 135 Signal Modifications (1H960)
CT-14: SR 135 Santa Maria CAPM	HWY	SR 135 in Santa Maria pavement preservation project CAPM (1G970)
CT-15: SR 154/ Baseline- Edison Roundabout	HWY	SR 154/ Baseline- Edison Roundabout (1H310)
CT-30: Milpas - 101 SB Off-ramp Operational Improvement	HWY	At the intersection of the first southbound off-ramp junction at Milpas Street, construct intersection improvements. This project includes all project phases - through construction.
City of Buellton		
B-PL-4: Santa Ynez Valley Bicycle Master Plan Implementation	BIKE/PED	Implement priority projects listed in the Santa Ynez Valley Bicycle Master Plan
City of Carpinteria		
C-5: Storm Damage Repair	ST/RDS	Supplement local funding to repair storm damage as part of the Via Real storm water management project.
C-7: Alternative Transportation Enhancements	BIKE/PED	Enhance the alternative transportation environment by performing maintenance, repair, improvement, and engineering of bike and ped facilities, including: the concrete repair and curb ramp program, City of Carpinteria Active Transportation Plan, Bike Path Maintenance Program, Linden Ave sidewalk repair, Bailard Ave Street Improvements, and Linden Ave/ Dorrance Way crossing improvements.
C-8: Safe Routes to School Improvements	BIKE/PED	Construct Safe Routes to School improvements, including: Caitlin Cir to Memorial Park, Ogan Rd & Vallecito Rd, Pear St & Carpinteria Ave, Cramer Rd & Carpinteria Ave.
C-10: Carpinteria Avenue Bridge Replacement Project	ST/RDS	Replace the existing bridge. Does not increase transportation related capacity
C-11: Rincon Trail (FTIP SBCAG29)	BIKE/PED	Construct a multiuse trail from Rincon Park to Carpinteria Avenue (part of the Carpinteria Coastal Vista Trail)
C-PL-1: Various Transportation Improvement Projects	VARIOUS	Utilize projected Measure A funds to implement various local transportation improvement projects
C-PL-2: Transportation Network Maintenance and Locally – Funded Improvements	ST/RDS	Maintain the local transportation network and construct locally-funded project.
C-PL-3: Regional Active Transportation Plan Implementation	BIKE/PED	Implement high priority projects listed in the Regional Active Transportation Plan.
C-PL-4: Holly Avenue Undercrossing	BIKE/PED	Construct a bicycle and pedestrian undercrossing of UPRR corridor.
C-PL-5: Santa Clause Lane to Carpinteria Avenue Multiuse Trail (FTIP SBCAG27)	BIKE/PED	Construct a multiuse trail from Santa Claus Lane to Carpinteria Avenue adjacent to the Sandyland Area Salt Marsh (part of the Carpinteria Coastal Vista Trail). 2017 FTIP does not provide funding for the project.

Project Title	Project Type	Description
C-PL-6: Franklin Creek Multiuse Path	BIKE/PED	Construct a multiuse path along Franklin Creek from Carpinteria Ave to 7th St.
C-PL-7: Third Street Improvements Project	BIKE/PED	Construct a multiuse trail along Third Street from Linden Avenue to the Carpinteria Marsh Park (part of the Carpinteria Coastal Vista Trail).
C-PL-8: Via Real Pedestrian Bridge Replacement	BIKE/PED	Replace existing pedestrian bridge over Santa Monica Creek at Via Real
C-PL-9: El Carro Pedestrian Bridge Replacement	BIKE/PED	Replace existing pedestrian bridge over Santa Monica Creek at El Carro
City of Goleta		
Go-7: Storm Damage Repair to Transportation Facilities	ST/RDS	Repair of transportation facilities damaged during storm events. Includes repair of Cathedral Oaks Crib Wall and locations citywide as necessary.
Go-13: Storke Road Hollister to Market Place Improvements	ST/RDS, BIKE/PED	The project includes transit, bicycle and pedestrian, and roadway improvements along Storke Road south of Hollister Ave. Includes restriping, median reconstruction, bus stop relocations and upgrades.
Go-17: Hollister Ave Class I Bike Path Lighting	BIKE/PED	Install lighting along the multipurpose path located along the south side of Hollister Avenue from Pacific Oaks to Ellwood School.
Go-18: Goleta Train Depot	TRANSIT, BIKE/PED	Construct new multi-modal train station at the location of existing Amtrak platform, to improve services and facilities and accommodate increase in ridership. Includes expanding parking, bus facilities, and bicycle and pedestrian improvements to S. La Patera Lane.
Go-22: US 101 Interchange Improvements	ST/RDS	At Patterson, Storke Rd/Glen Annie, Los Carneros, and Fairview Avenue Interchanges. Widen or replace existing overcrossing and overhead to accommodate additional turn lanes and Class II bike lanes. Ramp intersection improvements. Widen ramps to provide additional turn lanes and/or thru lanes. Signal modifications as necessary to accommodate peds and bikes. Add bike lanes.
Go-23: Intersection Operational Improvements	ST/RDS	Intersection improvements at Hollister and Patterson Ave, Los Carneros Road and Hollister Ave, Kellogg Ave and Hollister Ave, Hollister Ave and Pacific Oaks Rd, and Fairview Ave and Calle Real. Includes roadway widening to add turn lanes and/or thru lanes, median modifications, new traffic signals/traffic signal upgrades, bicycle and pedestrian improvements.
Go-24: Roadway Widening and Operation Improvements	ST/RDS	Vehicle capacity modifications, roadway widenings and extensions, realignments, addition of medians, turning and through lanes, restriping, new traffic signals, bicycle and pedestrian improvements at locations throughout the City, including Las Carneros Way, Los Carneros Rd, Calle Koral, Fairview, Phelps Road, Calle Real, Hollister, Cathedral Oaks.
Go-PL-5: Fairview Avenue at Hollister Roundabout	ST/RDS, BIKE/PED	Construct a two-lane roundabout at the intersection

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Project Title	Project Type	Description
Go-PL-6: Fairview Avenue and Storke/Glen Annie Road Corridor Studies	ST/RDS, BIKE/PED	Fairview Avenue and Storke/Glen Annie Road Corridor Studies
Go-PL-7: City of Goleta Bicycle and Pedestrian Master Plan Implementation	BIKE/PED	Implement projects identified in City of Goleta's Bicycle and Pedestrian Master Plan. Detailed project lists may be viewed online at https://www.cityofgoleta.org/projects-programs/bicycle-projects/bicycle-pedestrian-master-plan-project .
Go-25: US 101 Auxiliary Lanes	HWY	Construct auxiliary lane on US 101 NB between Los Carneros and Storke/Glen Annie Rd on NB US 101 and on US 101 NB and SB between at Fairview Rd to Los Carneros Rd
City of Lompoc		
L-5: Transit Operations and Maintenance Center (FTIP LOMPOC23)	TRANSIT	Purchase and construction of a new maintenance and operations center for City of Lompoc Transit
City of Santa Barbara		
SB-PL-7: Cliff Drive Multiuse Path and Crossing Enhancements	BIKE/PED	Create a separate/protected multiuse path along Cliff Drive. Project to include corridor intersection improvements including pedestrian activated flashers and new traffic signals and/or signal modifications along some intersections. Intersection/corridor improvements to nearby schools to connect to the path.
SB-PL-8: Class I Beachway Connection – Leadbetter Beach	BIKE/PED	Create a separate/protected bikeway connecting the Beachway through Ledbetter Beach to Shoreline Park
SB-PL-13: La Cumbre Jr High Multiuse Path Along Modoc	BIKE/PED	Construct multiuse path or separated bike path along Modoc Road between Las Positas Road and Mission Street and along Portesuello Road between Modoc Road and Gillespie Street. Intersection improvements along included to improve school crossings.
SB-PL-14: Corridor Improvements: Chapala Street	BIKE/PED	Pedestrian and bike improvements along Chapala between Gutierrez and Sola Streets
SB-PL-15: Corridor Improvements: De la Vina St Road Diet and Pedestrian Crossings	BIKE/PED	Implement a road diet on De La Vina Street from Constance Avenue to Padre Street. Crossing enhancements included.
SB-PL-16: Corridor Improvements: Milpas Street	BIKE/PED	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps
SB-PL-17: Corridor Improvements: Westside and Lower Westside Transportation Management Plan Implementation	BIKE/PED	Implement bike and pedestrian safety improvements as outlined in the Westside and Lower Westside Transportation Management Plan. Infrastructure projects include sidewalk infill, enhanced crossings, pedestrian scale lighting, bike lanes, and separated bikeways/multiuse paths.
SB-PL-18: Corridor Improvements: Upper State Street	BIKE/PED	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps
SB-PL-19: Pedestrian Enhancements: Crosswalk Improvements	BIKE/PED	Improve crosswalks at various locations in the City. Improvements may include pedestrian activated flashers and pedestrian safety lighting.

Project Title	Project Type	Description
SB-PL-20: Pedestrian Enhancements: Hollister Sidewalk	BIKE/PED	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps
SB-PL-21: Pedestrian Enhancements: Mission Canyon Corridor Improvements	BIKE/PED	Includes a pedestrian connection along the west side of Los Olivos Street and Mission Canyon Road.
SB-PL-22: Pedestrian Enhancements: Montecito St Sidewalk and Railroad Crossing	BIKE/PED	Add safety features to the Montecito Street railroad crossing, as well as complete nearly sidewalk infill along the north side of the train station.
SB-PL-23: Pedestrian Enhancements: Lower West Neighborhood Overcrossing	BIKE/PED/HWY	This project would be a new vehicle bridge crossing Highway 101 at Ortega Street or Cota Street. The vehicle crossing would accommodate traffic, pedestrian, and bicycle traffic to and from the Lower Westside to Downtown, relieving congestion at the Carrillo and Castillo Interchanges.
SB-8: Construct Active Transportation Program Awarded Projects (FTIP SBCITY)	BIKE/PED	Projects include: Eastside Green Lanes and Bike Boulevard Gap Closure, Westside Bike Boulevard Gap Closure, Downtown De La Vina Street Safe Crosswalks and Buffered Bike Lanes, U.S. 101 State Street Undercrossing Active Transportation Improvements, Lower Eastside Community Connectivity Active Transportation Plan (Plan Only), and Las Positas and Modoc Roads Class I Construction.
SB-10: Corridor Improvements - Carrillo Street (De la Vina to Miramonte)	ST/RDS	Includes intersection improvements at Carrillo and San Andres to reduce delay, improve safety, and improve pedestrian access. Left turn arrows will be added to Carrillo Street. Streetlights will be installed along entire corridor.
City of Santa Maria		
SM-PL-23: US 101/SR-166 (Main Street) Interchange	HWY	Design and construction of interchange.
SM-PL-25: Bridge Preventative Maintenance	ST/RDS	Design and construction for maintenance of structural features.
SM-PL-26: Betteravia/E Street/Mahoney Road Intersection	ST/RDS	ROW Acquisition, design and construction of Betteravia Road, E Street, and Mahoney Road intersection. Mahoney Road reconstruction to City Limits
City of Solvang		
Sol-PL-5: Solvang School Sidewalk Project	BIKE/PED	Project includes construction of new sidewalk, crosswalks and ADA access ramps along Fifth Street and Elm Avenue leading to Solvang School.
Sol-PL-6: Fredensborg Canyon Rd/Adobe Creek Culvert Replacement	ST/RDS	Project includes replacing undersized culvert and roadway shoulder improvements.
County of Santa Barbara		
SBC-PL-10: California Coastal Trail (Gaviota Coastal Trail)	BIKE/PED	CA Coastal Trail/Bacara Resort to El Capitan Cyn Rd; Refugio State Beach to Canada San Onofre. Nine miles of state mandated bicycle/pedestrian trail.
SBC-PL-11: Union Valley Parkway Extension - Rodeo Drive	ST/RDS	New local road connection between the Union Valley Parkway/U.S. Highway 101 interchange and the unnamed frontage road, known as Rodeo Drive, on the east side of U.S. Highway 101.

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Project Title	Project Type	Description
SBC-PL-12: Los Alamos Infrastructure Improvements	BIKE/PED	Construct a variety of bike lane, pedestrian, and parking improvements in the Los Alamos Community Pedestrian Circulation and Parking Plan
SBC-PL-13: Santa Ynez Valley Infrastructure Improvements - Santa Barbara County	BIKE/PED	Construct a variety of bike and pedestrian improvements in the Santa Ynez Valley unincorporated area including: Pine St, Calzada Avenue, Santa Ynez Rd, and Edison St bike lanes.
SBC-PL-14: Eastern Goleta Valley Infrastructure Improvements - Santa Barbara County	BIKE/PED	Construct a variety of bicycle and pedestrian improvements to improve bike and pedestrian connectivity in the Eastern Goleta Valley
SBC-PL-15: Orcutt Trails - Santa Barbara County	BIKE/PED	Construct trails as identified in Orcutt Community Plan
SBC-PL-16: Pt. Sal Trails - Northern Santa Barbara County Coastal Access	BIKE/PED	Construct various trails to Point Sal State Park
SBC-PL-17: Parks Road Maintenance - Santa Barbara County	ST/RDS	Road maintenance for County Park roads
SBC-PL-18: Jalama Beach County Park Coastal Trail Access - Santa Barbara County	BIKE/PED	Trail along coastal blufftop to Jalama Beach County Park
SBC-15: Orcutt Transportation Improvement Program Capital Projects	ST/RDS	Construct various roadway, intersection, transit, and sidewalk improvements in the Orcutt Community Area included in the OTIP
SBC-16: Orcutt Transportation Improvement Program Bikeway Projects	BIKE/PED	Construct various bikeway projects at development sites throughout Orcutt Community included in the OTIP
SBC-17: Montecito Debris Flow Trail Bridge Replacements	BIKE/PED	Replace three trail bridges in Montecito
SBCAG		
SBCAG-PL-3: South Coast Regional Transit Operations and Maintenance Facility	SBCAG	Develop a regional transit facility to support the Clean Air Express and Coastal Express intercity bus services
SBCAG-16: Carpinteria Train Station Second Platform and Pedestrian Undercrossing	RAIL	Construct passing siding and second passenger platform to allow for train meets and pedestrian undercrossing to improve safety at the existing Carpinteria train station
SBCAG-17: Goleta Train Storage Expansion	RAIL	Construct additional rail spur to store one additional train at the existing Goleta train station
SBCAG-18: Union Valley Pkwy Barrier Walls	ST/RDS	Barriers Walls along Union Valley Parkway in Santa Maria.

4.3.4 Cumulative Impacts

Biological resources impacts as described above are related to: direct and indirect impacts to sensitive/special status species or their habitat; significant impacts to riparian, wetland, or other sensitive natural communities; or interference with wildlife movement. Implementation of the transportation projects and land use development patterns under Connected 2050 could result in regional impacts on special-status species, riparian, wetland, or other sensitive natural communities, as well as wildlife movement. Similarly, development pursuant to other local and regional planning efforts within the greater cumulative impact area (adjoining counties) would also have impacts on these resources, and as a result, cumulative impacts would be considered significant. Due to the potential direct and indirect impacts that may occur, Connected 2050 would contribute considerably to this impact, and cumulatively is significant.

The mitigation measures presented in Section 4.3.3.b set requirements for surveys and actions to be taken if biological resources have potential to be impacted by Connected 2050 transportation and land use projects. However, as discussed above, impacts to wildlife movement would be significant and unavoidable. The contribution of the proposed Connected 2050 to cumulative impacts would therefore remain cumulatively considerable post-mitigation.

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4.4 Cultural Resources

This section analyzes impacts to cultural resources within Santa Barbara County that would result from implementation of the proposed Connected 2050, and feasible mitigation measures to reduce these potential impacts.

4.4.1 Setting

Santa Barbara County is located in the central coastal area of California and is bounded by San Luis Obispo County to the north, Ventura County to the east, Kern County to the northeast, and the Pacific Ocean to the south and the west. The geographic center of the County is about 300 miles south of San Francisco and 80 miles north of Los Angeles. About half of the remaining undeveloped land in the County lies within the Los Padres National Forest (which encompasses 983 square miles) and Vandenberg Air Force Base (which encompasses 154 square miles).

Santa Barbara County experiences a warm-summer Mediterranean climate due to its location on the coast. Coastal breezes ensure that most of the county has cooler summers and warmer winters than the surrounding inland valleys (Lenz 2013). In the cooler winter months, storms reach the Santa Barbara coast, bringing heavy rainfall. The summers remain almost rainless due to offshore high-pressure systems that develop.

Elevations in Santa Barbara County range from sea level to 4,864 feet above mean sea level, with the highest elevations falling within the Transverse Ranges, which abut the Santa Ynez Mountains. The ecology of Santa Barbara County today includes vegetation communities consisting predominantly of coastal sage brush and marshlands. Vegetation, within the county, where present, consists primarily of non-native grasses and trees.

Cultural Background

The following cultural background discussion is broken down into pre- and post-European contact histories. The cultural activities discussed occurred in and around construction projects outlined in the Connected 2050.

Prehistory

The project area is located in what is referred to as the Northern California Bight (Northern Bight) archaeological region. The Northern Bight archaeological region encompasses the area from Vandenberg Air Force Base south along the coast to Palos Verdes, inland to the Santa Ynez Valley, the Santa Monica Mountains, and the Los Angeles Basin, and the Northern Channel Islands. The chronological sequence of the Northern Bight (Glassow et al. 2007) can be divided into six periods: Paleo-Coastal Tradition (10,000 – 7000 BCE), Millingstone Horizon (7000 – 5000 BCE), Early Period (5000 – 2000 BCE), Middle Period (2000 BCE – 1 CE), Middle-Late Transition Period (1 – 1000 CE), and Late Period (1000 CE – Historic Contact). These periods are discussed in further detail below.

Paleo-Coastal Tradition (10,000 – 7000 BCE)

The Paleo-Coastal Tradition defines the earliest human occupation of the Northern Bight and describes the cultural trends and subsistence strategies of prehistoric populations from approximately 10,000 to 7000 BCE (Glassow et al. 2007). The Paleo-Indian Period in North America is largely recognized by Clovis style projectile points associated with extinct large mammal remains,

such as mammoth, bison, and dire wolves, particularly in the Southwest and Plains regions (Erlandson et al. 2007; Huckell 1996). Although few Clovis style fluted points have been found in southern California (Erlandson et al. 1987; Dillon 2002), the Paleo-Coastal Tradition is generally associated with a greater emphasis on hunting than later horizons.

The earliest accepted dates for human occupation in California were recovered from two archaeological sites on the Northern Channel Islands. The Arlington Springs site (CA-SRI-173) on Santa Rosa Island produced human femurs dating to approximately 13,000 years ago (Johnson et al. 2002; Arnold et al. 2004). On San Miguel Island, human occupation at Daisy Cave (CA-SMI-261) has been dated to nearly 13,000 years ago and included basketry greater than 12,000 years old, the earliest recorded on the Pacific Coast (Arnold et al. 2004). In nearby San Luis Obispo County, archaeological sites (Cross Creek: CA-SLO-1797 and CA-SLO-832) yielded radiocarbon dates from over 10,000 years ago (Jones et al. 2007).

Data from Paleo-Coastal sites in southern California indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas (Jones and Ferneau 2002; Erlandson et al. 2007). Archaeological deposits at Daisy Cave site yielded an assemblage of “the oldest known fishhooks in the Americas” (Erlandson et al. 2007:57), and shell middens discovered on the mainland of California have yielded dates from 8000 to 7000 BCE (Erlandson et al. 2007).

Millingstone Horizon (7,000 – 5,000 BCE)

A warm and dry 3000-year period called the Altithermal began around 6000 BCE the conditions of the Altithermal are likely responsible for the change in human subsistence patterns at this time, including a greater emphasis on plant foods and small game. Milling implements, including milling stones (e.g., metates, milling slabs) and hand stones (e.g., manos, mullers), are associated with the horizontal motion of grinding small seeds and nuts. Populations increased during the Millingstone Horizon, possibly as a result of an ecological adaptation to collecting plant resources.

Although milling implements suggest an emphasis on seed and nut gathering, Millingstone populations likely employed a mixed food procurement strategy. A broad spectrum of food resources was consumed including small and large terrestrial mammals, sea mammals, birds, shellfish and other littoral and estuarine species, near-shore fishes, and seeds and other plant products (Kennett 2005). Variability in artifact collections over time and from the coast to inland sites indicates that Millingstone Horizon subsistence strategies adapted to environmental conditions (Jones 1996; Byrd and Raab 2007).

Lithic artifacts associated with Millingstone Horizon sites are dominated by locally available tool stone and in addition to ground stone tools such as manos and metates, chopping, scraping, and cutting tools are very common. The mortar and pestle, associated with acorns or other foods processed through pounding, were first used during the Millingstone Horizon, and increased dramatically in later periods (Wallace 1955, 1978; Jones 1996). Sometime during this period, people began making *Olivella* shell beads, possibly indicating the start of a regional exchange system (Glassow et al. 2007).

Early Period (5000 – 2000 BCE)

The Early Period of the Northern Bight is marked by a lower frequency of radiocarbon dated archaeological sites as well as changes in artifact forms. This decline is attributed to population decrease and changes in the environment that may have affected available resources. Differences in

artifact forms, particularly in ground stone implements, likely represent changes in subsistence (Glassow et al. 2007). Mortars and pestles recovered from Early Period sites within the Northern Bight region provide evidence for the incorporation of newly important food resources and dietary expansion. Mortars and pestles are commonly associated with acorn processing, though the earliest use of these tools may have been to process tubers and roots (Glassow et al. 2007). The frequency of projectile points in Early Period assemblages also increased, while the style began to change from lanceolate forms to side-notched forms. Side-notched projectile points, mortars, and pestles are largely absent on the Northern Channel Islands, as marine resources remained the primary emphasis of Island subsistence (Glassow et al. 2007).

Middle Period (2000 BCE – 1 CE)

The Middle Period describes a pronounced trend toward greater adaptation to regional or local resources as well as the development of socioeconomic and political complexity among prehistoric populations (Glassow et al. 2007). The remains of fish, land mammals, and sea mammals are increasingly abundant and diverse in archaeological deposits along the coast, and mortars and pestles became more refined during this period. Coastal populations developed shell fishhooks and projectile points changed from side-notched dart points to contracting stem styles. Flaked stone tools used for hunting and processing occurred in archaeological deposits in higher frequencies and are more morphologically diversified during the Middle Period. Bone tools, including awls, are more numerous than in the preceding period, and the use of asphaltum adhesive became common. Circular fish hooks, compound bone fish hooks, notched stone sinkers, and the tule reed or balsa raft, indicative of complex maritime technology, became part of the toolkit during this period (Arnold 1995; Glassow et al. 2007; Jones and Klar 2005:466; King 1990:87–88).

Permanently occupied settlements with formal residential and ceremonial architecture appear during the Middle Period. Increased sedentism and the development of large villages directly on the mainland coast as well as the Northern Channel Islands represent an intensified marine-focused economy (Glassow et al. 2007:202). Prehistoric populations began to bury the deceased in formal cemeteries with grave goods that may represent changes in ideology and the development of ritual practices, as well as sociopolitical complexity including status differentiation (Glassow et al. 2007).

Middle-Late Transition Period (1 – 1000 CE)

The Middle-Late Transition is marked by continued sedentism, technological innovation, and increased cultural complexity. Shell middens and formal cemeteries at coastal sites indicate that more permanent settlements were being established. Burials during this period were crowded and grave goods and status differentiation is noted among the deceased. Important technology including the *tomol* and the bow and arrow significantly altered lifeways by allowing for dietary expansion and regional trade and interaction. The production of shell bead currency also increased during this period, the uneven distribution of which marks clear social stratification especially among elite burials (Glassow et al. 2007).

Late Period (1000 CE – Historic Contact)

Late Period archaeology of the Northern Bight is focused on climate change and sociopolitical complexity. An environmental warming pattern and intermittent droughts altered the lifeways of coastal and Island populations, and resource stress stimulated an increase in cultural complexity; though some argue that environmentally-stimulated culture change was more gradual, owing to the adaptive strategies of hunter-gatherer societies during periods of resource stress (Gamble

2005). Craft specialization emerges during this period, particularly among shell bead manufacturers on the Northern Channel Islands (Glassow et al. 2007).

Populations were congregated and abundant along the coast and smaller and scattered in the interior. Interior populations were not as complex as their coastal contemporaries, likely due to an absence of sophisticated maritime technology including the *tomol*. Larger populations on the coast were better able to persevere despite the changing environment due to the development of maritime subsistence strategies and economic trade networks “that allowed villages not only to cope more efficiently with hard times but also grow” (Glassow et al. 2007:208). Coastal Chumash populations additionally developed trade networks and interaction systems with their neighbors to the south, the Tongva, who inhabited the Los Angeles Basin as well as the Southern Channel Islands. The first Spanish explorers to the Northern Bight region identified the Chumash and the Tongva as having the most complex political and economic organization in western North America (Glassow et al. 2007).

History

Post-Contact history for the state of California is generally divided into three periods: the Spanish Period (1769 – 1822), Mexican Period (1822 – 1848), and American Period (1848 – present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins in 1769 with the establishment of a settlement at San Diego and the founding of Mission San Diego de Alcalá. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican American War, signals the beginning of the American Period when California became a territory of the United States.

Spanish Period (1769 – 1822)

Spanish explorers made sailing expeditions along the coast of what was then known as Alta (upper) California between the mid-1500s and mid-1700s. In 1542, while in search of the legendary Northwest Passage, Juan Rodríguez Cabrillo recorded a visit to the Santa Barbara area. Sebastian Vizcaíno also conducted exploration of the coast in 1602 and named the Santa Barbara Channel when his ship entered it on the feast day of Saint Barbara (Kyle 2002). The Spanish crown laid claim to Alta California based on the surveys conducted by Cabrillo and Vizcaíno (Bancroft 1885; Gumprecht 1999).

By the 18th century, Spain developed an approach to secure its hold on the territory and counter against other foreign explorers. The Spanish established military forts known as presidios, as well as missions and pueblos (towns) throughout Alta California. The 1769 overland expedition by Captain Gaspár de Portolá marks the beginning of California’s Historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. Portolá established the Presidio of San Diego as the first Spanish settlement in Alta California in 1769. Franciscan Father Junípero Serra also founded Mission San Diego de Alcalá that same year, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823. The Santa Barbara presidio was established in 1782, approximately 5.4 kilometers (3.4 miles) west of the APE, and the Santa Barbara Mission was founded four years later, approximately 7 kilometers (4.4 miles) northwest of the APE (Graffey 2010).

The mission and presidio relied on Chumash labor, and eventually most of the native population lived at the mission complex (Cole 1999). A major emphasis during the Spanish Period in California

was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles).

Spain began making land grants in 1784, typically to retiring soldiers, although the grantees were only permitted to inhabit and work the land. The land titles technically remained property of the Spanish king (Livingston 1914).

Mexican Period (1822 – 1848)

Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Dallas 1955).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The secularization of the missions following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos. Commonly, former soldiers and well-connected Mexican families were the recipients of these land grants, which now included the title to the land. Forty-one ranchos were granted between 1835 and 1846 in what would become Santa Barbara County (Graffy 2010).

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

American Period (1848 – Present)

The United States went to war with Mexico in 1846. During the first year of the war, John C. Fremont traveled from Monterey to Los Angeles with reinforcements, and evaded Californian soldiers in Santa Barbara's Gaviota Pass by taking the route over the San Marcos grade instead (Kyle 2002). The war ended in 1848 with the Treaty of Guadalupe Hidalgo, ushering California into its American Period.

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. territories (Waugh 2003). Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the southern California economy through 1850s. The discovery of gold in the northern part of the state led to the Gold Rush beginning in 1848, and with the influx of people seeking gold, cattle were desired not only for their hides but also as a source of meat and other goods. During the 1850s cattle boom, rancho vaqueros drove large herds from southern to northern California to feed the region's burgeoning mining and commercial boom.

A severe drought in the 1860s decimated cattle herds and drastically affected rancheros' source of income. In addition, property boundaries that were loosely established during the Mexican era led

to lawsuits and disputes with new incoming settlers and caused problems with squatters. Rancheros often were encumbered by debt and the cost of legal fees to defend their property. As a result, much of the rancho lands were sold or otherwise acquired by Americans. Most of these ranchos were subdivided into agricultural parcels or towns (Dumke 1944).

Santa Barbara County

Santa Barbara County was created in 1850 as one of the original twenty-seven counties within the state of California (California State Association of Counties 2014). At the time, less than twenty percent of Santa Barbara's population was Anglo and many of these residents had learned to speak Spanish, converted to Catholicism, and married into the old Californio families (Redmon 2009). In 1851 Captain Salisbury Haley surveyed and laid out the streets of the City of Santa Barbara (City of Santa Barbara 2016). Additional communities and towns developed to the north during the second half of the nineteenth century, including Guadalupe, Los Alamos, Santa Ynez and Santa Maria, and much of the land supported agricultural uses.

Catastrophic drought during 1863-1864 ruined grazing lands and led to many rancheros losing or selling off their land, providing additional property for a growing population. A speculative land boom and tourism resulted in an increase in Anglo settlement in Santa Barbara during the late 1860s and early 1870s by which time Anglos constituted a majority of the population (Redmon 2009).

By 1873 Ventura County was created and separated from Santa Barbara County. The Southern Pacific Railroad arrived in the region in 1887, which further advanced tourism and relocation to the area. That year the California land speculation boom peaked in the city of Santa Barbara (City of Santa Barbara 2016). Wealthy visitors were drawn to the area by the beautiful scenery, climate, and establishments catering to them (Graffy 2010).

A major earthquake in 1925 damaged or destroyed many structures throughout the county and resulted in a major rebuilding effort in the city of Santa Barbara (United States Geological Survey, n.d.). The region continued to grow and develop over the following decades, benefitting from the discovery of a large offshore oil field in the late 1920s, increased production in oil fields in northern portions of the county, and the opening of a new airport in the Goleta area in the 1930s. (City of Santa Barbara 2016). In the second half of the 20th century, agriculture and oil continued to contribute to the prosperity of North County communities, such as Santa Maria, while the operation of Vandenberg Air Force Base helped to foster and diversify the region's growth (City of Santa Maria 2021). Santa Barbara, the South County's main urban center relied largely on its long-standing tourism sector, but was, along with neighboring communities, boosted by the construction of the current University of California, Santa Barbara in the 1950s (University of California History Digital Archives 2021). Overall, the County grew steadily in the decades after World War II, expanding from a population of about 100,000 in 1950 to approximately 446,000 as of 2019.

4.4.2 Regulatory Setting

This section includes a discussion of the applicable laws, ordinances, regulations, and standards governing cultural resources.

a. Federal Regulations

National Register of Historic Places

The National Register of Historic Places (NRHP) was established by the National Historic Preservation Act of 1966 as “an authoritative guide to be used by Federal, state, and local governments, private groups and citizens to identify the Nation’s cultural resources and to indicate what properties should be considered for protection from destruction or impairment” (36 Code of Federal Regulations 60.2). The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it meets any one of the following criteria:

Criterion A: Are associated with events that have made a significant contribution to the broad patterns of our history

Criterion B: Are associated with the lives of persons significant in our past

Criterion C: Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined in the following manner:

Location: The place where the historic property was constructed or the place where the historic event occurred

Design: The combination of elements that create the form, plan, space, structure, and style of a property

Setting: The physical environment of a historic property

Materials: Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property

Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory

Feeling: A property’s expression of the aesthetic or historic sense of a particular period of time

Association: The direct link between an important historic event or person and a historic property

b. State Regulations

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires that a lead agency determine whether a project could have a significant effect on historical resources and tribal cultural resources (Public

Resources Code [PRC] Section 21074 [a][1][A]-[B]). A historical resource is a resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR) (Section 21084.1), a resource included in a local register of historical resources (Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (Section 15064.5[a][3]).

PRC Section 5024.1 requires an evaluation of historical resources to determine their eligibility for listing in the CRHR. The purpose of the register is to maintain listings of the state's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP, as enumerated according to CEQA and quoted below.

15064.5(a)(3) [...] Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC, § 5024.1, Title 14 California Code of Regulations, Section 4852) including the following:

- (1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
- (2) Is associated with the lives of persons important in our past
- (3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
- (4) Has yielded, or may be likely to yield, information important in prehistory or history

15064.5(a)(4) The fact that a resource is not listed in or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the PRC), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC sections 5020.1(j) or 5024.1.

15064.5(b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

In addition, if a project can be demonstrated to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2[a], [b], and [c]).

PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it does one or more of the following:

- a. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information
- b. Has a special and particular quality such as being the oldest of its type or the best available example of its type
- c. Is directly associated with a scientifically recognized important prehistoric or historic event or person

Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (State CEQA Guidelines Section 15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion or eligibility for inclusion in the CRHR (State CEQA Guidelines Section 15064.5[b][2][A]).

Codes Governing Human Remains

The disposition of human remains is governed by Health and Safety Code Section 7050.5 and PRC Sections 5097.94 and 5097.98 and falls within the jurisdiction of the NAHC. If human remains are discovered, the County Coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to PRC Section 5097.98, will immediately notify those persons it believes to be most likely descended from the deceased Native Americans so they can inspect the burial site and make recommendations for treatment or disposal.

c. Local Regulations

County of Santa Barbara Comprehensive Plan Conservation Element

The County of Santa Barbara Comprehensive Plan Conservation Element, adopted in 1979 and amended in 2010, recommends ways in which archaeological studies may be incorporated into projects. They are:

- Archaeological sites may be incorporated into parks or landscaped area in such a way that no damage will be done to the archaeological materials. Areas with archaeological sites may also be designated as limited use areas where they can be protected from vandalism. For either of these first two alternatives, a preliminary survey and surface collection by a competent archaeologist must be carried out prior to any action. Buffer zones adjacent to these sites may be necessary, but the extent of such a zone must be determined for each site.
- Outdoor museums are a feasible alternative to destruction when the nature of the archaeological remains is such that their careful excavation and preservation by professionals would prove attractive to the public. This alternative would be of value to the public relations of many private firms and would serve to increase the awareness of the County's prehistory among both residents and tourists. A museum of this sort might consist of a simple tin roof and fence protecting ongoing or completed excavations and appropriate displays of artifacts. Painted Cave is an example of how this approach has been implemented in Santa Barbara County.
- One method of preserving sites for future archaeological investigation is through the use of extensive land fill. If sites scheduled for possibly damaging use could be covered with sufficient clean fill to avoid damage, such sites would be preserved.
- Salvage excavation is a last resort in the "preservation" of archaeological information. Such short notice excavations destroy relevant information which might be more effectively

excavated with future improved archaeological methods and techniques. In salvage archaeology, it frequently is impossible to generate an adequate research design before excavation is commenced. Considering these factors, the loss of valuable information is inevitable. In addition, salvage operations are expensive undertakings. Consequently, every effort should be made to preserve, rather than excavate, endangered archaeological sites.

Other recommended approaches include:

- Public purchase and protection of representative sites from each topographic class (King, Moratto, and Leonard n.d.).
- Granting of tax relief to private owners protecting archaeological resources (King, Moratto, and Leonard n.d.). Protection should include no alteration of the ground surface of any archaeological site, and no surface or subsurface collecting by private owners or the public. If this approach is implemented, specific guidelines for private protection of sites can be obtained from archaeologists at the University of California, Santa Barbara.
- Action by the County to preserve and protect known historic cemetery sites (less than 200 years old). Such a policy has been legislated by the State, but initiative taken by County officials would ensure enforcement of the law.
- Designation of high-density archaeological resource areas as Historical Monuments. Applications for placing such areas on the National Register of Historic Places presently are pending in Santa Barbara County.
- Development of public education programs which would include general information on the prehistory of Santa Barbara County, with emphasis on the importance of archaeological sites as a data base for further understanding of the aboriginal inhabitants. Such a program might decrease the rate at which archaeological resources are destroyed by vandalism.

The County's Land Use and Development Code implements the Comprehensive Plan Conservation Element.

County Landmarks and Places of Historic Merit Lists

In addition to the CRHR, a resource listed in or eligible for listing in a local register also qualifies as a significant historical resource. CEQA Statute Section 21074(a)(1)(B) and CEQA Guidelines Section 15064.5(a)(2) indicate that resources included in a local register of historical resources are presumed to be significant historical resources.

Santa Barbara County has two such local registers: the Santa Barbara County Landmarks list, and Places of Historic Merit list. Both are maintained by the Historic Landmarks Advisory Commission (HLAC). Any resource listed in one of these registers is presumed to be a significant historical resource pursuant to CEQA. The review process for a property to become a County Landmark includes different criteria and reporting requirements for landmark designation than those used in CEQA review. A Landmark is any place, site, building, structure, or object having historical, aesthetic or other special character or interest and designated as a Landmark under the provisions of County Code Chapter 18A. A place, site, building, structure, or object is eligible for designation as a County Landmark if any of the following criteria are met:

- A) It exemplifies or reflects special elements of the County's cultural, social, economic, political, archaeological, aesthetic, engineering, architectural or natural history;
- B) It is identified with persons or events significant in local, state or national history;

- C) It embodies distinctive characteristics of a style, type, period or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
- D) It is representative of the work of a notable builder, designer, or architect;
- E) It contributes to the significance of a historic area, being a geographically definable area possessing a concentration of historic, prehistoric, archaeological, or scenic properties, or thematically related grouping of properties, which contribute to each other and are unified aesthetically by plan or physical development;
- F) It has a location with unique physical characteristics or is a view or vista representing an established and familiar visual feature of a neighborhood, community, or the County of Santa Barbara;
- G) It embodies elements of architectural design, detail, materials, or craftsmanship that represent a significant structural or architectural achievement or innovation;
- H) It reflects significant geographical patterns, including those associated with different eras of settlement and growth, particularly transportation modes or distinctive examples of park or community planning;
- I) It is one of the few remaining examples in the County, region, state, or nation possessing distinguishing characteristics of an architectural or historical type or specimen.

A designated County Landmark is preserved and protected by conditions restricting its demolition, removal, alteration, or use. The specific conditions for each landmarked property are spelled out in the Board Resolution which finalized the property's Landmark status. Plans for alterations to Landmarks are required to be reviewed by the HLAC for approval. Designation as a Place of Historic Merit officially recognizes the building or site as having historic, aesthetic or cultural value. A Place of Historic Merit, as opposed to a Landmark, is not protected by restrictions as to demolition, removal, alteration or use, but it would usually qualify as a historical resource in the context of CEQA environmental review. Designation as a Landmark recognizes the building or site at a higher level of historic, aesthetic, or cultural significance.

4.4.3 Impact Analysis

a. Methodology and Significance Thresholds

For the purpose of this discussion, the term cultural resource broadly includes historical and archaeological. The significance of a cultural resource impact is determined by whether that resource meets the criteria discussed above. Where the significance of a site is unknown, it is presumed to be a significant resource for the purpose of identifying potential areas of disturbance associated with construction projects or development in urban infill areas near high-quality transportation corridors as outlined in the Connected 2050.

Appendix G of the State CEQA Guidelines identifies the following criteria for determining whether implementation of Connected 2050 would have a significant impact on cultural and historic resources:

- 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 significant of an archaeological resource pursuant to §15064.5;

- c) Disturb any human remains, including those interred outside of formal cemeteries.

b. Project Impacts and Mitigation Measures

The following section presents a programmatic-level discussion of the potential for impacts to sensitive cultural resources from implementation of Connected 2050. Impacts and associated mitigation measures would apply in Santa Barbara County and all cities within the County. Section 4.3.4 summarizes the impacts associated with capital improvement projects proposed in the Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible at this time. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could result in the impacts as described in the following section.

Threshold: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

IMPACT CR-1 TRANSPORTATION IMPROVEMENT PROJECTS AND THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 MAY RESULT IN THE ALTERATION OR DEMOLITION OF HISTORICAL RESOURCES THROUGHOUT THE SBCAG REGION. POTENTIAL IMPACTS TO HISTORICAL RESOURCES WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Based on CEQA Guidelines Section 15064.5, future reasonably anticipated development activities carried out under Connected 2050 would have a significant impact on historical resources if they would cause a substantial adverse change in the significance of a historical resource. Historical resources include properties eligible for listing on the NRHP, the CRHR, or a local register of historical resources. In addition, as explained in Section 15064.5, “[s]ubstantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.” A review of the NRHP and the California State Office of Historic Preservation’s Built Environment Resource Directory shows there are more than 400 known historical resources listed in or eligible for the NRHP and CRHR and local registers located throughout the Plan Area. Additionally, there may be other yet unidentified resources eligible for inclusion in the NRHP or CRHR or for designation as a local Landmark. Connected 2050 proposes goals and policies that would consider aesthetics and preserve and enhance historic and local community character, in addition to preserving and maintaining the historic character of existing highway structures. While these policies may work to avoid and/or reduce impacts to historical resources, Connected 2050 also proposes new transportation improvement projects and would promote growth through new land use projects. If land use projects would involve redevelopment/demolition of existing structures, it is possible that such structures could have historical significance (as determined by site-specific evaluation) given the presence of structures that are over 50 years old within the SBCAG region, particularly within existing urbanized areas. Redevelopment or demolition could result in the permanent loss of historic structures. Similarly, while proposed transportation projects would not impact known historic structures, it is possible that such projects may require reconstruction or demolition of transportation infrastructure or other structures that are over 50 years old, and which may be considered historically significant as determined by site-specific evaluation. Such reconstruction or demolition could result in the permanent loss of historic structures.

In general, prior to commencement of any action, development or land use changes on lands subject to federal jurisdiction or for projects involving federal funding, a cultural resource survey and an environmental analysis must be prepared. Historic resources are also protected under the regulations of the National Historic Preservation Act and the Department of Transportation Act of 1966. County and city sponsored projects would be subject to local ordinance requirements, including General Plan provisions that protect cultural resources. Nevertheless, impacts would be significant because there could be substantial adverse changes to historic structures that meet the definition of “historical resources.”

Mitigation Measures

Project sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

CR-1 Historical Resources Impact Minimization

Prior to individual project permit issuance, the implementing agency of a Connected 2050 project involving earth disturbance or construction of permanent above ground structures or roadways shall prepare a map defining the impact zone. This map shall indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known historical resources are located within the impact zone. If a structure greater than 45 years in age is within the identified impact zone, a survey and evaluation of the structure(s) to determine their eligibility for recognition under State, federal, or local historic preservation criteria shall be conducted. The evaluation shall be prepared by an architectural historian, or historical architect meeting the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, Professional Qualification Standards. The evaluation shall comply with CEQA Guidelines section 15064.5(b). Study recommendations shall be implemented, which may include, but would not be limited to, the following:

- Realign or redesign projects to avoid impacts on known historic resources where possible.
- If avoidance of a significant architectural/built environment resource is not feasible, additional mitigation options include, but are not limited to, specific design plans for historic districts, or plans for alteration or adaptive re-use of a historical resource that follows the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring and Reconstructing Historic Buildings.
- Comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect historic resources.

Significance After Mitigation

Redevelopment or demolition that may be required to implement transportation improvements and/or infill and other development may result in the permanent loss or damage to historic structures. While implementation of Mitigation Measure CR-1 would reduce impacts to the extent feasible, some project-specific impacts may be unavoidable. Therefore, this impact is significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

Threshold: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

IMPACT CR-2 CONSTRUCTION ACTIVITY ASSOCIATED WITH TRANSPORTATION IMPROVEMENT PROJECTS, AND LAND USE DEVELOPMENT ENVISIONED BY THE IMPLEMENTATION OF CONNECTED 2050 MAY RESULT IN DISTURBANCES TO ARCHAEOLOGICAL RESOURCES THROUGHOUT THE SBCAG REGION. POTENTIAL IMPACTS TO ARCHAEOLOGICAL RESOURCES WOULD BE SIGNIFICANT AND UNAVOIDABLE.

It is known that archaeological resources are present throughout the SBCAG region. Therefore, it is possible to encounter known and unknown archaeological resources as a result of implementation of transportation improvement projects pursuant to the Connected 2050. Many of the improvements proposed under the Connected 2050 consist of minor expansions of existing facilities that would not involve construction in previously undisturbed areas. However, depending on the location and extent of the proposed improvement and ground disturbance, known and/or unknown cultural resources could be impacted. Project-specific analysis would be required as individual projects are proposed.

In addition, Connected 2050 contains a future land use scenario that emphasizes infill near transit and within existing urbanized areas. As a result, encroachment into undisturbed areas would be reduced when compared to land use scenario that does not focus future development within existing urbanized areas, thereby reducing the potential for impacts to known or unknown archaeological resources in undisturbed areas. However, it is possible that archaeological resources could be located on or near future infill development sites, as well as in undisturbed areas that would still be developed. Project grading and excavation for development sites may disturb these undiscovered resources.

In general, prior to commencement of any action, development or land use changes on lands subject to federal jurisdiction or for projects involving federal funding, a cultural resource survey and an environmental analysis must be prepared. County and city sponsored projects would be subject to local ordinance requirements, including General Plan provisions that protect cultural resources.

Nevertheless, impacts to archaeological resources would be potentially significant because there could be substantial adverse changes to significant archaeological resources, i.e., archaeological resources that meet the definition of “historical resources” or “unique archaeological resources.”

Mitigation Measures

Project sponsor agencies can and should implement the following mitigation developed for the Connected 2050 program where applicable for transportation projects that result in impacts to archaeological resources. Cities and counties in the SBCAG region can and should implement this measure where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

CR-2 Archaeological Resources Impact Minimization

Before construction activities, implementing agencies shall retain a qualified archaeologist to conduct a record search at the Central Coast Information Center to determine whether the project area has been previously surveyed and whether resources were identified. When recommended by the Information Center, implementing agencies shall retain a qualified archaeologist to conduct

archaeological surveys before construction activities. Implementing agencies shall follow recommendations identified in the survey, which may include, but would not be limited to: subsurface testing, designing and implementing a Worker Environmental Awareness Program (WEAP), construction monitoring by a qualified archaeologist, or avoidance of sites and preservation in place. Recommended mitigation measures will be consistent with CEQA Guidelines Section 15126.4(b)(3) recommendations.

In the event that evidence of any prehistoric or historic-era subsurface archaeological features or deposits are discovered during construction-related earthmoving activities (e.g., ceramic shard, trash scatters, lithic scatters), all ground-disturbing activity in the area of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. If the find is a prehistoric archaeological site, the appropriate Native American group shall be notified. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a testing plan shall be prepared and implemented. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the implementing agency to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics and other factors, shall recommend additional measures such as the preparation and implementation of a data recovery plan. All cultural resources work shall follow accepted professional standards in recording any find including submittal of standard DPR Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area.

Implementing agencies shall comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect archaeological resources.

Significance After Mitigation

Implementation of the above measure would reduce impacts to archaeological resources by requiring cultural resource searches and surveys of project areas and providing a procedure for discovered cultural archaeological resources. While implementation of Mitigation Measure CR-2 would reduce impacts to the extent feasible, some project-specific impacts may be unavoidable. Therefore, this impact is significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

Threshold: Would the project disturb any human remains, including those interred outside of formal cemeteries?

IMPACT CR-3 CONSTRUCTION ACTIVITY ASSOCIATED WITH TRANSPORTATION IMPROVEMENT PROJECTS, AND LAND USE DEVELOPMENT ENVISIONED BY IMPLEMENTATION OF CONNECTED 2050 MAY RESULT IN DISTURBANCES TO HUMAN REMAINS THROUGHOUT THE SBCAG REGION. POTENTIAL IMPACTS TO HUMAN REMAINS WOULD BE LESS THAN SIGNIFICANT.

The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, existing regulations outlined in the state of California Health and Safety Code Section 7050.5 state no further disturbance may occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. In the event of an unanticipated discovery of human remains, the County Coroner where the remains are found, must be notified immediately. If the human remains are determined to be prehistoric, the Coroner will

notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD must complete the inspection of the site within 48 hours of being granted access and provide recommendations as to the treatment of the remains to the landowner or project sponsor. With adherence to existing regulations, impacts to human remains would be less than significant.

Mitigation Measures

No mitigation measures are required.

d. Specific RTP Projects that May Result in Impacts

All Connected 2050 land use and transportation projects that require ground disturbance or potentially impact an existing structure may result in impacts as discussed in impacts CR-1 through CR-3; and therefore, are not specifically identified in table format. Connected 2050 projects are listed in Section 2.0, *Project Description*. Additional site-specific analysis will need to be conducted as the individual projects are implemented in order to determine the project-specific magnitude of the impact. Mitigation measures discussed above would apply to these specific projects.

4.4.4 Cumulative Impacts

Development in the SBCAG region would increase under buildout of Connected 2050, and development would continue in adjoining regions as well. The increase in growth in previously undisturbed areas contributes to regional impacts on existing and previously undisturbed and undiscovered historical and archaeological resources. While most cultural resources are typically site-specific, with impacts that are project-specific, others may have regional significance; for example, an historical structure that represents the last known example of its kind. For such a resource, cumulative impacts and the contribution of Connected 2050 to them, would be significant, and the Connected 2050 contribution would be cumulatively considerable. Mitigation measures outlined in this section would reduce impacts associated with Connected 2050 projects. However, the Connected 2050 contribution would remain cumulatively considerable after mitigation because it cannot be guaranteed that all future project-level impacts can be mitigated to a less than significant level.

4.5 Energy

This section discusses the energy impacts of implementing Connected 2050, following the guidance for evaluation of energy impacts in Section 15126.2(b) and Appendix G of the CEQA Guidelines.

4.5.1 Setting

Energy relates directly to environmental quality. Energy use can adversely affect air quality and other natural resources. The vast majority of California's air pollution is caused by burning fossil fuels. Consumption of fossil fuels is linked to changes in global climate and depletion of stratospheric ozone. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes (auto, carpool, and public transit); vehicle speeds; and miles traveled by these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy. In addition, residential, commercial, and industrial land uses consume energy, typically through the use of natural gas and electricity.

Petroleum

California

California is one of the top producers of petroleum in the nation, with drilling operations occurring throughout the state, but primarily concentrated in Kern and Los Angeles counties. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received at ports in Los Angeles, Long Beach, and the San Francisco Bay area. Crude oil production in California and Alaska is in decline, and California refineries have become increasingly dependent on foreign imports (California Energy Commission [CEC] 2020a). Foreign suppliers now produce more than half of the crude oil refined in California (CEC 2016a).

Santa Barbara County

Petroleum fuels are regulated by the Energy, Minerals, and Compliance Division, Petroleum Unit. This includes onshore oil and gas activities within Santa Barbara County by performing annual inspections of onshore wells, facilities, pipelines, and other pertinent equipment throughout oil production leases. The unit is also responsible for protecting the health, safety, public welfare, physical environment and natural resources of the County by the reasonable regulation of onshore petroleum facilities and operations, including but not limited to: exploration (drilling), production, storage, processing, disposal, well plugging, and well abandonment (Santa Barbara 2021).

There is one petroleum refinery in Santa Barbara County located in Santa Maria (EIA 2021a). According to the Division of Oil, Gas, and Geothermal Resources (DOGGR), and there are several oil and gas wells of unknown status within the County including wells that are classified as orphaned, abandoned or operating oil wells (DOC 2021).

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. The use of these fuels is encouraged through various statewide regulations and plans, such as the Low Carbon Fuel Standard and Senate Bill (SB) 32. Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle with transportation fuels including the following:

Hydrogen

Hydrogen is being explored for use in combustion engines and fuel cell electric vehicles. The interest in hydrogen as an alternative transportation fuel stems from its clean-burning qualities, its potential for domestic production, and the fuel cell vehicle's potential for high efficiency, which is two to three times more efficient than gasoline vehicles. Currently, 42 hydrogen refueling stations are located in California; one is located within Santa Barbara County in the City of Santa Barbara on La Cumbre Road. (DOE 2021a).

Biodiesel

Biodiesel is a renewable alternative fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant greases. Biodiesel is biodegradable and cleaner-burning than petroleum-based diesel fuel. Biodiesel can run in any diesel engine generally without alterations; however, fueling stations have been slow to make it available. There are currently 11 biodiesel refueling stations in California, none of which are located in Santa Barbara County (DOE 2021b).

Electric Vehicles

Electricity can be used to power electric and plug-in hybrid electric vehicles directly from the power grid. Electricity used to power vehicles is generally provided by the electricity grid and stored in the vehicle's batteries. Fuel cells are being explored as a way to use electricity generated onboard the vehicle to power electric motors. There are approximately 115 public electrical charging stations in Santa Barbara County, (DOE 2021c).

Natural Gas

California

Natural gas continues to play an important and varied role in California. The State's net natural gas production for 2019 was 193.9 billion cubic feet, or approximately 201,123 billion British thermal units (Btu), representing a decrease of 4.3 percent from 2020 production (EIA 2020b).

2018 California Gas Report

The 2018 California Gas Report presents a comprehensive outlook for natural gas requirements and supplies for California through the year 2035. The report is prepared in even-numbered years, followed by a supplemental report in odd-numbered years, in compliance with California Public Utilities Commission (CPUC) Decision D.95-01-039. The projections contained in the California Gas Report are for long-term planning and do not necessarily reflect the day-to-day operational plans of the utilities (California Gas and Electric Utilities [CGEU] 2018).

California natural gas demand, including volumes not served by utility systems, is expected to decrease at a rate of 0.5 percent per year from 2018 to 2035. The forecasted decline is due to a combination of moderate growth in the Natural Gas Vehicle market and across-the-board declines in all other market segments: residential, commercial, electric generation, and industrial markets (CGEU 2018).

Residential gas demand is expected to decrease at an annual average rate of 1.4 percent. Demand in the commercial and industrial markets are expected to increase slightly at an annual rate of 0.2 percent. Stricter codes and standards coupled with more aggressive energy efficiency programs and

new goals laid out in SB 350, discussed further under *Regulatory Setting*, are making a significant impact on the forecasted load for the residential, commercial, and industrial markets (CGEU 2018).

For the purposes of load-following as well as backstopping intermittent renewable resource generation, gas-fired generation will continue to be the primary technology to meet the ever-growing demand for electric power; however, overall gas demand for electric generation is expected to decline at 1.4 percent per year for the next 17 years due to more efficient power plants, statewide efforts to minimize GHG emissions through aggressive programs pursuing demand-side reductions, and the acquisition of preferred power generation resources that produce little or no carbon emissions (CGEU 2018).

California's existing gas supply portfolio is regionally diverse and includes supplies from California onshore and offshore sources, Southwestern United States supply sources, the Rocky Mountains, and Canada (CGEU 2018). The City of Santa Barbara is exploring options to not allow new gas connections for new residential construction.

4.5.2 Regulatory Setting

a. Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted by Congress in 2007, is designed to improve vehicle fuel economy and help reduce U.S. dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil, and confronting global climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard, requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels
- Reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020 – an increase in fuel economy standards of 40 percent

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the U.S. The law placed responsibility on the National Highway Traffic and Safety Administration, a part of the U.S. Department of Transportation, for establishing and regularly updating vehicle standards. The United States Environmental Protection Agency (USEPA) administers the Corporate Average Fuel Economy program, which determines vehicle manufacturers' compliance with existing fuel economy standards. Since the inception of the Corporate Average Fuel Economy program, the average fuel economy for new light-duty vehicles steadily increased from 13.1 miles per gallon for the 1975 model year to 30.7 miles per gallon for the 2014 model year and is proposed to increase to 54.5 by 2025. Light-duty vehicles include autos, pickups, vans, and sport-utility vehicles.

Energy Star Program

In 1992, the USEPA introduced Energy Star as a voluntary labeling program designed to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specification for

maximum energy use established under the program are certified to display the Energy Star label. In 1996, the USEPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, and homes.

b. State

California Energy Plan

The CEC is responsible for preparing the California Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The 2008 California Energy Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs; and encouragement of urban designs that reduce vehicle miles travelled (VMT) and accommodate pedestrian and bicycle access.

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), the CEC and the California Air Resources Board (CARB) prepared and adopted in 2003 a joint agency report, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand. Furthermore, in response to the CEC's 2003 and 2005 *Integrated Energy Policy Reports*, the Governor directed the CEC to take the lead in developing a long-term plan to increase alternative fuel use.

Senate Bill 1078: California Renewables Portfolio Standard Program

SB 1078 (Chapter 516, Statutes of 2002), and as expanded under SB 2, established the RPS for electricity supply. The RPS requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 20 percent of their supply from renewable sources by 2017. SB 2 expanded this law and required procurement from eligible renewable energy resources to 33 percent by 2020. In addition, electricity providers subject to the RPS must increase their renewable share by at least one percent each year.

Senate Bill 100: California Renewable Energy Portfolio Standard Program: Emissions of Greenhouse Gases

Approved by the Governor on September 10, 2018, SB 100 amends the State's RPS program from 33 percent of electricity generation from renewable sources by 2020 and 50 percent by 2030 to 33 percent by 2020, 50 percent by 2026, 60 percent by 2030, and 100 percent carbon-free electricity generation by 2045.

Assembly Bill 1493: Reduction of Greenhouse Gas Emissions

AB 1493 (Chapter 200, Statutes of 2002), known as the Pavley bill, amended Health and Safety Code sections 42823 and 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks, and other vehicles used for noncommercial personal transportation in California.

Implementation of new regulations prescribed by AB 1493 required that the state of California apply for a waiver under the federal Clean Air Act. Although the USEPA initially denied the waiver in 2008, USEPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to its initially adopted regulations to apply the Pavley standards that reduce GHG emissions to new passenger vehicles in model years 2009 through 2016. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions.

Energy Action Plan

In the October 2005 *Energy Action Plan (EAP) II*, the CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues and research and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required the CEC to prepare a plan to increase the use of alternative fuels in California. The CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other federal, State, and local agencies. The State Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Bioenergy Action Plan, Executive Order S-06-06

Executive Order (EO) S-06-06, April 25, 2006, establishes targets for the use and production of biofuels and biopower, and directs State agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050. EO S-06-06 also calls for the State to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the State can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications

- Create jobs and stimulate economic development, especially in rural regions of the state
- Reduce fire danger, improve air and water quality, and reduce waste

Title 24, California Code of Regulations

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-residential Buildings. The CEC established Title 24 in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. The standards are updated on an approximately three-year cycle to allow consideration and possible incorporation of new efficient technologies and methods. In 2016, the CEC updated Title 24 standards with more stringent requirements effective January 1, 2017. All buildings for which an application for a building permit is submitted on or after January 1, 2017, must follow the 2016 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The CEC Impact Analysis for California's 2016 Building Energy Efficiency Standards estimates that the 2016 Standards are 28 percent more efficient than the previous 2013 standards for residential buildings and five percent more efficient for non-residential buildings. The building efficiency standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary due to local climatologic, geologic, or topographic conditions, provided these standards exceed those provided in Title 24.

California Green Building Standards Code (2019), California Code of Regulations Title 24, Part 11

California's Green Building Code, referred to as CalGreen, was developed to provide a consistent approach to green building in the State. Having taken effect in January 2020, the most recent version of CalGreen lays out the minimum requirements for newly constructed residential and nonresidential buildings to reduce GHG emissions through improved energy efficiency and process improvements. It also includes voluntary tiers to further encourage building practices that improve public health, safety, and general welfare by promoting a more sustainable design.

Executive Order N-79-20

On September 23, 2020, Governor Newsom issued EO N-79-20, which established the following new statewide goals:

- All new passenger cars and trucks sold in-state to be zero-emission by 2035;
- All medium- and heavy-duty vehicles in the state to be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and
- All off-road vehicles and equipment to be zero-emission by 2035 where feasible.

EO N-79-20 directs CARB, the Governor's Office of Business and Economic Development, the CEC, the California Department of Transportation, and other state agencies to take steps toward drafting regulations and strategies and leveraging agency resources toward achieving these goals. This Executive Order, if implemented, will change the future transportation fuel mix in California, substantially decreasing fossil fuel usage and increasing electricity usage. However, there is insufficient information to incorporate this executive order into this analysis, especially given that there is currently no pathway for its implementation due to the revocation of California's authority

to set its own GHG emissions standards and to adopt its own zero-emission vehicle mandates by the federal Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule; to do so would be speculative. Accordingly, this energy analysis has been conducted with the most recent available tools prepared and accepted by the regulatory agencies, which do not incorporate implementation of EO N-79-20.

c. Local

Santa Barbara County General Plan

The Santa Barbara County General Plan Energy Element was adopted on 1994 and republished in June 2015. The General Plan includes the following goals and policies regarding energy consumption:

Policy 1.6: Siting Governmental Facilities- Promote coordination of new public facilities with mass transit service and other alternative transportation services, including bicycles, and design structures to enhance mass transit, bicycle, and pedestrian use.

Internal Action 1.6.1: The County shall continue to consider location of new County facilities near mass transit corridors and existing and planned bicycle commuting routes as one of the criteria when considering location.

Internal Action 1.6.2: If a new governmental facility is not located along or within a 1/8 mile of a mass transit corridor, the County shall work cooperatively with local transit agencies regarding new bus service to the facility.

Policy 1.7: County Transportation Demand Management-The County shall continue to make every effort to meet its Transportation Demand Management (TDM) objectives to reach its designated rate of participation specified in the TDM Ordinance.

Internal Action 1.7.1: The County shall continue efforts on increasing participation through various means and monitoring of the effectiveness of the TDM program.

Policy 2.5: Maintain and Improve Enforcement of State Building Energy Standards-The County shall maintain and strengthen the existing training of Planning & Development, Building & Safety Division personnel to remain proficient in reviewing plans for compliance with the energy code.

Policy 2.7: Shade Trees-The County shall maintain and expand the tree population to enhance the cooling benefits.

Public Service 2.7.1: The County shall support the efforts and work cooperatively with Santa Barbara Beautiful and other community tree planting organizations.

Encouragement 2.7.1: Landscape plans shall include shade trees in parking lots and street trees, where appropriate.

Encouragement 2.7.2: The selection of tree species shall be reviewed by the County to ensure that appropriate species are chosen (e.g., deep-rooting, low-maintenance, drought-tolerant, native, etc.).

Encouragement 2.7.3: Existing trees on a proposed project site shall be assessed to determine compatibility with landscaping, shading and solar access goals, and should be protected to the maximum extent feasible.

Goal 3: Transportation and Land Use-Provide a composition of land-uses

Policy 3.1: Alternative Transportation and Support Facilities- Enhance opportunities for alternative transportation.

Public Service 3.1.1: The County shall continue to develop programs that encourage the use of alternative modes of transportation, including bike-and-ride and park-and-ride facilities.

Public Service 3.1.2: The County shall work with the Santa Barbara County Association of Governments and adjacent jurisdictions to pursue a commuter rail system as a potential mass transit option for the County.

Public Service 3.1.3: The County shall work with the Santa Barbara County Association of Governments, appropriate organizations, local mass transit agencies, educational institutions, driver education, Department of Motor Vehicle, etc., to inform the public about available transportation choices, and to inform the transit agencies about ways to make alternative transportation more attractive, etc.

Encouragement 3.1.1: Where appropriate, the County shall require projects to include mass transit improvements, such as bus stops, pull-outstand shelters, or funding to assist in the installation of mass transit improvements as mitigation for significant traffic impacts.

Encouragement 3.1.2: The County should amend applicable zoning ordinances to recommend design of the mass transit passenger stops to be shaded, comfortable, convenient, and safe

Santa Barbara County Energy and Climate Action Plan (ECAP)

The County's current 2015 Energy & Climate Action Plan sunset in 2020. The new 2030 CAP will be updated with a goal to achieve 50% reduction of communitywide greenhouse gas emissions by 2030. The CAP will also feature resilience measures in response to likely and imminent climate change impacts and updated thresholds of significance for local projects. The new 2030 CAP is in the process of collecting public input and has not been adopted.

City of Santa Barbara Climate Action Plan (CAP)

The Santa Barbara Climate Action Plan adopted in 2012 addresses climate change issues for the City of Santa Barbara community in the period to the year 2030, in accordance with directives of the Santa Barbara General Plan and the California Global Warming Solutions Act (AB 32). The CAP also supports statewide GHG emissions reduction goals identified in SB 375. The CAP includes measures pertaining to building energy efficiency, construction equipment fuel usage, and transportation emissions.

City of Carpinteria Energy Action Plan (EAP)

The Carpinteria Energy Action Plan adopted in 2016 identifies Carpinteria's long term vision and goals on achieving energy efficiency in local government facilities and addresses energy consumption by the City's facilities and operations. The City of Carpinteria aims to increase the energy efficiency in their own facilities in order minimize energy costs and protect the environment, with the understanding that energy generation is directly related to greenhouse gas emissions. The EAP discusses goals to reduce greenhouse gas emissions and lower municipal energy costs by identifying projects and priorities for energy efficiency work throughout the City's facilities and operations.

City of Goleta Climate Action Plan

The City of Goleta's (City) 2014 Climate Action Plan (CAP) identifies both quantified and non-quantified measures to effectively meet greenhouse gas (GHG) reduction targets. Attainment of the reduction targets requires a commitment to local actions as well as continued implementation of federal and state mandates. These actions and goals contribute to the City's current and future prosperity and sustainability by 1) conserving resources such as energy and water; 2) fostering the creation of green jobs; and 3) furthering Goleta's leadership in clean research and development (R&D) industries.

4.5.3 Impact Analysis

a. Methodology and Significance Thresholds

Significance Thresholds

Pursuant to the *CEQA Guidelines*, potentially significant energy impacts to would result if the project would:

- a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation
- b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency

Methodology

Public Resources Code Section 21100(b)(3) states that an EIR shall include "mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." The physical environmental impacts associated with the use of energy including the generation of electricity and burning of fuels have been accounted for in Section 4.2, *Air Quality*, and Section 4.8, *Greenhouse Gas Emissions*.

Energy consumption is analyzed herein in terms of construction and operational energy. Construction energy demand accounts for anticipated energy consumption during construction of Connected 2050, such as fuel consumed by construction equipment and construction workers' vehicles traveling to and from construction sites. Operational energy demand accounts for the anticipated energy consumption during operation of the transportation system and land use scenario envisioned by Connected 2050, such as fuel consumed by cars, trucks, and public transit; natural gas consumed for heating indoor spaces; and electricity consumed for lighting, new traffic signals, and electric vehicle charging stations.

For this analysis, the calculation of total energy consumption follows the Input-Output methodology suggested by Caltrans (Caltrans 1983). It should be noted that the Caltrans methodology provides for the calculation of the cumulative energy consumption. Not only does the methodology include energy consumption that would be due solely to the construction of Connected 2050 projects, it also includes energy consumption that is not due to Connected 2050, but rather is due to socioeconomic growth (e.g., population and employment), land use policies, and the existing transportation infrastructure. This analysis takes into consideration the equipment and processes employed during construction of Connected 2050 and the land uses, location, and VMT per service population of Connected 2050 to qualitatively determine whether energy consumed during construction and operation would be wasteful, inefficient, or unnecessary.

Energy consumption is categorized herein in terms of “direct” and “indirect” energy. Direct energy accounts for energy consumed during operation of the transportation system and land use scenario envisioned under Connected 2050, including fuel consumed by vehicles. Indirect energy accounts for construction-related energy (e.g., the energy required to construct transportation improvements), which is anticipated to be consumed through the life of the plan as several transportation improvement projects may be undertaken concurrently, and is therefore characterized as a long-term, operational energy use. Indirect energy also accounts for the maintenance of a roadway over the life of a project, which is also considered a long-term, operational energy use.

Direct Energy Consumption

Direct energy is that energy used in the daily operation of the transportation system, including the propulsion of passenger vehicles (automobiles, vans and trucks) and transit vehicles, including buses and trains. The direct energy analysis for the project is based on baseline (2020) and 2050 VMT with and without Connected 2050 (as analyzed in Section 4.12, *Transportation and Circulation*).

The fleet mix, fuel and electricity consumption data is provided by the California Air Resources Board Emission Factor (EMFAC) 2021 Emissions Inventory. Based on the data from EMFAC 2021, energy consumption is calculated using the VMT under baseline 2020 and planning horizon year 2050 (see Appendix D for calculations).

Indirect Energy Consumption

Indirect energy is the energy required to construct, operate, and maintain the transportation network, as well as to manufacture and maintain on-road vehicles and transit vehicles. Therefore, construction-related impacts associated with Connected 2050 are included in the indirect energy analysis. The indirect energy analysis was conducted using the Input-Output methodology developed by Caltrans (1983). This method converts VMT, lanes-miles, or construction dollars into energy consumption based on data from other transportation projects in the United States. Table 4.5-1 shows the indirect energy consumption factors used in this analysis. It should be noted that indirect energy consumption due to production of fuel and transportation/transmission to the end users is not included in this analysis, as any such analysis would be speculative.

Table 4.5-1 Indirect Energy Consumption Factors

Mode	Factor (Btu/VMT)
Manufacturing	
Passenger Vehicles	1,410
Transit Buses	3,470
Roadway (construction)	27,300
Maintenance	
Passenger Vehicles	1,400
Transit Buses	13,142
Rail	7,060

Source: Caltrans 1983

b. Project Impacts and Mitigation Measures

Threshold: Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact E-1 FUTURE TRANSPORTATION IMPROVEMENT PROJECTS AND IMPLEMENTATION OF THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 WOULD NOT RESULT IN SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO THE WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Daily operation of the County’s transportation system uses energy in the form of fuel consumed by propulsion of passenger vehicles (automobiles, vans, and trucks) and transit vehicles (buses and trains). Some highway and roadway improvements included in Connected 2050 would potentially increase vehicle capacity, allowing a greater number of vehicles on facilities in the SBCAG region. Increases in motor vehicle trips are primarily a combined function of population growth and employment growth. It should be noted that population growth and an increase in VMT would occur within the region regardless of whether Connected 2050 is implemented. As a result, energy consumption as it relates to vehicles would increase beyond the 2020 baseline in any scenario. Connected 2050 would help to minimize energy consumption by improving the overall efficiency of the transportation system. In addition, many Connected 2050 projects (e.g., bikeway and pedestrian, rail, transit, and Transportation Demand Management [TDM] projects) would improve the availability of alternative transportation modes, help reduce congestion and resultant harmful air quality emissions in the County. Generally, the availability of these alternative modes would be expected to potentially reduce overall motor vehicular trips, VMT, and associated energy consumption.

Table 4.5-2 shows the VMT and total energy use (Btu) in the County under baseline (2020) conditions and conditions in 2050 with implementation of Connected 2050.

Table 4.5-2 Transportation Energy Use

Year	Daily VMT	Daily Energy Consumption	Total Daily Energy Use (Billion Btu)	Daily per Capita Energy Use (kBtu)
2020 Baseline				
Gasoline	1,312,634	60,136 gallons	7	0.015
Diesel	103,141	11,654 gallons	2	0.003
Natural Gas	1,603	44,514 scf	46	0.102
Electricity	21,068	2,013 kWh	0.01	0
Total	1,438,446	–	8	0.018
2050 with Connected 2050				
Gasoline	1,398,866	51,878 gallons	6	0.011
Diesel	59,061	7,875 gallons	1	0.002
Natural Gas	822	27,058 scf	28	0.054
Electricity	203,733	7,157 kWh	0.02	0
Total	1,662,483	–	7	0.013

Source: Appendix D for calculations

As shown in Table 4.5-2, countywide daily VMT and total daily energy use would increase over time as the result of regional socioeconomic (population and employment) growth. However, Connected 2050 would result in an approximately 28 percent decrease in per capita energy usage when compared to 2020 baseline conditions. This would be due to increase in vehicle fuel efficiency over time, switch to electric and other alternative fuel vehicles, and reduction in per capita VMT through increased use of transit and active transportation.

Indirect energy consumption would also result from the net increase in total VMT under Connected 2050 as compared to baseline (2020) conditions, which would be associated with the construction, operation, and maintenance of the transportation network, as well as to the manufacturing and maintenance of on-road vehicles and transit vehicles. Table 4.5-3 shows the indirect energy consumption in MMBtu for each mode of transportation. These energy estimations were calculated using the net change from 2050 to 2020 VMT estimates (1,662,483-1,438,446=224,037). Most of the indirect energy consumption would be associated with roadway construction. Construction and maintenance of proposed Connected 2050 projects (including construction and maintenance of roadways and rail lines) would result in short-term consumption of energy resulting from the use of construction equipment and processes. During construction activities, energy would be needed to operate construction equipment. In addition, roadway and transit construction materials, such as asphalt, concrete, surface treatments, steel, rail ballast, as well as building materials, require energy to be produced, and would likely be used in projects that involve new construction or replacement of older materials. The CalGreen Code includes specific requirements related to recycling, construction materials, and energy efficiency standards, which would apply to construction of roadway and transit improvement projects envisioned by Connected 2050 and help to minimize waste and energy consumption. All construction and maintenance conducted pursuant to Connected 2050, or as a result of improvements made by Connected 2050, would be required to comply with the CalGreen Code and would thus reduce energy consumption associated with buildout of Connected 2050.

Table 4.5-3 Indirect Energy Consumption

Mode	Energy Consumption (MMBtu)
Manufacturing	
Passenger Vehicles	316
Transit Buses	777
Roadway (construction)	6,116
Maintenance	
Passenger Vehicles	314
Transit Buses	2,944
Rail	1,582

Source: See Appendix D for calculations.

Transportation Improvement Projects

The transportation improvements proposed under Connected 2050 would result in a more efficient transit system. Connected 2050 also would result in greater availability of public transit and other alternative modes of transportation, such as bicycling, which does not consume fuel energy and also reduces traffic congestion. The reduction in overall congestion resulting from these service level improvements would reduce fuel consumption and promote fuel efficiency beyond what is accounted for in the above analysis. As mentioned previously, improvements to State fuel efficiency

standards for vehicles and State mandated increases in the supply and use of alternative transportation fuels would further reduce fuel consumption, such as implementation of an electric vehicle charging station plan.

New transportation facilities that require energy for operation, such as signal lighting, roadway or parking lot lighting, and electronic equipment would increase energy demand. New landscaping irrigation would also increase energy demand through water pumping and treatment. However, energy consumption would not be unnecessary or wasteful, as all lighting, signage and irrigation systems would comply with applicable energy efficiency requirements within the California Building Code. Therefore, the transportation improvements projects included in Connected 2050 would not result in inefficient, unnecessary, or wasteful consumption of gasoline or diesel fuel or an increased reliance on fossil fuels.

Land Use Changes

Connected 2050 emphasizes a regional land use scenario that promotes land development in existing commercial corridors in combination with high quality transit service (e.g., bus service that has headways of 15 minutes or less during the peak period, Bus Rapid Transit [BRT], express bus or rail) and improved bicycle and pedestrian infrastructure. Mixed use and infill projects would help reduce VMT and energy use because they would locate people closer to existing goods and services, thereby resulting in shorter vehicle trips and/or promoting walking or biking, and they would locate people closer to existing transportation hubs, thereby encouraging the use of alternative modes of transit (e.g., buses) resulting in fewer vehicle trips. Other land development allowed under Connected 2050 would not reduce VMT and energy use. Operation of future land development projects would increase overall demand for energy beyond existing demand; however, such development would not require unusual, unnecessary, or wasteful amounts of energy. Future mixed use, infill, and other development projects allowed under the SCS would be constructed using standard building practices. These projects would also be subject to the CALGreen Code and Title 24 of the California Energy Code, which set forth specific energy efficiency requirements related to design, construction methods and materials.

In summary, Connected 2050 would not result in wasteful or inefficient energy consumption within the region. Therefore, Connected 2050 would not have a significant impact on energy. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact E-2 CONNECTED 2050 WOULD NOT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

As discussed in Section 4.5.2, Regulatory Setting, several state plans, the County's adopted General Plan, local General Plans, the County's Energy and Climate Action Plan, and local Climate Action Plans include energy conservation and energy efficiency strategies intended to enable the State and the County to achieve GHG reduction and energy conservation goals. A full discussion of the 2020 RTP/SCS's consistency with GHG reduction plans is included in Section 4.8, *Greenhouse Gas Emissions*.

As discussed in Impact E-1, Connected 2050 would result in an approximately 28 percent decrease in per capita energy use in the region and would not result in energy used in an unnecessary or wasteful manner. Implementation of Connected 2050 would result in greater VMT and total energy use, however per capita energy consumption would be less than 2020 baseline conditions. Accordingly, inconsistencies between Connected 2050 and adopted plans and policies related to energy conservation have not been identified. The discussion below further examines consistency with adopted plans and policies related to energy conservation.

SBCAG monitors regulations related to fuel efficiency standards and alternative fuel vehicles. Connected 2050 would not conflict with such regulations (e.g., *Energy Policy and Conservation Act* and *CAFE Standards, EPA Act, Energy Independence and Security Act of 2007, AB 1493: Reduction of Greenhouse Gas Emissions, AB 1007: State Alternative Fuels Plan*).

The 1975 *Warren-Alquist Act* established the California Energy Resource Conservation and Development Commission, now known as the California Energy Commission (CEC), and established a State policy to reduce wasteful, uneconomical and unnecessary uses of energy. Based on the data above, and explained in the conclusion below, Connected 2050 would not result in wasteful, inefficient, or unnecessary use of energy. Therefore, Connected 2050 is consistent with the *Warren-Alquist Act* policies.

Senate Bill (SB) 1078 as accelerated by SB 350, establishes a renewable portfolio standard for electricity supply, and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 33 percent of their supply from renewable sources by 2020. In addition, the 2017 Integrated Energy Policy Report (IEPR) includes a set of strategies to address California's future energy needs. Key topics covered in the report include electricity resource and supply plans; electricity and natural gas demand forecasts; natural gas outlooks; transportation energy demand forecasts; energy efficiency savings; integrated resource planning; a barriers study; climate adaptation and resilience; renewable gas; distributed energy resources; strategic transmission investment plans; and existing power plan reliability issues. Connected 2050 would not conflict with these policies. Refer to Section 4.8, *Greenhouse Gas Emissions/Climate Change*, for a discussion of greenhouse gas emissions reductions related to the proposed Connected 2050.

In addition, many Connected 2050 projects promote energy efficiency as they support implementation of the 2019 Ozone Plan transportation control measures including transportation demand management, transportation system management, commuter and public transit; rail, bike and pedestrian programs, among others (refer to Section 4.2, *Air Quality*).

Locally, the Connected 2050 would be consistent with the Santa Barbara County General Plan that includes goals and policies that encourage energy conservation and energy efficiency. The Santa Barbara County Energy and Climate Action Plan along with the new updated 2030 Climate Action Plan (draft, not adopted) includes various goals and policies that employ energy conservation and efficiency measures through an array of strategies. These plans encourage the use of renewable energy, energy conservation and energy efficiency techniques in all new building design, orientation, construction, and support of alternative transportation and fuels. Local General Plans and local Climate Action Plans include similar goals and policies. Connected 2050 would be consistent with the State and local plans as Connected 2050's Chapter 2 Policy 1.3 Alternative Fuels and Energy would 1: Encourage the use of alternative fuels, and the application of advanced transportation and energy technologies to reduce vehicular emission production and energy consumption, and; 2. Promote renewable energy and energy conservation, consistent with applicable federal, State, and local energy programs, goals, and objectives.

Therefore, Connected 2050 would be consistent with State energy efficiency plans, the County's adopted energy conservation and efficiency strategies contained in its General Plan and Energy and Climate Action Plan, and local General Plan and Climate Action Plan energy efficiency policies. As described under Impact E-1, construction and operation of Connected 2050 would be required to comply with relevant provisions of CALGreen and Title 24 of the California Energy Code. Therefore, this impact would be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

c. Specific 2020 RTP/SCS Projects That May Result in Impacts

All Connected 2050 projects would result in the use of energy to construct, regardless of location within the SBCAG region and therefore, are not specifically identified in table format. Connected 2050 would support the use of alternate modes of transportation, through improvements to bicycle, pedestrian, and transit facilities, which would decrease the region's reliance on passenger vehicles and gasoline consumption throughout the region.

4.5.4 Cumulative Impacts

Connected 2050 would increase demand for energy resources such as natural gas, electricity and transportation fuels by approximately 28 percent over the 24-year planning horizon. However, many of the transportation improvement projects under Connected 2050 would conserve transportation energy by relieving congestion and contributing towards other transportation efficiencies, resulting in lower per capita transportation energy consumption in 2050 than in the 2020 baseline year. In addition, renewable energy sources steadily constitute a larger proportion of California's energy supply makeup, resulting in a trend of decreased dependency on fossil fuels and increased dependency on renewable energy sources. As a result, Connected 2050 would not contribute to significant impacts related to wasteful or inefficient use of energy resources and services because energy would be used more efficiently on a per capita basis with Connected 2050 as compared to existing 2020 conditions.

In addition, adherence to existing applicable policies and regulations, such as CalGreen and the Low Carbon Fuel Standard, would ensure the incorporation of energy efficiency measures in the design and operation of future projects facilitated by Connected 2050. As such, Connected 2050 would not contribute to a cumulative impact to the wasteful, unnecessary, or inefficient use of energy. Based on the analysis provided above, the contribution of Connected 2050 to cumulative impacts related to energy consumption would not result in the inefficient use of energy resources. As such, Connected 2050's impacts related to per capita energy consumption and reliance on fossil fuels would not be a cumulatively considerable contribution to a significant cumulative energy impact, and therefore, impacts would be less than significant.

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4.6 Environmental Justice

This section analyzes the impacts of Connected 2050 on low-income populations, minority individuals and populations, and low mobility populations. The analysis in this section is based primarily on the information contained in Chapter 4, Social Equity – Title VI and Environmental Justice, of Connected 2050.

4.6.1 Setting

a. Overview

Environmental justice is defined in the California Government Code as “the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies” (Gov. Code § 65040.12 (e)). In May 2012, the California Attorney General’s office released a report titled “Environmental Justice at the Local and Regional Level – Legal Background,” which interprets CEQA to include considerations of environmental justice, although environmental justice is not explicitly mentioned in the *State CEQA guidelines*. The report defines “fairness” in this context to mean that “the benefits of a healthy environment should be available to everyone, and the burdens of pollution should not be focused on sensitive populations or on communities that already are experiencing its adverse effects.”

At the federal level, Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations became effective on February 11, 1994. The Executive Order directs every federal agency to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on minority and low-income populations. Hence, the U.S. Department of Transportation (USDOT) issued its own order, 5680.2, to clarify and reinforce environmental justice policies related to transportation planning. A branch of the USDOT, the Federal Highway Administration (FHWA), has established policies for integrating environmental justice principles into existing operations. There are three main elements to FHWA’s environmental justice policy:

- Avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects on minority and low-income populations;
- Ensure full and fair participation by all potentially affected communities in the transportation decision-making process; and
- Prevent reduction or significant delay in the receipt of benefits by minority populations and low-income groups.

No new policies or regulations have been implemented as they pertain to Environmental Justice impact determinations under CEQA.

Connected 2050 strives to assure that all socio-economic groups are adequately served and that no group or community bears a disproportionate amount of the costs or impacts of transportation investments. As discussed further below, the Office of Planning and Research identifies “Disadvantaged Communities” as an area identified by the California Environmental Protection Agency (EPA) or an area that is a low-income and is disproportionately affected by environmental pollution. In addition, some grant programs allow for applicants to reference a regional definition of disadvantaged communities, such as the Active Transportation Program. As part of Connected 2050,

SBCAG has addressed environmental justice by identifying communities of minority and low-income populations, in addition to other factors described below, in order to ensure that these communities are not negatively impacted by future transportation projects and provide benefits to all socioeconomic groups. This EIR relies on the communities identified by SBCAG to determine if Connected 2050 would result in disproportionate environmental impacts, in conformance with the three main elements of FHWA’s environmental policy.

b. Environmental Justice Communities

Santa Barbara County consists of two major regions: South Coast and North County. Census demographic information at the block group level was used to determine areas where concentrations of environmental justice communities (EJ Communities) currently live. According to the OPR General Plan guidelines, the concentration of a given population is defined as “if the percentage of minority, and low-income population is meaningfully greater than the percentage of the same group in the general population of the area”. FHWA criteria on environmental justice define “minority” as persons belonging to any of the following groups that are based on the self-identification of individuals in the census: African American, Hispanic, Asian/Pacific Islander, and Native American and Alaskan Native. The poverty classification is a federally established income guideline used to define persons who are economically disadvantaged based on the latest census data.

As part of Connected 2050, SBCAG developed an approach that defines EJ Communities as areas (as a percentage of the population or households) in the highest 30 percent of regional scores. In addition, the influence of the Hispanic indicator has been reduced as it composes approximately 50 percent of the population. This adjustment allows the other indicators to have increased influence on community identification. The highest 30 percent indicator scores were used as the threshold as it encompasses additional rural areas in addition to higher density urban areas. This approach ensures the degree of disadvantaged can be stratified to assess severity. For example, portions of an otherwise advantaged area may cross a threshold for one indicator due to a large retiree or student population, but other areas with a significantly more disadvantaged community would satisfy the thresholds for a number of indicators. The approach uses a percentage of the population (or households) so that the result is more reflective of the density of the factors relative of the area and not just where the largest overall values are. Table 4.6-1 identifies the indicators used in the EJ Community identification methodology.

Table 4.6-1 Environmental Justice Community Indicators

EJ Community Type	Indicator
Minority	Hispanic origin (25% of total), African, Asian, Native American, and other race
Low-income	80% of county household median (\$54,000), 50% of county household median (HUD very-low, \$34,000)
Poverty	Federal definition based on household size and income (persons)
Low mobility	No vehicle Household., elderly (> 75), disabled person, youth (< 18)
Low Community Engagement	Limited English Household., no High School diploma
Housing Costs	Rent or Mortgage over 50% of income

Source: Connected 2050 Regional Transportation Plan & Sustainable Communities Strategy

Issues of environmental justice impact low-income populations, minority individuals and populations, and low-mobility populations, as defined below, and may include, but are not limited to concerns related to human health and safety, economic development, society and culture, accessibility, and the natural environment. These populations are discussed further below.

Minority Populations

Concentrations of minority (Hispanic Origin and minority races) persons in Santa Barbara County primarily include locations in the Old Town Goleta area, the lower east and west side of the City of Santa Barbara, and in the northwest portion of the City of Carpinteria. University of California Santa Barbara (UCSB) has one of the most substantial proportions of racial groups other than white or Hispanic. Concentrations are present throughout the City of Lompoc, including the Lompoc Federal Penitentiary and Vandenberg Air Force Base. Additional significant concentrations include the Chumash Indian Reservation, the northern portion of the City of Santa Maria, and the City of Guadalupe.

County-wide minority demographics:

- The non-White non-Hispanic Black, Asian, American Indian and other racial groups of Santa Barbara County comprised 7.4 percent of the countywide total population or approximately 32,800 persons.
- Approximately 39 percent of the countywide non-White non-Hispanic Black, Asian, American Indian and other race population or 12,700 persons reside in EJ Communities.
- Persons of Hispanic Origin (of any race) and represent 44 percent of the Countywide population or 198,550 persons.
- Approximately 48 percent of the countywide Hispanic Origin population or 95,800 persons reside in EJ Communities.

Low Income and Poverty Populations

Concentrations of households living below the poverty level, as well as low income populations, are located in the community of Isla Vista (near UCSB), and the lower west and east-side of the City of Santa Barbara. Additional locations include the areas adjacent to Highway 154 and U.S. 101 that are represented by mobile home parks and assisted living facilities and in portions of downtown Carpinteria. Additional significant low-income concentrations include the central core of the City of Lompoc, northern portions of the City of Santa Maria, and downtown Guadalupe.

County-wide low-income demographics:

- The percentage of countywide households that live below the poverty level is 4.3 percent or approximately 19,000 households, in comparison to the 2.6 percent of the countywide total or approximately 11,700 households that reside in EJ Communities.
- The percentage of households countywide with incomes less than 80 percent of median (\$54,000 per year) is 14.5 percent or approximately 64,000 households, compared to seven percent of the countywide total or approximately 30,400 households that reside in EJ Communities.

The U.S. Census Bureau uses a set of money income thresholds that vary by family size and composition to determine whether an individual or family is “in poverty.” If a family's total income is

less than the family's threshold, then that family and every individual residing within is considered "in poverty". Table 4.6-2 illustrates the census poverty thresholds for 2018.

Low Mobility Populations

Mobility refers to the movement of people via multiple modes, including individual cars, transit, walking, and cycling, among others. Mobility can be an important indicator of quality of life, as mobility is correlated with accessibility, which is the ease with which individuals can reach their destinations. Enhanced mobility is a means to increase accessibility of desired goods or destinations. Low-mobility populations are limited in their ability to access needed goods and services or means by which they reach their destination that are expensive or inconvenient. Auto-oriented cities and communities with few safe or reliable transportation alternatives are mobility-limiting, leaving the individual without choices in means of transportation. Limited public transit options, few cycling infrastructure improvements, or lack of pedestrian safety measures limit individual mobility. Low-income populations may be faced with restricted mobility if they do not have access to a private vehicle. Elderly populations are frequently limited in individual mobility in auto-oriented transportation systems. As aging populations lose their ability to drive privately-owned vehicles, it is increasingly important to address multiple modes of transportation to prevent isolation, economic hardship, or reduced quality of life of the expanding senior population.

All cities and communities in the County have roughly similar commuting patterns, with single-occupancy vehicles being the most common choice. Concentrations of persons with low mobility as determined by the availability of a vehicle are located in downtown City of Santa Barbara, Old Town Goleta, the unincorporated area between the Cities of Buellton and Solvang, central City of Lompoc, and northern City of Santa Maria. The percentage of households countywide that do not have access to a vehicle is six percent or approximately 8,600 households. Approximately 3.8 percent of the countywide total or approximately 5,400 households reside in EJ Communities.

Concentrations of persons with low mobility as determined by age over 75 years old are located in various unincorporated areas of the county, such as Montecito and Hope Ranch in the South Coast and Santa Ynez and Vandenberg Village in the North County. The percentage of the population countywide aged 75 or older is 14.2 percent or approximately 62,800 persons. Approximately 3.3 percent of the countywide total or approximately 14,700 persons reside in EJ Communities.

Concentrations of persons with low mobility as determined by disabilities are located in downtown City of Santa Barbara, adjacent to Highway 154 and U.S. 101, City of Buellton and City of Solvang, and northern City of Santa Maria. The percentage of the population countywide with a disability is 8.8 percent or approximately 38,900 persons. Approximately 3.1 percent of the countywide total or approximately 14,700 persons reside in EJ Communities.

Concentrations of persons with low mobility as determined by youth less than 18 years of age are located in the areas of Orcutt and City of Santa Maria. The percentage of the population countywide aged 18 years or less is 22.4 percent or approximately 99,000 persons. Approximately 8.6 percent of the countywide total or approximately 38,300 persons reside in EJ Communities.

Table 4.6-2 2018 Poverty Thresholds by Family Size and Number of Related Children Under 18 Years

Size of family unit	Weighted average thresholds (dollars)	Related children under 18 years								
		None	One	Two	Three	Four	Five	Six	Seven	Eight or more
One person (unrelated individual):	12,784									
Under Age 65	13,064	13,064								
Aged 65 and older	12,043	12,043								
Two people:	16,247									
Householder under Age 65	16,889	16,815	17,308							
Householder aged 65 and older	15,193	15,178	17,242							
Three people	19,985	19,642	20,212	20,231						
Four people	25,701	25,900	26,324	25,465	25,554					
Five people	30,459	31,234	31,689	30,718	29,967	29,509				
Six people	34,533	35,925	36,068	35,324	34,612	33,553	32,925			
Seven people	39,194	41,336	41,594	40,705	40,085	38,929	37,581	36,102		
Eight people	43,602	46,231	46,640	45,800	45,064	44,021	42,696	41,317	40,967	
Nine people or more	51,393	55,613	55,883	55,140	54,516	53,491	52,082	50,807	50,491	48,546

Source: United States Census Bureau, 2018

Low Community Engagement Populations

Concentrations of persons with low community engagement, based on the ability to speak English, are located in northwest City of Santa Maria and City of Guadalupe, as well as the westside area of the City of Santa Barbara. The percentage of the population countywide with limited English speaking is 7.5 percent or approximately 10,900 persons. Approximately 5.2 percent of the countywide total or approximately 7,500 persons reside in EJ Communities.

Concentrations of the persons with low community engagement lacking a high school diploma are concentrated in the northwest portion of the City of Carpinteria, Old Town Goleta, northern City of Lompoc (State penitentiary), unincorporated Lompoc Valley, and the northwestern portion of the City of Santa Maria. The percentage of the population countywide without a high school diploma is 1.1 percent or approximately 4,880 persons. Approximately 0.4 percent of the countywide total or approximately 1,640 persons reside in EJ Communities.

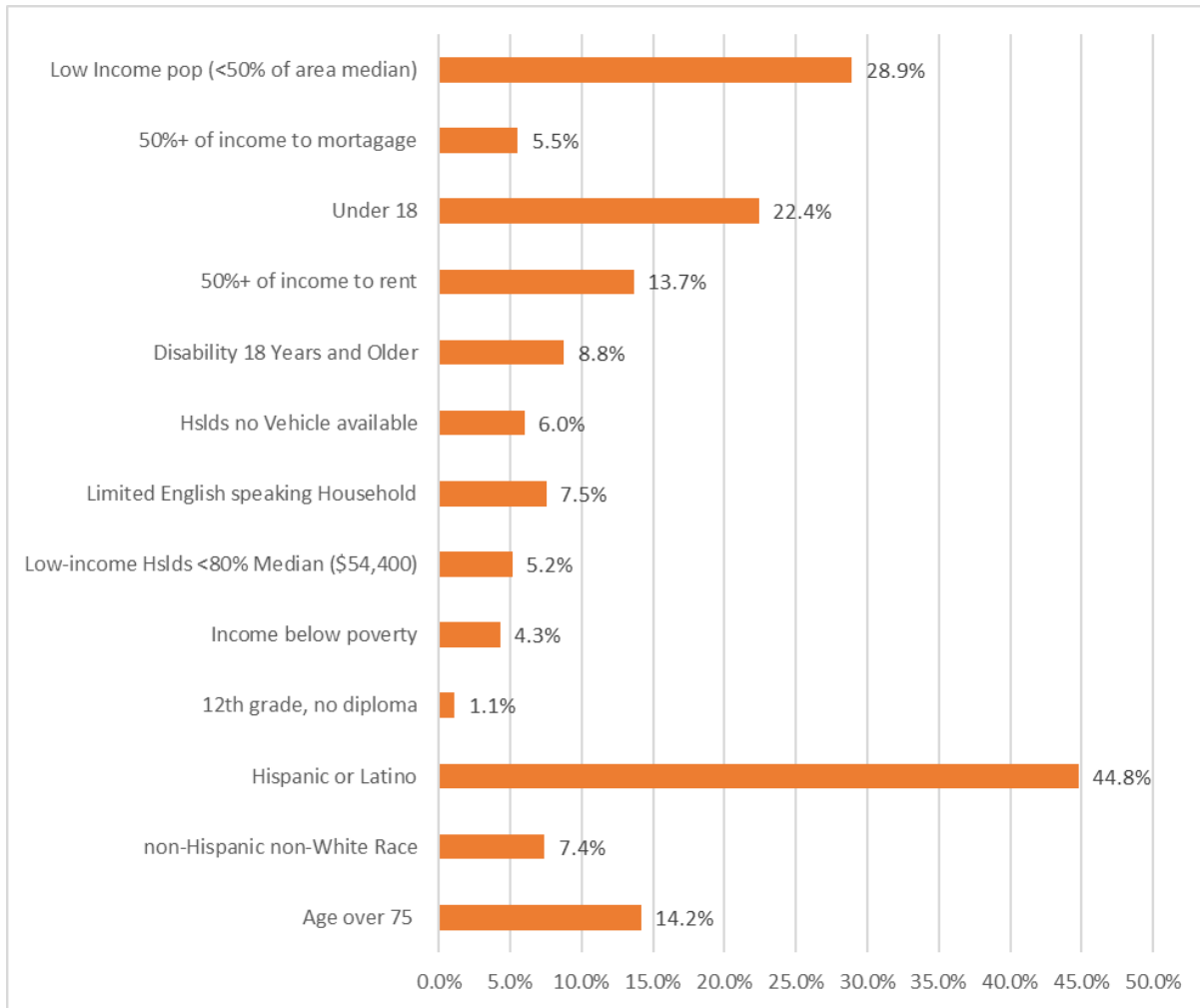
High Housing Cost Populations

Households with housing costs exceeding 50 percent of income are indicated primarily by the rental costs, as mortgage costs are less of an indicator, and are concentrated in Isla Vista, the west side of the City of Carpinteria, the City of Lompoc, and middle/western portions of the City of Santa Maria. The percentage of the countywide households with high housing costs (rent and mortgage combined) is 19 percent or approximately 27,600 households. Approximately 8.6 percent of the countywide total or approximately 12,400 households reside in EJ Communities.

Countywide Comparisons

Figure 4.6-1 illustrates the countywide proportions of the indicators used to determine EJ Communities. The largest countywide proportions are the Hispanic or Latino Origin population with approximately 45 percent and households with an income less than 50 percent of the county median with 29 percent. As shown, approximately 14 percent of households pay over 50 percent of their income to rent and four percent of the population have an income below poverty.

Figure 4.6-1 Indicator Percent of Countywide Total Population or Households



The EJ Communities comprise a large percentage of the countywide total indicator values. Figure 4.6-2 and Figure 4.6-3 compare the indicator totals captured within the EJ Communities and the countywide total. In EJ Communities, each of the following indicators have over 50 percent of the countywide total: *Low Income Population, Allocate 50 Percent Income to Rent, Vehicle Availability, Limited English Spoken, and Income Below Poverty.*

Figure 4.6-2 EJ Community Indicator Total Compared to Countywide Indicator Total

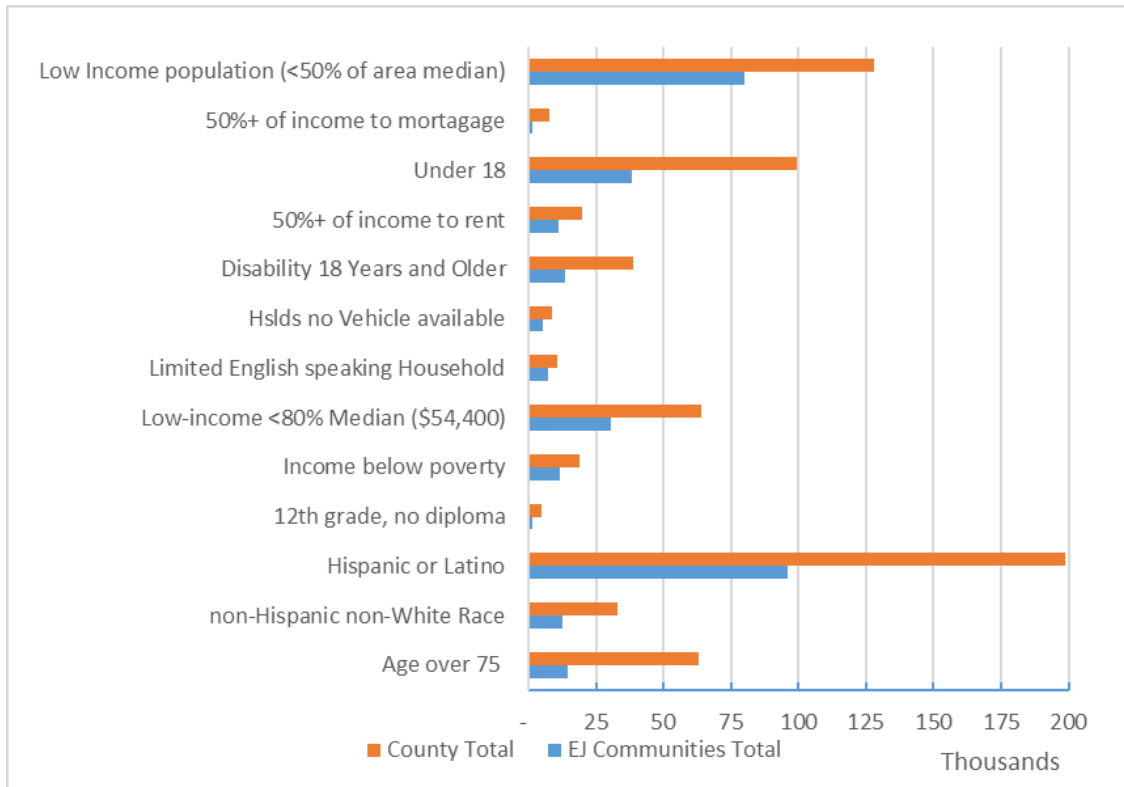
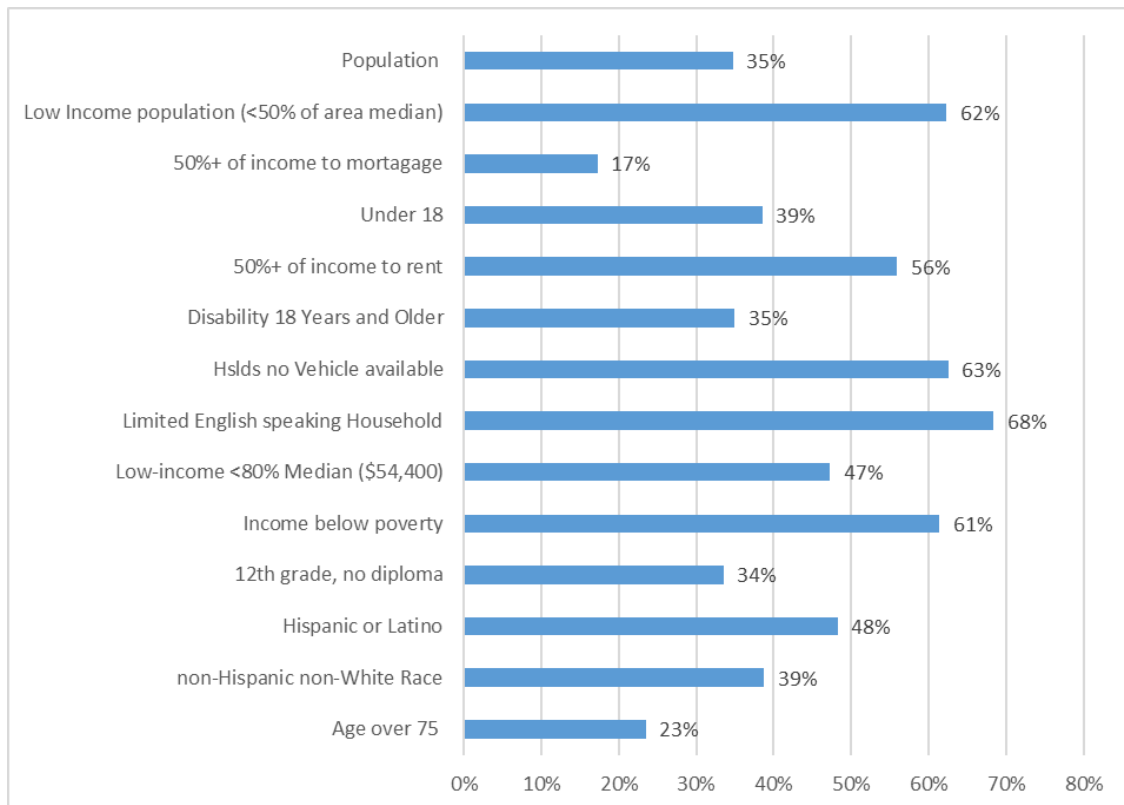


Figure 4.6-3 EJ Community Indicator Percent of Countywide Indicator Total



EJ Community Identification

As discussed in Section 4.6.1.b, SBCAG developed an approach that defines EJ Communities as areas (as a percentage of the population or households) in the highest 30 percent of regional scores/indicators. The highest 30 percent indicator scores were used as the threshold as it encompasses additional rural areas in addition to higher density urban areas. This approach ensures the degree of disadvantaged can be stratified to assess severity. For example, portions of an otherwise advantaged area may cross a threshold for one indicator due to a large retiree or student population, but other areas with a significantly more disadvantaged community would satisfy the thresholds for a number of indicators. The approach uses a percentage of the population (or households) so that the result is more reflective of the density of the factors relative of the area and not just where the largest overall values are. The highest EJ Community scores (stratified into the top 5 to 30 percent) include all the indicators discussed above, combined into one score to identify an EJ Community. The indicators include: minority (Hispanic Origin and minority races) persons, households with 80 percent of county median income (\$54,000), households with 50 percent of county median (Department of Housing and Urban Development (HUD) defines very-low as \$34,000), poverty (Federal definition based on household size and income), households with no vehicle, elderly (greater than age 75), disabled individuals, youth (less than age 18), limited English spoken, no high school diploma, and rent or mortgage costs over 50 percent of income. These concentrations/EJ communities are described in Table 4.6-3 and are shown visually in Figure 4.6-4 through Figure 4.6-9:

Table 4.6-3 Environmental Justice Communities

Subregion	Community
South Coast	EJ Communities are located in the lower east and west side of the City of Santa Barbara (Figure 4.6-4), western portion of the City of Carpinteria (Figure 4.6-5), and Old Town Goleta (Figure 4.6-6). UCSB and Isla Vista has a score in the highest five percent.
Santa Ynez and Lompoc Valley	EJ Communities are located throughout the Santa Ynez Valley, notably the Chumash Indian Reservation (Figure 4.6-7), and the City of Lompoc (Figure 4.6-8).
Santa Maria Valley	EJ Communities are located in the northwestern area of the City of Santa Maria and the City of Guadalupe (Figure 4.6-9).

Figure 4.6-4 City of Santa Barbara EJ Communities

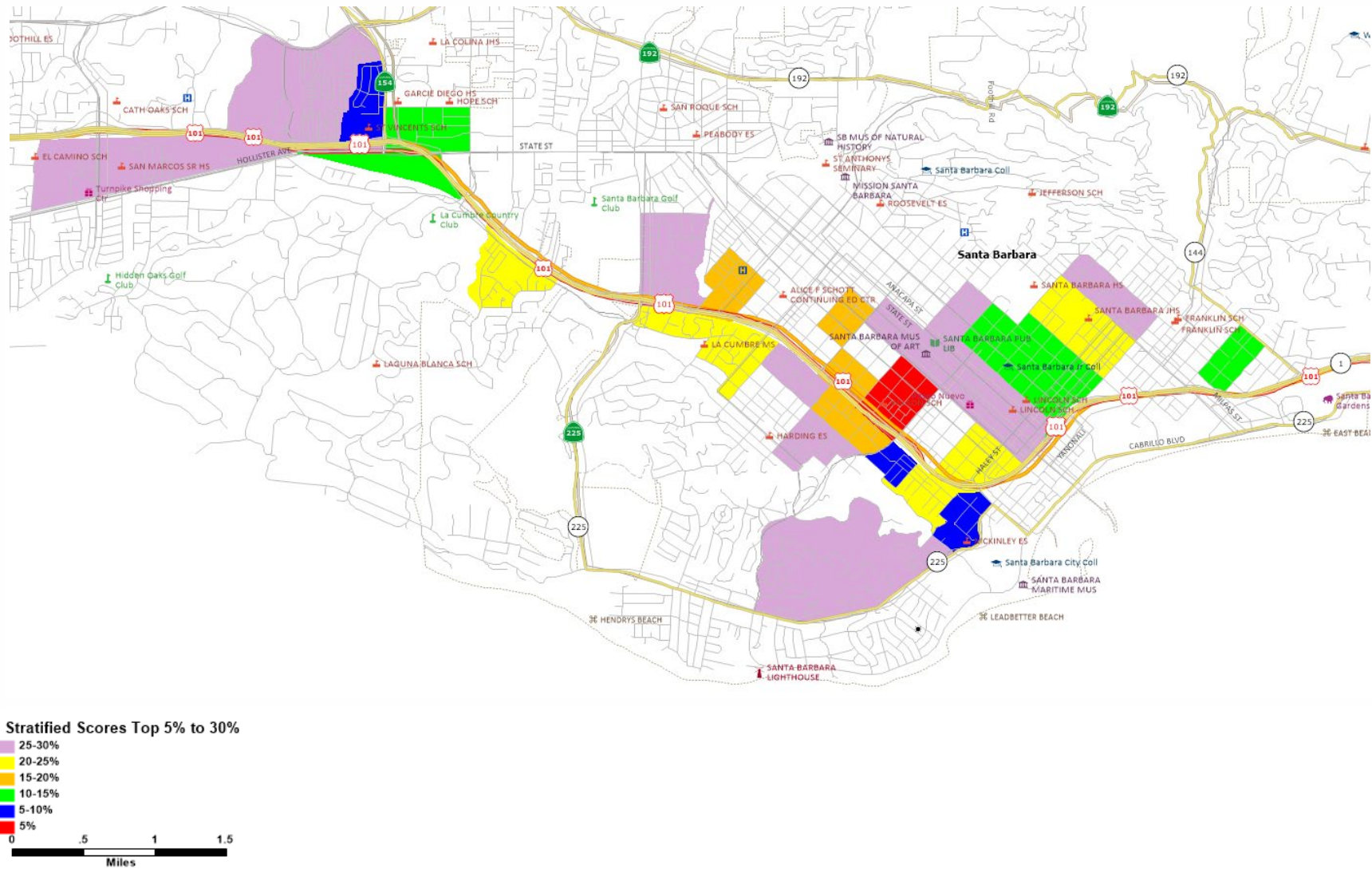


Figure 4.6-5 City of Carpinteria EJ Communities

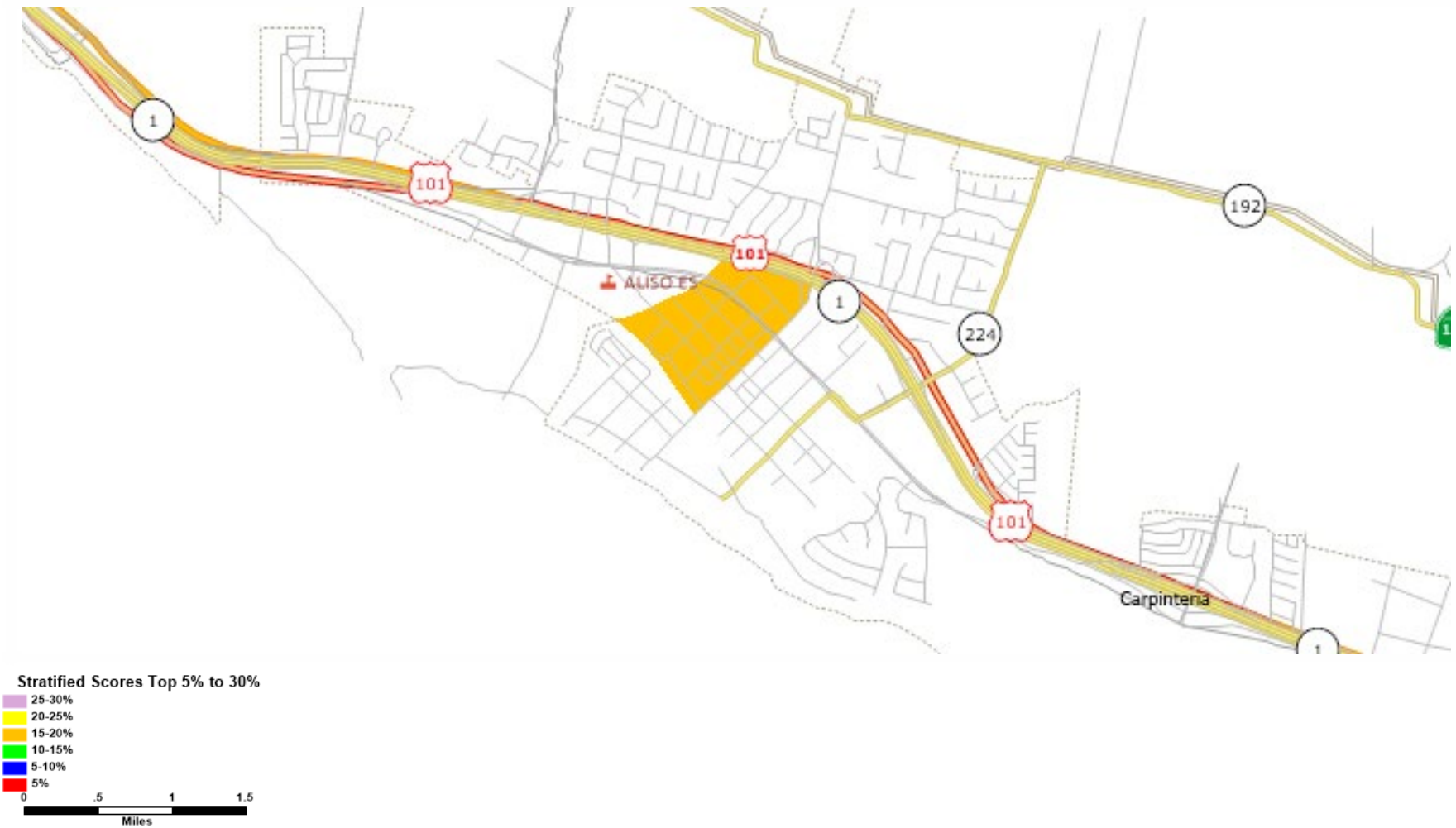


Figure 4.6-6 Goleta Valley EJ Communities

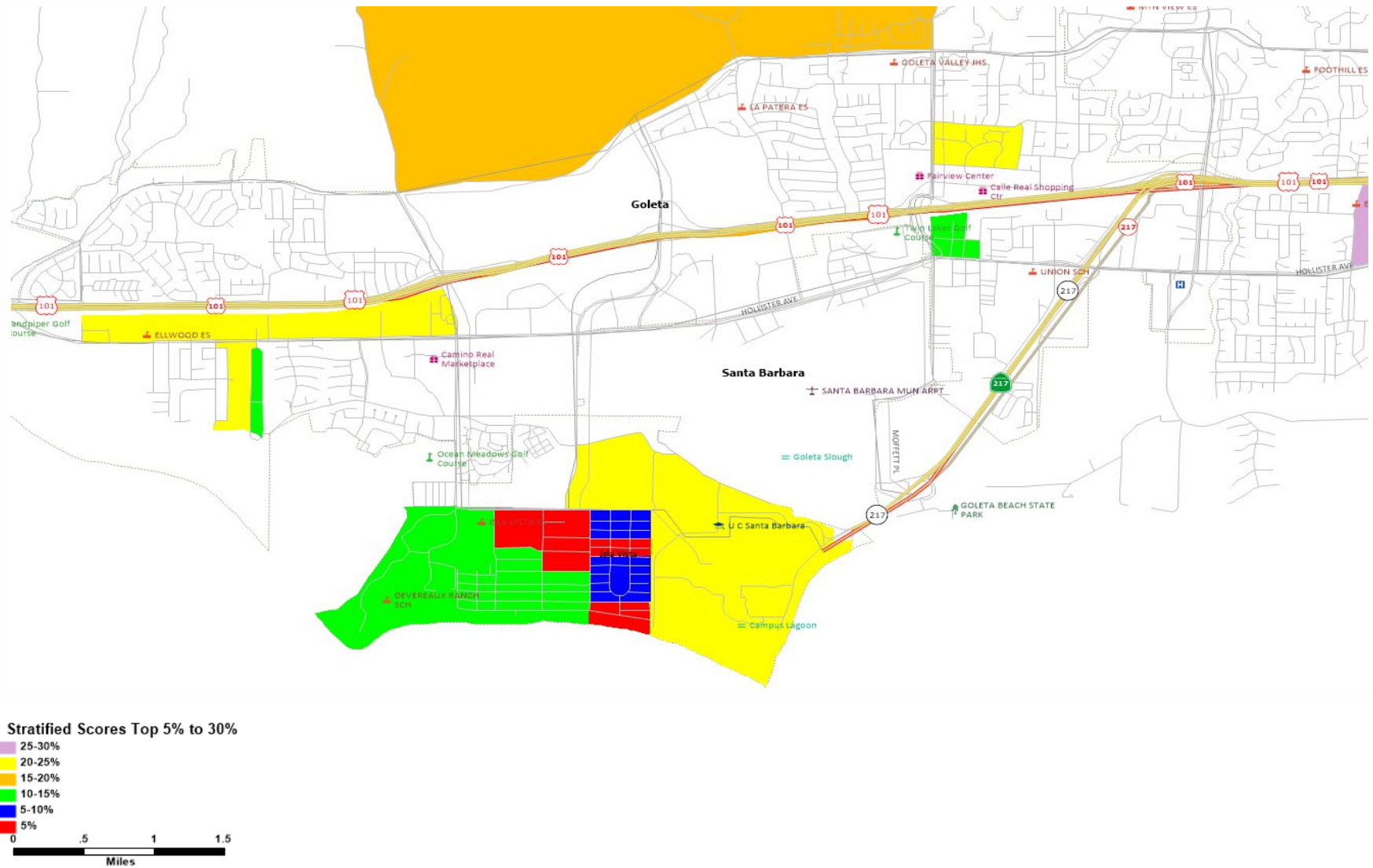


Figure 4.6-7 Santa Ynez EJ Communities

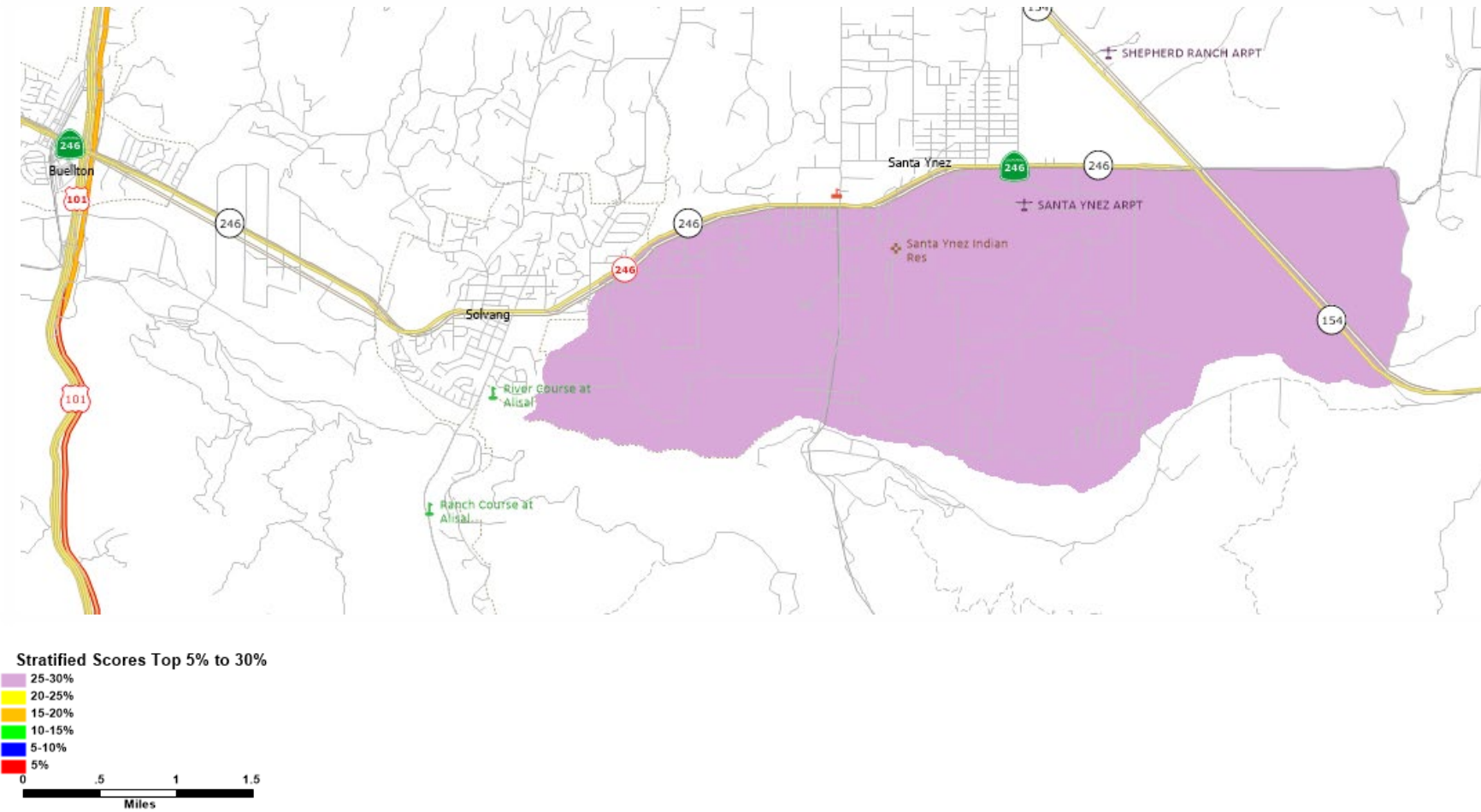


Figure 4.6-8 City of Lompoc EJ Communities

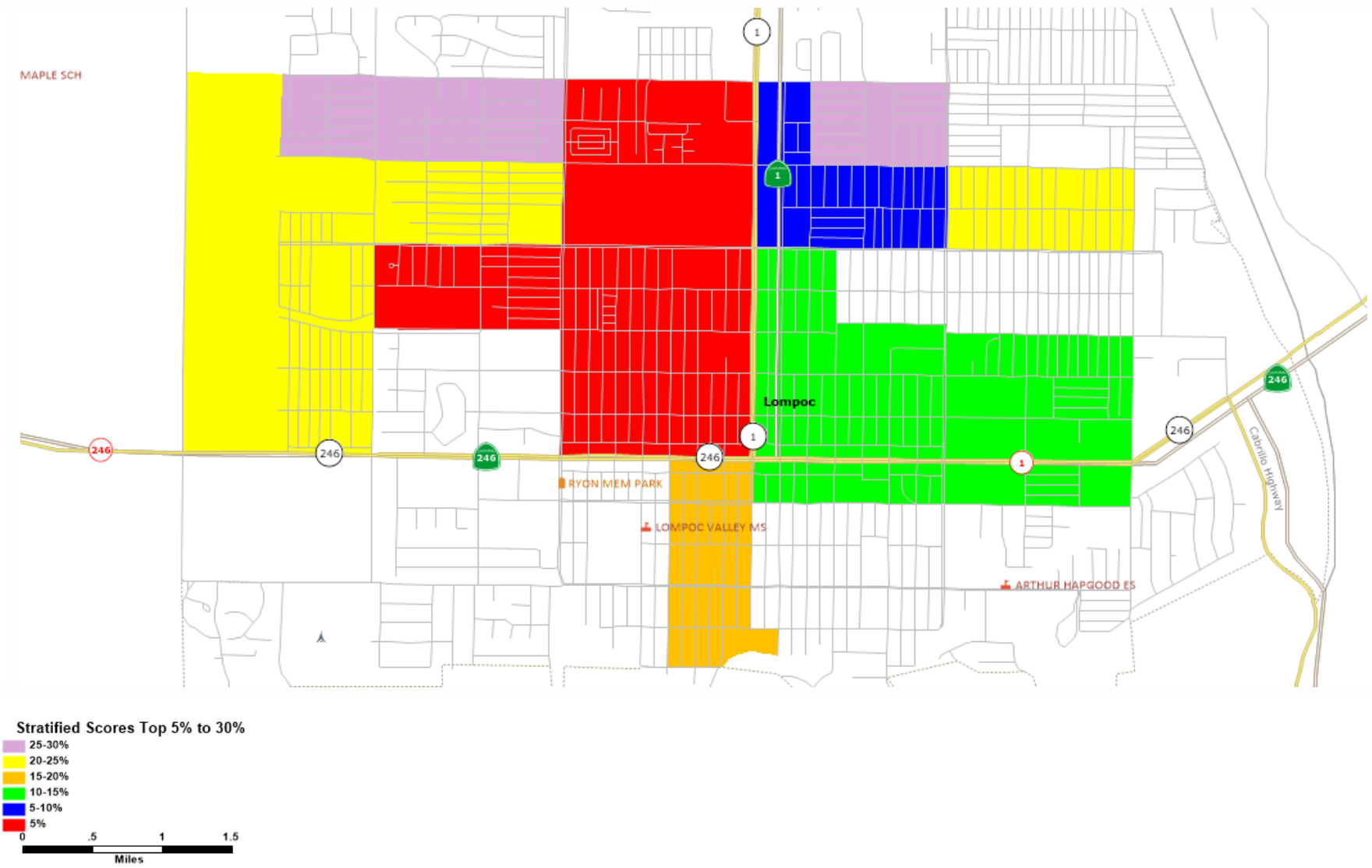
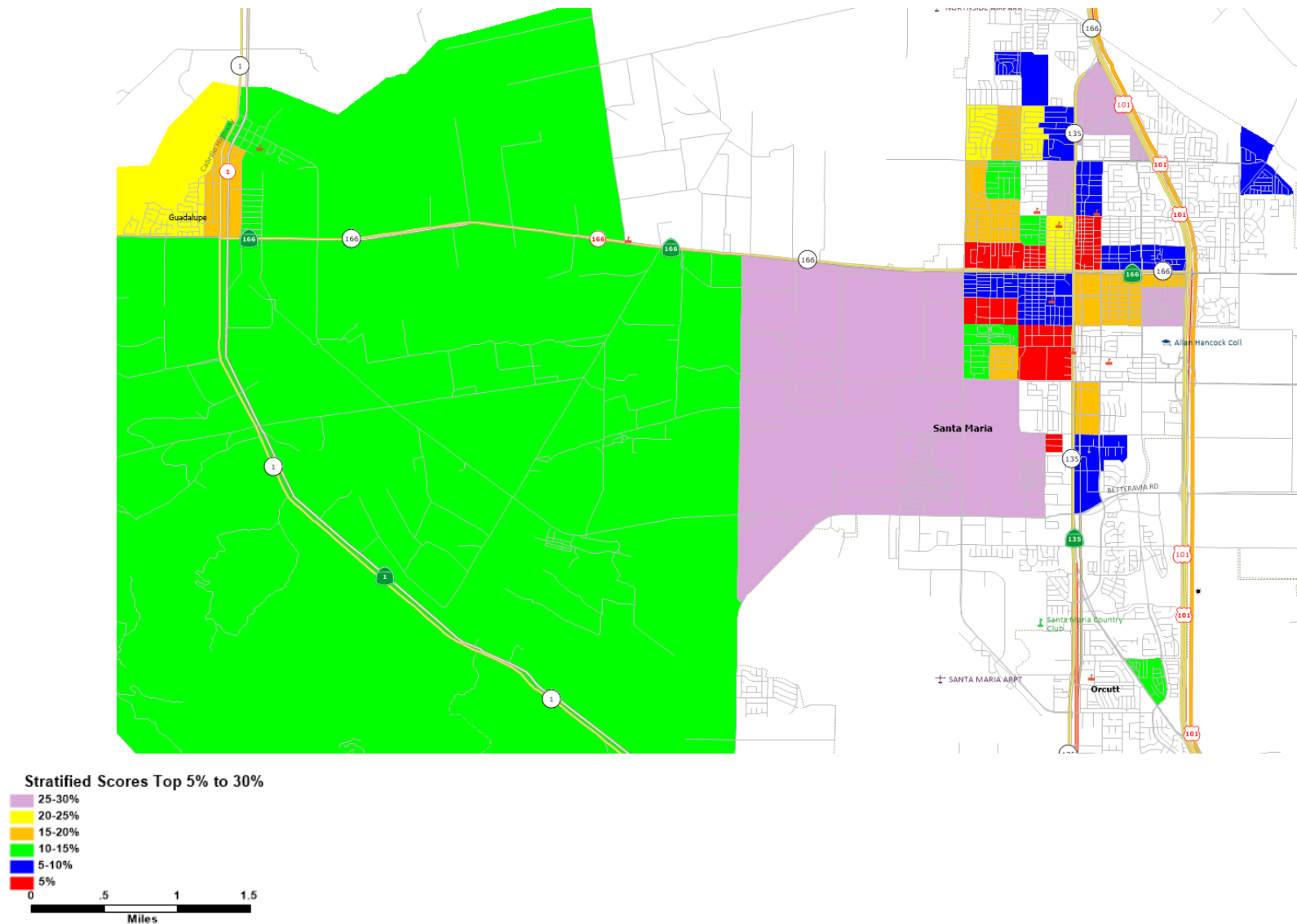


Figure 4.6-9 Santa Maria Valley EJ Communities



4.6.2 Regulatory Setting

Federal Regulations

SBCAG receives funding from federal agencies such as the Federal Highway Administration and Federal Transit Administration for some of its programs and activities. Therefore, SBCAG conducts its federally funded programs and activities in accordance with guidance issued by the federal agencies pursuant to federal laws, executive orders, and regulations (discussed in subsection 4.6.1, *Overview*).

State Regulations

California Government Code Section 65040.12

Senate Bill 115 of 1999 and Senate Bill 89 of 2000 (Section 65040.12 of the Government Code) required the California Office of Planning and Research (OPR) to:

- Consult with the Secretaries of the California Environmental Protection Agency, the Resources Agency, and the Business, Transportation, and Housing Agency, the Working Group on Environmental Justice established pursuant to Section 72002 (now Section 71113) of the Public Resources Code, any other appropriate State agencies, and all other interested members of the public and private sectors in this State.
- Coordinate OPR's efforts and share information regarding environmental justice programs with the Council on Environmental Quality, the United States Environmental Protection Agency, the General Accounting Office, the Office of Management and Budget, and other federal agencies.
- Review and evaluate any information from federal agencies that is obtained as a result of their respective regulatory activities under federal Executive Order 12898, and from the Working Group on Environmental Justice established pursuant to Section 72002 of the Public Resources Code.

SB 89 also required the formation of an advisory committee, California Environmental Justice Advisory Committee (CEJAC), to provide information and assistance to the Secretary of the CalEPA and Interagency Working Group on Environmental Justice (IWG) in establishing and implementing an intra-agency strategy to achieve environmental justice. In 2004, the CalEPA released its Environmental Justice Strategy and Action Plan based on the IWG recommendations for identifying and addressing any gaps in existing programs, policies, or activities that may impede the achievement of environmental justice and suggested procedures for collecting, maintaining, analyzing, and coordinating information relating to its environmental justice strategy.

CALIFORNIA GOVERNMENT CODE SECTION 11135

California Government Code Section 11135 states that no person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the State or by any State agency, is funded directly by the State, or receives any financial assistance from the State.

4.6.3 Impact Analysis

a. Methodology and Significance Thresholds

A significant impact is defined as “a substantial or potentially substantial adverse change in the environment” (CEQA Section 21068). Based on the information provided above, an impact is significant if it would cause disproportionately high and adverse environmental and public health effect and interrelated difficult social and/or economic effect for minority or low-income populations. Therefore, Connected 2050 would have a significant impact on an environmental justice community if:

- a) Implementation of Connected 2050 would lead to disproportionately high and adverse human health or environmental impacts to the minority populations, low-income populations, low community engagement populations and/or populations with low mobility in the SBCAG region.
- b) The mobility benefits derived from Connected 2050 in terms of travel times and accessibility by transit and/or single-occupancy vehicle would be substantially less for minority populations, low-income populations, low community engagement populations, and/or populations with low mobility in the SBCAG region.

b. Project Impacts and Mitigation Measures

The following section describes generalized disproportionate environmental impacts associated with proposed transportation improvements and the future land use scenario envisioned under Connected 2050. Impacts and associated mitigation measures would apply in Santa Barbara County and all cities within the County. Table 4.6-4 in Section 4.6.4 summarizes the specific projects that could result in impacts. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the Connected 2050 could result in the impacts as described in the following section.

Threshold: Would implementation of Connected 2050 lead to disproportionately high and adverse human health or environmental impacts to the minority populations, low-income populations, low community engagement populations and/or populations with low mobility in the SBCAG region?

Impact EJ-1 IMPLEMENTATION OF CONNECTED 2050 WOULD NOT LEAD TO DISPROPORTIONATELY HIGH AND ADVERSE HUMAN HEALTH OR ENVIRONMENTAL IMPACTS TO THE MINORITY POPULATIONS, LOW-INCOME POPULATIONS, LOW COMMUNITY ENGAGEMENT POPULATIONS AND/OR POPULATIONS WITH LOW MOBILITY IN THE SBCAG REGION. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Short-Term Impacts

During construction of some of the transportation improvement projects and future land use development under Connected 2050, some minority and/or low-income populations may be affected (see discussion of communities of concern below and Table 4.6-4 for a list of Connected 2050 projects that may result in impacts to these communities). Projects included in this list were specifically chosen due to the potential impacts they present, as well as the location of the project. Projects that were located outside of study cities/communities were left out, as well as projects that

would not warrant environmental justice analysis (i.e., Caltrans Project CT-13 which focuses on signal modifications on State Route 135). The improvement projects with potentially significant impacts may have short-term impacts on surrounding communities related to construction; including impacts related to air quality, noise, and traffic (refer to Sections 4.2, *Air Quality*, 4.11, *Noise*, and 4.12 *Transportation*). Specific air quality impacts could include exposure to dust from ground disturbance, due to the operation of construction vehicles (e.g., scrapers, loaders, dump trucks), during clearing, grading and/or excavation activities. Other air quality impacts include short-term exposure to hazardous air emissions, including diesel emissions from operation of construction equipment. Construction noise impacts from clearing, grading, and laying asphalt could expose nearby receptors to levels up to 89 dBA at 50 feet from the source, depending upon the types of equipment in operation at any given time and the phase of construction. EJ Communities may be exposed to these temporary air quality and noise related impacts; however, such impacts would be mitigated to a less than significant level after implementation of the mitigation measures listed in Section 4.2, *Air Quality*, and 4.11, *Noise*. Temporary traffic impacts include delays during road closures or other disturbances from construction activities; however, due to their temporary nature, traffic delay impacts would not be considered significant.

While it is likely that numerous construction sites of individual improvement projects may experience temporary air quality, noise and construction impacts, mitigation measures have been identified to minimize potential impacts and protect sensitive receptors or special populations located near the individual improvement sites, including identified EJ Communities (refer to Sections 4.2, *Air Quality*, 4.11, *Noise*, and 4.12, *Transportation*). These temporary impacts would be distributed to all communities within proximity to a specific project construction site. All cities and unincorporated communities may experience periods of temporary dust, hazardous air emissions, elevated noise levels, and increased traffic congestion prior to the completion of the roadway, circulation, infrastructure, or transit improvement. EJ Communities would not be disproportionately affected, and as a result, short-term impacts would be less than significant.

Long-Term Impacts

Minority populations, as well as non-minority populations, located in close proximity to major highways, particularly U.S. Highway 101, may be exposed to hazardous criteria pollutants. However, as discussed in Section 4.2 *Air Quality*, diesel PM_{2.5}, PM₁₀ and NO_x emissions under Connected 2050 would be notably lower than existing conditions and future conditions without Connected 2050. As a result, impacts to minority populations that may occur in close proximity to major freeways would be less than significant. In addition, ambient noise throughout the region, in EJ Communities and elsewhere, particularly in urbanized areas, would increase due to an overall increase in vehicle activity. Mitigation measures identified in Section 4.11, *Noise*, would reduce these potential impacts to a less than significant level. It is also important to note that while some minority populations may be exposed to these conditions, there are many other non-minority populations that may be exposed as well, as non-minority populations and non-EJ Communities also live within close proximity to major highways, particularly along U.S. Highway 101 in the South Coast region of Santa Barbara County. Connected 2050 projects are dispersed throughout the region, in areas identified with EJ Communities and other County populations. For example, Caltrans City of Santa Maria U.S. 101 Corridor Study (SM-PL-24), which includes a corridor study to determine transportation projects on U.S. 101 in Northern Santa Barbara County (Santa Maria Way Interchange to Santa Barbara/San Luis Obispo County Line). A variety of populations reside along this corridor, including those identified as EJ Communities. Therefore, minority populations would not be disproportionately impacted.

In addition, Connected 2050 envisions a land use scenario that encourages urban land uses along existing transportation corridors, which would locate people closer to existing goods and services, as well as transportation hubs. As a result, Connected 2050 would locate people closer to areas with increased concentrations of air pollutants, elevated noise levels and increased light and glare. These specific impacts are discussed in Sections 4.1, *Aesthetics*, 4.2, *Air Quality* and 4.11, *Noise*. While future residents of land use development envisioned in Connected 2050 include EJ Communities, implementation of Connected 2050 would not disproportionately impact identified communities of concern, as future land development projects would serve a wide array of the population and would be dispersed throughout urbanized areas, particularly in the South Coast area, as well as the cities of Santa Barbara, Santa Maria, Carpinteria, Goleta, and Lompoc. In addition, transportation system improvements, as well as the land use scenario envisioned by Connected 2050, would provide greater mobility for all users, including low-income and minority groups.

SBCAG has explicitly outlined goals, policies, objectives, and performance measures to address equity, health and safety in Connected 2050, in compliance with EO 12898, including:

- Policy 3.3 Environmental Justice. The planning process shall be consistent with Title VI of the Civil Rights Act of 1964, SBCAG’s 2015 Public Participation Plan, and SBCAG’s SB 375 Public Participation Plan (2019).

Therefore, based on the analysis above and through implementation of Policy 3.3, Connected 2050 would not disproportionately expose EJ Communities, including minority populations, low-income population or low-mobility populations to adverse environmental impacts. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold: Would the mobility benefits derived from Connected 2050, in terms of travel times and accessibility by transit and/or single-occupancy vehicle, be substantially less for minority populations, low-income populations, low community engagement populations, and/or populations with low mobility in the SBCAG region?

Impact EJ-2 MOBILITY BENEFITS DERIVED FROM CONNECTED 2050, IN TERMS OF TRAVEL TIMES AND ACCESSIBILITY BY TRANSIT AND/OR SINGLE-OCCUPANCY VEHICLE, WOULD NOT BE SUBSTANTIALLY LESS FOR MINORITY POPULATIONS, LOW-INCOME POPULATIONS, LOW COMMUNITY ENGAGEMENT POPULATIONS, AND/OR POPULATIONS WITH LOW MOBILITY IN THE SBCAG REGION. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Connected 2050 identifies several performance measures to evaluate the effectiveness of Connected 2050 at achieving SBCAG’s planning goals and objectives. Performance measures related to equity and mobility include but are not limited to:

- Average Travel Distance (All Trips) [Miles]
- Average Travel Time (All Trips) [Minutes]
- Average Commute Time (Workers) [Minutes]
- Transit Accessibility (% of Jobs Within a High-Quality Transit Corridor)
- Transit Accessibility (% of Population Within a High-Quality Transit Corridor)
- Transit Accessibility for Low Incomes (% Jobs Within a High-Quality Transit Corridor)

- Transit Accessibility for Low Incomes (% of Population Within a High-Quality Transit Corridor)
- Average Peak Trip Time for Low Income Communities (Minutes)

Based on the evaluation of the transportation improvement projects and future land use patterns envisioned by Connected 2050, and shown in Table 3-8 of the SCS (Chapter 3 of Connected 2050), mobility benefits would not be significantly less for low-income or minority populations compared to effects for the total population. Connected 2050 includes the identification of EJ Communities in the performance measures of the total population, and balances competing considerations in a way that maximizes region-wide benefits and minimizes detrimental effects. Compared to the future baseline scenario in 2050, the preferred scenario:

- Reduces overall vehicle miles traveled by 16 percent, vehicle hours traveled by 14 percent, and average daily traffic (ADT) volumes by one percent.
- Reduces overall congestion (as measured by congested vehicle miles traveled) by 32 percent compared to the future baseline scenario.
- Reduces average vehicle trip time by 10 percent and average vehicle commute time for workers by six percent.
- Achieves an overall 10 percent increase in transit accessibility (the percentage of population within a high-quality transit corridor¹).
- Achieves a 33 percent increase in transit accessibility for low income populations (the percentage of low-income population within a high quality transit corridor).
- Increases transit ridership by 5 percent (38,980 daily trips for the preferred scenario versus 36,960 for the future baseline), and results in a three percent increase in alternative trip (biking, walking, and transit) mode share.

The preferred scenario achieves increases in transit accessibility for low income populations. The overall percentage of low-income populations within a high-quality transit corridor increases, from 8.33 percent in 2010 to estimates of 46.14 percent, 54.78 percent, and 153.86 percent in 2020, 2035 and 2040 respectively. The total increase is 546 percent from 2010 percentages, and an 81 percent increase from the corresponding 2040 future baseline numbers (29.75 percent). In addition, average one-way vehicle trip time for low-income communities is estimated to be 14.88 minutes in 2015. For the preferred scenario, there are marginal changes; 14.63, 15.01, and 15.17 minutes in 2020, 2035, and 2050 respectively, a two percent increase from 2015 and a full 13 percent reduction from the 2050 future baseline scenario (17.49 minutes).

Overall, Connected 2050 would improve mobility benefits for EJ Communities, as well as non-minority populations. In areas of increase, EJ Communities would not be impacted in a disproportionate manner compared to the total population. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

¹ Defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes per peak commute hour.

c. Specific Projects That May Result In Impacts

Table 4.6-4 shows the list of projects that are located in or adjacent to EJ Communities. These listed projects are based on their potential to contribute to Environmental Justice impacts. The projects are shown below:

Table 4.6-4 Projects With Potential Environmental Justice Impacts

Project #	Affected Community of Concern	Project Description	Impact
CT-2	Carpinteria	South Coast 101 HOV Lanes - Carpinteria (Segment 4A) (0N701)	EJ-1, EJ-2, EJ-3
CT-26	Carpinteria	Reconstruct Linden Ave and Casitas Pass Rd interchanges in Carpinteria. Construct missing link in frontage road system. Reconstruct US 101 bridge over Carpinteria Creek. Includes Measure A funds. Includes mitigation planting and mitigation monitoring.	EJ-1, EJ-2, EJ-3
C-7	Carpinteria	Enhance the alternative transportation environment by performing maintenance, repair, improvement, and engineering of bike and ped facilities.	EJ-1, EJ-2, EJ-3
C-PL-4	Carpinteria	Construct a bicycle and pedestrian undercrossing of UPRR corridor.	EJ-1, EJ-2, EJ-3
C-PL-7	Carpinteria	Construct a multiuse trail along Third Street from Linden Avenue to the Carpinteria Marsh Park (part of the Carpinteria Coastal Vista Trail).	EJ-1, EJ-2, EJ-3
CT-24	Goleta Valley	Near Goleta, at the San Jose Creek Bridge # 51-0217. Replace bridge.	EJ-1, EJ-2, EJ-3
Go-1	Goleta Valley	Supplement local funding to better preserve local transportation assets, to include pavement rehabilitation, pavement maintenance, striping and signage, Hollister Ave Bridge project, and Hollister Ave widening.	EJ-1, EJ-2, EJ-3
Go-5	Goleta Valley	Enhance the active transportation environment by supporting bike and ped projects identified in the Goleta Bicycle and Pedestrian Master Plan; concrete maintenance and access ramps; and safe routes to school improvements.	EJ-1, EJ-2, EJ-3
Go-7	Goleta Valley	Repair of transportation facilities damaged during storm events. Includes repair of Cathedral Oaks Crib Wall and locations citywide as necessary.	EJ-1, EJ-2, EJ-3
Go-9	Goleta Valley	Remove existing bridge over San Jose Creek and replace with a new, wider bridge with greater hydraulic capacity. Additional width for sidewalks and bike lanes.	EJ-1, EJ-2, EJ-3
Go-17	Goleta Valley	Install lighting along the multipurpose path located along the south side of Hollister Avenue from Pacific Oaks to Ellwood School.	EJ-1, EJ-2, EJ-3
Go-21	Goleta Valley	Construct a Class I bike path on Cathedral Oaks from Glen Annie to La Patera, 1.63 miles	EJ-1, EJ-2, EJ-3
Go-22	Goleta Valley	At Patterson, Storke Rd/Glen Annie, Los Carneros, and Fairview Avenue Interchanges. Widen or replace existing overcrossing and overhead to accommodate additional turn lanes and Class II bike lanes. Ramp intersection improvements. Widen ramps to provide additional turn lanes and/or thru lanes. Signal modifications as necessary to accommodate peds and bikes. Add bike lanes.	EJ-1, EJ-2, EJ-3

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Project #	Affected Community of Concern	Project Description	Impact
Go-25	Goleta Valley	Construct auxiliary lane on US 101 NB between Los Carneros and Storke/Glen Annie Rd on NB US 101 and on US 101 NB and SB between at Fairview Rd to Los Carneros Rd	EJ-1, EJ-2, EJ-3
Gu-1	Guadalupe	Supplement local funding to better preserve local transportation assets, to include: maintenance of streets, curbs, gutters, and drainage facilities, contract paving, and public works garage.	EJ-1, EJ-2, EJ-3
Gu-2	Guadalupe	Enhance the alternative transportation environment by performing bike and ped maintenance projects and ADA sidewalk work.	EJ-1, EJ-2, EJ-3
Gu-PL-2	Guadalupe	Maintain the local transportation network and construct locally-funded project.	EJ-1, EJ-2, EJ-3
Gu-PL-3	Guadalupe	Implement high priority projects listed in the Regional Active Transportation Plan.	EJ-1, EJ-2, EJ-3
CT-PL-15	Guadalupe	Guadalupe ADA (1E030)	EJ-1, EJ-2, EJ-3
CT-23	Lompoc	Near Lompoc, at San Antonio Creek Bridge No. 51-0237 L/R. Bridge scour mitigation.	EJ-1, EJ-2, EJ-3
CT-25	Lompoc	Near Lompoc, at the Salsipuedes Creek. Reconstruct slope protection.	EJ-1, EJ-2, EJ-3
L-1	Lompoc	Supplement local funding to better preserve local transportation assets, to include: street maintenance, engineering, overlays and rehabilitation, and urban forestry.	EJ-1, EJ-2, EJ-3
L-2	Lompoc	Enhance the alternative transportation environment by performing maintenance, repair, improvement, and engineering of bike and ped facilities.	EJ-1, EJ-2, EJ-3
L-5	Lompoc	Purchase and construction of a new maintenance and operations center for City of Lompoc Transit	EJ-1, EJ-2, EJ-3
L-PL-2	Lompoc	Circulation improvements on arterials and/or collectors.	EJ-1, EJ-2, EJ-3
L-PL-3	Lompoc	Central/H St. intersection widening improvements	EJ-1, EJ-2, EJ-3
L-PL-6	Lompoc	Construct Class 2 Bikeways at Locations: B) A St, Chestnut Ave to Central Ave; D) Floradale Rd/Santa Lucia Canyon Rd, adjacent to Federal Correctional Institution.	EJ-1, EJ-2, EJ-3
CT-PL-6	City of Santa Barbara	Reconstruct portions of, or entire interchange of US 101 at Castillo Street	EJ-1, EJ-2, EJ-3
CT-PL-7	City of Santa Barbara	US 101 Milpas St SB off-ramp Improvements	EJ-1, EJ-2, EJ-3
CT-PL-10	City of Santa Barbara	Hwy 154 Drainage Improvement	EJ-1, EJ-2, EJ-3
CT-30	City of Santa Barbara	At the intersection of the first southbound off-ramp junction at Milpas Street, construct intersection improvements. This project includes all project phases - through construction.	EJ-1, EJ-2, EJ-3
SB-1	City of Santa Barbara	Supplement local funding to better preserve local transportation assets, to include: pavement maintenance, roadway maintenance, engineering services, bridge preventative maintenance, post bridge construction monitoring, and graffiti abatement.	EJ-1, EJ-2, EJ-3
SB-2	City of Santa Barbara	Supplement local funding to repair storm damage, including storm drain repair and maintenance.	EJ-1, EJ-2, EJ-3

Project #	Affected Community of Concern	Project Description	Impact
SB-5	City of Santa Barbara	Enhance the alternative transportation environment by performing maintenance of sidewalks and improving sidewalk access ramps.	EJ-1, EJ-2, EJ-3
SB-8	City of Santa Barbara	Projects include: Eastside Green Lanes and Bike Boulevard Gap Closure, Westside Bike Boulevard Gap Closure, Downtown De La Vina Street Safe Crosswalks and Buffered Bike Lanes, U.S. 101 State Street Undercrossing Active Transportation Improvements, Lower Eastside Community Connectivity Active Transportation Plan (Plan Only), and Las Positas and Modoc Roads Class I Construction	EJ-1, EJ-2, EJ-3
SB-PL-2	City of Santa Barbara	Location: US 101 between Mission St/Las Positas St. Access Improvements	EJ-1, EJ-2, EJ-3
SB-PL-4	City of Santa Barbara	Replace the Union Pacific Railroad bridge over Cabrillo Boulevard with a bridge meeting contemporary standards and construct capacity improvements on Cabrillo Boulevard at Los Patos. Capacity and operational improvements at the intersection of Cabrillo Boulevard and Los Patos Road. Construct roundabout to accommodate anticipated demand and alleviate existing congestion.	EJ-1, EJ-2, EJ-3
SB-PL-10	City of Santa Barbara	Create a separate/protected bikeway over US 101 from Modoc to State Street	EJ-1, EJ-2, EJ-3
SB-PL-15	City of Santa Barbara	Pedestrian and bike improvements along Chapala between Gutierrez and Sola Streets	EJ-1, EJ-2, EJ-3
SB-PL-16	City of Santa Barbara	Implement a road diet on De La Vina Street from Constance Avenue to Padre Street. Crossing enhancements included.	EJ-1, EJ-2, EJ-3
SB-PL-17	City of Santa Barbara	Pedestrian safety crossing enhancements, sidewalk repair, sidewalk widening where feasible, access ramps	EJ-1, EJ-2, EJ-3
SB-PL-18	City of Santa Barbara	Implement bike and pedestrian safety improvements as outlined in the Westside and Lower Westside Transportation Management Plan. Infrastructure projects include sidewalk infill, enhanced crossings, pedestrian scale lighting, bike lanes, and separated bikeways/multiuse paths.	EJ-1, EJ-2, EJ-3
SB-PL-24	City of Santa Barbara	This project would be a new vehicle bridge crossing Highway 101 at Ortega Street or Cota Street. The vehicle crossing would accommodate traffic, pedestrian, and bicycle traffic to and from the Lower Westside to Downtown, relieving congestion at the Carrillo and Castillo Interchanges.	EJ-1, EJ-2, EJ-3
CT-14	Santa Maria	SR 135 in Santa Maria pavement preservation project CAPM (1G970)	EJ-1, EJ-2, EJ-3
CT-18	Santa Maria	Pavement preservation in Santa Barbara County near Santa Maria from Solomon Road to Jct. SRs 166/01	EJ-1, EJ-2, EJ-3
SM-1	Santa Maria	Supplement local funding to maintain, improve, or construct roadways and bridges.	EJ-1, EJ-2, EJ-3
SM-3	Santa Maria	Supplement local funding for Downtown Multimodal Streetscape Plan (Hwy 135).	EJ-1, EJ-2, EJ-3
SM-11	Santa Maria	Install fiber optic communications to improve communications. Enhance SMAT's IT system.	EJ-1, EJ-2, EJ-3
SM-PL-2	Santa Maria	Location: Main Street at US 101. Add capacity to approaches and on/off ramps.	EJ-1, EJ-2, EJ-3

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Project #	Affected Community of Concern	Project Description	Impact
SM-PL-3	Santa Maria	The project will improve the operations of intersections at Betteravia Road and US 101 by constructing a northbound loop on ramp in the south east interchange quadrant.	EJ-1, EJ-2, EJ-3
SM-PL-4	Santa Maria	The project will connect McCoy Lane to US 101 through a new interchange including northbound and southbound on and off ramps to provide Santa Maria residents and businesses with improved access to the highway.	EJ-1, EJ-2, EJ-3
SM-PL-6	Santa Maria	Location: Miller St, between Robles St and Stowell Rd. Widen arterials to City standards.	EJ-1, EJ-2, EJ-3
SM-PL-7	Santa Maria	Location: Alvin Ave between Curryer St and Miller St. Modify to secondary arterial stands with class II bike lanes.	EJ-1, EJ-2, EJ-3
SM-PL-8	Santa Maria	Location: Stowell Rd at College Dr. Lengthen E/B left turn lane.	EJ-1, EJ-2, EJ-3
SM-PL-9	Santa Maria	Location: Betteravia Rd: E St. to SR 135. Purchase ROW, widen to 6 lanes, signalize intersections.	EJ-1, EJ-2, EJ-3
SM-PL-10	Santa Maria	Location: A Street between McCoy Lane and Stowell Rd - Modify to secondary arterial standard	EJ-1, EJ-2, EJ-3
SM-PL-11	Santa Maria	Location: Miller St from Enos Drive to Stowell Rd - Widen to four lanes w/ channelization and class II bike lane.	EJ-1, EJ-2, EJ-3
SM-PL-12	Santa Maria	Location: McCoy Ln between A St and Mahoney Rd	EJ-1, EJ-2, EJ-3
SM-PL-13	Santa Maria	Location: Foster Rd between SR 135 and Blosser Rd. Widen to four lanes and construct class II bike lane.	EJ-1, EJ-2, EJ-3
SM-PL-14	Santa Maria	Widen to 4 lanes. Chapel to Alvin	EJ-1, EJ-2, EJ-3
SM-PL-15	Santa Maria	Widen to 4 lanes between Blosser Road and "A" Street	EJ-1, EJ-2, EJ-3
SM-PL-16	Santa Maria	Widen to 4 lanes between Route 166 and Stowell Road	EJ-1, EJ-2, EJ-3
SM-PL-17	Santa Maria	Widen to 6 lanes from Union Valley Parkway to SM Way	EJ-1, EJ-2, EJ-3
SM-PL-18	Santa Maria	Widen to 4 lanes between Panther Drive and easterly City Limit boundary	EJ-1, EJ-2, EJ-3
SM-PL-19	Santa Maria	Construct secondary arterial standards from Betteravia Rd to Carmen Lane	EJ-1, EJ-2, EJ-3
SM-PL-23	Santa Maria	Design and construction of interchange.	EJ-1, EJ-2, EJ-3
SM-PL-25	Santa Maria	Design and construction for maintenance of structural features.	EJ-1, EJ-2, EJ-3
SM-PL-26	Santa Maria	ROW Acquisition, design and construction of Betteravia Road, E Street, and Mahoney Road intersection. Mahoney Road reconstruction to City Limits	EJ-1, EJ-2, EJ-3
CT-31	Santa Ynez	The project will improve access to Lompoc across the Santa Ynez River by a providing a bridge raised above flood level with wider shoulders that can safely accommodate vehicles, bicycles and pedestrians.	EJ-1, EJ-2, EJ-3
SBC-1	SB County	Supplement local funding to maintain, repair, construct, and improve streets and bridges, including: roadway maintenance and repair; pavement preservation; bridge and large culvert projects	EJ-1, EJ-2, EJ-3
SBC-2	SB County	Supplement local funding to maintain, repair, construct, and improve streets and bridges, including: roadway maintenance and repair; pavement preservation; bridge and large culvert projects	EJ-1, EJ-2, EJ-3
SBC-7	SB County	Enhance the alternative transportation environment by performing maintenance, repair, construction, and improvement of the bike	EJ-1, EJ-2, EJ-3

Project #	Affected Community of Concern	Project Description	Impact
		and ped facilities in the North County, including: sidewalk repair and replacements (Partnership Program), and bike, pedestrian and Safe Routes facilities.	
SBC-8	SB County	Enhance the alternative transportation environment by performing maintenance, repair, construction, and improvement of the bike and ped facilities on the South Coast, including: sidewalk repair and replacements (Partnership Program), and bike, pedestrian and Safe Routes facilities.	EJ-1, EJ-2, EJ-3
SBC-12	SB County/ Isla Vista	Construct pedestrian and bicycle facilities throughout Isla Vista.	EJ-1, EJ-2, EJ-3
SBC-PL-4	SB County	Hollister Ave between San Antonio Rd and US 101/SR 154. Widen to 4 lanes with channelization and bike lanes; reconstruct UPRR overcrossing.	EJ-1, EJ-2, EJ-3
SBC-PL-8	Santa Maria Valley/Guadalupe	Along the Santa Maria levee, Santa Maria to Guadalupe. Construct multi-purpose bikeway.	EJ-1, EJ-2, EJ-3

4.6.4 Cumulative Impacts

Cumulative environmental justice impacts would occur if Connected 2050 cumulatively contributed to disproportionate high and adverse human health or environmental impacts to the minority populations, low-income populations, low community engagement populations and/or populations with low mobility in the SBCAG region. As discussed throughout this section, EJ Communities have been mapped and identified in the SBCAG region and Connected 2050 would not lead to disproportionately high and adverse environmental impacts towards EJ communities. While all populations in the SBCAG region would be exposed to the environmental impacts discussed in this EIR, they would not be disproportionate, and Connected 2050's contribution of exposing EJ communities to environmental impacts would not be cumulatively considerable. In addition, as discussed in Impact EJ-2, the mobility benefits derived from connected 2050 would not be substantially less for EJ Communities, rather Connected 2050 considers cumulative development in the SBCAG region and would improve mobility benefits for both EJ Communities and non-minority populations. Connected 2050's cumulative impacts would not be cumulatively considerable and cumulative environmental justice impacts would be less than significant.

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4.7 Geology and Soils

This section discusses the geology and soils setting and impacts of development facilitated by Connected 2050.

4.7.1 Setting

The transportation improvement projects and land use scenario envisioned by Connected 2050 are located primarily within the four urban areas of the County: the South Coast, the Santa Maria-Orcutt area, the Santa Ynez Valley, and the Lompoc region. All of the urban areas are located in one of two geomorphic provinces, namely, the Transverse Ranges (trending east-west from beyond Point Conception to the Ventura County line) and the Southern Coast Ranges (trending north-northwest from the Santa Ynez River to beyond the County line). A geomorphic province is a region of unique topography and geology that is readily distinguished from other regions based on its landforms and diastrophic history. The South Coast lies in the narrow strip of Transverse Ranges bordered by the Pacific Ocean on the south and the Santa Ynez Mountains on the north. The Santa Ynez Valley and Lompoc region are primarily within the Southern Coast Ranges, while the Santa Maria-Orcutt area is located fully within these Ranges.

The basement rocks of the Coast Ranges include the Jurassic to Cretaceous rocks of the Franciscan Assemblage, which consist of over 55,000 feet of greywacke, greenstone, bluestone, metasedimentary rocks, and ophiolite sequences. During the Mesozoic and into the Cenozoic, the area of the present-day Coast Ranges was covered by marine waters, resulting in the thick accumulation of marine and nonmarine shale, sandstone, and conglomerate on the Franciscan basement rock. Later, these deposits were unconformably overlain by Paleocene to Pliocene continental shelf marine sedimentary rocks. During the Late Miocene to the Late Pliocene, a mountain-building episode occurred in the vicinity of the present-day Coast Ranges, resulting in their uplift above sea level. Subsequently, from the Late Pliocene to Pleistocene, extensive deposits of terrestrial material, including alluvial fans and fluvial sediments, were deposited in the Coast Ranges (Norris and Webb 1990). Ongoing tectonic deformation and sea level change related to Pleistocene climate fluctuations continued through the Quaternary Period, resulting in the formation of marine terrace platforms along the Coast Ranges.

Existing geologic and soils conditions for each of the urban study areas are briefly summarized below. Figure 4.7-1 through Figure 4.7-3 show known faults and zones of ground-shaking intensity, liquefaction hazard, and slope stability and landslide hazards throughout the Santa Barbara County region.

a. South Coast

This area stretches from the Ventura County line to Gaviota on the west and lies in the coastal plain and Santa Ynez Mountain foothills. Topography is steep along the northern boundary (>25 percent grade) and varies along the coastline from high, near vertical bluffs to tidal flats and lagoons.

Geologic Formations

Bedrock units are found in the foothills, mountains, and many portions of the coastal bluffs. These are Tertiary sedimentary formations of shale, siltstone, and sandstone which are sometimes prone to land sliding and most often can be excavated without the use of blasting techniques. Bedrock is overlain by Pleistocene to recent alluvium in stream channels, coastal terraces, and coastal

lowlands. The deposits are poorly bedded, have highly variable engineering properties, and are normally easy to excavate.

Earthquake Groundshaking and Fault Rupture

The South Coast area is susceptible to high levels of groundshaking due to the numerous active (e.g., More Ranch, Mission Ridge, Arroyo Panda, Red Mountain) and potentially active (e.g., Goleta, Mesa-Rincon, Carpinteria, Santa Ynez) faults which border or pass through the area. Historically, very large earthquakes very near the area have produced groundshaking (horizontal acceleration values measured in percent G's, or "force of gravity") above building code values. Distant faults (most notably the San Andreas, to the north and east) have the potential to produce a very high level of groundshaking with differing frequency content that may affect linear and longer period structures (roads and bridges). Fault rupture can occur during severe earthquakes and produce ground surface displacements (vertical or horizontal offsets) of a few feet to a few tens of feet. Where these faults cross structures (roads, bridges, buildings), there could be substantial damage and high potential for injury to occupants or users of the structures. The highest potential for fault rupture is directly on the active faults as shown in Figure 4.7-1.

Liquefaction

Liquefaction (the loss of soil bearing strength during a strong earthquake) is a potential occurrence in several areas with younger soils as well as in areas where the groundwater table is less than 50 feet deep. This condition occurs mainly near Carpinteria, in the coastal zone area of downtown Santa Barbara, and in the Isla Vista - Airport - Goleta area. The severity of ground deformation due to liquefaction is dependent on the density and depth of the liquefied material. Shallower materials experience the most severe effects. See Figure 4.7-2.

Slope Stability

Landslides and surficial slope failures are most likely to occur in areas of greater than 25 percent slope (hillside areas) and along steep bluffs. In the South Coast region, unstable hillsides are common in the foothills of the Coast Range. In addition, the majority of the coastline is comprised of highly erodible and unstable coastal bluffs. See Figure 4.7-3.

Expansive, Compressible/Collapsible Soils

Soils with relatively high clay content are expansive due to the capacity of clay minerals to take in water and swell (expand) to greater volumes. Because the bedrock and soils contain relatively substantial amounts of clay, this can be a condition experienced along numerous roadways in the area. Collapsible and compressible soils occur in areas where fine-grained soils have accumulated relatively rapidly and not been buried with associated consolidation. Areas with the highest potential for these impacts are primarily along the South Coast and include Carpinteria and the Airport-Goleta area south of US 101.

Figure 4.7-1 Fault Lines in Santa Barbara County

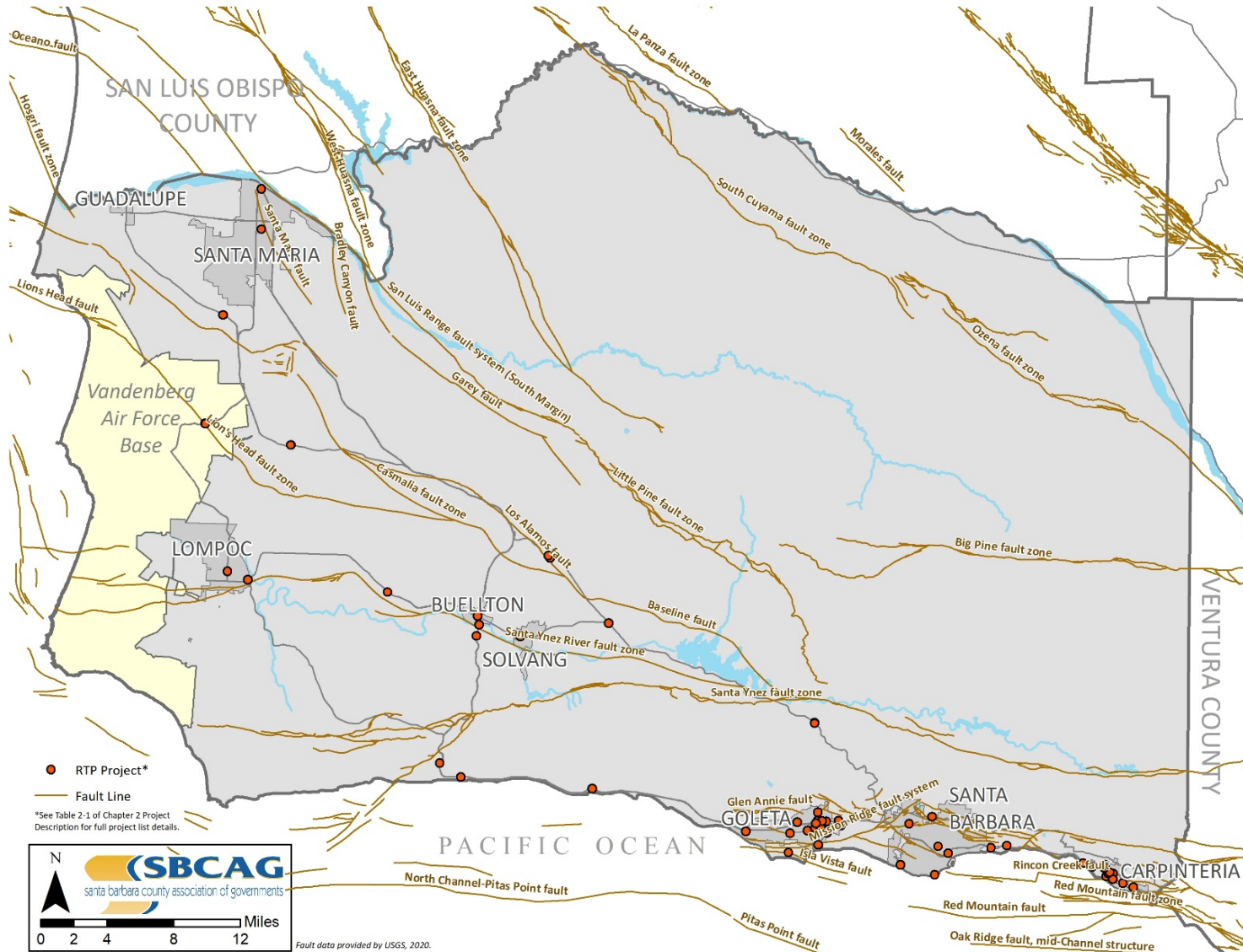


Figure 4.7-2 Liquefaction Risk in Santa Barbara County

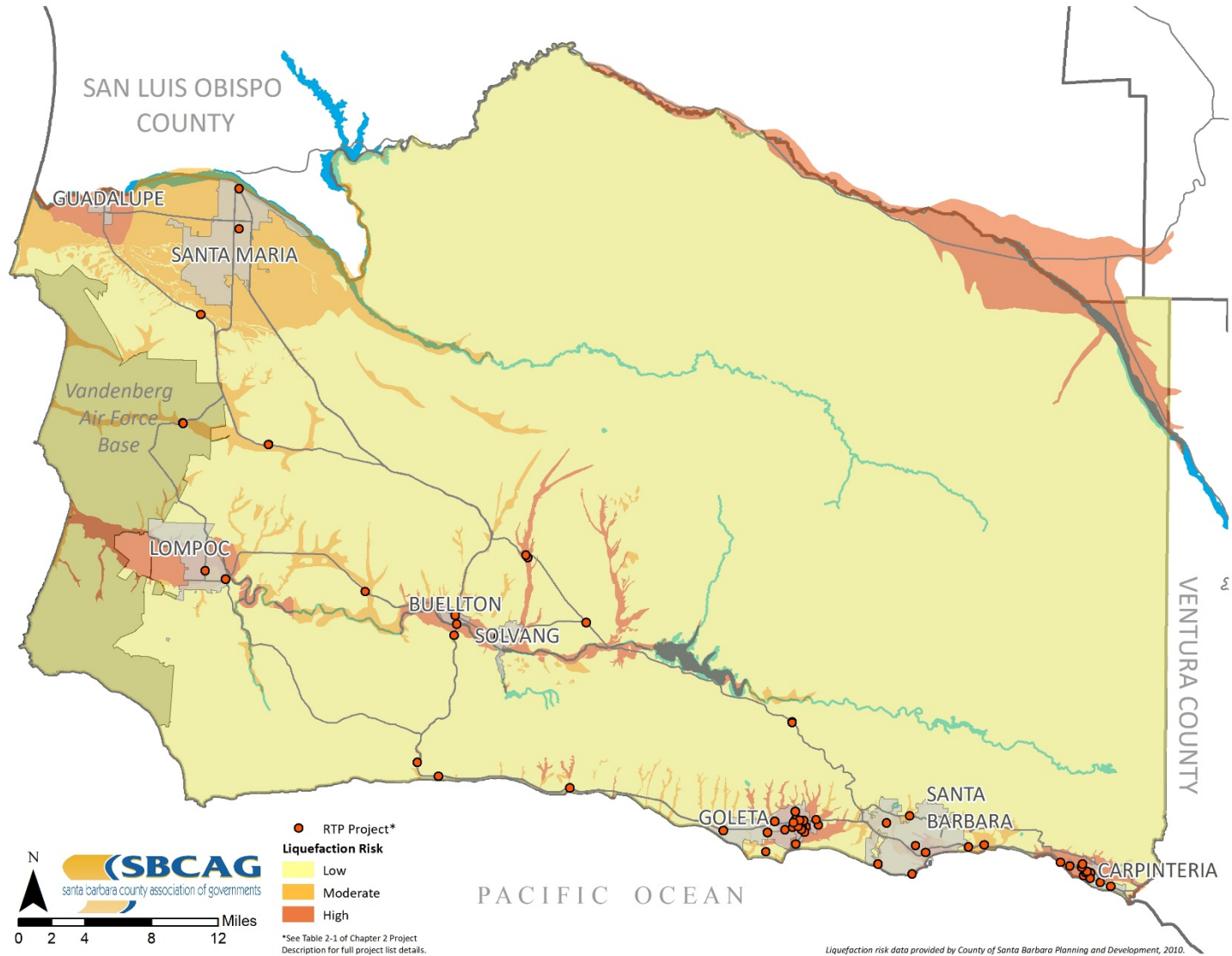
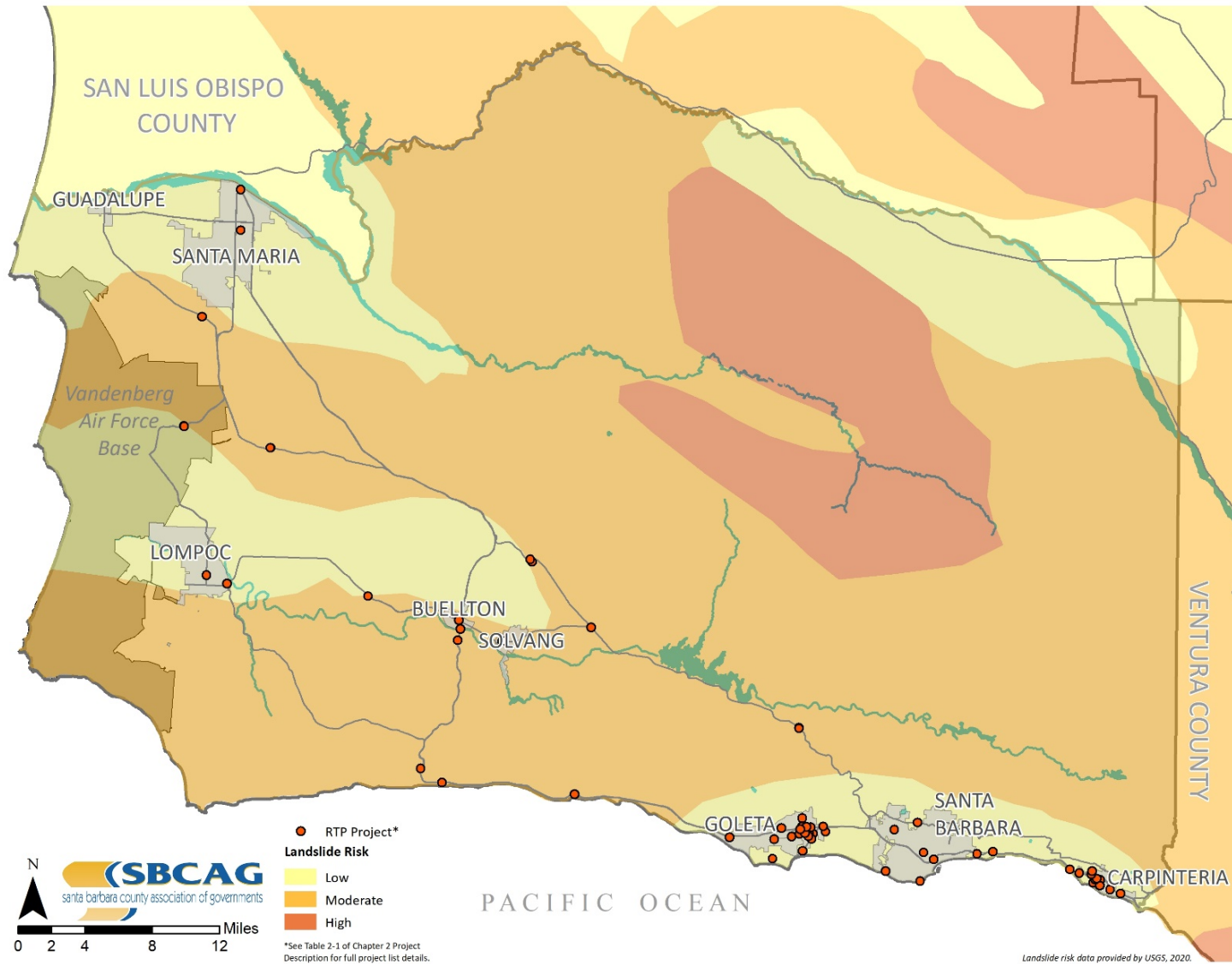


Figure 4.7-3 Landslide Risk in Santa Barbara County



b. Santa Maria-Orcutt Area

The Santa Maria Valley is bordered on the south and east by hills of the Coast Ranges (Casmalia and Solomon Hills), and on the north by the Santa Maria River. The valley is generally flat, although it also has areas of rolling hills. To the west is the floodplain opening to the Pacific Ocean. In the southern portion of the valley, incised topography with local closed depressions dominates due to the old sand dunes which cover this area. To the north, the floodplain of the ancestral Santa Maria River has created a flatter topography that extends west to Guadalupe.

Geologic Formations

The Quaternary deposits south of the Santa Maria Valley Railroad in the Betteravia Road area consist of old dune sands overlying Orcutt Sand. North of this area is floodplain alluvium that extends east to the river and west to beyond Guadalupe. The sand units have low variability in engineering properties. The alluvium may have greater lateral variability in properties.

Earthquake Groundshaking and Fault Rupture

The area has been mapped as a moderate groundshaking hazard for all project areas. Due to the potential activity on the Lion's Head fault southwest of the Santa Maria Valley on Vandenberg Air Force Base, east-west to northwest-southwest geologic structures could exist along the south edge of the City of Santa Maria. Activity on this fault could cause intense groundshaking, although such an event has not occurred to date.

The Santa Maria Fault, which is covered by Quaternary deposits, has been mapped in a northwest-southeast direction in the northeast portion of the area. Because it has at least some chance of reactivation, projects in its vicinity have been given a moderate fault rupture potential. No other faults are presently known in the project areas.

Liquefaction

Liquefaction potential is greatest around Guadalupe, where it is rated moderate. It could be high in local areas if groundwater levels are within 50 feet of the surface. Most other areas have a low liquefaction potential, indicating fairly deep groundwater.

Slope Stability

The southern portions of the area underlain by old dune sand and Orcutt sand are rated low for slope stability hazard, although some areas are susceptible to local slumps in oversteepened slopes. North of the railroad and Betteravia Road, there is no natural slope stability hazard identified within the area.

Expansive, Collapsible/Compressible Soils

Areas of moderate and highly expansive soil hazard exist in the area, but in nearly all project areas, the potential is low. The exception is in the Guadalupe area and where Orcutt sand is exposed below old dune sand just south of the railroad to near the Santa Maria Airport, where the hazard is rated moderate. The only area that is rated with a moderate hazard potential for collapsible soils is in Guadalupe, west of State Route 1.

c. Santa Ynez Valley

Santa Ynez, Solvang, and Buellton lie in the Santa Ynez Valley, which is surrounded by the Santa Ynez Mountains and southernmost extensions of the Coastal Ranges. The Santa Ynez River borders the southerly edge of the area, through Solvang and Buellton, against the northern slopes of the Santa Ynez Mountains (which have slopes exceeding 25 percent). The valley itself is made up of low hills and is crossed northeast to southwest by drainages exiting the hills and draining to the Santa Ynez River.

Geologic Formations

Bedrock units, Quaternary terrace deposits, alluvium and landslides typify the geologic units in the area. Along the Santa Ynez River are Tertiary and Cretaceous sandstones and shales comprising at least ten different formations. West in the Purisima Hills are the younger Tertiary units, and Quaternary terrace and alluvial deposits with generally north-to-northeast and south-to-southwest dipping bedding planes. Within the Valley are isolated younger bedrock outcrops surrounded by dissected terrace deposits.

Generally, the bedrock materials in the area of the proposed projects should be readily excavated with normal construction equipment but will have somewhat variable engineering geologic properties. Quaternary deposits are poorly bedded and normally are easily excavated.

Earthquake Groundshaking and Fault Rupture

The Santa Ynez Valley area has two zones of groundshaking: high and moderate. The high rating is based on the presence of faults to the south (Santa Ynez Fault) and to the north (Big Pine-Rinconada faults). However, there are no known faults in the valley itself. The valley is therefore considered at moderate risk.

Fault rupture potential is generally low throughout the valley except along the southern margin where the rocks are more highly deformed and faulted. The specific character, location and age of last movement are not known for faults in this area; however, activity potential cannot be entirely discounted.

Liquefaction

Liquefaction potential in the area varies from low to moderate. Data possibly indicate high potential in areas adjacent to the Santa Ynez River (State Route 246) and Alamo Pintado Road at Ballard.

Slope Stability

Due to the local relief and nature of geologic units, the entire area is classified as having moderate potential for slope stability problems, with local areas of high potential along US 101 and at Ballard at Alamo Pintado Road. Areas adjacent to steep arroyos may not be mapped and should be considered as having high potential for slope instability.

Expansive, Collapsible/Compressible Soils

The potential for expansive soils is classified as moderate, but local areas (particularly around the Santa Ynez Airport and along Baseline Avenue) may have a higher potential. Low expansion potential soils may also be found along State Route 246 and US 101.

There is a moderate potential for collapsible soils around the intersection of State Route 246 and US 101. For deeper foundations or mat-type foundations, the materials several feet below the surface may be collapsible when water is added, but this has not generally been mapped or considered in previous mapping.

d. Lompoc Area

Lompoc occupies a broad inland valley area at the mouth of the Santa Ynez River, where its meandering course exits between the Santa Ynez Mountains on the south and the Santa Rita Hills on the north. The valley area is generally flat, with few areas greater than 10 percent in grade. Some steeper grades are found locally along State Route 1. Salsipuedes and Jalama Creek roads are bordered closely by terrain with 10 percent to greater than 25 percent grades.

Geologic Formations

Bedrock units in the hilly areas are basically the same as for the Santa Ynez area. These are encountered along State Route 1 and adjacent to Salsipuedes and Jalama Creeks. Floodplain deposits laid down primarily by the Santa Ynez River underlay the alluvial plain upon which Lompoc rests south of the River. These alluvial deposits can be readily excavated and have variable engineering properties.

Earthquake Groundshaking and Fault Rupture

According to the Santa Barbara County General Plan Seismic Safety and Safety Element, several active faults are located within or near the region including: Big Pine, Graveyard and Turkey Trap, Mesa, More Rach, Nacimiento, Pacifico, Santa Cruz Island, Santa Rosa Island, and the Santa Ynez Faults. The potentially active faults include: Arroyo Parida, Bradley Canyon, Carpinteria, Goleta, Mission Ridge, Red Mountain, Rincon Creek, and the San Jose Fault. The inactive faults are: the Carneros, Camuesa, Dos Pueblos, Eagle, East Huasna, Erburu, Glen Anne, Hildreth, Honda, Las Varas, Lavigia, Lion's Head, Little Pine and Loma Alta, Lompac Terrace, Modoc, Montecito, Morales, Schwade, Munson Creek, Ozena, Pezzoni, Refugio, San Antonio, San Pedro, Santa Maria, South Cuyama, Suey, White Rock, and Ygnacio Faults.

The Lompoc area is located mostly within a zone of moderate shaking potential due to the same earthquake sources as described for the Santa Ynez Valley. Only the southern portion of the valley has high potential.

Fault rupture can occur during severe earthquakes and produce ground surface displacements (vertical or horizontal offsets) ranging in severity. Where these faults cross structures (roads, bridges, buildings), substantial damage can occur which can cause injury to occupants or users. The highest potential for fault rupture is directly on the active faults. Fault rupture potential is considered to be low throughout the valley area except for the Lompoc Terrace Fault, which may have unmapped extensions from the Lompoc Terrace area of Vandenberg east under the alluvium. To the south, the active Santa Ynez-Pacifico faults project along Jalama Creek and create moderate to high ground rupture potential.

Liquefaction

Liquefaction, or the loss of soil bearing strength during a strong earthquake, is a potential occurrence in areas with younger soils as well as in areas where the groundwater table is less than 50 feet deep. Specifically, in areas of loose sand and silt that is saturated with water, soils can

behave like liquid during earthquakes. Liquefaction can cause serious damage to foundations and bases of structures (USGS n.d.). Liquefaction in a subsurface layer can cause lateral spreading of the ground surface, which usually occurs along weak shear zones that have formed within the liquefiable soil layer. Lateral spreading has generally been observed to take place in the direction of a free face (e.g., a retaining wall or slope). In Santa Barbara County, most of the valley area south of the Santa Ynez River is rated as having moderate liquefaction hazard. The severity of ground deformation due to liquefaction is dependent on the density and depth of the liquefied material. Shallower materials experience the most severe effects.

Slope Stability

Landslides and surficial slope failures are most likely to occur in areas of greater than 25 percent slope (hillside areas) and along steep bluffs. Landslides also occur due to specific events, such as loss of vegetation after fires or earthquakes adding loads to barely stable slopes. In general, mountainous areas and steeply sloped streambanks are most susceptible to landslides or mudflows when soils are wet, particularly adjacent to areas of unstabilized cut or fill. Due to the flat topography within Santa Barbara County, the risk of slope stability is low throughout the valley south of the River. Along the road extensions, this risk will be moderate to high, depending on the nature of construction (e.g., high cut slopes), and the geologic formations (e.g., Rincon and Monterey) or fault/fracture zones encountered.

Expansive, Collapsible/Compressible Soils

Soils with relatively high clay content are expansive because the clay absorbs water and swells (expands). Because the bedrock and soils contain relatively high amounts of clay, the potential for soil expansion occurs throughout the County. The potential for expansive and collapsible soils within the valley area is generally rated low. This potential for expansive soils increases to the south along the hills outside the area of the proposed projects due to the composition of diatomaceous earth. This type of condition results in a very high range of water solubility and shrink potential.

Subsidence

Subsidence is a process that occurs in response to the voids created by extracting solids or liquids from beneath the Earth's surface. Subsidence is controlled by many factors including mining methods, depth of extraction, thickness of deposit and topography. Impacts from subsidence can be serious if damage occurs to structures or effects ground-water conditions (Lee and Abel 1983). Santa Barbara County includes areas with oil mining and groundwater extraction that can be at risk from subsidence. However, there is little evidence of widespread land subsidence from drainage or organic soils, underground mining, or hydrocompaction within the region according to the United States Geological Survey (USGS) Area of Land Subsidence in California Map (USGS 2021).

e. Paleontological Resources Background

Paleontological resources (fossils) are the remains and/or traces of prehistoric life. Fossils are typically preserved in layered sedimentary rocks and the distribution of fossils is a result of the sedimentary history of the geologic units within which they occur. Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. Although it is not possible to determine whether a fossil will occur in any specific location, it is possible to evaluate the potential for geologic units to contain scientifically significant paleontological resources, and therefore evaluate the

potential for impacts to those resources and provide mitigation for paleontological resources if they do occur during construction. Scattered vertebrate remains (mammoth, mastodon, horse, ground sloth, camel, and rodents) have been identified from the Pleistocene non-marine continental terrace deposits in various locations in Santa Barbara County.

4.7.2 Regulatory Setting

State

The Alquist-Priolo Earthquake Fault Zoning Act, California's Alquist-Priolo Act (PRC 2621 et seq.), is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (Earthquake Fault Zones). It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones. Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if they are "sufficiently active" and "well-defined." A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined as within the last 11,000 years). A fault is considered well-defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria and judgment (Hart and Bryant, 1997).

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong ground-shaking, liquefaction and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the State is charged with identifying and mapping areas at risk of strong ground-shaking, liquefaction, landslides and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones.

The California Building Standards Code (CBSC) is based on the Uniform Building Code (International Code Council 1997), which is used widely throughout United States and has been modified for California conditions with numerous, more detailed or more stringent regulations. The CBSC provides standards for various aspects of construction, including, but not limited to: excavation, grading and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss. In accordance with California law, proponents of specific projects are required to comply with all provisions of the CBSC for certain aspects of design and construction.

The California Department of Transportation (Caltrans) has Seismic Design Criteria (SDC) which contain new and currently practiced seismic design and analysis methodologies for the design of new bridges in California. The SDC adopts a performance-based approach specifying minimum levels of structural system performance, component performance, analyses, and design practices for ordinary standard bridges. The SDC has been developed with input from the Caltrans Offices of Structure Design, Earthquake Engineering and Design Support and Materials and Foundations. Memo 20-1 outlines the bridge category and classification, seismic performance criteria, seismic design philosophy and approach, seismic demands and capacities on structural components and seismic design practices that collectively comprise Caltrans' seismic design methodology.

Section 402 of the Clean Water Act authorizes the California State Water Resources Control Board (SWRCB) to issue National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit (Water Quality Order 99-08-DWQ, as amended), referred to as the “General Construction Permit.” Construction activities can comply with and be covered under the General Construction Permit provided that the permittee:

- Develops and implements a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off-site into receiving waters.
- Eliminates or reduces non-stormwater discharges to storm sewer systems and other waters of the nation.
- Performs inspections of all BMPs

California Environmental Quality Act

Paleontological resources are protected under CEQA, which states in part a project will “normally” have a significant effect on the environment if it, among other things, will disrupt or adversely affect a paleontological site except as part of a scientific study. Specifically, in Section VII(f) of Appendix G of the State CEQA Guidelines, the Environmental Checklist Form, the question is posed thus: “Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.” To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, CEQA mandates mitigation of adverse impacts, to the extent practicable, to paleontological resources.

CEQA does not define “a unique paleontological resource or site.” However, the Society of Vertebrate Paleontology (SVP) has defined a “significant paleontological resource” in the context of environmental review as follows:

Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are typically to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) (SVP 2010).

The loss of paleontological resources meeting the criteria outlined above (i.e., a significant paleontological resource) would be a significant impact under CEQA, and the CEQA lead agency is responsible for ensuring that impacts to paleontological resources are mitigated, where practicable, in compliance with CEQA and other applicable statutes.

California Public Resources Code

Section 5097.5 of the Public Resources Code states:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Here “public lands” means those owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with Public Resources Code Section 5097.5 for their own activities, including construction and maintenance, and for permit actions (e.g., encroachment permits) undertaken by others.

Local

Santa Barbara County

The Seismic Safety Element of the Santa Barbara County General Plan was adopted in 1979 and amended in 2015, the element guides land use planning by providing pertinent data regarding geologic, soil, seismic, fire and flood hazards. Geologic and Seismic Goal 1 would protect the community to the extent feasible from risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction and other seismic hazards pursuant to Government Code §65302(g)(1), Chapter 7.8 (commencing with Section 2690) of Division 2 of the Public Resources Code. Geologic and Seismic Protection Policy 1 and associated implementation measures would minimize the potential effects of geologic, soil, and seismic hazards through the development review process (Santa Barbara 2015). In addition, Chapter 14 of the Santa Barbara County Code requires all grading work to conform to the County’s standards and requirements pertaining to construction plans and the recommendations of the soils engineer and engineering geologist.

4.7.3 Impact Analysis

a. Methodology and Significance Thresholds

In accordance with the *State CEQA Guidelines*, a project would result in a significant impact if it would:

- 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, or
 - 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, creating substantial risks to life or property; or
- e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

- f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

In addition, Santa Barbara County's *Environmental Thresholds and Guidelines Manual* (2021) includes "Geologic Constraints Guidelines." In accordance with the Geologic Constraints Guidelines, impacts are considered significant if proposed transportation system improvements involve any of the following characteristics:

- The project site or any part of the project is located on land having substantial geologic constraints, as determined by the Planning and Development Department or the Public Works Department. Areas constrained by geology include parcels located near active or potentially active faults and property underlain by rock types associated with compressible/collapsible soils or susceptible to landslides or severe erosion. Special Problem Areas designated by the Board of Supervisors have been established based on geologic constraints, flood hazards and other physical limitations to development.
- The project results in potentially hazardous geologic conditions such as the construction of cut slopes exceeding a grade of 1.5 horizontal to one vertical.
- The project proposes construction of a cut slope over 15 feet in height as measured from the lowest finished grade.
- The project is located on slopes exceeding 20 percent grade.

Paleontological Resources Sensitivity

Paleontological sensitivity refers to the potential for a geologic unit to produce scientifically significant fossils. Direct impacts to paleontological resources occur when earthwork activities, such as grading or trenching, cut into the geologic deposits within which fossils are buried and physically destroy the fossils. Since fossils are the remains of prehistoric animal and plant life, they are considered to be nonrenewable. Such impacts have the potential to be significant and, under the *CEQA Guidelines*, may require mitigation. Sensitivity is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey.

The discovery of a vertebrate fossil locality is of greater significance than that of an invertebrate fossil locality, especially if it contains a microvertebrate assemblage. The recognition of new vertebrate fossil locations could provide important information on the geographical range of the taxa, their radiometric age, evolutionary characteristics, depositional environment, and other important scientific research questions. Vertebrate fossils are almost always significant because they occur more rarely than invertebrates or plants. Thus, geological units having the potential to contain vertebrate fossils are considered the most sensitive.

The Society for Vertebrate Paleontology (SVP) outlines in its Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (SVP 2010) guidelines for categorizing paleontological sensitivity of geologic units within a project area. The SVP (2010) describes sedimentary rock units as having a high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is based on rock units within which vertebrates or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. Significant paleontological resources are fossils or assemblages of fossils, which are unique, unusual, rare, uncommon, diagnostically or stratigraphically,

taxonomically, or regionally. The paleontological sensitivity of the project site has been evaluated according to the following SVP (2010) categories, which are presented below.

High Potential (Sensitivity)

Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than recent, including deposits associated with nests or middens, and areas that may contain new vertebrate deposits, traces, or trackways are also classified as significant. Full-time monitoring is typically recommended during any project-related ground disturbance in geologic units with high sensitivity.

Low Potential (Sensitivity)

Sedimentary rock units that are potentially fossiliferous, but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic (processes affecting an organism following death, burial, and removal from the ground), phylogenetic species (evolutionary relationships among organisms), and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations.

Undetermined Potential (Sensitivity)

Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

No Potential

Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources. For geologic units with no sensitivity, a paleontological monitor is not required.

b. Project Impacts and Mitigation Measures

This section describes generalized impacts associated with Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific geologic impacts associated with individual transportation and land use projects is not possible. Because the location of each proposed improvement can be different in geologic character, the ultimate determination of impact significance and identification of mitigation measures will be based on site-specific analysis at the time of the project design and environmental review. In general, however,

implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the Connected 2050 could be exposed to impacts caused by geology/soil conditions as described in the following sections.

Threshold:	Would the project directly or indirectly cause 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.
Threshold:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?
Threshold:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?
Threshold:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?
Threshold:	Would the project 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?
Threshold:	Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Impact GEO-1 IMPLEMENTATION OF THE PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN LAND USE SCENARIO ENVISIONED IN CONNECTED 2050 WOULD NOT SUBSTANTIALLY RISK EXACERBATING SEISMIC HAZARDS, INCLUDING FAULT RUPTURE, GROUND-SHAKING, LIQUEFACTION AND LANDSLIDES, THAT COULD EXPOSE PEOPLE OR STRUCTURES TO SUBSTANTIAL ADVERSE EFFECTS. CONNECTED 2050 PROJECTS COULD BE LOCATED ON POTENTIALLY UNSTABLE SOILS OR IN AREAS OF LATERAL SPREADING, SUBSIDENCE, OR HIGH LIQUEFACTION POTENTIAL. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED FOR PROJECTS ON UNSTABLE SOILS, IN AREAS WITH RISK OF LIQUEFACTION, EXPANSIVE OR COMPRESSIBLE SOILS, OR LANDSLIDE.

Seismic, Fault Rupture and Ground Shaking Hazards

Fault rupture can occur along or immediately adjacent to faults during an earthquake. Fault rupture is characterized by ground cracks and displacement which could endanger life and property. Damage is typically limited to areas close to the moving fault.

Ground-shaking effects are also the result of an earthquake, but the impacts can be widespread. Although a function of earthquake intensity, ground-shaking effects can be magnified by the underlying soils and geology, which may amplify shaking at great distances. It is difficult to predict the magnitude of ground-shaking following an earthquake, as shaking can vary widely within a relatively small area. The type of transportation and land use projects proposed under Connected 2050 are unlikely to exacerbate seismic activity, fault rupture, or increases in ground shaking due to the nature of the project's effects, including construction, being near or on the ground surface.

Footings and pilings that could extend below the surface would be localized to the project site and require geological testing for specific impacts. The potential to directly or indirectly cause adverse regional impacts due to rupture of a known earthquake fault related to the projected land use pattern and planned transportation improvements from implementation of Connected 2050 would be less than significant.

Construction within seismic zones as identified by the Alquist-Priolo Act and the Seismic Hazards Mapping Act of 1990 (PRC 2690–2699.6) are required by the California Building Standards Code (CBSC) to follow more stringent regulations to withstand fault ruptures and ground-shaking effects from seismic activities. The CBSC provides standards for various aspects of construction, including, but not limited to; excavation, grading and earthwork construction; fills and embankments; expansive soils; foundation investigations; and liquefaction potential and soil strength loss. In accordance with California law, proponents of specific projects are required to comply with all provisions of the CBSC for certain aspects of design and construction. Caltrans has Seismic Design Criteria (SDC) which contain new and currently practiced seismic design and analysis methodologies for the design of new bridges in California. The SDC adopts a performance-based approach specifying minimum levels of structural system performance, component performance, analyses, and design practices for ordinary standard bridges. The required adherence to these standards reduces impacts from seismic events to a less than significant level on Connected 2050 associated projects.

Subsidence

Transportation improvements and new development constructed under Connected 2050 would have low potential for subsidence as there are no known areas vulnerable to subsidence due to groundwater or oil extraction (USGS 2021). Where it can occur, subsidence may result in unstable soils and the affect the stability of structures constructed by Connected 2050. Due to the unlikely nature of subsidence within the SBCAG region, impacts to subsidence would be less than significant.

Liquefaction and High Groundwater

Transportation improvements and development projects emphasized in Connected 2050 may be vulnerable to liquefaction and lateral spreading in areas with younger soils and with high groundwater tables or caused by seismic events. In the region, these areas are near the cities of Carpinteria, Guadalupe, and along the Santa Ynez River, as shown in Figure 4.7-2. Liquefaction and resulting lateral spreading may result in the loss of the soils ability to support structures constructed by Connected 2050 in any of these areas.

Liquefaction potential is widespread throughout the County, particularly in lower-lying valleys overlaid by alluvium, as shown on Figure 4.7-2 and areas prone to seismic activity. Such areas are also typically characterized by high groundwater. This condition is most prevalent in the Santa Maria and Santa Ynez Valleys, as well as along the other coastal valleys of the County. Nearly all of the County's major roadways and urban centers are located in such areas. Consequently, the majority of transportation and land use projects pursuant to Connected 2050 involving structural change or new facilities could be subject to liquefaction and high groundwater hazards. Impacts would be less than significant with mitigation incorporated.

Expansive and Compressible Soils

New development that is constructed on expansive soils could be subject to damage or could become unstable when the underlying soil shrinks or swells. Soils with high clay content have the

highest potential for shrink-swell. Potential impacts related to expansive soils may occur in coastal areas of the region. Transportation improvement projects in Connected 2050 which may be affected include the projects within the South Coast, Santa Maria-Orcutt and the Santa Ynez Valley regions of the County. However, expansive soils can be remediated, or structures and foundations can be engineered to withstand the forces of expansive soil. Implementation of Mitigation Measures GEO-1(a) through GEO-1(c) would ensure that impacts related to soil expansion would be less than significant for Connected 2050 projects in these areas.

Potential impacts related to soil stability and collapsible/compressible soils for the majority of the projects are unlikely because such geologic conditions are not prevalent in the County; however, such conditions do exist. Areas with highly compressible soils include Goleta south of U.S. Highway 101 and downtown Carpinteria. Impacts would be less than significant with mitigation incorporated for Connected 2050 projects in these areas.

Landslide and Mudflow

Santa Barbara County is vulnerable to high slope instability in the South Coast, Santa Maria-Orcutt and the Santa Ynez Valley regions near as shown in Figure 4.7-3. Erosion problems are generally limited to restricted areas where grading has over-steepened slopes, has deposited fill in unstable areas, or where improper grading practices have not included provisions to seed or otherwise protect fresh slopes from eroding. They can also be caused by seismic events. Due to areas susceptible to slope instability throughout Santa Barbara County, erosion will continue to reduce slopes to lower and lower elevations. However, this normal function is incremental and slow enough so as to be imperceptible. This can change if the erosion functions are accelerated by events such as seismic activity or predominantly human activities related to development and grading. Roadway projects in mountainous areas or along steeply sloped streambanks are most susceptible to landslide or mudflows, especially when soils are wet and in areas adjacent to unstabilized cut or fill. Few projects proposed under Connected 2050 are located in such areas. However, projects involving cut slopes of over 20 feet in height or projects located in areas of bedded or jointed bedrock are more likely to result in a landslide. Impacts related to landslides are significant, especially in seismically active areas. Roadway projects in mountainous areas or along steeply sloped streambanks are most susceptible to landslide or mudflows when soils are wet, particularly adjacent to areas of unstabilized cut or fill. A substantial number of projects proposed under Connected 2050 are located near coastal bluffs or in the foothills and would be subject to landslides and/or mudflows. The highest risk of landslides occurs around U.S. Highway 101 in the Gaviota region and Summerland, as well as in parts of the SR-166 corridor east of the Twitchell Reservoir. Impacts would be less than significant with mitigation incorporated.

In addition, potential structural damage and the exposure of people to the risk of injury or death from structural failure would be minimized by compliance with California Building Code engineering design and construction measures. Foundations and other structural support features would be designed to resist or absorb damaging forces from liquefaction and landslide. Overall, impacts related to exposure to liquefaction and landslide hazards would be less than significant with mitigation incorporated.

Mitigation Measures

Transportation project sponsor agencies can and should implement the following mitigation measures for applicable transportation projects located on potentially unstable soils or in areas of lateral spreading, subsidence, or high liquefaction potential. The County and cities in the SBCAG

region can and should implement these measures where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions

GEO-1(a) Geotechnical Analysis

If a Connected 2050 project is located in an area of moderate to high liquefaction, lateral spreading and/or subsidence potential or in underground areas located in an area of high groundwater potential, the implementing agency shall ensure that these structures are designed based upon site specific geology, soils and earthquake engineering studies conducted by a qualified geotechnical expert. Projects shall follow the recommendations of these studies. Possible design measures include, but would not be limited to: deep foundations, removal of liquefiable materials and dewatering.

GEO-1(b) Hillside Stability Evaluation

If a Connected 2050 project requires cut slopes over 20 feet in height or is located in areas of bedded or jointed bedrock, the implementing agency shall ensure that hillside stability evaluations and/or specific slope stabilization studies are conducted by a qualified geotechnical expert. Projects shall follow the recommendations of these studies. Possible stabilization methods include buttresses, retaining walls and soldier piles.

GEO-1(c) Site Specific Geotechnical Evaluation

If a Connected 2050 project is located in an area of highly expansive soils, the implementing agency shall ensure that a site-specific geotechnical investigation is conducted. The investigation shall identify hazardous conditions and recommend appropriate design factors to minimize hazards. Such measures could include concrete slabs on grade with increased steel reinforcement, removal of highly expansive material and replacement with non-expansive import fill material, or chemical treatment with hydrated lime to reduce the expansion characteristics of the soils.

Significance After Mitigation

Implementation of the above measures would reduce impacts to a less than significant level because individual projects would require geotechnical analysis when located on potentially unstable soils. Site specific geotechnical evaluations and hillside stability evaluation would identify feasible measures to address site specific issues related to unstable soils and geologic hazards and reduce geological hazards impacts to less than significant levels.

Threshold: Would the project result in substantial soil erosion or the loss of topsoil?

Impact GEO-2 GRADING ASSOCIATED WITH TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN CONNECTED 2050 COULD CAUSE SOIL EROSION AND LOSS OF TOPSOIL. HOWEVER, COMPLIANCE WITH APPLICABLE REGULATIONS WOULD ENSURE THAT IMPACTS WOULD REMAIN LESS THAN SIGNIFICANT.

Typically, erosion and loss of topsoil resulting from grading and development occur on a very small scale and do not present a quantifiable threat to a community. However, erosion and grading also have the potential to create unstable slopes and significant loss of topsoil can occur for projects where excavations require off-site soil disposal. Erosion control can be accomplished on critical slopes being affected by natural agents. Buildout under Connected 2050 would occur in

conformance with Chapter 14 of the Santa Barbara County Code for grading and erosion standards and guidelines as mentioned in Regulatory Setting. These ordinances would require the appropriate measures to prevent erosion as a result of implementation of transportation and land use projects under Connected 2050, thus reducing erosion impacts.

In addition, the Regional Water Quality Control Board would require a project-specific SWPPP to be prepared for each project that disturbs an area one acre or larger. The SWPPPs would include project-specific BMPs designed to control drainage and erosion. Project BMPs to control erosion may include, but would not be limited to: silt fencing, fiber rolls, slope stabilization and sand bags. These BMPs would be required as part of each individual project permit and would minimize impacts related to soil erosion and loss of topsoil as a result of construction or grading.

Adherence to the applicable ordinance codes and other local, State and regulatory programs, as discussed above, would ensure that project-specific erosion and topsoil loss would be minimized. Because such effects would not be substantial, impacts related to erosion and loss of topsoil would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact GEO-3 IMPLEMENTATION OF THE PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 COULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN OR DISTURB KNOWN AND UNKNOWN PALEONTOLOGICAL RESOURCES AS DEFINED IN CEQA GUIDELINES SECTION 15064.5. IMPACTS TO PALEONTOLOGICAL RESOURCES WOULD BE SIGNIFICANT AND UNAVOIDABLE.

It is known that significant paleontological resources are present throughout Santa Barbara County (Paleobiology Database 2021; University of California Museum of Paleontology 2021). Therefore, it is possible to encounter known and unknown paleontological resources as a result of implementation of transportation improvement projects pursuant to Connected 2050. Many of the improvements proposed under Connected 2050 consist of minor expansions of existing facilities that would not involve construction in previously undisturbed areas. However, depending on the location and extent of the proposed improvement and ground disturbance, paleontological resources could be impacted. There are mapped areas with a higher occurrence of paleontological features, but it should be noted that any project overlying a geologic unit with high paleontological sensitivity could result in impacts, regardless of location relative to existing development. It is also possible that construction activities associated with some of the proposed roadway or bridge widening or extension projects could adversely impact paleontological resources by exposing them to potential vandalism or causing displacement from the original context and integrity. Project-specific analysis would be required as individual projects are proposed.

In addition, Connected 2050 envisions a future land use scenario that emphasizes infill near transit and within existing urbanized areas, but with development still allowed in more suburban and rural areas. It is possible that paleontological resources could be located on or near future infill sites, or other development sites. Project grading and excavation for land development may disturb these known or undiscovered resources. Impacts to paleontological resources would therefore be significant.

Mitigation Measures

Transportation project sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects that could potentially cause a substantial adverse change in or disturb known and unknown paleontological resources. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions

GEO-3 Paleontological Resources Impact Minimization

Prior to any ground disturbance, the implementing agency of a Connected 2050 project involving ground disturbing activities (including grading, trenching, foundation work and other excavations) within intact (previously-undisturbed) deposits shall retain a qualified paleontologist, defined as a paleontologist who meets the Society of Vertebrate Paleontology (SVP) standards for Qualified Professional Paleontologist (SVP 2010), to conduct a Paleontological Resources Assessment (PRA). The PRA shall determine the age and paleontological sensitivity of geologic formations underlying the proposed disturbance area, consistent with SVP Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (SVP 2010) guidelines for categorizing paleontological sensitivity of geologic units within a project area. If underlying formations are found to have a high potential (sensitivity) for paleontological resources, the following measures shall apply:

- **Paleontological Mitigation and Monitoring Program.** A qualified paleontologist shall prepare a Paleontological Mitigation and Monitoring Program to be implemented during ground disturbance activity. This program shall outline the procedures for construction staff Worker Environmental Awareness Program (WEAP) training, paleontological monitoring extent and duration (i.e., in what locations and at what depths paleontological monitoring shall be required), salvage and preparation of fossils, the final mitigation and monitoring report and paleontological staff qualifications.
- **Paleontological Worker Environmental Awareness Program (WEAP).** Prior to the start of ground disturbance activity greater than two feet below existing grade, construction personnel shall be informed on the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff.
- **Paleontological Monitoring.** Ground disturbing activity with the potential to disturb geologic units with high paleontological sensitivity shall be monitored on a full-time basis by a qualified paleontological monitor. Should no fossils be observed during the first 50 percent of such excavations, paleontological monitoring could be reduced to weekly spot-checking under the discretion of the qualified paleontologist. Monitoring shall be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources.
- **Salvage of Fossils.** If fossils are discovered, the implementing agency shall be notified immediately, and the qualified paleontologist (or paleontological monitor) shall recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.

- **Preparation and Curation of Recovered Fossils.** Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data and maps.
- **Final Paleontological Mitigation and Monitoring Report.** Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated. The report shall be submitted to the sponsor agency. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.

Significance After Mitigation

Implementation of the above mitigation measure would reduce impacts to paleontological resources by requiring a Paleontological Resources Assessment for any projects under Connected 2050 that may impact sensitive paleontological resources. While implementation of Mitigation Measure GEO-3 would reduce impacts to the extent feasible, some project-specific impacts may be unavoidable. Therefore, this impact is significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

c. Specific Connected 2050 Projects that May Result in Impacts

Connected 2050 projects located in seismic zones or in areas susceptible to unstable soils, landslide or mudflows, or in paleontological sensitive areas could result in significant geologic impacts, but would not necessarily do so. Additional site-specific analysis will need to be conducted as the individual projects are implemented in order to determine the project-specific magnitude of impact. Mitigation measures discussed above would apply to these specific projects as well as any other Connected 2050 projects that would result geology and soils-related impacts.

4.7.4 Cumulative Impacts

Geology, soils and seismicity impacts may be related to: increased exposure to seismic hazards, increased erosion and/or loss of topsoil, or the presence of unstable/expansive soils. These effects occur independently of one another and are caused by site-specific and project-specific characteristics and conditions. In addition, existing regulations, such as the California Building Code, specify mandatory actions that must occur during project development, which would minimize effects from construction and operation of projects related to geology, soils and seismicity as discussed above. Cumulative impacts related to geology, soils and seismicity would not be significant, and the Connected 2050 would not make a cumulatively considerable contribution to significant cumulative impacts related to geology, soils and seismicity.

Implementation of Connected 2050 would result in impacts to paleontological resources within the SBCAG region. Projects approved by counties outside the SBCAG region would also continue to impact paleontological resources. Collectively this adds to the cumulative impact to paleontological resources and therefore Connected 2050's contribution to this would be cumulatively considerable and significant. Consequently, cumulative impacts to paleontological resources and the regional contribution to them, remain significant and the contribution of Connected 2050 would be

cumulatively considerable. Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.

4.8 Greenhouse Gas Emissions and Climate Change

This section discusses potential impacts related to greenhouse gas emissions and climate change. Air quality impacts are discussed in Section 4.2, *Air Quality*.

4.8.1 Setting

a. Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term "climate change" is often used interchangeably with the term "global warming," but climate change is preferred because it conveys that other changes are happening in addition to rising temperatures. The baseline against which these changes are measured originates in historical records that identify temperature changes that occurred in the past, such as during previous ice ages. The global climate is changing continuously, as evidenced in the geologic record which indicates repeated episodes of substantial warming and cooling. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming over the past 150 years. The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed a high degree of confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-twentieth century (IPCC 2014a).

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO₂), methane (CH₄), nitrous oxides (N₂O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and natural processes, such as oceanic evaporation, largely determine its atmospheric concentrations.

GHGs are emitted by natural processes and human activities. Of these gases, CO₂ and CH₄ are emitted in the greatest quantities from human activities. Emissions of CO₂ are usually by-products of fossil fuel combustion, and CH₄ results from off-gassing associated with agricultural practices and landfills. Human-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆ (United States Environmental Protection Agency [U.S. EPA] 2020).

Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO₂) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO₂e), which is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 28, meaning its global warming effect is 28 times greater than CO₂ on a molecule per molecule basis (IPCC 2014b).¹

¹ The IPCC's (2014b) *Fifth Assessment Report* determined that methane has a GWP of 28. However, modeling of GHG emissions was completed using the California Emissions Estimator Model version 2016.3.2, which uses a GWP of 25 for methane, consistent with the IPCC's (2007) *Fourth Assessment Report*.

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 33 degrees Celsius (°C) cooler (World Meteorological Organization 2020). However, since 1750, estimated concentrations of CO₂, CH₄, and N₂O in the atmosphere have increased by 36 percent, 148 percent, and 18 percent, respectively, primarily due to human activity (Forster et al. 2007). GHG emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, are believed to have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

b. Greenhouse Gas Emissions Inventories

Global Emissions Inventory

Worldwide anthropogenic emissions of GHGs were approximately 49,000 million metric tons (MMT) of CO₂e in 2010 (IPCC 2014a). Carbon dioxide emissions from fossil fuel combustion and industrial processes contributed about 65 percent of total emissions in 2010. Of anthropogenic GHGs, CO₂ was the most abundant, accounting for over 75 percent of total 2010 emissions. Methane emissions accounted for 16 percent of the 2010 total, while N₂O and fluorinated gases accounted for 6 percent and 2 percent respectively (IPCC 2014a).

United States Emissions Inventory

Total United States (U.S.) GHG emissions were 6,676.6 MMT of CO₂e in 2018. Emissions increased by 2.9 percent from 2017 to 2018, and since 1990, total U.S. emissions have increased by an average annual rate of 0.13 percent for a total increase of 3.7 percent between 1990 and 2018. The increase from 2017 to 2018 was primarily driven by increased fossil fuel combustion as a result of multiple factors, including increased energy usage from greater heating and cooling needs due to a colder winter and hotter summer in 2018 as compared to 2017. In 2018, the transportation and industrial end-use sectors accounted for 36 percent and 26 percent, respectively, of nationwide GHG emissions while the residential and commercial end-use sectors accounted for 20 percent and 17 percent of nationwide GHG emissions, respectively, with electricity emissions distributed among the various sectors (U.S. EPA 2020).

California Emissions Inventory

Based on the California Air Resource Board's (CARB) California Greenhouse Gas Inventory for 2000-2018, California produced 425.3 MMT of CO₂e in 2018. The major source of GHG emissions in California is the transportation sector, which comprises 41 percent of the state's total GHG emissions. The industrial sector is the second largest source, comprising 24 percent of the state's GHG emissions while electric power accounts for approximately 15 percent (CARB 2020a). The magnitude of California's total GHG emissions is due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions as compared to other states is its relatively mild climate. In 2016, the State of California achieved its 2020 GHG emission reduction target of reducing emissions to 1990 levels as emissions fell below 431 MMT of CO₂e (CARB 2020a). The annual 2030 statewide target emissions level is 260 MMT of CO₂e (CARB 2017).

c. Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources though potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The observed global mean surface temperature (GMST) from 2015 to 2017 was approximately 1.0°C higher than the average GMST over the period from 1880 to 1900 (National Oceanic and Atmospheric Administration 2020). Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations jointly indicate that LSAT and sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014a and 2018).

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 0.6 to 1.1°C higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include reduced water supply from snowpack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (State of California 2018). In addition to statewide projections, *California's Fourth Climate Change Assessment* includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the state and regionally-specific climate change case studies (State of California 2018). However, while there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. A summary follows of some of the potential effects that could be experienced in California and the Santa Barbara County region as a result of climate change.

Hydrology and Sea Level Rise

Climate change could affect the intensity and frequency of storms and flooding (State of California 2018). Furthermore, climate change could induce substantial sea level rise in the coming century. Rising sea level increases the likelihood of and risk from flooding. The rate of increase of global mean sea levels between 1993 to 2020, observed by satellites, is approximately 3.3 millimeters per year, double the twentieth century trend of 1.6 millimeters per year [World Meteorological Organization 2013; National Aeronautics and Space Administration (NASA) 2020]. Global mean sea levels in 2013 were about 0.23 meter higher than those of 1880 (NASA 2020). Sea levels are rising faster now than in the previous two millennia, and the rise will probably accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea level rise of 0.25 to 0.94 meter by 2100 (IPCC 2018). A rise in sea levels could erode 31 to 67 percent of southern California beaches and cause flooding of approximately 370 miles of coastal highways during 100-year storm events. This would also jeopardize California's water supply due to saltwater intrusion and induce groundwater flooding and/or exposure of buried infrastructure (State of California 2018). Furthermore, increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Sea level rise is defined as the rising of the level of the sea as a result of global warming. Erosion is a natural process which alters existing geomorphic features. Erosion can occur due to a number of

factors, including winter storms, tidal action, wind-generated high surf, wave action, and rising sea levels. The Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan (2017) identifies high-hazard areas within the County related to flood and coastal surge vulnerability. Storm waves that are coincident with very high tides will continue to be a threat to the Santa Barbara County coastline, including the Cities of Goleta, Santa Barbara, and Carpinteria, in the next several decades. The impacts of sea-level rise will likely begin to increase and become more noticeable during the second half of the twenty-first century than they have been in the recent past, particularly when combined with large El Niño-driven storm waves and high tides. A continuing rise in sea level will produce a range of hazards and impacts, including increasingly frequent coastal flooding, gradual inundation of low-lying beach and shoreline areas, continued and likely increased erosion of coastal cliffs and bluffs, and flooding at stream mouths, with associated damage to development. The City of Santa Barbara released a Sea-Level Rise Vulnerability Assessment in 2018 which identified low lying coastal areas of the City potentially at risk from increased hazards related to sea-level rise through the year 2100, without intervention (City of Santa Barbara 2020a).

Air Quality

Scientists project that the annual average maximum daily temperatures in California could rise by 2.4 to 3.2°C in the next 50 years and by 3.1 to 4.9°C in the next century (State of California 2018). Higher temperatures are conducive to air pollution formation, and rising temperatures could therefore result in worsened air quality in California. As a result, climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. In addition, as temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have occurred at higher elevations in the Sierra Nevada Mountains (State of California 2018). If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality could worsen. Severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state. However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains could tend to temporarily clear the air of particulate pollution, which would effectively reduce the number of large wildfires and thereby ameliorate the pollution associated with them (California Natural Resources Agency 2009).

Air quality effects for the Santa Barbara County region would be similar to those expected statewide. Temperature increases are expected to facilitate smog production, with the potential for adverse effects on public health. Deposition of reactive nitrogen affects agriculture and natural habitats. Changes in weather patterns and associated plant migrations could also alter the timing and duration of pollen production and allergen effects, affecting public respiratory conditions. Increased risk of drought and wildfires could also lead to higher particulate matter levels (City of Santa Barbara 2012).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. Year-to-year variability in statewide precipitation levels has increased since 1980, meaning that wet and dry precipitation extremes have become more common (California Department of Water

Resources 2018). This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The average early spring snowpack in the western U.S., including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 0.15 meter along the central and southern California coasts (State of California 2018). The Sierra snowpack provides the majority of California's water supply as snow that accumulates during wet winters is released slowly during the dry months of spring and summer. A warmer climate is predicted to reduce the fraction of precipitation that falls as snow and the amount of snowfall at lower elevations, thereby reducing the total snowpack (State of California 2018). Projections indicate that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (State of California 2018).

Santa Barbara County's water supply has diversified sources, including the Santa Ynez River watershed, State Water Project, groundwater, and recycled water, along with a strong water conservation program. The City of Santa Barbara also has a desalination plant as a back-up supply. The plant was previously decommissioned but was recommissioned by the City Council in July 2015 and the plant began distributing water to City customers in 2017. (City of Santa Barbara 2020b). Future temperature and weather pattern changes could result in more variable or reduced supplies from the Santa Ynez River watershed and State Water Project, and potentially more saltwater intrusion issues for groundwater. Studies and planning to address water supply issues, including climate change effects, are ongoing by the State (Department of Water Resources), regional agencies (e.g., Cachuma Operation and Maintenance Board, Santa Barbara County's Integrated Regional Water Management Program), and the City of Santa Barbara (City of Santa Barbara 2012).

Agriculture

California has an over \$50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2020). Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent, which would increase water demand as hotter conditions lead to the loss of soil moisture. In addition, crop yield could be threatened by water-induced stress and extreme heat waves, and plants may be susceptible to new and changing pest and disease outbreaks (State of California 2018). Temperature increases could also change the time of year certain crops, such as wine grapes, bloom or ripen, and thereby affect their quality (California Climate Change Center 2006).

As discussed related to air quality above, the Santa Barbara County region could experience an increase in deposition of reactive nitrogen and alteration in the timing and duration of pollen production (City of Santa Barbara 2012). Both of these climate change effects could have adverse implications for agriculture in the region.

Ecosystems and Wildlife

Climate change and the potential resultant changes in weather patterns could have ecological effects on the global and local scales. Soil moisture is likely to decline in many regions as a result of higher temperatures, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: timing of ecological events; geographic distribution and range of species; species composition and the incidence of nonnative

species within communities; and ecosystem processes, such as carbon cycling and storage (Parmesan 2006; State of California 2018).

In the Santa Barbara County region, potential future effects on biological resources include reduction or loss of intertidal habitats, loss or inland movement of wetlands and marshes, and biodiversity loss from gradual coastal bluff, dune, and beach erosion. Upland and foothill species and habitats may experience upslope movement and/or northward migrations. Ocean species and habitats are at risk from temperature and weather changes, and ocean acidification (City of Santa Barbara 2012).

4.8.2 Regulatory Setting

The following regulations address both climate change and GHG emissions.

a. Federal Regulations

The U.S. Supreme Court determined in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the U.S. EPA issued a Final Rule that established the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.

In *Utility Air Regulatory Group v. Environmental Protection Agency* (134 S. Ct. 2427 [2014]), the U.S. Supreme Court held the U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source can be considered a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits otherwise required based on emissions of other pollutants, may continue to require limitations on GHG emissions based on the application of Best Available Control Technology.

Safer Affordable Fuel-Efficient Vehicles Rule

On September 27, 2019, the U.S. EPA and the National Highway Traffic Safety Administration published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program. The SAFE Rule Part One revokes California's authority to set its own GHG emissions standards and to adopt its own zero-emission vehicle mandates. On April 30, 2020, the U.S. EPA and the National Highway Safety Administration published Part Two of the SAFE Vehicles Rule, which revised corporate average fuel economy and CO₂ emissions standards for model years 2021-2026 passenger cars and trucks such that the standards increase by approximately 1.5 percent each year through model year 2026 as compared to the 2012 standards which required an approximately five percent annual increase (National Highway Traffic Safety Administration 2020). To account for the effects of the Part Two Rule, CARB released off-model adjustment factors on June 26, 2020 to adjust GHG emissions outputs from the EMFAC model (CARB 2020b).

b. State Regulations

CARB is responsible for the coordination and oversight of state and local GHG emissions reduction programs in California. There are numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

California Advanced Clean Cars Program

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires CARB to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles, beginning with the 2009 model year, which allows California to implement more stringent vehicle emission standards than those promulgated by the U.S. EPA. Pavley I regulates model years from 2009 to 2016 and Pavley II, now referred to as "LEV (Low Emission Vehicle) III GHG," regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the LEV, Zero Emissions Vehicles (ZEV), and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions. If fully implemented, new automobiles would emit 34 percent fewer GHGs and 75 percent fewer smog-forming emissions from their model year 2016 levels by 2025 (CARB 2011). However, as a result of the SAFE Rule discussed above, fuel economy and GHG emission standards for new vehicles will increase by approximately 1.5 percent each year through model year 2026 as compared to the 2012 standards which required an approximately five percent annual increase.

California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Senate Bill 32)

The "California Global Warming Solutions Act of 2006," AB 32, outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 MMT of CO₂e. CARB approved the Scoping Plan on December 11, 2008 and the Plan included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2008). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Plan's approval.

The CARB approved the 2013 Scoping Plan update in May 2014. The update defined the CARB's climate change priorities for the next five years and set the groundwork to reach post-2020 statewide goals. The update highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030

target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of six MT of CO₂e by 2030 and two MT of CO₂e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

Senate Bill 97

SB 97, signed in August 2007, acknowledges that climate change is an environmental issue that requires analysis in California Environmental Quality Act (CEQA) documents. In March 2010, the California Natural Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted guidelines give lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHG and climate change impacts.

Senate Bill 375

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPO's Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy (categorized as "transit priority projects") would receive incentives to streamline CEQA processing. On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. SBCAG was assigned targets of a 13 percent reduction in GHG emissions from per capita passenger vehicles by 2020 and a 17 percent reduction in GHG emissions from per capita passenger vehicles by 2035, relative to 2005 emission levels (CARB 2020c). However, no aspect of Connected 2050 can influence the achievement or lack of achievement of target year 2020 GHG emissions. SBCAG will report on meeting 2020 goals with submittal of this SCS for review by CARB.

Senate Bill 1383

Adopted in September 2016, SB 1383 requires the CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, the former Governor Brown issued Executive Order (EO) B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction goals established by SB 375, SB 32, SB 1383, and SB 100.

California Building Standards Code

California Code of Regulations, Title 24 – California Building Code

The California Code of Regulations (CCR) Title 24 is referred to as the California Building Code, or CBC. It consists of a compilation of several distinct standards and codes related to building construction including plumbing, electrical, interior acoustics, energy efficiency, and handicap accessibility for persons with physical and sensory disabilities. The CBC's energy-efficiency and green building standards are outlined below.

Part 6 – Building Energy Efficiency Standards/Energy Code

CCR Title 24, Part 6 is the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. The Energy Code is updated periodically to incorporate and consider new energy-efficiency technologies and methodologies as they become available. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC).

The 2019 Title 24 standards are the applicable building energy efficiency standards for the project because they became effective on January 1, 2020. In general, under the 2019 Standards, nonresidential buildings will be 30 percent more energy-efficient compared to the 2016 Standards (CEC 2018). In addition, per Section 110.10, non-residential buildings must incorporate a solar zone area with a minimum area of 15 percent of the total roof area excluding any skylight area for nonresidential buildings with three habitable stories or fewer (other than healthcare facilities) (see the 2019 Standards for exceptions). Solar zones must be comprised of areas that have no dimension less than five feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. See the 2019 Standards for additional requirements regarding the azimuth, shading, interconnection pathways, and electrical service panels of solar zones.

Part 11 – California Green Building Standards/CALGreen

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011

(as part of the 2010 CBC). The 2016 CALGreen institutes mandatory minimum environmental performance standards for all ground-up new construction of non-residential and residential structures. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

The mandatory standards require:

- 20 percent reduction in indoor water use relative to specified baseline levels;
- 50 percent construction/demolition waste diverted from landfills;
- Inspections of energy systems to ensure optimal working efficiency;
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards;
- Dedicated circuitry to facilitate installation of electric vehicle charging stations in newly constructed attached garages for single-family and duplex dwellings; and
- Installation of electric vehicle charging stations at least three percent of the parking spaces for all new multi-family developments with 17 or more units.

The voluntary standards require:

- **Tier I:** 15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content for building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar reflective roof; and
- **Tier II:** 30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content for building materials, 30 percent permeable paving, 30 percent cement reduction, and cool/solar reflective roof.

Similar to the compliance reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen water-reduction requirements must be demonstrated through completion of water use reporting forms for new non-residential buildings. Buildings must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

Executive Order N-79-20

On September 23, 2020, Governor Newsom issued EO N-79-20, which established the following new statewide goals:

- All new passenger cars and trucks sold in-state to be zero-emission by 2035;
- All medium- and heavy-duty vehicles in the state to be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and
- All off-road vehicles and equipment to be zero-emission by 2035 where feasible.

EO N-79-20 directs CARB, the Governor's Office of Business and Economic Development, the CEC, the California Department of Transportation, and other state agencies to take steps toward drafting

regulations and strategies and leveraging agency resources toward achieving these goals. This Executive Order, if implemented, will change the future transportation fuel mix in California, substantially decreasing fossil fuel usage and increasing electricity usage. However, there is insufficient information to incorporate this executive order into this analysis, especially given that there is currently no pathway for its implementation due to the revocation of California’s authority to set its own GHG emissions standards and to adopt its own zero-emission vehicle mandates by the federal SAFE Vehicles Rule; to do so would be speculative. Accordingly, this GHG analysis has been conducted with the most recent available tools prepared and accepted by the regulatory agencies, which do not incorporate implementation of EO N-79-20.

California Environmental Quality Act

Pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the *CEQA Guidelines* for determining the effects and feasible mitigation of GHG emissions. The adopted *CEQA Guidelines* provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, while giving lead agencies the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts.

c. Local Regulations

Local Regulations and CEQA Requirements

Three of SBCAG’s member jurisdictions have climate action plans (CAP) that set goals and targets on the reduction of GHG emissions, and outline policies to help achieve those goals. The Cities of Goleta and Santa Barbara, as well as Santa Barbara County, have conducted baseline emissions inventories, which establish a reference point for GHG emissions reduction. The City of Goleta CAP (2014), City of Santa Barbara CAP (2012), and County of Santa Barbara Energy and Climate Action Plan (ECAP) (2015) also establish GHG reduction targets and reduction measures to meet those targets². To date, the Cities of Buellton, Carpinteria, Guadalupe, Lompoc, Santa Maria, and Solvang do not have adopted CAPs. Baseline and projected 2020 and 2030 GHG emissions from the respective CAPs and jurisdiction are shown in Table 4.8-1 below.

Table 4.8-1 Climate Action Plans in the SBCAG Plan Area

Jurisdiction	Annual GHG Emissions (MT CO ₂ e)	
	2007 Baseline Emissions	Projected 2030 Business As-Usual Emissions
Goleta	325,532	429,295
Santa Barbara	719,833	943,225
Santa Barbara County	1,192,970	1,540,000 ¹

¹ County of Santa Barbara emissions are 2035 not 2030

Sources: City of Goleta, July 2014; City of Santa Barbara, September 2012; County of Santa Barbara, May 2015

The completed CAPs in the area address emissions produced by transportation, electricity and natural gas consumptions, water supply and conveyance, wastewater treatment, and solid waste disposal. The types and quantity of emissions produced in the SBCAG region vary among jurisdictional boundaries. However, for most jurisdictions, transportation and energy consumption

² The County of Santa Barbara is currently in process of preparing the 2030 Climate Action Plan which is anticipated in 2022, replacing the 2015 Energy Action Plan.

are responsible for the majority of GHG emissions. Policies included in the climate action plans in the region establish a framework for improved circulation networks and energy conservation. Transportation policies aim to reduce vehicle miles traveled (VMT) by offering more opportunities for alternative transportation modes, such as bicycling and transit use. In addition, many of the climate action plans include policies to promote transit-oriented development. In order to reduce emissions caused by energy usage, jurisdictions have established policies that will facilitate and encourage energy efficiency for both residential and commercial land uses. Cities and counties include programs to improve energy efficiencies in old and new buildings and decrease the use of fossil fuels by providing incentives for use of renewable energy.

4.8.3 Impact Analysis

a. Methodology and Significance Thresholds

Methodology

Mobile Source Emissions Modeling

GHG emissions from on-road mobile sources were calculated using the emission factors, fleet mix, and vehicle trip and population estimates from CARB’s EMFAC2017 model; CARB’s off-model adjustment factors to account for the effects of the SAFE Vehicles Rule; and regional vehicle miles travelled (VMT) from SBCAG’s travel demand forecasting model (as further described in Section 4.12, *Transportation and Circulation*), shown in Table 4.8-2.

Table 4.8-2 Connected 2050 Total Daily VMT Data

Year	VMT per Day ¹
Existing (2020)	10,958,000
Future No Connected 2050	13,676,600
Connected 2050	11,539,600

VMT = vehicle miles traveled

¹ Values are rounded to the nearest hundred.

Source: SBCAG, 2021

EMFAC2017 emission factors are established by CARB and incorporate mobility assumptions (e.g., vehicle fleets, speed, delay times, average trip lengths, time of day and total travel time) and socioeconomic growth projections based on data from sources including the Bureau of Automotive Repair, the California Household Travel Survey, the University of California Riverside College of Engineering-Center for Environmental Research and Technology, the UCLA Anderson Forecast, California Department of Finance, California Board of Equalization, California Energy Commission, U.S. Department of Energy - Energy Information Administration, and U.S. Bureau of Economic Analysis. EMFAC2017 accounts for updated fleet characterization, vehicle activity profile, and socio-econometric forecasting data; new vehicle testing data for emission rates; updated assumptions on the Advanced Clean Cars regulation; and implementation of new regulations and policies including Phase 2 GHG standards for heavy-duty vehicles and the Road Repair and Accountability Act of 2017 (Senate Bill 1). To account for the effects of the SAFE Vehicle Rule on mobile source GHG emissions, off-model adjustment factors published by CARB (2020) were applied to CO₂ emissions from

gasoline-powered passenger cars (LDA) and light duty-trucks (LDT1, LDT2, and MDV).³ Projected emissions from all vehicle types on the SBCAG transportation network for the year 2050 under Connected 2050 were compared with emissions estimated for baseline year 2020 and with emissions estimated for year 2050 without implementation of Connected 2050.

SB 375 Analysis

To determine whether Connected 2050 would allow SBCAG to meet its SB 375 reduction targets, per capita CO₂ emissions were calculated by multiplying the emission factors by the VMT from passenger vehicles and dividing by the region's population. For the purposes of this analysis, the year 2005 is used as the baseline year per the requirements of SB 375. In accordance with CARB guidance, the same methodology and version of EMFAC (i.e., EMFAC2014) was utilized for SB 375 modeling for Connected 2050 to provide a consistent comparison of per capita CO₂ emissions with the SB 375 targets (CARB 2019). Furthermore, per CARB guidance, off-model adjustment factors related to the SAFE Rule were not applied in the SB375 analysis because EMFAC2014 does not account for the impact of light duty ZEV and GHG emissions standards when used in SB 375 mode (CARB 2020b).

As discussed in the Connected 2050 Technical Methodology (Appendix B of the Connected 2050), the EMFAC model generates an output of CO₂ emissions, which were used as the overall indicator of GHG emissions associated with passenger vehicles. In order to calculate the CO₂ emissions within EMFAC, VMT and VMT by speed class distributions were extracted from the travel demand model for the baseline year (2005) and the relevant target year (2035) along with the other non-target scenario year (2050) and alternative transportation/land use scenarios within the future years. This extracted information was input into the EMFAC model. The CO₂ emissions associated with vehicle starts are accounted for in the EMFAC model based on the distribution of vehicle starts by vehicle classification, vehicle technology class, and operating mode. EMFAC adds these vehicle starts to the running emissions to compute total on-road mobile source emissions. Then, the CO₂ emissions for the four vehicle classes that meet the passenger vehicle definition⁴ were extracted from the EMFAC output and reported.

Significance Thresholds

Appendix G of the State CEQA Guidelines identifies the following criteria for determining whether a project's impacts would have a significant impact related to GHG emissions:

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

The issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

³ The definition of light-duty trucks in the SAFE Vehicles Rule correlates to the definitions of LDT1, LDT2, and MDV by CARB in the EMFAC2017 model (CARB 2019b and 2020a).

⁴ Passenger vehicles include light-duty automobiles, light-duty trucks weighing less than 3,750 pounds, light-duty trucks weighing between 3,751 and 5,750 pounds, and medium-duty trucks weighing between 5,751 to 8,500 pounds.

Construction Emissions

Although construction activity is addressed in this analysis, the California Air Pollution Control Officer Association (CAPCOA) does not discuss whether any of the suggested threshold approaches adequately address impacts from temporary construction activity. As stated in the CEQA and Climate Change white paper, “more study is needed to make this assessment or to develop separate thresholds for construction activity” (CAPCOA, 2008). Additionally, Santa Barbara County does not have any adopted construction-related standards. Construction-related emissions are speculative at the RTP/SCS level because such emissions are dependent on the characteristics of individual development projects. However, because construction of the RTP/SCS would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips, a qualitative, program-level analysis is provided below.

Total Transportation-Related Emissions (All Vehicle Classes)

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional or state GHG reduction plan (such as a Climate Action Plan). SBCAPCD has adopted thresholds for projects involving stationary sources and for projects where the SBCAPCD is the lead agency (SBCAPCD 2015). These thresholds would not apply to Connected 2050 because it does not include stationary sources (e.g., generators, boilers), and SBCAPCD is not the lead agency.

On January 26, 2021, the Santa Barbara County Board of Supervisors adopted interim thresholds of significance that apply to land use projects and plans that are not otherwise subject to the County’s existing industrial stationary source threshold. As discussed previously, stationary sources thresholds would not apply to Connected 2050 because it does not include stationary sources. The interim thresholds for land use projects and plans are based on the County’s 2030 GHG emissions target (i.e., 50 percent below 2007 levels by 2030). The County’s thresholds are intended to be utilized only for projects located in the unincorporated area of the County; however, Connected 2050 is a countywide plan that would influence GHG emissions in both incorporated and unincorporated areas of the county of Santa Barbara. Therefore, these thresholds are not applicable to Connected 2050.

Absent a relevant quantitative threshold adopted by SBCAPCD, the County of Santa Barbara, or SBCAG, this analysis utilizes a net-zero threshold to determine whether per capita transportation-related GHG emissions associated with Connected 2050 would be significant, which is consistent with the approach utilized by SBCAG in the previous EIR for Fast Forward 2040. Therefore, if countywide transportation-related per capita GHG emissions (including all vehicle classes) associated with Connected 2050 do not exceed the 2020 baseline, impacts related to GHG emissions would not be considered significant.

SB 375 Analysis (Per Capita Passenger Vehicle Emissions)

For the purposes of the SB 375 analysis, per capital passenger vehicle emissions associated with Connected 2050 would be significant if they would exceed the SB 375 target established by CARB for SBCAG of a 17 percent reduction in GHG emissions from per capita passenger vehicles by 2035, relative to 2005 emission levels (CARB 2020c; see Section 4.8.2(b), *State Regulations*, for more information).

Consistency with SB 32, the 2017 Scoping Plan, EO S-3-05, and EO B-55-18

Meeting the goals of SB 375 does not guarantee consistency with SB 32 and the 2017 Scoping Plan. To determine that a project would not conflict with the State's ability to achieve the SB 32 target and its associated 2017 Scoping Plan, Connected 2050 would need to achieve substantial progress toward achieving the target reduction. Mobile source emissions were calculated to determine regionwide GHG emissions with implementation of Connected 2050. If implementation of Connected 2050 would achieve substantial progress toward the emissions reduction targets established by SB 32, then impacts related to SB 32 would not be considered significant.

At this time, the State Legislature has codified a target of reducing emissions to 40 percent below 1990 emissions levels by 2030 (SB 32) and has developed the 2017 Scoping Plan to demonstrate how the State will achieve the 2030 target and make substantial progress toward the 2050 goal of an 80 percent reduction in 1990 GHG emission levels set by EO S-3-05. In EO B-55-18, which identifies a new goal of carbon neutrality by 2045, the California Air Resources Board has been tasked with including a pathway toward the EO B-55-18 carbon neutrality goal in the next Scoping Plan update.

While state and regional regulators of energy and transportation systems, along with the State's Cap-and-Trade program, are designed to be set at limits to achieve most of the reductions needed to attain the State's long-term targets, local governments can do their fair share toward meeting the State's targets by siting and approving projects that accommodate planned population growth and projects that are GHG-efficient. At this time, the California Air Resources Board has not adopted a plan that establishes a pathway to achieving the State's long-term targets; therefore, these targets are not used as thresholds of significance in this analysis. Instead, the Association of Environmental Professionals (AEP) Climate Change Committee recommends that CEQA GHG analyses evaluate project emissions in light of the trajectory of state climate change legislation and assess their "substantial progress" toward achieving long-term reduction targets identified in available plans, legislation, or EOs (AEP 2016). Consistent with AEP Climate Change Committee recommendations, GHG impacts are analyzed using a threshold based on the State's 2030 target, which evaluates whether the project would impede "substantial progress" toward meeting the reduction goals identified in SB 32, EO S-3-05, and EO B-55-18. Because SB 32 is considered an interim target toward meeting the 2045 and 2050 State goals, consistency with SB 32 is considered to be contributing substantial progress toward meeting the State's long-term 2045 and 2050 goals. Avoiding interference with, and making substantial progress toward, these long-term State targets is important because these targets have been set at levels that achieve California's share of international emissions reduction targets that will stabilize global climate change effects and avoid the adverse environmental consequences of climate change (EO B-55-18). Furthermore, it is infeasible to meet the State's long-term targets at this time because achieving these targets will depend on substantial technological innovation in GHG emission reduction measures and changes in legislation and regulations that will need to occur over the next 25 to 30 years as have occurred over the past 14 years to meet the 2020 target set by AB 32. Therefore, if Connected 2050 is consistent with the SB 32 target, Connected 2050 would also achieve substantial progress toward climate-stabilizing targets set forth by EOs S-3-05 and B-55-18 and would be consistent with these long-term goals.

b. Project Impacts and Mitigation Measures

The following section presents a programmatic-level discussion of the potential for impacts to greenhouse gases and climate change from implementation of Connected 2050. Impacts and associated mitigation measures would apply in Santa Barbara County and all cities within the County. Section 4.8.3.c summarizes the impacts associated with capital improvement projects planned in Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible at this time. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could result in the impacts as described in the following section.

Threshold: Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact GHG-1 CONSTRUCTION OF THE TRANSPORTATION IMPROVEMENT PROJECTS AND DEVELOPMENT OF FUTURE LAND USE PROJECTS ENVISIONED BY CONNECTED 2050 WOULD GENERATE TEMPORARY SHORT-TERM GHG EMISSIONS THAT MAY HAVE A SIGNIFICANT IMPACT ON THE ENVIRONMENT. IMPACTS WOULD BE SIGNIFICANT BUT MITIGABLE.

Construction activities associated with transportation improvement projects and future land use projects envisioned by Connected 2050 would generate temporary short-term GHG emissions primarily due to the operation of construction equipment and truck trips. GHG emissions from construction can vary depending on the level of activity, the specific operations taking place, the equipment being operated and other factors. However, because such emissions are dependent on the characteristics of individual development projects, construction-related emissions are speculative at the RTP/SCS level. At the program level of analysis, it is not possible to quantify the amount of emissions expected from implementation of Connected 2050 because of variability in the extent of construction based on site conditions throughout the SBCAG region and the lack of project details needed to conduct such an analysis. Therefore, this analysis includes a qualitative analysis of potential GHG emissions from construction activity associated with projected land use development and proposed transportation projects.

Construction activity tends to be temporary in nature and would be expected to occur throughout the planning period of Connected 2050. During construction activities, GHG emissions would be emitted from travel to and from the worksites and the operation of construction equipment such as graders, backhoes, and generators. Site preparation and grading typically generate the greatest amount of emissions due to the intensive use of grading equipment and soil hauling. The level of GHG emissions from the construction of any one project or of all projects combined would be primarily dependent on the particular type, size, quantity, engine type, fuel type, and fuel efficiency of the equipment and the duration of their operation at the construction site or in the region. Construction activities generally result in annual GHG emissions that represent a small proportion of total annual GHG emissions from operational sources such as transportation and land use emissions. For example, the County of Santa Barbara determined that construction emissions accounted for approximately 4.7 percent of total 2016 GHG emissions in the unincorporated areas of the county, and the Southern California Association of Governments (SCAG) noted in their 2020-2045 RTP/SCS PEIR that total construction-related emissions typically account for less than 0.3 percent of total GHG emissions for the entire SCAG region (County of Santa Barbara 2018; SCAG 2020).

Construction activities generally result in annual GHG emissions that represent a small proportion of total annual GHG emissions, and implementation of Connected 2050 would result in an overall net reduction in long-term transportation-related GHG emissions in 2050 when compared to existing 2020 conditions (refer to Impact GHG-2). Nonetheless, construction activities would still result in GHG emissions that may have a significant impact on the environment. Therefore, this analysis identifies the measures, or best management practices (BMPs), that should be implemented for individual construction projects to have less than significant impacts. Thus, should implementing agencies adopt feasible mitigation measures for each construction project resulting from Connected 2050, impacts related to GHG emissions associated with construction activity would be less than significant with mitigation incorporated.

Mitigation Measures

For all transportation projects under their jurisdiction, transportation project sponsor agencies can and should implement the following mitigation measures for applicable transportation projects. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

GHG-1 Construction GHG Reduction Measures

The implementing agency shall incorporate the most recent GHG reduction measures and/or technologies for reducing diesel particulate and NO_x emissions measures for off-road construction vehicles during construction. The measures shall be noted on all construction plans and the implementing agency shall perform periodic site inspections. Current GHG-reducing measures include the following:

- Use of diesel construction equipment meeting CARB's Tier 4 certified engines wherever feasible for off-road heavy-duty diesel engines and comply with the State Off-Road Regulation. Where the use of Tier 4 engines is not feasible, Tier 3 certified engines shall be used; where the use of Tier 3 engines are not feasible, Tier 2 certified engines shall be used;
- Use of on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the five-minute idling limit;
- Use of electric powered equipment in place of diesel-powered equipment when feasible;
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and
- Use of alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, in place of diesel-powered equipment for 15 percent of the fleet;
- Use of materials sourced from local suppliers; and
- Recycling of at least 75 percent of construction waste materials.

Significance After Mitigation

With implementation of the above mitigation, implementing agencies would reduce short-term GHG emissions from individual projects to the maximum extent feasible. Because construction activities generally result in annual GHG emissions that represent a small proportion of total annual GHGs and implementation of Connected 2050 would result in an overall net reduction in transportation-related GHG emissions in 2050 when compared to existing 2020 conditions (refer to Impact GHG-2), impacts related to GHG emissions associated with construction activity would be less than significant.

Threshold: Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact GHG-2 IMPLEMENTATION OF CONNECTED 2050 WOULD NOT RESULT IN A SIGNIFICANT INCREASE IN TOTAL GHG EMISSIONS FROM MOBILE AND LAND USE SOURCES COMPARED TO 2020 CONDITIONS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Transportation-Related Emissions

As discussed in Subsection 4.8.3.a, total GHG emissions associated with all classes of on-road motor vehicles for Connected 2050 were calculated using the CARB's EMFAC2017 model based on the VMT that would be generated as a result of Connected 2050 (refer to Section 4.12, *Transportation and Circulation*). Table 4.8-3 compares the total transportation-related emissions from all vehicle classes for existing conditions in 2020 and future 2050 conditions with implementation of Connected 2050. Future conditions in 2050 without implementation of the Connected 2050 are also shown for informational purposes. As presented in Table 4.8-3, implementation of Connected 2050 would result in a net reduction in per capita emissions of 1.4 MT of CO₂e per person per year and a net reduction in total emissions of 454,191 MT of CO₂e per year, compared to existing 2020 conditions. The estimated reduction in total mobile source emissions is primarily due to stricter fuel efficiency and vehicle emissions standards such as the Corporate Average Fuel Economy standards that will phase in over the planning period as reflected in EMFAC2017 emission factors. In addition, the estimated reduction in per capita mobile source emissions is a result of slower growth in VMT as compared to forecast population growth as a result of the infill and TOD strategies in Connected 2050 that would reduce per capita VMT. Since Connected 2050 would result in a net decrease in overall transportation-related emissions in the County, the plan would not generate GHG emissions that may have a significant impact on the environment, such as sea level rise, increased magnitude of wildfires, or increased incidence of extreme heat days (see Section 4.8.1(c), *Potential Effects of Climate Change*).

Table 4.8-3 Connected 2050 Net Change in Transportation-Related Emissions (2020-2050)

Scenario	Total Emissions (MT of CO ₂ e/year) ¹	Per Capita Emissions (MT of CO ₂ e/person/year) ²
Existing (2020)	1,613,545	3.6
Future No Connected 2050	1,368,977	2.6
Connected 2050	1,159,354	2.2
Net Change from Existing (2020)	(454,191)	(1.4)
Net Change from Baseline (Future No Connected 2050)	(209,623)	(0.4)
Threshold of Significance	–	> 0
Threshold Exceeded?	–	No

() denotes a negative number.

MT = metric tons; CO₂e = carbon dioxide equivalents;

¹ Emission modeling completed using EMFAC 2017 and CARB’s off-model adjustment factors to account for SAFE Vehicles Rule implementation. See Appendix E for EMFAC results.

² The existing (2020) population of Santa Barbara County is 451,840 persons, and the future (2050) population is forecast to be 521,700 persons (California Department of Finance 2020; SBCAG Connected 2050).

Other Land Use Development Emissions

In addition to the transportation-related GHG emissions shown in Table 4.8-3, land use projects envisioned by the land use scenario in Connected 2050 would also result in GHG emissions due to electricity and natural gas consumption. However, this residential and commercial growth is not directly attributed to Connected 2050. This growth is anticipated to occur in the region regardless of whether Connected 2050 is adopted. Over the planning period, per capita emissions associated with electricity and natural gas consumption, water and wastewater conveyance and treatment, and solid waste disposal are anticipated to decline, primarily as a result of increasingly stringent iterations of State building code standards (specifically, the California Energy Code and the California Green Building Standards Code). In addition, by redistributing growth within the region to focus growth within existing urban areas, Connected 2050 would reduce per capita transportation-related GHG emissions associated with future land use development, which would contribute to an overall reduction in per capita GHG emissions associated with future (2050) land use development as compared to existing (2020) conditions. As a result, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold: Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Impact GHG-3 IMPLEMENTATION OF CONNECTED 2050 WOULD NOT CONFLICT WITH REGIONAL SB 375 PER CAPITA PASSENGER VEHICLE CO₂ EMISSION REDUCTION TARGETS BUT WOULD POTENTIALLY CONFLICT WITH SB 32, THE 2017 SCOPING PLAN, AND EOS S-3-05 AND B-55-18. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

SB 375

One of the goals of SB 375 is to reach the per capita GHG emissions reduction targets for passenger vehicles set by CARB through an integrated land use, transportation, and housing plan. Achievement of this goal is an objective of Connected 2050. The target from CARB, analyzed in this EIR, is identified as a 17 percent reduction in per capita passenger vehicle emissions from 2005 levels by 2035.⁵ To assess whether the Connected 2050 would reach the SB 375 target, EMFAC2014 was used to model CO₂ emissions for passenger vehicles. Table 4.8-4 presents per capita passenger vehicle emissions for 2035 as compared to the 2005 baseline. The per capita transportation-related emissions from passenger vehicles are based on the VMT estimates for Connected 2050, which include off-model adjustments that represent a reasonable level effect of the transportation programs included in Connected 2050 (i.e., telecommuting/remote work, public charging infrastructure for electric vehicles, and new vanpool riders [commuters and agricultural workers]).⁶

Table 4.8-4 Per Capita Passenger Vehicle CO₂ Emissions Comparison

	Per Capita CO ₂ Emissions (lbs/day)		
	2005 Baseline (per SB 375)	2035	2050
Per Capita Passenger Vehicle Emissions	18.77	15.43	16.01
Percent Change from in Per Capita GHG Emissions from 2005		-17.8%	-14.7%
SB 375 Target		-17%	n/a ¹
SB 375 Target Met?		Yes	n/a ¹

¹ SB 375 targets have not been adopted for post-2035 years.

Source: SBCAG Connected 2050

As shown in Table 4.8-4, implementation of Connected 2050 in the year 2035 would result in a decrease of per capita passenger vehicle CO₂ emissions by 17.8 percent compared to 2005 levels. Therefore, implementation of Connected 2050 would achieve the SB 375 GHG reduction target for SBCAG of 17 percent by 2035, and Connected 2050 would be consistent with SB 375.

⁵ The SB 375 target for 2020 is not utilized herein as a threshold of significance because Connected 2050 would apply only to future transportation and land use planning from the current year (2021) forward.

⁶ Refer to Chapter 3 of Connected 2050 and *Connected 2050 Regional Transportation Plan – Sustainable Community Strategy Technical Methodology* (December 2020) for more information on the off-model adjustments.

SB 32, 2017 Scoping Plan, and EOs S-3-05 and B-55-18

Connected 2050 would implement a suite of transportation improvement projects and facilitate a land use scenario that is consistent with the transportation sustainability goals of the 2017 Scoping Plan. The land use scenario envisioned by Connected 2050 concentrates the forecasted growth in population and employment in already urbanized areas in an effort to reduce VMT. Active transportation projects would implement complete street design policies that prioritize transit, biking, and walking throughout the SBCAG region, including but not limited to Old Town and Eastern Goleta Valley, City of Santa Barbara, City of Solvang, and Isla Vista. Active Transportation projects would increase the number, safety, and connectivity, and attractiveness of biking and walking facilities by adding sidewalks, trails, bike lanes, crosswalks, intersection improvements, pedestrian bridges, and signage throughout the SBCAG region. Furthermore, Connected 2050 includes transit projects designed to maintain, enhance, and expand transit services offered by agencies in the County, including, but not limited to, Clean Air Express, Coastal Express, Wine Country Express, and Breeze 200. Connected 2050 projects include expansion of existing transit fleets for the Metropolitan Transit District (MTD), Easy Lift, and Santa Maria Organization of Transportation Helpers. In conjunction with these active transportation projects, the Transit projects would increase the availability of low carbon mobility options in the region. Connected 2050 also includes projects to fund new electric battery infrastructure and transit properties, including additional battery electric buses in the City of Santa Maria and for MTD, thereby contributing to the 2017 Scoping Plan's goals of increasing the penetration of zero emission vehicles in non-light-duty sectors and electrifying the transportation sector. Therefore, Connected 2050 is consistent with the goals and strategies of the 2017 Scoping Plan.

The SB 375 targets are a key element of CARB's 2017 Scoping Plan. However, the 2017 Scoping Plan states, "Stronger SB 375 GHG reduction targets [adopted in 2018] will enable the State to make significant progress toward this goal, but alone will not provide all of the VMT growth reductions that will be needed. There is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals" (CARB 2017). Therefore, consistency with the SB 375 target does not necessarily equate to consistency with SB 32 and the 2017 Scoping Plan. This analysis hypothetically assumes that Connected 2050 would be required to achieve the same proportional GHG reductions as the state by the year 2030 (i.e., a 40 percent reduction in GHG emissions below 1990 levels). As shown in Table 4.8-5, total per capita transportation-related GHG emissions (for all vehicle classes) in 2030 would decrease by approximately 9 percent as compared to 1990 levels, which is not sufficient to achieve the 2030 target of a 40 percent reduction below 1990 levels. Therefore, although the projects, policies and land use scenarios identified in Connected 2050 are designed to align transportation and land use planning to reduce transportation-related GHG emissions, Connected 2050 would conflict with the State's ability to achieve the SB 32 GHG emissions reduction goal, assuming that Connected 2050 is required to achieve the same proportional GHG reductions as the overall state. As a result, impacts related to consistency with SB 32, the 2017 Scoping Plan, and EOs S-3-05 and B-55-18 would be potentially significant.

Table 4.8-5 Per Capita Transportation-Related Emissions (All Vehicle Classes) Compared to 1990 Levels

Scenario	Per Capita CO ₂ Emissions (lbs/day)	
	Vehicle Emissions	% Change in Emissions Compared to 1990 Baseline
1990 Baseline ^{1, 2}	20.7	–
2005 Baseline ²	24.4	–
Existing (2020) ³	21.7	+5%
2030 with Connected 2050 ⁴	18.9	-9%
2050 with Connected 2050 ³	13.3	-36%

¹ Actual 1990 emissions are unknown but are generally assumed to be 15% below 2005 levels.

² Source: SBCAG 2017

³ See Table 4.8-3; emissions were converted from MT per year to pounds per day

⁴ In the absence of specific VMT data for year 2030, per capita emissions for year 2030 were calculated via linear interpolation of per capita emissions for years 2020 and 2050 (see Table 4.8-3; emissions were converted from MT per year to pounds per day).

The following discussion of the project’s consistency with the State’s long-term 2045 and 2050 goals is provided for informational purposes only. Consistency with the 2045 and 2050 goals is not a threshold of significance used to evaluate the project’s GHG emissions in this EIR for the reasons stated earlier in Section 4.8.2(a), *Methodology and Significance Thresholds*. As shown in Table 4.8-3 and Table 4.8-5, GHG emissions generated by Connected 2050 would decline over the long-term due to slower growth in VMT as compared to forecast population growth, which would result from the alternative transportation and transit projects, and infill and TOD strategies in Connected 2050 that would reduce per capita VMT, as well as stricter fuel efficiency and vehicle emissions standards such as the Corporate Average Fuel Economy standards. Nevertheless, total transportation-related emissions under Connected 2050 would be approximately 1,159,354 MT of CO₂e per year, or 2.2 MT of CO₂e per capita, by 2050, which would be potentially inconsistent with the State’s goals of carbon neutrality by 2045 (EO B-55-18) and an 80 percent reduction in GHG emission levels by 2050 (EO S-3-05). However, it is not possible to definitively determine whether the project would be consistent because substantial technological innovation in GHG emission reduction measures and changes in legislation and regulations are likely to occur over the next 25 to 30 years as have occurred over the past 14 years to meet the target set by AB 32. Furthermore, the State has not yet comprehensively quantified its carbon sinks; therefore, it is unknown at this time what magnitude of emissions reductions are needed to achieve the carbon neutrality goal set in EO B-55-18. As previously stated, this discussion of Connected 2050’s consistency with the State’s long-term goals is provided for informational purposes only and is not used to determine the significance of the project’s GHG emissions.

Local Climate Action Plans

Three of SBCAG’s member jurisdictions (the Cities of Goleta and Santa Barbara and the County of Santa Barbara) have adopted climate action plans that set goals and targets for the reduction of GHG emissions, and outline policies to help achieve those goals (City of Goleta 2014; City of Santa Barbara 2012; County of Santa Barbara 2015).⁷ The local climate action plans and GHG reduction plans were adopted in an effort to comply with the GHG emissions reduction goals recommended

⁷ The City of Santa Barbara and County of Santa Barbara are currently updating their climate action plans with publication expected sometime in 2021.

for local governments in the AB 32 Scoping Plan, which was aimed at reducing GHG emissions to 1990 levels by 2020 in accordance with AB 32. These climate action plans are also intended to make progress toward the State's 2030 target of reducing GHG emissions by 40 percent below 1990 levels, as first set forth in EO S-3-05 in 2005 and later codified by SB 32 in 2017. As discussed previously, Connected 2050 was determined to be potentially inconsistent with the goals of SB 32 and EO S-3-05. Therefore, it would also conflict with the goals of local climate action plans designed to meet the same State goals, and impacts would be potentially significant.

Mitigation Measures

Connected 2050 would facilitate infill and TOD land use development as well as transit and alternative transportation projects, which would improve the transportation network in the SBCAG planning region and encourage the use of transportation modes other than passenger vehicles. Furthermore, by achieving its SB 375 target, Connected 2050 technically contributes its share of transportation-related GHG emission reductions towards meeting the State's GHG reduction target for 2030 under SB 32. However, the expected GHG emissions associated with VMT in the SBCAG region in year 2030 would not be consistent with the State's GHG reduction target for 2030, which would conflict with the state's ability to achieve SB 32, EO S-3-05, and EO B-55-18 GHG reduction goals. SBCAG does not have land use authority to implement additional VMT reductions that would result in additional transportation-related GHG emission reductions. Therefore, for land use projects under their jurisdiction, the cities and counties in the SBCAG region can and should implement measures to encourage infill and TOD land use development and reduce VMT, thereby reducing GHG emissions associated with individual development projects. In addition, implementing agencies can and should implement the following measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

GHG-3 Transportation-Related GHG Reduction Measures

The implementing agency shall incorporate the most recent GHG reduction measures and/or technologies for reducing VMT and associated transportation-related GHG emissions. The measures shall be incorporated into construction plans, as appropriate, and the implementing agency shall verify implementation when practicable. Current GHG-reducing measures include the following:

- Installation of electric vehicle charging stations beyond those required by State and local codes
- Utilization of electric vehicles and/or alternatively-fueled vehicles in company fleet
- Provision of dedicated parking for carpools, vanpool, and clean air vehicles
- Provision of vanpool and/or shuttle service for employees
- Implementation of reduced parking minimum requirements
- Implementation of maximum parking limits
- Provision of bicycle parking facilities beyond those required by State and local codes
- Provision of a bicycle-share program
- Expansion of bicycle routes/lanes along the project site frontage
- Provision of new or improved transit amenities (e.g., covered turnouts, bicycle racks, covered benches, signage, lighting) if project site is located along an existing transit route
- Expansion of existing transit routes
- Provision of transit subsidies

- Expansion of sidewalk infrastructure along the project site frontage
- Provision of safe, pedestrian-friendly, and interconnected sidewalks and streetscapes
- Provision of employee lockers and showers
- Provision of on-site services that reduce the need for off-site travel (e.g., childcare facilities, automatic teller machines, postal machines, food services)
- Provision of alternative work schedule options, such as telework or reduced schedule (e.g., 9/80 or 10/40 schedules), for employees
- Implementation of transportation demand management programs to educate and incentivize residents and/or employees to use transit, smart commute, and alternative transportation options

Significance After Mitigation

If implementing agencies adopt and require the mitigation described above, impacts would be reduced because transportation-related GHG emissions from land use projects would be reduced. However, implementation of project-level GHG-reducing measures may not be feasible and cannot be guaranteed on a project-by-project basis. Additionally, it is speculative at this time to forecast whether project-level GHG emission reductions would be sufficient to achieve a county-wide reduction in GHG emissions of 40 percent below 1990 levels by 2030. Therefore, this impact would remain significant and unavoidable. No additional feasible mitigation measures are available that would reduce emissions to trajectories consistent with SB 32, EO S-3-05, and EO B-55-18 GHG reduction goals.

c. Specific Projects that May Result in Impacts

Transportation projects that require construction and operational energy use, as listed and summarized in Section 2.0, *Project Description*, would have the potential to generate GHG emissions. However, Connected 2050 as a whole is designed to reduce per capita transportation-related GHG emissions in accordance with SB 375 and SB 32.

4.8.4 Cumulative Impacts

GHG emissions are, by definition, cumulative impacts, as they add to the global accumulation of greenhouse gases in the atmosphere. As discussed in Section 4.8.3, construction activities associated with transportation improvement projects and future land use projects envisioned by Connected 2050 may generate temporary GHG emissions. However, compliance with GHG emission mitigation measures during construction would reduce this impact. Implementation of Connected 2050 would reduce total regionwide mobile emissions compared to existing conditions as well as decrease of per capita CO₂ emissions associated with passenger vehicles by 17.8 percent compared to 2005 levels, consistent with SB 375 reduction targets. However, as discussed under Impact GHG-3, Connected 2050 would potentially conflict with the state's ability to achieve SB 32, EO S-3-05, and EO B-55-18 GHG reduction targets. Therefore, the project's contribution to cumulative GHG and climate change impacts, including sea level rise, would be cumulatively considerable. For the reasons discussed under Impact GHG-3, impacts would be significant and unavoidable.

4.9 Hydrology and Water Quality

This section describes water quality, groundwater supply, drainage, runoff, flooding and dam inundation impacts of development facilitated by Connected 2050.

4.9.1 Setting

The County contains five primary watersheds: Santa Maria, Cuyama, San Antonio, Santa Ynez, and South Coast, which is composed of approximately 50 short, steep watersheds. The headwaters of the principal watersheds are generally undeveloped, and the middle and lower sections are often developed with urban or agricultural uses. The four major rivers draining these watersheds are the Santa Maria, Sisquoc, Cuyama, and Santa Ynez. Rainfall throughout the County in the 2016 Water-Year was approximately 7.58 to 20.58 inches (Santa Barbara County Hydrology Report 2016). Streamflow is generated directly from rainfall with little base flow contribution from headwaters. Most rivers and the lower reaches of streams are dry in the summer.

a. Water Supply

Water supplies include groundwater, surface water, imported State Water Project water, and recycled water. The City of Santa Barbara utilizes a desalination plant which was recommissioned in 2017 and distributes water to approximately 30 percent of the City's customers (City of Santa Barbara 2020b). Water supplies also are enhanced by the conjunctive use of surface and groundwater supplies and cloud seeding. As of 2019, the average annual water supplies for Santa Barbara County totaled about 223,000 acre-feet per year (AFY), plus about 90,000 AFY in return flows to useable groundwater basins (Santa Barbara County IRWMP 2019).

Santa Barbara County's water supply currently comes from two primary sources: 1) surface water impounded behind dams on the Santa Ynez River, augmented by infiltration into delivery tunnels drilled through the Santa Ynez Mountains; and 2) groundwater pumped primarily from the County's alluvial basins. Groundwater is also obtained from bedrock aquifers in the hills that surround the alluvial basins and supplies about 75 percent of the County's domestic, commercial, industrial and agricultural water (IRWMP 2019). Additional water supplies are available to certain cities and communities from the Coastal Branch Aqueduct of the State Water Project. Existing allocations from the State Water Project range from 50 AFY to as high as 16,200 AFY, though actual water deliveries may be less in any given year depending on a number of factors including customer demand, regulatory restrictions and droughts in northern California (IRWMP 2019).

The County of Santa Barbara 2016 Water-Year (WY) can be summarized as a year with less than normal rainfall (70% County-wide), a continuation of the four previous drier-than-normal years, a record breaking 5 consecutive year dry period (2012-2016), and historically low reservoir water storage levels (Santa Barbara County 2016). However, due to heavy rainfall in December 2016 into March of 2017, the average county-wide normal-to-date rainfall percentage is approximately 150% for the 2017 Water-Year. Nevertheless, average rainfall does not typically produce substantial recharge. Long-term average annual yields of the surface reservoirs, as currently constructed, are fixed amounts that are subject only to further downward adjustments due to siltation. In addition, groundwater supplies are limited in terms of the annual amount of water that can be withdrawn without causing a long-term drop in water levels ("Safe Yield") and in the total storage of a basin that can be removed without substantial environmental effects ("Available Yield"). Such water source limitations make water conservation a necessity in the county.

According to the 2020 Santa Barbara County Groundwater Basins Status Report, 9 of the 15 groundwater basins are currently overdrafted. This overdraft pertains to safe yield and not perennial yield. Overdrafted basins include: the Montecito, Foothill, Goleta North/Central, Buellton Uplands, Santa Ynez Uplands, Lompoc, San Antonio, Santa Maria, and Cuyama. All groundwater basins have remained consistent in terms of surplus/overdraft since the 2011 Groundwater Report (IRWMP 2019). Table 4.9-1 shows the status of the County’s groundwater basins, with the corresponding threshold where consumption would result in a significant impact.

Table 4.9-1 Groundwater Basin Status

Basin	Estimated “Usable” Water in Storage (AF) ¹	Annual Surplus/ (Overdraft) (AFY)	Threshold of Significance (AFY)
South Coast Groundwater Basins			
Carpinteria	50,000	51	None applied
Montecito <i>(includes Toro Canyon)</i>	16,000	(426)	4
Santa Barbara	10,000	217	None applied
Foothill	5,000	52	4
Goleta (North/Central)	18,000	(1,488)	2
Santa Ynez Watershed Groundwater Basins			
Santa Ynez Uplands	900,000	(2,028)	61
Buellton Uplands	153,800	(800)	22
Lompoc	170,000	(1,918)	12
North Coast Groundwater Basins			
San Antonio	800,000	(8,931)	23
Santa Maria	1,100,000	(20,000)	25
East County Groundwater Basins			
Cuyama	1,500,000	(28,525)	31

¹ “Useable” or “working” water in storage generally denotes that which is above sea level and also above the bottom of the deepest water wells constructed in that specific area.

Source: 2020 County of Santa Barbara Groundwater Basins Status Report; County of Santa Barbara Environmental Thresholds and Guidelines Manual, 2008 (amended September 2020).

b. Water Quality

Water quality is a concern because of its potential effect on human health, enterprise, aquatic organisms, and ecosystem conditions. Quality is determined by factors such as native condition of groundwater and surface water, sources of contamination (natural and human induced), and extent of seawater intrusion.

Surface Water

Various entities in the region are focusing their efforts on poor surface water quality in creeks, rivers, and oceans due to polluted storm water and urban runoff discharges. Runoff pollutants can include pesticides, fertilizers, green waste, animal waste, human waste, petroleum hydrocarbons (gasoline, motor oil), trash, and other constituents.

One of the primary sources of surface water contamination in the County is runoff from impervious surfaces in urban areas. Stormwater flowing over roadways and other transportation facilities carries urban pollutants through natural drainage systems or man-made storm drain facilities to a body of surface water. Such discharges are referred to as “non-point” sources because the pollutants are generated from multiple locations rather than a single source and location. These discharges are mostly unregulated, resulting in untreated pollutants entering rivers, lakes, and the Pacific Ocean. Pollutants contained within urban runoff primarily include suspended solids, oil, grease, pesticides, pathogens, and air pollutants. Table 4.9-2 lists the potential pollutant generating activities identified for each of the watersheds within Santa Barbara County.

Table 4.9-2 Pollutant Generating Activities

Watershed	Pollutant Generating Activities
Santa Maria River	Urban development, agriculture return flows and runoff, wildfire burn areas, grazing
San Antonio	Urban development, agriculture return flows and runoff
Santa Ynez River	Urban development, agriculture return flows and runoff, wildfire burn areas, septic systems, gravel mining, wastewater plant discharges, grazing
South Coast	Urban development, agriculture return flows and runoff, wildfire burn areas, septic systems, seawater intrusion, industrial and commercial contaminated soils, former disposal sites

Source: 2018 Santa Barbara County-Wide Stormwater Resource Plan

Groundwater

Water quality in the groundwater basins of the County has degraded over the years due to continual use of the resource. This is particularly true in areas where the water table has been substantially lowered. Additional factors that contribute to the decline of water quality include: percolation of agricultural runoff contaminated with fertilizers and pesticides into the water table; percolation of water from public and private sewage treatment systems; percolation of contaminated urban runoff; the reduction of the natural “flushing” effect of water through-flow caused by lowered overall water levels, and the upward or lateral diffusion of connate brines by over-pumping of freshwater aquifers. Several areas in the County, including Santa Barbara and Santa Maria, have experienced signs of seawater intrusion. As of yet, these initial signs of intrusion do not pose a threat to drinking water supplies (IRWMP 2019).

The importation of State Water Project water, with lower salt content than the local sources, provides for higher quality “return flows,” and thus, helps with basin water quality. Laguna County Sanitation District helps improve water quality in the basin by utilizing a reverse osmosis process to remove and a deep injection well to dispose of concentrated waste brine and produce approximately 2,242 AFY of water for agricultural, landscaping, and industrial purposes (IRWMP 2019). Additionally, in the Santa Ynez Watershed, State Water Project water is mixed with water rights releases from Bradbury Dam to lower the salt content of flows downstream. Since 1997, discharge of State Water Project water has tended to lower the total dissolved solids (TDS) of groundwater in the vicinity of these sources (IRWMP 2019).

The County contains a number of non-sewered, fairly densely populated areas that remain on septic tanks, requiring integrated action by the Local Agency Formation Commission, cities, and special districts to provide for extensions of sewer systems to serve these areas or other measures to address potential groundwater contamination. State maximum contaminant levels (MCLs) for nitrates have been exceeded in some areas (IRWMP 2019).

South Coast Groundwater Basins

The South Coast Basin includes five sub-basins (Carpinteria, Montecito, Santa Barbara, Foothill and Goleta). Groundwater analyses conducted in 2010 indicate that nitrate levels in groundwater in the Carpinteria Basin are generally below the State MCL for public water systems (IRWMP 2019). There is no evidence of seawater intrusion into the Carpinteria Basin. Water quality in the Montecito Basin generally is suitable for agricultural and domestic use. Some wells in the Montecito Basin near fault zones or coastal areas yield groundwater with elevated levels of TDS and other constituents, such as iron and manganese (Bulletin 118 – Montecito Groundwater Basin). Studies also indicate that seawater intrusion is not a substantial problem in the Montecito Basin. Samples taken from coastal wells have confirmed the presence of seawater intrusion in the Santa Barbara Basin where heavy groundwater extraction from municipal wells caused groundwater levels to drop as much as 100 feet in the late 1970s. Groundwater pumping within the basin has been required to be at much-reduced flow rates compared to 1991. Effective pumping practices, together with groundwater injection programs, have restored the previously existing gradient, thereby reversing the trend of seawater intrusion. Analyses of water from the Foothill Basin indicated general water quality to be classified as very hard with dissolved solids, nitrogen, and sulfate with high levels sampled (Santa Barbara County Groundwater Report 2020). Water quality in the Goleta Basin is sufficient for many agricultural uses but might require treatment for domestic uses. The basin is divided into three sub-basins: the Central Sub-basin, the West Sub-basin, and the North Sub-basin. The Central Sub-basin, from which most water is extracted, contains the lowest TDS and chloride concentrations. Chloride concentrations are a particular problem in low lying areas of the basin near tidal marshes. Water in the West Basin requires treatment for domestic use and can be used for irrigation of a limited variety of crops (IRWMP 2019).

Santa Ynez River Watershed Groundwater Basins

The Santa Ynez River Watershed includes four groundwater basins (Santa Ynez River Alluvial, Santa Ynez Uplands, Buellton Uplands, and Lompoc Basins). Water quality within the Santa Ynez Uplands Basin is generally adequate for most agricultural and domestic purposes. The Santa Ynez River Valley Groundwater Basin is currently in a Medium SGMA Basin Prioritization stage (Groundwater Status Report 2020). Current water quality data for the Buellton Uplands basin is limited. However, data from late 1950s and early 1960s indicate TDS concentrations between 300 and 700 milligrams per liter (mg/L) for several wells within the basin (IRWMP 2019). Groundwater quality in the Lompoc Basin generally decreases from east to west as the basin nears the coastline of the Pacific Ocean. Water levels are balanced by releases made from Lake Cachuma. Thus, in essence, the basin is managed to maintain water level and water quality thresholds under current operation of the reservoir (IRWMP 2019).

North Coast Groundwater Basins

The North Coast Groundwater Basins include two sub-basins (San Antonio and Santa Maria). Westward water quality degradation in the San Antonio Basin has been thought to be caused by the accumulation of lower quality water from agricultural return flow and the dissolution of soluble minerals. There is no evidence of seawater intrusion in the basin, nor is the basin considered susceptible to seawater intrusion due to the consolidated rock that separates the basin from the ocean. The water quality in this area has not been degraded over the past few years and is far within both agricultural and domestic usage standards. Water quality in the Santa Maria Basin has been improved through the importation and domestic use of State Water Project and also from Laguna

Sanitation District to the south. While recently general groundwater quality has been stable, nitrate concentrations in shallow groundwater have progressively increased. Deep groundwater concentrations remain markedly lower, generally less than 10 mg/l (IRWMP 2019).

East County Groundwater Basin

Groundwater quality in the Cuyama Basin ranges from hard (high in dissolved solids) to very hard and is predominantly of the calcium and magnesium-sulfate type, in great part due to the abundance of gypsum as a source material in the middle and upper parts of the watershed (IRWMP 2019). Water quantity and quality deteriorate toward the west end of the basin, where the basin sediments thin. Although groundwater in the Cuyama Valley is only of fair to poor chemical quality, it has been used successfully to irrigate most crops (IRWMP 2019).

c. Flooding

Flooding can occur during periods of excessive rainfall or as a result of wave run-up along the coast. Flooding in steeper, mountainous areas is usually confined to the stream channel and adjacent floodplain. Larger rivers typically have longer, more predictable flooding sequences and broad floodplains. The Santa Barbara County Flood Control District reviews proposed development applications for conformance with the Flood Plain Management Ordinances, setback from major watercourses, adequacy of drainage plans, regional drainage planning, and protection of existing development. Figure 4.9-1 illustrates floodplain hazards in the County.

Dam Inundation

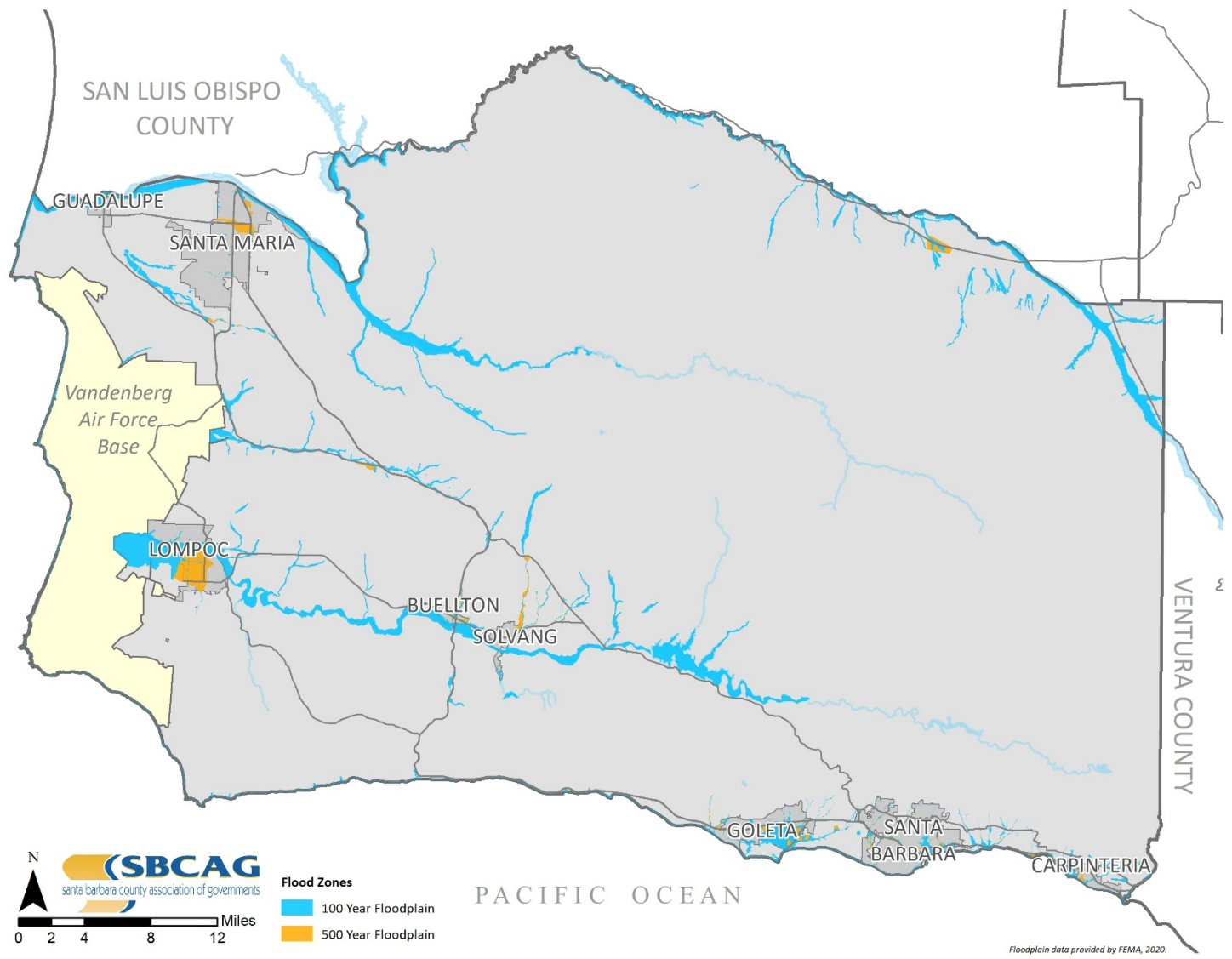
Inundation may be caused by dam failure or overtopping resulting from heavy precipitation. Dams may also fail as a result of structural damage caused by seismic events, erosion, structural design flaws, rapidly rising floodwater or landslides flowing into a reservoir. Populated areas below dams may be exposed to flood hazards resulting from dam failure. Dam failure could also pose a risk to roads, highways, public facilities, agricultural crops or other land uses within the inundation zone). Dam inundation maps show high downstream hazards from the Santa Monica Debris Basin near Carpinteria, the Juncal Dam in Montecito, Gibraltar Dam, Rancho Del Ciervo Dam, Dos Pueblos Dam, Edwards Reservoir, and Alisol Reservoir (Department of Water Resources 2021).

The Santa Barbara County Flood Control District's Operation and Maintenance Program is one of the District's highest priority ongoing programs and involves normal operation of basins, channels, and other flood protection facilities and the routine and emergency maintenance and repair of these facilities in the County. Maintenance of channels, debris basins, dams and storm drain facilities prevents minor storm problems from becoming major flood problems and the County performs routine maintenance and operation of dams, 264 miles of channels and storm drains, 78 retention/recharge/debris basins and many major storm drain systems.

Tsunami/Seiche

According to the Department of Conservation, tsunami hazards are present along most of the County's coastal boundary with the Pacific Ocean. There are five major areas along the Santa Barbara Coast which are subject to inundation by a tsunami if an earthquake were to occur offshore. These areas are Point Sal at the mouth of the Santa Maria River, the mouth of the Santa

Figure 4.9-1 Flood Hazards in Santa Barbara County



Ynez River west of Lompoc, Goleta Slough -Santa Barbara Airport area, Santa Barbara City Harbor Area, and Carpinteria. These are located in lowland areas along the coast (Santa Barbara County 2015).

Seiches can affect bodies of water as small as swimming pools, but normally would be likely to cause major damage only to developed areas surrounding, or downstream from, large lakes. In addition to small waves initiated by ground shaking which might affect the local shoreline, larger waves can be generated by large landslides triggered by an earthquake. These waves could overtop a dam and cause serious damage to property lying downstream. There are several lakes in the County, the largest being Lake Cachuma. Except for recreational facilities, there is little shore development surrounding the lake. Other water bodies subject to seiches are Twitchell and Gibraltar Reservoirs, Jameson and Zaca Lakes, and Sheffield Dam. Detectable seiches would be more frequent than tsunamis, but generally of less wave height (Santa Barbara County 2015).

4.9.2 Regulatory Setting

a. Federal Regulations

Clean Water Act

Congress enacted the Clean Water Act (CWA), 33 U.S.C. § 1251 et seq., formerly the Federal Water Pollution Control Act of 1972, with the intent of restoring and maintaining the chemical, physical and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain and restore water quality through the regulation of point source and non-point source discharges to surface water. Point source discharges are regulated by the NPDES permit process (CWA Section 402). NPDES permitting authority is administered by the SWRCB and nine RWQCBs. Santa Barbara County is within a region administered by the Central Coast (CC) RWQCB.

Individual projects that disturb more than one acre would be required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMP) the discharger would use to prevent and retain storm water runoff. The SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

Section 401 of the CWA requires that any activity that would result in a discharge into waters of the U.S. be certified by the RWQCB. This certification ensures that the proposed activity does not violate State water quality standards. Section 404 of the CWA authorizes the U.S. Army Corps of Engineers to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. Discharges to waters of the U.S. must be avoided where possible and minimized and mitigated where avoidance is not possible. Section 303(d) of the CWA requires states to establish total maximum daily load (TMDL) programs for streams, lakes and coastal waters that do not meet certain water quality standards.

Executive Order 11988

Executive Order (EO) 11988 Floodplain Management directs federal agencies to avoid short- and long-term adverse impacts associated with the occupancy and modification of floodplains and to

avoid direct and indirect support of floodplain development whenever there is a practicable alternative. Additionally, EO 11988 requires the prevention of uneconomic, hazardous, or incompatible use of floodplains; protection and preservation of the natural and beneficial floodplain values; and consistency with the standards and criteria of the National Flood Insurance Program.

National Flood Insurance Act/Flood Disaster Protection Act

The National Flood Insurance Act of 1968 (42 U.S.C. § 4001 et seq.) made national flood insurance available for the first time. The Flood Disaster Protection Act of 1973 (42 U.S.C. § 4001 et seq.) made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas. These laws are relevant because they led to mapping of floodplains and to local management of floodplain areas according to guidelines that include prohibiting or restricting development in flood hazard zones.

b. State Regulations

Porter Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act of 1967 (Water Code § 13000 et seq.) requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect State waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The Water Quality Control Plan, or Basin Plan, protects designated beneficial uses of State waters through the issuance of Waste Discharge Requirements (WDRs) and through the development of TMDLs. Anyone proposing to discharge waste that could affect the quality of the waters of the State must make a report of the waste discharge to the RWQCB or SWRCB as appropriate, in compliance with Porter-Cologne.

Sustainable Groundwater Management Act

In September 2014, the state passed legislation requiring that California’s critical groundwater resources be sustainably managed by local agencies. The Sustainable Groundwater Management Act (SGMA, Water Code § 10720 et seq.) gives local agencies the power to sustainably manage groundwater and requires Groundwater Sustainability Plans (GSPs) to be developed for medium- and high-priority groundwater basins. The SBCAG region is part of a collaborative effort to implement SGMA and form groundwater sustainability agencies (GSA). GSAs for medium- and high-priority groundwater basins in the SBCAG region include: Carpinteria Water District, Montecito Water District, Santa Ynez River Water Conservation District, and the Santa Barbara County Water Agency (County of Santa Barbara 2020). These agencies will prepare the required GSPs for their respective groundwater basins. The GSP’s for the Carpinteria and Montecito Water Basins are due by 2024 and the Santa Ynez River Valley Basin and San Antonio Creek Valley Basin GSP’s are due by 2022. The DWR is required to draft and adopt emergency regulations for the evaluation of GSPs, the implementation of GSPs and Alternatives, and coordination agreements. On February 18, 2016 DWR released for public review the Draft GSP Emergency Regulations for public review and comment and the regulations were approved on May 18, 2016.

Antidegradation Policy

California’s antidegradation policy, formally known as the Statement of Policy with Respect to Maintaining High Quality Waters in California, restricts degradation of surface and ground waters. It protects waters where existing water quality is higher than necessary for the protection of beneficial

uses. Any actions with the potential to adversely affect water quality must be consistent with the maximum benefit to the people of the State; not unreasonably affect present and anticipated beneficial use of the water; and not result in water quality less than prescribed in water quality plans and policies.

Cobey-Alquist Floodplain Management Act

The Cobey-Alquist Floodplain Management Act (Water Code § 8400 et seq.) gives support to the National Flood Insurance Program by encouraging local governments to plan, adopt and enforce land use regulations for floodplain management, to protect people and property from flooding hazards. The Act also identifies requirements that jurisdictions must meet to receive State financial assistance for flood control.

Caltrans Statewide NPDES Permit

The California Department of Transportation (Caltrans) was issued the nation's first statewide stormwater NPDES permit (Order 99-06-DWQ) in 1999 by the SWRCB. The Caltrans Permit requires Caltrans to regulate nonpoint source discharge from its properties, facilities and activities. The Caltrans Permit requires development of a program for communication with local agencies and coordination with other municipal separate storm sewer system (MS4) programs where those programs overlap geographically with Caltrans facilities. As part of the permit, Caltrans is required to create and annually update a Stormwater Management Plan (SWMP) that is used to outline the regulation of pollutant discharge caused by current and future construction and maintenance activities. SWMP requirements apply to discharges from Caltrans stormwater conveyances, including catch basins and drain inlets, curbs, gutters, ditches, channels and storm drains. The SWMP must be approved by the SWRCB and, as specified in the permit, it is an enforceable document. Compliance with the permit is measured by implementation of the SWMP. Caltrans' policies, manuals and other guidance related to stormwater are intended to facilitate implementation of the SWMP. Caltrans also requires all contractors to prepare and implement a program to control water pollution effectively during the construction of all projects.

California Green Building Standards Code

The California Green Building Standards Code (CalGreen, Cal. Code Regs. Title 24, Part 11)) includes mandatory measures for residential and nonresidential development. For example, Section 4.106.2 requires residential projects that disturb less than one acre and are not part of a larger common plan of development to manage storm water drainage during construction through on-site retention basins, filtration systems and/or compliance with a stormwater management ordinance. Section 5.106.1 requires newly constructed nonresidential projects and additions of less than one acre to prevent the pollution of storm water runoff because of construction through compliance with a local ordinance or implementing BMPs that address soil loss and good housekeeping to manage equipment, materials and wastes. Section 5.303 sets measures for indoor water use for non-residential development requiring metering devices to conserve water.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code, Section 10610 et seq.), which requires urban water suppliers to develop water management plans to actively pursue the efficient use of available supplies. Every five years, water suppliers are

required to develop Urban Water Management Plans (UWMPs) to identify short-term and long-term water demand management measures to meet growing water demands.

SRWCB Water Rights Program

The SWRCB is responsible for administering water rights in California. It has several water rights programs including a Compliance Monitoring Program, Drought Year Information Resources, Water Availability Analysis, Water Use Reports Program and Water Quality Certification. The Water Availability Analysis Program, applicable to Connected 2050, is required by the California Water Code which requires sufficient information for applications submitted to the SWRCB to demonstrate a reasonable likelihood that appropriated water is available for appropriation. The Water Use Reports Program is responsible for water use reports for water right holders and sets measurement methods for the reports.

Senate Bill 610 and 221

Senate Bill (SB) 610 and SB 221 of 2001 improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 and 221 promote more collaborative planning between local water suppliers and cities and counties. Under SB 610, water supply assessments (WSAs) must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA. Under SB 221, approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. SB 221 is intended as a “fail safe” mechanism to ensure that collaboration on finding the need for water supplies to serve new large subdivision occurs prior to construction.

State Water Conservation Requirements

Executive Order B-37-16 established a new water use efficiency framework for California. The order bolstered the state’s drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating clearly wasteful practices, strengthening urban drought contingency plans and improving agricultural water management and drought plans. Based on monthly water use reporting, the majority of urban water suppliers reported sufficient supplies to meet demand in three additional dry years and are not subject to state conservation mandates. On February 8, 2017, SWRCB adopted an emergency water conservation regulation to amend and extend the May 2016 regulation. The amended regulation allows certain suppliers the opportunity to submit or resubmit their water supply reliability assessments.

California Coastal Act

The California Coastal Act (Public Resources Code § 30000 et seq.) is the primary law that governs decisions of the Coastal Commission. Chapter 3 of the California Coastal Act contains Coastal Resources Planning and Management Policies. Policies include protection of certain water oriented recreational activities (Section 30220); minimizing the adverse effects of waste water discharge, controlling runoff and preventing depletion of ground water supplies (Section 30231); and water supply and flood control through channelization, dams, or other substantial alternations (Section 30236).

Local

Santa Barbara County Municipal Code

GRADING

Development activity in Santa Barbara County must prevent sediment and other construction related pollutants from entering the storm drain. The County regulates discharges from construction activities through permits issued by Planning & Development Department. These include Grading Permits and Land Use Permits. Chapter 14, Grading Code, of the County Code addresses construction site runoff control and associated inspection and enforcement procedures. Under the Grading Code, a ministerial permit is required when 50 cubic yards or more are graded. The permit requires submittal of an Erosion and Sediment Control Plan (Section 14-29) to the Building and Safety Division of Planning and Development. In the case where a project is also subject to the requirements of the Construction General Permit, a SWPPP can be submitted instead of an Erosion and Sediment Control Plan. The Erosion and Sediment Control Plan (or SWPPP) addresses pollution prevention through the use of BMPs to control erosion and non-storm water discharges such as fueling, sawcutting, placing concrete, painting, etc.

STORMWATER MANAGEMENT AND DISCHARGE CONTROL

Chapter 29 Article 4 of the Santa Barbara County Municipal code establishes provisions related to the health, safety, and general welfare of the citizens of Santa Barbara County through the regulation of non-storm water discharges to the storm drainage system (MS4"), to the maximum extent practicable as required by federal and state law. The Chapter establishes methods for controlling the introduction of pollutants into the storm drain system in order to comply with requirements of the NPDES permit process. The Chapter regulates the contribution of pollutants by any person to the storm drain system, prohibits illicit connections and discharges to the storm drain system, and requires new development and redevelopment projects to comply with the California Regional Water Quality Control Board, Central Coast Region, Resolution No. R3-2013-0032, Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region as set forth in the most recent edition of the Santa Barbara County Stormwater Technical Guide.

Santa Barbara County-Wide Stormwater Resource Plan

The SWRP was developed as a framework for the City of Buellton, Carpinteria, Goleta, Guadalupe, Solvang, County of Santa Barbara, Carpinteria Valley Water District, Montecito Water District, and the University of California at Santa Barbara's ongoing identification and prioritization of stormwater and dry weather runoff capture projects that provide water quality, water supply, flood management, environment, and community. Additionally, the Santa Barbara County IRWMP identifies regional objectives that include conserving, protecting, and augmenting surface water supplies; protecting, managing, and increasing groundwater supplies; and protecting and improving water quality. This SWRP's watershed-based approach identifies and prioritizes stormwater management projects with multiple benefits that directly address regional objectives.

4.9.3 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the State CEQA Guidelines identifies the following criteria for determining whether a project's impacts would have a significant impact related to hydrology and water quality:

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - (i) Result in substantial erosion or siltation on- or off-site;
 - (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - (iii) 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; or
 - (iv) Impede or redirect flood flows?
- d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

In addition, the County of Santa Barbara *Environmental Thresholds and Guidelines Manual (2021)* defines potential impacts relating to groundwater and water quality with any of the following conditions:

- Withdrawal of water that exceeds the current threshold designated for overdrafted groundwater basins; or
- Is located within an urbanized area of the county and the project construction or redevelopment individually or as a part of a larger common plan of development or sale would disturb one (1) or more acres of land;
- Increases the amount of impervious surfaces on a site by 25% or more;
- Results in channelization or relocation of a natural drainage channel;
- Results in removal or reduction of riparian vegetation or other vegetation (excluding nonnative vegetation removed for restoration projects) from the buffer zone of any streams, creeks or wetlands;
- Is an industrial facility that falls under one or more of categories of industrial activity regulated under the NPDES Phase I industrial storm water regulations (facilities with effluent limitation; manufacturing; mineral, metal, oil and gas, hazardous waste, treatment or disposal facilities; landfills; recycling facilities; steam electric plants; transportation facilities; treatment works; and light industrial activity);

- Discharges pollutants that exceed the water quality standards set forth in the applicable NPDES permit, the Regional Water Quality Control Board's (RWQCB) Basin Plan or otherwise impairs the beneficial uses of a receiving waterbody;
- Results in a discharge of pollutants into an "impaired" waterbody that has been designated as such by the State Water Resources Control Board or the RWQCB under Section 303 (d) of the Federal Water Pollution Prevention and Control Act (i.e., the Clean Water Act); or
- Results in a discharge of pollutants of concern to a receiving waterbody, as identified in by the RWQCB.

b. Project Impacts and Mitigation Measures

The following section presents a programmatic-level discussion of the potential for hydrology and water quality impacts from implementation of Connected 2050. Impacts and associated mitigation measures would apply in Santa Barbara County and all cities within the County. Section 4.9.4c summarizes the impacts associated with capital improvement projects proposed in the Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible at this time. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could result in the impacts as described in the following section.

Threshold:	Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
Threshold:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

Impact HYD-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN CONNECTED 2050 COULD RESULT IN SUBSTANTIAL ERODED SEDIMENTS AND CONTAMINANTS IN RUNOFF, AS WELL AS CHANGES IN DRAINAGE PATTERNS WHICH COULD DEGRADE SURFACE AND GROUND WATER QUALITY. HOWEVER, COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS WOULD REDUCE IMPACTS TO WATER QUALITY TO LESS THAN SIGNIFICANT.

Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in Connected 2050 would result in both short-term and long-term impacts to water quality. Certain transportation improvements would increase overall impervious surface area throughout the SBCAG region. For example, new roadways or road widening projects would introduce pavement in areas that are currently undeveloped. Development projects envisioned under the land use scenario could also introduce impervious surfaces, including infill sites, if the infill site is currently unpaved. These and other projects that would increase impervious surfaces may generate significant adverse impacts to surface water quality. Pollutants and chemicals associated with urban activities would run off new roadways and other new impervious surfaces flowing into nearby bodies of water during storm events. These pollutants would include, but are not limited to: heavy metals from auto emissions, oil, grease, debris and air pollution residues. Similarly, any Connected 2050 projects with landscaping may require fertilizer/pesticide application, which could enter nearby bodies of water and cause adverse effects to water quality. Such

contaminated urban runoff may remain largely untreated, thus resulting in the incremental long-term degradation of water quality. Short-term adverse impacts to surface water quality may also occur during the construction periods of individual improvement projects because areas of disturbed soils would be highly susceptible to water erosion and downstream sedimentation. This impact is of particular concern for projects located on previously contaminated sites. Without effective erosion and storm water control, contaminated soils exposed during construction activities may result in surface water contamination. In addition, grading and vegetation removal in proximity to creeks for construction, widening and bridge repair could increase erosion and sedimentation of creek banks. This could affect both water quality and the stability of slopes along the creeks.

As discussed in the Regulatory Setting, the federal CWA requires that an NPDES storm water permit be obtained for construction projects that would disturb greater than one acre. Acquisition of the General Construction permit is dependent on the preparation of a SWPPP that contains specific BMPs to control the discharge of pollutants, including sediment, into the local surface water drainages. Specific BMPs may include, but are not limited to: silt fencing, fiber rolls, trenching and silt stabilization techniques. In addition, all state projects for which Caltrans is the sponsor agency would comply with the Caltrans Statewide NPDES permit that regulates all stormwater discharges from Caltrans owned conveyances, maintained facilities and construction activities. Many Connected 2050 projects, especially new and extended roadways, would disturb more than one acre and would be subject to these regulations. Construction of transportation and development projects under Connected 2050 could also result in the change of existing drainage patterns on individual project sites or within a project area, which could impact water quality. Project grading and construction of impervious surfaces, for transportation projects may alter existing drainage patterns by altering slopes and reducing infiltration. Additionally, any infill development projects included in the SCS land use scenario could also increase impervious surfaces and develop structures that may alter existing drainages. However, compliance with regulations would reduce impacts from project construction by requiring measures to prevent runoff and pollutants from leaving a project site.

For operational water quality control, the CWA NPDES MS4 Phase I and Phase II requirements, as discussed in the Regulatory Setting, require agencies and developments to implement SWMPs, which in turn require the implementation of source and treatment control measures. NPDES MS4 permittees are also required to develop and enforce ordinances and regulations to reduce the discharge of sediments and other pollutants in runoff, and must verify compliance. New development that would introduce 10,000 or more square feet of new impervious surfaces would be required under Provision C.3 of the NPDES program to incorporate LID strategies such as stormwater reuse, onsite infiltration and evapotranspiration. Some typical BMPs to meet regulatory standards for project operation include erosion control and revegetation programs, LID, alternative discharge options and integrated pest management techniques in landscaped areas. During operations and maintenance of transportation projects, operational BMPs would result in compliance with applicable stormwater runoff discharge permits. In addition, consistent with the Post-Construction Stormwater Management Requirements for development projects in the central coast region (February 2013), post project stormwater flows from a project site are required to be the same or less than pre-project stormwater flows. Based on compliance with these requirements, land use development patterns included in Connected 2050 would not result in impacts to the local stormwater system.

Depending on the location and design specific to transportation projects included in Connected 2050, stormwater runoff may be captured in existing storm drain systems and conveyed to local or

regional wastewater treatment facilities. Likewise, the land use pattern included in Connected 2050 would generate new sources of sanitary sewage, which would also be conveyed to wastewater treatment facilities in the region for secondary or tertiary treatment. Discharges of treated wastewater, also called effluent, from the treatment plants are regulated by the RWQCB and must meet water quality effluent limitations established in the NPDES permit issued by the RWQCB for the treatment plant. Thus, although implementation of Connected 2050 would increase the volume of point-source wastewater discharges in the SBCAG region, required compliance and monitoring of effluent prior to discharge from treatment facilities would ensure impacts would be less than significant.

Development under Connected 2050 would not substantially degrade water quality or violate water quality standards because compliance with state regulation such as NPDES and MS4 permits would require implementation of BMPs and development to reduce discharge of runoff and maintain water quality. In addition, local ordinances require measures such as erosion control reduce the discharge of pollutants into storm drain systems. Although individual projects included in Connected 2050 have the potential to adversely affect water quality at a project-specific level, projects would adhere to existing regulations related to water quality. Therefore, water quality impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold:	Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
Threshold:	Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?
Threshold:	Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact HYD-2 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN CONNECTED 2050 WOULD INCREASE WATER DEMAND (INCLUDING DEMAND FOR GROUNDWATER) IN THE SBCAG REGION, WHICH MAY LEAD TO A DECREASE IN WATER SUPPLIES. THIS DEMAND MAY POTENTIALLY REQUIRE NEW OR EXPANDED WATER SUPPLIES, ENTITLEMENTS, OR FACILITIES AND LEAD TO CONFLICTS WITH SUSTAINABLE GROUNDWATER MANAGEMENT PLANS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in Connected 2050 would result in both short-term and long-term impacts to water supply throughout the SBCAG region. During grading and general construction activities, water would be needed to suppress fugitive dust generated by construction equipment. Given the current state of overdraft of many groundwater basins in the study area, and the likelihood that more than one project would be constructed simultaneously in areas with overdrafted basins, the short-term water impact of Connected 2050 is significant.

Projects that require long-term commitments of water, whether from irrigation for landscaping or from development included in the proposed land use scenario, also could generate impacts on

water supplies in the SBCAG region. Most transportation improvements involve modification of existing facilities and would not result in a substantial increase in landscaped areas that require irrigation. There are projects however, that specifically involve tree planting or landscaping, such as landscaping at the Linden Ave/Casitas Pass Interchanges in the City of Carpinteria and at the intersection of SR 154 and SR 246 in Santa Barbara County, near Santa Ynez. Irrigation of landscaping associated with these projects, and other projects in Connected 2050, would require long-term commitments of water. In addition, development associated with the land use scenario envisioned in Connected 2050 would require water supply. Transportation projects would be located in areas served by the Montecito, Goleta (North/Central), Santa Ynez Uplands, Buellton Uplands, Lompoc, and Santa Maria Basins, all of which are in a state of overdraft. Although several of the major urbanized areas throughout the County currently use reclaimed water for transportation facility landscaping, in more remote areas, reclaimed water sources are not located within a reasonable distance. As such, it may not be economically feasible to convey reclaimed water to outlying areas. In addition, land development projects would demand potable water.

Major Connected 2050 projects and the land use scenario envisioned by Connected 2050, could also affect groundwater supplies by incrementally reducing groundwater recharge potential. This reduction in groundwater recharge could occur because the impermeable surfaces associated with the proposed improvements would increase surface water runoff at the expense of natural infiltration. As discussed in the Regulatory Setting, UWMPs for the SBCAG area estimate and pursue the efficient use of available water supplies identifying short-term and long-term water demand management measures. In addition, SB 610 and 221 improve the link between information on water supply availability and certain land use decisions made by cities and counties by promoting more collaborate planning. Further, GSPs prepared under SGMA would be implemented to protect and regulate groundwater in the SBCAG area. A list of GSAs in the SBCAG region that would prepare GSPs is included in the Regulatory Setting. These regulatory and planning programs encourage planning for anticipated water usage and thus conservation in the SBCAG area and would include consideration for the water demand anticipated by Connected 2050.

Although compliance with existing regulations would require consideration of water demand, the magnitude of impacts associated with individual Connected 2050 projects cannot be accurately determined at this programmatic stage of analysis. In addition, although existing regulations would reduce groundwater impacts, some jurisdictions may not have local regulations or the regulations may not apply to all projects. Therefore, impacts related to groundwater recharge, water supply entitlements, and new water supply facilities are significant.

Mitigation Measures

Transportation project sponsor agencies can and should implement the following mitigation measures for applicable transportation projects. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

HYD-2(a) Construction Dust Suppression Water Supply

All Connected 2050 projects, where feasible, reclaimed and/or recycled water shall be used for dust suppression during construction activities. This measure shall be noted on construction plans and shall be spot checked by the local jurisdiction.

HYD-2(b) Landscape Watering

In jurisdictions that do not already have an appropriate local regulatory program related to landscape watering, Connected 2050 projects that include landscaping shall be designed with drought tolerant plants and drip irrigation. When feasible, native plant species shall be used. In addition, landscaping associated with proposed improvements shall be maintained using reclaimed and/or desalinated water when feasible.

HYD-2(c) Porous Pavement

In jurisdictions that do not already have an appropriate local regulatory program related to porous pavement, the sponsor of a Connected 2050 project that involves streetscaping, parking, transit and land use improvements shall ensure that porous pavement materials are utilized, where feasible, to allow for groundwater percolation.

HYD-2(d) Water Infrastructure Improvements

The sponsor of Connected 2050 projects that would require potable water service shall coordinate with water supply system operators to ensure that the existing water supply systems have the capacity to handle the increase. If the current infrastructure servicing the project site is found to be inadequate, infrastructure improvements for the appropriate public service or utility should be provided by the implementing agency.

HYD-2(e) Bioswale Installation

The sponsor of a Connected 2050 project, such as new roads or roadway extensions, that would substantially increase impervious surfaces shall ensure that bioswales are installed, where feasible, to facilitate groundwater recharge using stormwater runoff from the project site while improving water quality if not already required by the appropriate jurisdictions local regulatory programs.

Significance After Mitigation

Implementation of the above measures would reduce impacts from water supply in the Santa Barbara County region. However, due to the programmatic nature of Connected 2050 a precise, project-level analysis of specific water demand and supply impacts associated with individual transportation and land use projects is not possible at this time. The land use scenario envisioned by Connected 2050 along with transportation projects are water intensive and may result in the need for additional water supply, even with the implementation of mitigation measures listed above. Given the overdraft conditions of area groundwater basins and other regional water supply concerns, impacts would remain significant and unavoidable. No additional feasible mitigation measures to reduce this impact to less-than-significant levels are available.

Threshold:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
Threshold:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would 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?
Threshold:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

Impact HYD-3 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN CONNECTED 2050 WOULD INCREMENTALLY INCREASE STORMWATER FLOWS AND CHANGE DRAINAGE PATTERNS IN THE SBCAG REGION. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in Connected 2050 may increase stormwater flows, resulting in increased volume and/or velocity of stormwater runoff. Potential increases in stormwater volume and/or velocity could result in on- or off-site flooding. However, planned transportation and land use projects would be designed to comply with existing State and local jurisdiction requirements, including applicable municipal code sections related to stormwater runoff and drainages, such as curb and gutter design, and would build drainage infrastructure to control and accommodate the increase in stormwater flows. As discussed in the Regulatory Setting, these ordinances include the Santa Barbara County Municipal Code Chapter 29, Article 4, to control the entry of urban pollutants into stormwater runoff and the County Stormwater Technical Guide. Compliance with local ordinances would control runoff via drainage basins, silt fencing, vegetation erosion control and other measures to reduce runoff into stormwater drainage systems.

Land use projects under Connected 2050 would require drainage control post-construction measures required under the NPDES MS4 permit and would include implementation of LID drainage control features. These measures could include incorporation of permeable paving, vegetated swales, infiltration retention basins and other features that would minimize stormwater runoff.

The effects of transportation projects and land use development would have the potential to increase stormwater runoff. However, existing regulations provide adequate analysis of potential impacts and preventative measures to limit or avoid substantial runoff during project construction and operation. Based on compliance with these existing regulations, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold: In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Impact HYD-4 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS FACILITATED BY THE LAND USE SCENARIO ENVISIONED IN CONNECTED 2050 COULD BE SUBJECT TO FLOOD HAZARDS DUE TO STORM EVENTS, FLOODING, AND/OR DAM FAILURE, HOWEVER ADHERENCE TO EXISTING REGULATIONS WOULD ENSURE IMPACTS TO WATER QUALITY ARE LESS THAN SIGNIFICANT.

Implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could be subject to flooding hazards due to storm events, tsunami/seiche, sea-level rise due to climate change and/or dam failure.

Flooding/Dam Failure

Proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 in low-lying areas, 100-year and 500-year flood plains, and in proximity to waterways and/or dam inundation zones may be subject to flood hazard. The effects of flooding could include temporary inundation of a facility that impedes its use or causes long-term damage to the facility. Flooding may also cause immediate damage to roadways, bikeways, and bridges, particularly during high-velocity flood events that wash away or erode facilities, typically occurring adjacent to rising rivers or streams, or if located in a dam inundation area. Unpaved bikeways are particularly vulnerable, although any facility within the flood zone of a stream would be subject to impacts. Erosion caused by flooding can damage paved facilities, and bridge supports can be undermined or washed away. Potential flooding due to sea level rise for projects at or near the coast or within the coastal zone is required to be considered when designing such projects, in accordance with the California Coastal Commission's Sea Level Rise Policy Guidance (2015).

There are several federal, state and local programs to reduce flooding in the region as discussed in the Regulatory Setting. The National Flood Insurance Act makes the purchase of flood insurance mandatory for properties in Special Flood Hazard Areas to prevent the loss of property from flooding. The Cobey-Alquist Floodplain Management Act encourages local governments to plan, adopt and enforce land use regulations for floodplain management to protect people and property from flood hazards. The California Division of Dam Safety inspects dams across the State, including in the SBCAG region, on a yearly schedule to ensure that they are performing and being maintained in a safe manner. The Santa Barbara County Flood Control District's Operation and Maintenance Program inspects and provides normal operation of basins, channels, and other flood protection facilities and the routine and emergency maintenance and repair of these facilities in the County. In addition to local management agencies, the Santa Barbara County Flood Control District has flood prevention ordinances requiring building standards in flood zones, as discussed further in the Regulatory Setting. Building standards for flood prevention include elevated structures, anchored foundation systems and erosion control measures along waterways.

Tsunami and Seiche

Although there is a risk of tsunamis in the SBCAG region, incorporating required building regulations and design standards into development would minimize the risk of tsunamis. Safety policies from local general plans would reduce the risk of injury, loss of life and property damage associated with a tsunami and emergency evacuation plans would address safe travel routes in the event of a tsunami.

Transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could be subject to flooding hazards/inundation, however, as discussed in Impact HYD-1, implementation of Connected 2050 would not substantially degrade water quality or violate water quality standards because compliance with state regulations such as NPDES and MS4 permits would require implementation of BMPs and development to reduce discharge of pollutants in runoff and maintain water quality. In addition, local ordinances require measures such as erosion control reduce the discharge of pollutants into storm drain systems. Although individual projects included in the Connected 2050 have the potential to adversely affect water quality at a project-specific level, projects would adhere to existing regulations regarding risks from water quality pollutants.

Mitigation Measures

No mitigation measures are required.

c. Specific RTP Projects that May Result in Impacts

All Connected 2050 projects discussed in Section 2.0, *Project Description*, that require new construction or landscaping may result in impacts as discussed in impacts HYD-1 through HYD-3; and therefore, are not specifically identified in table format below. Additional site-specific analysis would need to be conducted as the individual projects are implemented in order to determine the project-specific magnitude of the impact. Mitigation measures discussed above would apply to these specific projects. Table 4.9-3 identifies projects that may result in flooding impacts as discussed in Impact HYD-4. Given the large number of projects proposed in Connected 2050, Table 4.9-3 shows a representative rather than comprehensive list of projects that would result in flooding-related impacts.

Table 4.9-3 Connected 2050 Projects that May Result in a Flooding Impact

Location	Project Description	Impact
City of Carpinteria	Study Feasibility of constructing a pedestrian bridge on 5th Street over Franklin Creek near Aliso School, in Carpinteria.	HYD-4
City of Goleta	Construct Class I/Class II bike path adjacent to San Jose Creek, from Hollister Avenue to the Atascadero Creek Bike Path at Goleta Beach.	HYD-4
City of Goleta	Improve sidewalks in residential areas of Old Town Goleta, north of Hollister Avenue from Fairview Avenue to Kellogg Avenue, and on Pine Avenue south of Hollister Avenue.	HYD-4
City of Goleta	Construct sidewalk infill and Class II Bike Lanes along both sides La Patera Road between the Amtrak terminal and Hollister Avenue in Goleta.	HYD-4
City of Goleta	Construct a sidewalk on the east side of Magnolia Avenue, south of Hollister Avenue in Goleta.	HYD-4
City of Goleta	Construct a sidewalk on the east side of Magnolia Avenue, south of Hollister Avenue in Goleta.	HYD-4
City of Carpinteria	Construct a multiuse path along Franklin Creek from Carpinteria Avenue to 7th Street in Carpinteria.	HYD-4
City of Carpinteria	Place lighting facilities along the new 9th Street Pedestrian Bridge and proposed Franklin path in Carpinteria.	HYD-4
City of Carpinteria	Replace existing pedestrian bridge over Santa Monica Creek at Via Real in Carpinteria.	HYD-4
City of Santa Barbara	Add green Class II bike lanes and operational improvements on State Street between De La Vina Street and Constance Avenue in the city of Santa Barbara.	HYD-4
City of Santa Barbara	Create a separate/protected Class I bikeway connecting the Beachway through Leadbetter Beach to Shoreline Park	HYD-4
City of Santa Barbara	U.S. Hwy 101 bridge rail replacement from San Ysidro Road to State Street	HYD-4
Santa Barbara County	Bridge removal of the Alamo Pintado Creek Pedestrian Bridge (BR # 51-0076Y) adjacent to SR 154 near Los Olivos.	HYD-4
Santa Barbara County	Bridge removal of the Alamo Pintado Creek Pedestrian Bridge (BR # 51-0076Y) adjacent to SR 154 near Los Olivos.	HYD-4
Santa Barbara County	Replace bridge deck at U.S. Hwy 101 and SR 135 separation (BR # 51-0073R/L)	HYD-4
Santa Barbara County	Replace bridge rails on Nojoqui Creek Bridges (BR # 51-0018L/R) on U.S. Hwy 101.	HYD-4
Santa Barbara County	Bridge seismic retrofit on San Antonio Creek Bridge (BR # 51-0006) on SR 135, near Los Alamos.	HYD-4
Santa Barbara County	Bridge seismic retrofit on San Antonio Creek Bridge (BR # 51-0006) on SR 135, near Los Alamos.	HYD-4
Santa Barbara County	Replace the San Jose Creek Bridge (BR # 51-0217) on SR 217 near Goleta.	HYD-4
City of Carpinteria	Rehabilitate roadway (3R) on U.S. Hwy 101 between Casitas Pass and west of Sandpiper Drive in Carpinteria.	HYD-4

4.9.4 Cumulative Impacts

Cumulative development would increase erosion and sedimentation resulting from grading and construction, and result in minor changes in drainage patterns which could degrade surface and ground water quality. In addition, new development in flood- and non-flood hazard areas, would increase the generation of urban pollutants that may adversely affect water quality in the long term. The effects of transportation projects and land use development would have the potential to increase stormwater runoff and potential increases in stormwater volume and/or velocity that could result in on- or off-site flooding. Similar to the land use projects under Connected 2050, cumulative development of projects in the County would also require drainage control post-construction measures required under a NPDES MS4 permit, and would include implementation of LID drainage control features to minimize runoff, including but not limited to, permeable paving, vegetated swales, and infiltration retention basins. Construction within areas subject to flood hazards due to storm events, flooding, and/or dam failure could increase flooding hazards to the surrounding areas and outside the SBCAG Region through a change in rate or levels due to an increase in impermeable surfaces or change in the flood flow pattern or direction. As with Connected 2050, individual construction projects within the cumulative impact area would be required to comply with applicable water quality regulations, as discussed in the Regulatory Setting and Impact HYD-1 above. Compliance with these existing requirements would reduce project-level impacts throughout the cumulative impact area; as such, cumulative impacts related to water quality, flooding, and stormwater runoff would be less than significant, and the Connected 2050's contribution to this impact would not be cumulatively considerable.

Water supply in the cumulative impact development area is derived from a variety of sources that vary depending on the location. In the SBCAG region, both groundwater and surface water supplies in portions of the cumulative impact development area may be limited. Cumulative development would create additional water demand, which may exceed supply in some localized areas. Compliance with SB 610 and SB 221, as well as preparation of GSPs where applicable, pursuant to the Sustainable Groundwater Management Act, would partially limit these cumulative effects. However, given that these regulations would not apply to all projects or all groundwater basins, this cumulative impact would be significant. As discussed in Impact HYD-2, Connected 2050 may impact groundwater supply in the SBCAG region because of the water required for land use projects and some transportation projects. Even with the implementation of mitigation measures, these impacts would be significant and unavoidable. Therefore, Connected 2050's contribution to cumulative water supply impacts would be cumulatively considerable. There are no feasible mitigation measures to ensure that there is sufficient water supply to support anticipated growth in the region. Given the overdraft conditions of area groundwater basins and other regional water supply concerns, impacts would remain cumulatively considerable post-mitigation, and thus be significant and unavoidable.

4.10 Land Use and Agricultural Resources

4.10.1 Setting

a. Land Use Patterns

The SBCAG region can be generally separated into four geographically separate areas: South County, Santa Maria Valley, Lompoc Valley, and Santa Ynez Valley. The South County area is the most urbanized area in the County and includes the Cities of Santa Barbara, Carpinteria, and Goleta and the unincorporated communities of Summerland, Montecito, and Isla Vista. Although this area is primarily developed with residential, commercial, and industrial uses, agriculture remains an important secondary use between the boundaries of the individual cities and communities, and within some urbanized areas, such as the unincorporated eastern Goleta valley.

The Santa Maria Valley includes the Cities of Santa Maria and Guadalupe, and the communities of Orcutt and Los Alamos. Santa Maria is the largest urban center in the northern portion of the county with a 2017 population just over 108,500 (SBCAG 2019). However, much of the Valley remains agricultural and rural in character.

The Lompoc Valley, adjacent to Vandenberg Air Force Base, includes the City of Lompoc and the communities of Vandenberg Village and Mission Hills. Other than the urbanized communities and uses that serve the needs of the Air Force Base, this valley is primarily comprised of agricultural land uses. Approximately 46 percent (751,180 acres) of the total 1,633,000 acres countywide is federally owned in the jurisdiction of either the Vandenberg Air Force Base or Los Padres National Forest. Cuyama Valley is also primarily comprised of agricultural land uses and includes the communities of Cuyama and New Cuyama.

The Santa Ynez Valley includes the Cities of Solvang and Buellton, and the communities of Los Olivos, Ballard, and Santa Ynez. Primary land uses in the valley include agriculture, ranch-style residential housing, and visitor-serving commercial properties. Vineyards and Cannabis Farms are present throughout portions of the Santa Ynez Valley.

Local Governments

Santa Barbara County is home to eight, incorporated cities (Guadalupe, Santa Maria, Lompoc, Buellton, Solvang, Goleta, Santa Barbara and Carpinteria). As required by law, each city in the Santa Barbara region, as well as the unincorporated County, has a general plan containing at minimum seven statutorily required elements, among them a land use element and housing element that designate appropriate land uses throughout the jurisdiction, accommodate each jurisdiction's share of the regional housing need and define specific goals, policies, and objectives that the local jurisdiction has determined to be important.

A city or county may also provide for land use planning by developing community or specific plans for smaller, more specific areas within its jurisdiction. These more localized plans provide for focused guidance for developing a specific area, with development standards tailored to the area, as well as systematic implementation of the general plan. The County of Santa Barbara, and the Cities of Santa Maria and Santa Barbara have numerous community and sub-regional plans. Santa Barbara County has a total of eleven community plans for areas including Los Alamos, Orcutt, Cuyama, Santa Ynez, Montecito, Summerland, Toro Canyon, Mission Canyon, Isla Vista, Eastern Goleta Valley, and

the Gaviota Coast. The County of Santa Barbara unincorporated area is divided into five Supervisorial Districts with similar population sizes of approximately 85,000 persons.

b. Important Farmland

To characterize the environmental baseline for agricultural resources, Important Farmland Maps produced by the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP) were reviewed. Unless otherwise expressed, the future use of "Important Farmland" specifically includes the following definitions provided by the DOC (DOC 2016):

Prime Farmland

Land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming standards.

Farmland of Statewide Importance

Land that is similar to *Prime Farmland* but with minor shortcomings, such as greater slopes or less ability to hold and store moisture.

Farmland of Local Importance

Farmland of Local Importance is land of importance to the local agricultural economy as determined by each county's board of supervisors following recommendations by a local advisory committee.

Unique Farmland

Land of lesser quality soils used for the production of specific high economic value crops. It has the special combination of soil quality, location, growing season and moisture supply needed to produce sustained high quality or high yields of a specific crop when treated and managed according to current farming methods. It is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Examples of crops include oranges, olives, avocados, rice, grapes and cut flowers.

According to the most recent FMMP data from the Department of Conservation, Santa Barbara County contains a total of 117,481 acres of Important Farmland (DOC 2016).

Important Farmland Trends

According to the DOC, irrigated Farmland in California decreased by 11,165 net acres between 2014 and 2016 (DOC 2016). Prime Farmland decreased by 18,312 net acres, coupled with a Farmland of Statewide Importance decrease of 26,557 net acres. Partially offsetting these losses was the addition of 33,704 net acres of irrigated crops on lesser quality soils, mapped as Unique Farmland.

As shown in Table 4.10-1, Santa Barbara County experienced an 417 acre net decrease in Important Farmland between 2014-2016 (DOC 2016). Net increases in acreages occurred for Farmland of Statewide Importance and Unique Farmland, and net decreases for both Prime and Farmland of Local Importance.

Table 4.10-1 Important Agriculture Land Conversion in Santa Barbara County 2014-2016

Land Use Category	Total Acreage Inventoried		2014-2016 Acreage Changes			
	2014	2016	Acres Lost (-)	Acres Gained (+)	Total Acreage Changed	Net Acreage Changed
Prime Farmland	67,217	66,978	1,071	832	1,903	-239
Farmland of Statewide Importance	12,999	13,194	265	460	725	195
Unique Farmland	36,584	37,325	681	1,422	2,103	741
Farmland of Local Importance	9,722	8,951	1,133	362	1,495	-771
Important Farmland Total¹	126,522	126,448	3,150	1,716	3,015	-74

¹ Important Farmland represents all Prime Farmland, Farmland of Statewide and Local Importance, and Unique Farmland within Santa Barbara County.

Sources: California Department of Conservation (DOC). 2016. *California Farmland Conversion Report 2014-2016*.

Agricultural Productivity

California is the leading state in agricultural production in the United States, and Santa Barbara County consistently ranks in the top 20 counties of the State in overall agricultural productivity. Agriculture continues to be the main producing industry in Santa Barbara County. For the 2019 crop year, Santa Barbara County had a total gross production value of \$1,600,146,484, surpassing the gross production value for the prior year by \$78,625,992, an increase of 5.1 percent. The top ten revenue crops that were produced in the County in 2019 included strawberries, wine grapes, nursery products, cauliflower, head lettuce, broccoli, leaf lettuce, celery, cut flowers and foliage, and avocado (Santa Barbara County Crop Report 2019).

The County’s transportation system traverses many rural areas, including areas overlain by rich agricultural soils, a high percentage of which are in production. The Santa Maria Valley, Santa Ynez Valley, Lompoc Valley, and Carpinteria are among the County’s leading agricultural areas, and are noted for their high quality irrigated crops, including strawberries, grapes, and cut flowers, along with orchards, field crops and greenhouses. Cattle ranching is common throughout the County, and much of the rolling terrain in the more remote portions of the County is characterized by this land use.

4.10.2 Regulatory Setting

There are numerous federal, State, and local laws, regulations, policies, programs, plans, codes, and ordinances that regulate land use in Santa Barbara County. Local land use issues are regulated by the general plans, specific plans, and zoning ordinances of the County and the various incorporated cities within the County. City and unincorporated County land which lies within the California coastal zone is subject to provisions outlined in each jurisdiction’s Local Coastal Program (LCP) as mandated by the California Coastal Act. The Coastal Zone generally consists of all land 1,000 yards inland from the mean high tide line. The LCPs consist of coastal land use plans, zoning, and other implementing actions as needed to comply with the Coastal Act and include land use regulations related to housing, coastal access, public works, and all types of transportation infrastructure and facilities.

Some agricultural lands are under statewide protection pursuant to the Williamson Act, or Land Conservation Act (LCA). Agricultural land under LCA contract cannot be converted to urban uses

during the contract period, typically a minimum of 10 years. The contracts are entered into voluntarily by property owners in exchange for tax incentives. Property owners may file a notice of non-renewal to terminate the contract. Such lands retain their LCA status for 9 years prior to termination of the contract.

The FAST Act is a funding and authorization bill to govern United States federal surface transportation spending. The Sustainable Communities Strategy and Climate Protection Act, SB 375, is a law passed in 2008 by the California legislature that requires each MPO to demonstrate, through the development of an SCS, how its region will integrate transportation, housing, and land use planning to meet the greenhouse gas (GHG) reduction targets set by the State. The details of the FAST Act and SB 375 are discussed in Section 2.0, *Project Description*.

Farmland Protection Policy Act (FPPA)

The FPPA is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.

State Regulations

Sustainable Communities Strategy and Climate Protection Act (SB 375)

SB 375 is a California law passed in 2008 that requires each MPO to demonstrate, through the development of a Sustainable Communities Strategy (SCS), how its region will integrate transportation, housing and land use planning to meet the greenhouse gas (GHG) reduction targets set by the State. The details of SB 375 are discussed in Section 2.0, *Project Description*.

Office of Planning and Research 2015 Environmental Goals and Policy Report

Governor's Office of Planning and Research's Environmental Goals and Policy Report (EGPR) (Governor's Office of Planning and Research, 2015) contains plans, research and objectives pertaining to land use, development, waste, natural resource conservation, water and air quality. The EPGR works alongside state planning priorities to implement State environmental goals and guide land use decisions. More specifically, the EPGR addresses State planning priorities including efficient infill development and adaptive reuse and mixed-use development.

Office of Planning and Research 2017 General Plan Guidelines

The 2017 General Plan Guidelines (Governor's Office of Planning and Research 2017) is the first comprehensive update to the guidelines since 2003 and addresses numerous new laws, requirements, resources and research that affect long-range planning in California. The 2017 update includes links to external documents and additional resources. This includes guidance for implementing the following legislation: Environmental Justice (SB 1000), Climate Change (SB 379), Sustainable Communities Strategies (SB 375), Flood Management (SB 5), Vehicle Miles Traveled (SB 743), Island or Fringe Communities (SB 244), Tribal Consultation (AB 52) and Local Hazard Mitigation Plans (AB 2140). Beyond State law requirements, the 2017 General Plan Guidelines also provide direction on topics including healthy communities, equitable and resilient communities, economic development, climate change and renewable energy.

Smart Mobility 2010 Framework

The Smart Mobility Framework, formally known as *Smart Mobility 2010: A Call to Action for the New Decade* (Caltrans 2010), was prepared by Caltrans in partnership with the U.S. EPA, the Governor's Office of Planning and Research, and the California Department of Housing and Community Development to address both long-range challenges and short-term programmatic actions to implement multi-modal and sustainable transportation strategies in California. The Smart Mobility Framework helps guide and assess how well various levels plans, programs, and projects (e.g., RTPs, General Plans, specific development proposals, etc.) meet a definition of "smart mobility". The Smart Mobility Framework is intended to move people and freight while enhancing California's economic, environmental and human resources by emphasizing:

- Convenient and safe multimodal travel
- Speed suitability
- Accessibility
- Management of the circulation network
- Efficient use of land

Planning and Zoning Law

California Government Code Section 65000, et seq., regulates the substantive and topical requirements of general plans. State law requires each city and county to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning." The California Supreme Court has called the general plan the "constitution for future development." The general plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private.

Zoning authority originates from city and county police power and from the Planning and Zoning Law, which sets minimum requirements for local zoning ordinances. Zoning ordinances must be consistent with the general plan and specific plans. The consistency requirement does not apply to charter cities other than Los Angeles unless the charter city adopts a consistency rule.

Cortese Knox Hertzberg Local Government Reorganization Act of 2000 (CKH Act)

The Cortese Knox Hertzberg Local Government Reorganization Act (CKH Act) is the most substantial reform to local government reorganization law since the 1963 statute that created a Local Agency Formation Commission (LAFCO) in each county. The law established procedures for local government changes of organization, including city incorporation, annexation to a city or special district, and consolidation of cities or special districts (Section 56000, et seq.). LAFCOs have numerous powers under the CKH Act, but those of prime concern are the power to act on local agency boundary changes and to adopt spheres of influence (SOIs) for local agencies. The law also states that in order to update a Sphere of Influence, LAFCOs are required to first conduct a review of the municipal services provided in the county. The Santa Barbara County Local Agency Formation Commission is committed to serving the residents of Santa Barbara County and the State of California by discouraging urban sprawl and encouraging the orderly formation and development of local agencies based on local conditions and circumstances (SBLAFCO 2021).

Farmland Mapping and Monitoring Program (FMMP)

The DOC, under the Division of Land Resource Protection, developed the FMMP to monitor the conversion of the state’s farmland to and from agricultural use. Data is collected at the county level to produce a series of maps identifying eight land use classifications using a minimum mapping unit of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates the “Important Farmland Series Maps” every two years (DOC 2016).

Williamson Act

The California Land Conservation Act of 1965, Sections 51200 et seq. of the California Government Code, commonly referred to as the “Williamson Act”, enables local governments to restrict the use of specific parcels of land to agricultural or related open space use. Landowners enter into contracts with participating cities and counties and agree to restrict their land to agriculture or open space use for a minimum of ten years. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market (speculative) value.

Coastal Zone Management Act

The Coastal Zone Management Act requires the protection of agricultural lands within the coastal zone. It does so by directly mandating that the maximum amount of prime agricultural land be maintained in production and by supporting various techniques to limit threats to agricultural productivity. These include establishing stable urban-rural boundaries, agricultural buffers, development priority on lands not suitable for agriculture, subdivision restrictions and public service expansion controls (Public Resource Code Section 30241).

Local Regulations

The following section focuses on the key plans that regulate land use in the SBCAG region, which are the county and city general plans and Local Coastal Program, the Airport Land Use Compatibility Plans and master plans regulating land dedicated to university campuses. This section outlines the status of those plans.

Santa Barbara County General Plan

The County of Santa Barbara Comprehensive and Coastal Land Use Plan is the County’s guiding document outlining physical development in the County (County of Santa Barbara 2021). The County General Plan is broken down into the following elements: Circulation, Conservation, Housing, Land Use, Community and Specific Plans, Noise, Open Space, Seismic Safety and Safety, Coastal Land Use Plan, Agricultural, Energy, Environmental Resource Management, Hazardous Waste, and Scenic Highways.

City of Guadalupe General Plan

The City of Guadalupe General Plan was adopted in 1986, reformatted in 2001, and revised in 2002. The General Plan includes the following Elements: Land Use, Housing, Circulation, Conservation and Open Space, Safety, and Noise (City of Guadalupe 2002). The General Plan is comprehensive long-term document (20+ years) and contains goals, policies, and programs to serve the community’s use and development of land in the planning area. The City released the 2040 Draft General Plan in June 2018, which addresses Land Use, Circulation Environmental Justice, Housing, Conservation,

Economic Development, Open Space, Noise, Safety, Public Facilities, Air Quality, Community Design, and Health (City of Guadalupe 2018).

City of Santa Maria General Plan

The City of Santa Maria's existing General Plan contains seven elements updated between 1995 and 2015. The General Plan includes the following elements: Land Use, Circulation, Noise, Safety, Resource Management, Housing, Economic Development. The City is the process of updating its General Plan to address issues such as population growth, housing affordability, and climate change (City of Santa Maria 2021).

City of Lompoc General Plan

The 2030 General Plan is the City of Lompoc's guiding document for growth and prosperity in the City. Outlining goals, policies, and implementation measures in a fashion complimenting the City's core values and providing direction for services provided by all departments; public safety, water resources, parks & recreation, land use, to all members utilizing the services provided to the community (City of Lompoc 2021). The General Plan includes the following elements: Land Use, Circulation, Housing, Parks and Recreation, Public Services, Urban Design, Conservation/Open Space, Noise, Safety, and Economic Development.

City of Buellton General Plan

The purpose of the General Plan Land Use Element is to provide an orderly plan for the general distribution, location and intensity of land uses within the City of Buellton. The Land Use Element describes long-range goals for the physical development of the community, both in terms of land use type and intensity, as well as urban character and form. The Land Use Element describes the intensity or density of development expected for the community based on the proposed land uses. This General Plan includes the following elements: Land Use, Circulation, Conservation/Open Space, Economic Development, Housing, Noise, Parks and Recreation, Public Facilities/Services, and Safety (City of Buellton 2008. The Housing and Safety Elements have been updated in 2015 and 2017, respectively. The City is currently in the process of updating the Land Use and Circulation Elements of the General Plan (City of Buellton 2021).

City of Solvang General Plan

The General Plan includes the following elements: Housing, Circulation, Community Design, Conservation and Open Space, Land Use, Noise, Parks and Recreation, and Safety (City of Solvang 2008). The Land Use Element of the City's General Plan provided for balanced development that is responsive to the City's unique opportunities and constraints and that respects the values of the community. The Land Use Element is a tool with which to maintain and enhance the unique character of the Village Area, the City's economic health, and the community's desirability as a residential and recreational area.

City of Goleta General Plan

The City of Goleta General Plan/Coastal Land Use Plan governs land use and physical development within the geographic area of the incorporated city limits. The General Plan/Coastal Land Use Plan Program's core concept is to reflect the community's goals and aspirations for Goleta. The overall community vision forms the foundation for the plan's goals, objectives, and policies for the next 25 years. The Goleta General Plan/Coastal Land Use Plan is the primary means for guiding future

change in Goleta as it faces challenges of growth, housing, environmental protection, neighborhood compatibility and preservation, and transportation. The plan provides a guide for making these choices by relating day-to-day decisions to the goals, objectives, and policies. The General Plan includes the following elements: Land Use, Open Space, Conservation, Safety, Visual and Historic Resources, Transportation, Public Facilities, Noise, and Housing (City of Goleta 2006).

City of Santa Barbara General Plan

The City of Santa Barbara General Plan seeks to maintain the natural resources of the City and the socially, environmentally, and economically healthy and sustainable Community as the City moves forward to 2030 (City of Santa Barbara 2011). The purpose of the General Plan is to adjust the City's current course to become holistically sustainable, facing challenges such as growth management, environmental stewardship, affordable housing, historic preservation, design compatibility, sustainability, climate change, and promotion of community health. The vision of the General Plan is met through the implementation of goals, policies, and implementation measures which work together through eight comprised General Plan Elements: Land Use; Housing; Open Space, Parks and Recreation; Economy and Fiscal Health; Historic Resources; Environmental Resources; Circulation; and Safety.

City of Carpinteria General Plan

The Carpinteria General Plan and Local Coastal Plan (LCP) (hereafter referred to together as the "General Plan") is the primary planning policy document for the city and represents the community's collective vision for preserving and improving the quality of life in the Carpinteria Valley. The General Plan includes the following elements: Land Use, Community Design, Circulation, Housing, Open Space/Recreation/Conservation, Safety, Noise, Public Facilities/Services (City of Carpinteria 2003). The City of Carpinteria is currently updating the General Plan/LCP over the next couple of years. The City is preparing 2 new elements of the City's General Plan: 1) the Climate Change and Resiliency Element, which would be based on a Carpinteria Sea Level Rise Vulnerability Assessment and Adaptation Plan, and 2) the Healthy Community Element, a multi-disciplinary element that focuses on health in the City in every policy (City of Carpinteria 2021).

4.10.3 Impact Analysis

a. Methodology and Significance Thresholds

Pursuant to the *State CEQA guidelines*, potentially significant impacts would result if the project would:

- 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.

Regarding agriculture resource impacts, pursuant to the *State CEQA guidelines*, potentially significant impacts would result if the project would:

- 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 nonagricultural use;

- b) Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- 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

The issue of impacts to agriculture is complex in Santa Barbara County. The recommended CEQA checklist in the *State CEQA Guidelines* specifically mentions the conversion of prime agricultural land to non-agricultural use as having potentially significant impacts to agriculture. However, due to the important role of agricultural production in the County's economy, the County of Santa Barbara has adopted a detailed point system for determining the significance of converting agricultural land. The Santa Barbara County *Environmental Thresholds and Guidelines Manual* (2021) includes a section on "Agricultural Resource Guidelines." This system assigns points for each of nine categories, including soil type, parcel size, current and adjacent uses, Comprehensive Plan designation, existing and historic land use, agricultural preserve potential, water availability, combined farming operations, and agricultural suitability. If the overall point total is 60 or above, the impact to agriculture land is considered significant.

Under the County's system, an agricultural parcel could be considered "significant" even when it contains no Prime, Unique, or Statewide Important farmland, if it contains other attributes that make it especially well-suited to farming. In order to be considered viable agricultural land, the parcel must be of sufficient size and capability to support an agricultural enterprise independent of any other parcel. Under this system, the impact to farmland from a road widening could be considered significant, for example, even if all of the land to be built upon is entirely within the legal right-of-way.

This point system acts only as an initial review to determine potentially significant impacts. Once a project or plan is determined to be significant or potentially significant to agricultural land, further in depth evaluation will need to be performed which will focus upon other factors or important criteria, but not the point system, such as the history of agricultural use on the site, land use trends, and compatibility of uses. Because of the complexity of determining the significance of any individual agricultural parcel, a final determination of the significance of impacts to farmland associated with any individual Connected 2050 improvement is beyond the scope of this program-level EIR. Therefore, this EIR assumes that any individual Connected 2050 project that could convert any farmland would have a potentially significant impact. The actual magnitude of agricultural land impacts associated with individual projects will need to be determined on a case-by-case basis as projects are designed and implemented.

Santa Barbara County's *Environmental Thresholds and Guidelines Manual* (2021) includes "Quality of Life Considerations." Although changes to quality of life are not treated as significant effects on the environment pursuant to CEQA, many quality of life considerations are addressed in Comprehensive Plan policies. Projects must conform to the applicable Comprehensive Plan policies, and decisionmakers must make findings of consistency in order to approve the land use entitlements required for a proposed project. For example, quality of life issues such as loss of privacy and neighborhood compatibility are often cited in Comprehensive Plan policies. In these situations, a project's effect on the quality of life of the surrounding community should be analyzed for consistency with the applicable policies.

b. Project Impacts and Mitigation Measures

Land use impacts were assessed based upon a review of the proposed transportation network and SCS land use scenario to determine whether any aspects of the network could physically divide an established community. Conflicts with plans, policies, programs and regulations were assessed based on a review of the proposed SCS land use pattern to determine whether it conflicted with locally adopted plans and regulations that are intended to avoid or mitigate environmental impacts. The following section presents a programmatic-level discussion of the potential for land use and planning impacts resulting from implementation of Connected 2050.

Impacts and associated mitigation measures would apply in Santa Barbara County and all cities within the County. Section 4.10.3.c summarizes the impacts associated with capital improvement projects proposed in the Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible at this time. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could result in the impacts as described in the following section.

Threshold: Would the project physically divide an established community?

Impact LU-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 WOULD NOT PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

In general, Connected 2050 implements roadway projects and transportation improvements that will decrease traffic congestion, increase mobility and improve alternative transportation infrastructure. Construction of additions to existing facilities and new facilities routinely involve temporary disruptions within established communities such as lane or road closures along roads and highways and service delays or detours for bus routes and passenger rail. Local jurisdictions routinely require traffic control plans and related measures to ensure that construction activities accommodate vehicular and pedestrian access, such as designating alternate routes or scheduling disruptive activities late at night or on weekends. With these controls, construction activities would not result in the physical division of established communities.

Connected 2050 intends to improve the system for all modes of transit so vehicles and non-motorized transit can use the streets simultaneously and safely. As a result, while few roads may be expanded and widened under Connected 2050, these and/or other planned projects would include improvements to bicycle and pedestrian facilities. Because the existing roads subject to expansion or widening are already part of the communities in which they are located, such projects would not have the potential to divide those communities. The projects are intended to achieve goals of Connected 2050 to increase mobility and decrease VMT, therefore the projects should result in bringing communities closer together rather than dividing them. New roadway, roadway rehabilitation projects, bridge repairs, bicycle lanes and ADA accessibility projects included in Connected 2050 are long-planned projects that are typically included in local circulation elements. As such, they have been anticipated and accommodated in local land use planning and would be integrated into the community infrastructure. These projects are expected to increase community connectivity and mobility and decrease congestion and GHG emissions.

The land use scenario envisioned by the Connected 2050 would encourage infill, mixed use and transit-oriented development within existing urbanized areas along transportation corridors,

although development could still occur in more suburban and rural areas as well. The land use scenario follows adopted city plans, taking into consideration recent updates and buildout scenarios, following existing regulations to promote infill development in existing communities along with planned growth in other areas. In general, this infill type of development would not divide a community; rather it would promote the development of existing vacant or underutilized properties. Other types of development would be consistent with the localized planning as well. This infill development would locate people closer to existing employment, goods and services within established communities. Buildout of the SCS land use scenario would result in more compact development in those established communities. The existing and new road projects contained in Connected 2050 originate from either local circulation plans or state projects supported by individual cities and/or the County. The projects have therefore been coordinated with and integrated into local plans that support and connect communities consistent with state planning law. Therefore, impacts related to dividing an established community would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold: Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact LU-2 CONNECTED 2050 MAY NOT BE CONSISTENT WITH EVERY APPLICABLE ADOPTED STATE AND LOCAL LAND USE POLICY OR REGULATION ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING ENVIRONMENTAL EFFECTS. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

In planning for projected growth in the region, Connected 2050 represents a voluntary growth strategy that retains local government land use autonomy. Neither SB 375 nor any other law requires local member agency general plans or land use regulation to implement the land use policies in Connected 2050. Thus, implementation of Connected 2050 is dependent on local government policy decisions and voluntary action. The proposed Connected 2050 includes a list of planned and programmed projects including local and regional capital improvements that have been anticipated or accounted for in local general plans and coastal plans. These plans are summarized above in the Regulatory Setting section.

The vision for Connected 2050 is built on a set of integrated policies, strategies and investments to maintain and enhance the transportation system to meet the diverse needs of the region through 2050. Connected 2050 was prepared with the specific intent to comply with the SB 375 goal to reduce GHG emissions. Connected 2050 was assessed to determine whether the SCS land use pattern and strategies could conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. This review focused on the process used by SBCAG to develop regional growth projections, the transportation network and programs, housing needs estimates and the SCS land use strategies

Proposed Connected 2050 projects encourage a multi-modal transportation network in high quality transit areas, with emphasis on non-motorized transportation and land use patterns to reduce distance between trip destinations. This approach is consistent with the general provisions of the FAST Act, and the Caltrans Smart Mobility 2010 framework.

In addition, Connected 2050 would help the region reach its GHG emission reduction targets established by CARB under AB 32, SB 32, and SB 375, as discussed in Section 4.8, *Greenhouse Gas Emissions/Climate Change*. Connected 2050 encourages development in high quality transit areas in order to reduce automobile traffic and commute lengths. Connected 2050 would meet the CARB-established goal of a net zero per capita increase in GHG emissions from passenger vehicles and light trucks in 2020 and 2035 (see Section 4.8, *Greenhouse Gas Emissions/Climate Change*).

At the local level, Connected 2050 builds on and incorporates regional and local planning efforts of its member agencies, including local general plans. Other key regional and local examples include, but are not limited to:

- 101-In-Motion,
- Isla Vista Master Plan,
- UCSB 2025 Long-Range Development Plan, and
- Regional Active Transportation Plan, SBCAG, 2015.

The land use scenario envisioned in Connected 2050 was developed in close coordination with SBCAG member agency planning staff and also builds on local general plans and general plan updates currently in process or completed. Central to the SCS is a land use plan identifying the general location of uses, residential densities, and building intensities within the region. Starting with land uses allowed by existing, adopted local General Plans, the land use plan envisioned by Connected 2050 provides for intensification of residential and commercial land uses in urban areas proximate to existing transit, aligning with existing and future transit priority areas (TPAs). The intent of these changes is ultimately to shorten trip distances and reduce vehicle miles traveled by (1) directly addressing regional jobs/housing imbalance by providing more housing on the jobs-rich South Coast and more jobs in bedroom communities in the North County, and (2) promoting more trips, both local and inter-city, by alternative transportation modes, especially public transit.

Importantly, the land use scenario envisioned by Connected 2050 was modeled using UPlan. UPlan allocates the future population increase across generalized UPlan land use categories. The generalized UPlan land use categories are the result of condensing hundreds of land use types from various local general plans into seven calibrated categories. The result is a spatial projection of future, allowable urbanization within each land use type that is broadly consistent with adopted local general plans.

As discussed, Connected 2050 was developed in close collaboration with the cities and agencies that comprise the SBCAG region. Meetings were held with local agency staff to reach agreement on analytical methodology, assumptions, growth projections, place types, opportunity areas, economic development and the transportation network. While cities and counties are not required by SB 375 to make their plans consistent with the RTP/SCS, every effort was made to avoid inconsistencies. These meetings resulted in consensus among the local agencies on a land use pattern and transportation network for the SBCAG. While this consensus suggests that the Connected 2050 would not conflict with key policies or regulations adopted to avoid or mitigate environmental impacts, as presented throughout this EIR, the Connected 2050 would result in significant and unavoidable impacts in several environmental issue areas, including: aesthetics/visual resources, air quality, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality (water supply), noise, transportation and circulation, and wildfire. Because Connected 2050 would result in significant and unavoidable impacts to these environmental issue areas, some inconsistencies with city or county policies or regulations intended to protect these resources may

occur. Therefore, impacts related to consistency with land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects would be significant.

Mitigation Measures

Mitigation measures are provided for applicable resources throughout this section of the EIR to reduce impacts. However, impacts for some resources would remain significant and unavoidable in conflict with adopted plans even with implementation of mitigation measures. Such impacts include those related to wildland fire hazard, locating sensitive receptors in areas with unacceptable noise levels, or increases in VMT. No additional feasible mitigation measures are available to reduce significant and unavoidable impacts beyond those identified in this EIR.

- Threshold a:** Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?
- Threshold b:** Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?
- Threshold e:** Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use

Impact LU-3 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY CONNECTED 2050 COULD RESULT IN THE CONVERSION OF PRIME OR NON-PRIME AGRICULTURAL LANDS INTO NON-AGRICULTURAL USE OR CONFLICT WITH EXISTING ZONING FOR AGRICULTURE, OR A WILLIAMSON ACT CONTRACT. THIS WOULD BE A SIGNIFICANT AND UNAVOIDABLE IMPACT.

Connected 2050 envisions land development generally located within existing transit corridors and/or urbanized areas. Such land use development within urbanized areas of cities and unincorporated communities in the county would not be expected to result in agricultural resource impacts since they would be located within urban cores of existing urban areas. The land use assumptions for higher density in high quality transit areas envisioned in Connected 2050 also would not result in the conversion of agricultural lands as the increased densities would occur in existing urban areas, although development could still occur in more suburban and rural areas with a greater chance of impacting agriculture. Because the Connected 2050 land use pattern emphasizes infill development, the majority of this Important Farmland would remain available for agricultural use. However, because some of the future land use development would occur in areas containing Important Farmland, some of this land would be converted to non-agricultural use. Additionally, the land use growth footprint would overlap with areas zoned for agriculture as well as lands that are under Williamson Act contract. This conversion of Important Farmland land and resulting conflicts with zoning and Williamson Act contracts would constitute a significant impact.

Transportation improvement projects under Connected 2050 adjacent to agricultural areas, particularly those requiring new rights-of-way, could also convert Important Farmland to non-agricultural use, or conflict with agricultural zoning and/or Williamson Act contracts. Although incorporated cities in the county are fairly urbanized, many cities border agriculture, including FMMP-designated Important Farmland. Transportation improvement projects that involve roadway widening have the potential to affect narrow segments of agricultural land located immediately along the existing right-of-way of proposed improvements. Projects with potential to result in

impacts to agricultural resources includes a Caltrans project on SR 246, which proposes east and west bound passing lanes from east of Big Ranch Road to west of Drum Canyon Road. In addition, improving, expanding, and extending existing roadways, along with the installation of new roadways, could remove some barriers to development taking place on the urban edge as the region's connectivity and access improves from these projects. It is important to note that for federally funded projects, implementing and local agencies are required to follow the rules and regulations of the Farmland Protection Policy Act (FPPA) including determining the impact by completing the Farmland Conversion Impact Rating form (AD-1006). The FPPA assures that to the extent possible, federal programs are administered to be compatible with state and local programs and policies to protect farmland.

In developing Connected 2050 forecasted development pattern and transportation system, SBCAG relied on the policies of local governments to develop urbanization assumptions based on the most recent information available. The general plans and related environmental documentation for each local jurisdiction identify impacts to agricultural resources that could occur as a result of Plan implementation. As such, Connected 2050 was developed consistent with the applicable general plans; thus, no impacts that are new or different from what was disclosed would likely occur. By developing more compactly, the proposed Connected 2050 would direct more growth in the areas that are already urbanized, thereby reducing the potential for conversion of agricultural lands to urban uses, as well as avoiding lands currently designated for agriculture and/or under Williamson Act contract. However, as discussed previously, implementation of Connected 2050 would potentially result in the conversion of Important Farmland to non-agricultural. Lands that remain agricultural, but are located near areas converted to urban uses, may also experience increased development pressure, as nearby land values increase or nuisances from urban development spread to agricultural lands.

A determination of the impacts to Important Farmland, agricultural zoning and conflicts with Williamson Act contracts would be made on a case-by-case basis as individual projects are implemented. Many individual projects would likely not create significant impacts, particularly those that involve only minor widening along existing rights-of-way or would be located in urbanized areas zoned for development. Agricultural impacts would primarily be constrained to temporary construction easements or minor land acquisitions related to shoulder or road widening. Nevertheless, because implementation of Connected 2050 could directly result in conversion of Important Farmland and conflict with agricultural zoning and Williamson Act contracts, the overall impact to agriculture continues to be potentially significant and unavoidable.

Mitigation Measures

The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

LU-3 Agricultural Resource Impact Avoidance and Minimization

Implementing agencies shall implement measures, where feasible based on project-and site-specific considerations that include, but are not limited to those identified below.

- Require project relocation or corridor realignment, where feasible, to avoid Important Farmland, agriculturally-zoned land and/or land under Williamson Act contract;

- Compensatory mitigation at a minimum 1:1 (impacted : replaced) acreage ratio with Important Farmland of equivalent or better quality, where feasible;
- Require acquisition of conservation easements on land at least equal in quality and size as mitigation for the loss of Important Farmland; and/or
- Institute new protection of farmland in the project area or elsewhere through the use of long-term restrictions on use, such as 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.) or 10-year, annually renewed, Williamson Act contracts (Government Code Section 51200 et seq.).

Significance After Mitigation

Implementation of Mitigation Measure LU-1 would require avoidance or compensation for Important Farmland impacted by specific projects included in Connected 2050, thereby reducing the impact of conversion of Important Farmland to non-agriculture use and conflicts with agricultural zoning and Williamson Act contracts. However, it cannot be known with certainty whether all Important Farmland could be avoided, or whether compensation would completely prevent the loss of Important Farmland. As a result, the aforementioned mitigation would reduce impacts, but impacts would remain significant and unavoidable.

c. Specific RTP Projects That May Result in Impacts

All of the transportation projects contained in Connected 2050 would associate with Impacts LU-1, LU-2, LU-4. Projects with potential to result in impacts to agricultural resources (Impact LU-3) include two Caltrans projects, one on SR 246 which proposes east and west bound passing lanes from east of Big Ranch Road to west of Drum Canyon Road, the other on SR 1, which includes pavement restoration work in Santa Barbara County near Santa Maria from Solomon Road to SR 166. These projects are representative and were selected based on their proximity to important farmland. Additional specific analysis will be required as individual projects are implemented to determine the project-specific magnitude of impact. Mitigation discussed above would apply to these specific projects.

4.10.4 Cumulative Impacts

Planned growth in counties neighboring the SBCAG region, when combined with the projected growth of the SBCAG cities and counties, could have significant cumulative land use impacts related to either the physical division of communities or conflicts with land use goals, plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects. The SBCAG region is adjacent to three counties: Kern (bordered by wilderness); San Luis Obispo (bordered by agricultural uses); and Ventura (bordered by undeveloped land and agricultural uses which are not suitable for development). The land between each of these counties and the SBCAG region is primarily undeveloped, agricultural land, grazing land, or open space. Transportation projects and the land use scenario envisioned by Connected 2050 would occur along transportation corridors in urbanized areas. Therefore, Connected 2050 would not contribute to a significant cumulative impact related to the physical division of communities.

Each of the three adjacent counties have adopted general plans that direct new growth to existing developed areas, strongly support agricultural land preservation, and are part of other regional transportation plans. These general plans include goals, policies and programs adopted for the purpose of avoiding or mitigating environmental effects. San Luis Obispo County has adopted a Local Coastal Plan, which includes goals, policies and programs adopted for the purpose of avoiding

or mitigating environmental effects. All of the counties have zoning ordinances. Since the geographic reach of Connected 2050 does not extend into the adjacent counties, and the goals, policies, programs and regulations adopted by the three adjacent counties is geographically limited to each of those counties, the potential for cumulative considerable conflict between the subject goals, policies, programs and regulations is minimal. Therefore, the cumulative impacts resulting from the implementation of Connected 2050 related to conflict with plans, policies and regulations would be less than significant.

Implementation of Connected 2050 could result in conversion of agriculture to non-agricultural use. While this represents total Important Farmland lost in the SBCAG region, projects approved by counties outside the SBCAG region would also continue to convert agricultural land due to development outside of existing urbanized areas, as well as cause conflicts with agricultural zoning and Williamson Act contracts. Collectively, this adds to the cumulative conversion of agricultural lands, including areas designated as Important Farmland by the FMMP, in the cumulative impact analysis area. As such, the cumulative loss of agricultural lands, as well as conflicts with agricultural zoning and Williamson Act contracts, would be a cumulative significant impact.

Implementation of mitigation identified above would reduce the contribution of Connected 2050 to cumulative agricultural land impacts. However, as the cumulative impact analysis area urbanizes, total agricultural conversion as well as conflicts with agricultural zoning and Williamson Act contracts could intensify, particularly at the edge of existing cities and communities. Consequently, cumulative impacts to agricultural resources and the regional contribution to them, remain significant and the contribution of Connected 2050 would be cumulatively considerable. Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.

4.11 Noise

This section analyzes noise impacts from buildout of the Connected 2050 RTP/SCS. Impacts related to noise from construction, building operations, traffic, and flight operations are addressed.

4.11.1 Setting

a. Overview of Noise and Vibration

The following discussion describes the characteristics of noise and vibration. These characteristics are used to assess potential impacts at sensitive land uses. Noise- and vibration-sensitive land uses include locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, senior facilities, schools, hospitals, guest lodging, libraries and some passive recreation areas are examples of typical noise- and vibration-sensitive land uses.

Noise

Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz). In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as contained in fluctuating levels of sound over a period of time. Typically, Leq is summed over a one-hour period.

Sound pressure is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB and a sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is noticeable, while 1-2 dBA changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40 to 50 dBA, while noise levels along arterial streets are generally in the 50 to 60+ dBA range. Normal conversational levels are in the 60-65 dBA range and ambient noise levels greater than that can interrupt conversations.

Noise levels typically attenuate at a rate of 6 dBA per doubling of distance from point sources such as industrial machinery. Noise from roads typically attenuates at a rate of about 4.5 dBA per doubling of distance over absorptive ground surfaces (e.g., grass). Noise from roads typically attenuates at about 3 dBA per doubling of distance over reflective ground surfaces (e.g., pavement).

The actual time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. To evaluate community noise on a 24-hour basis, the day-night average sound level was developed (Ldn). Ldn is the time average of all A-weighted levels for a 24-hour period with a 10 dB upward adjustment added to those noise levels occurring between 10:00 PM and 7:00 AM to account for the general increased sensitivity of people

to nighttime noise levels. The Community Noise Equivalent Level (CNEL) is identical to the Ldn with one exception. The CNEL adds 5 dB to evening noise levels (7:00 PM to 10:00 PM). Thus, both the Ldn and CNEL noise measures represent a 24-hour average of A-weighted noise levels with Ldn providing a nighttime adjustment and CNEL providing both an evening and nighttime adjustment.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration can be a serious concern, causing buildings to shake and rumbling sounds to be heard. In contrast to noise, vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings and is usually measured in inches per second. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration.

High levels of vibration may cause physical personal injury or damage to buildings. However, groundborne vibration levels rarely affect human health. Instead, most people consider groundborne vibration to be an annoyance that can affect concentration or disturb sleep. In addition, high levels of groundborne vibration can damage fragile buildings or interfere with equipment that is highly sensitive to groundborne vibration (e.g., electron microscopes).

In contrast to noise, groundborne vibration is not a phenomenon that most people experience every day. The background vibration velocity level in residential areas is usually 50 RMS or lower which is well below the threshold of perception for humans (human perception is around 65 RMS). Most perceptible indoor vibration is caused by sources within buildings, such as operation of mechanical equipment, movement of people, or slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If the roadway is smooth, the vibration from traffic is rarely perceptible.

b. Noise and Vibration Sources

Ambient noise levels in Santa Barbara County vary widely depending upon proximity to noise generators, such as major roads, airports, and rail lines. The major noise sources in the County are described below.

Motor Vehicle Traffic

Motor vehicles, including cars/light trucks, buses, and various types of trucks, are the most substantial source of noise in most of Santa Barbara County. This can be attributed to the extensive network of major, primary, and secondary arterials located throughout the County, as well as the large number of vehicle trips that occur each day.

The primary roadway corridor noise source in the County is US 101, due to both the high traffic volumes experienced and the high speed of traffic. In 2017, daily traffic on US 101 averaged around 112,750 vehicles per day through the City of Santa Barbara and ranging from a low of 21,200 near SR 246, to a high of 139,000 at Mission Street in Santa Barbara (Caltrans 2017). As a result, noise

levels along the entire US 101 corridor exceed 65 dBA CNEL near the freeway. Along the South Coast, existing land uses within approximately 400 feet of the freeway centerline may be exposed to noise levels over 65 dBA CNEL and in the North County, land uses within approximately 200 feet of the freeway centerline may be exposed to noise levels over 65 dBA CNEL. Noise-sensitive land uses in the vicinity of the freeway corridor therefore have the potential to be exposed to noise in excess of what the County normally considers acceptable.

Traffic on other major transportation corridors also generates noise in excess of 65 dBA CNEL within certain distances from centerline of the freeway/roadway. In the Santa Barbara area, noisy road corridors include portions of State Street and Hollister Avenue. Traffic on several roads in the Santa Maria area, including State Routes 135 and 166, also generates noise in excess of normally acceptable standards for noise sensitive uses.

Aircraft Operation

Both the Santa Barbara and Santa Maria airports have commercial and general aviation activities. Because of the level of activity at these airports, noise generated at these airports is audible in the surrounding communities. Therefore, land uses in the surrounding areas have been planned to ensure that noise levels remain at acceptable levels for the various uses.

The Lompoc and Santa Ynez airports are general aviation airports, with little commercial traffic and no jet operations. While these general aviation airports do not generate as much noise as Santa Barbara or Santa Maria, flight operations have also had impacts on the nearby residential areas because of their location.

In addition to the four active County airports, flight operations at Vandenberg Air Force Base, located near the City of Lompoc, generate aircraft noise. While these operations are limited, the resulting 60-65 dB contour extends into a portion of the City of Lompoc as shown in Figure 4-1 of the Vandenberg Air Force Base Land Use Compatibility Plan (SBCAG 2019). As a federal facility, Vandenberg Air Force Base is exempt from County and City noise controls. Nevertheless, the Air Force has developed measures to reduce noise impacts from flight operations in the areas surrounding the base.

In addition to airplanes, helicopter flights occur throughout the County. These flights typically follow major and primary arterials with the exception of police patrol activities. Other flight-related activities include tourist sightseeing, Coast Guard, Santa Barbara County Sheriff's Department for search and rescue operations, and SoCal Edison for power infrastructure work. Cottage Hospital in Santa Barbara is verified as a Level II Trauma Center and provides helicopter emergency medical services. Helicopters traveling to Cottage Hospital follow the US 101 corridor until turning inland at Junipero Street toward the hospital. Although single-event noise exposure resulting from helicopter operations may be considered a nuisance, the relatively low frequency and short duration of these operations do not significantly affect average daily noise levels anywhere in the County.

Railroad Operations

Train operations on the Union Pacific Railroad and the Santa Maria Valley Railroad generate noise within proximity to the railroad lines. Noise is generated during rail operations by locomotives starting and stopping, trains braking, the connection and disconnection of cars, train whistles, and track noise (the trains' wheels running on the track). The Union Pacific Railroad right-of-way traverses the County through much of its coastal area, passing through the cities of Carpinteria, Santa Barbara, and Guadalupe. The Santa Maria Valley Railroad originates in the City of Santa Maria

and travels westward through Santa Maria to connect with the Union Pacific railroad line in Guadalupe.

Amtrak provides the only commercial intercity passenger rail transportation available in Santa Barbara County. Its trains share the Union Pacific Railroad main line tracks. Two AMTRAK trains, the Pacific Surfliner has five daily round trips and the Coast Starlight has once a day round trips that serves Santa Barbara County.

Noise-sensitive land uses within approximately 800 feet of the tracks could be exposed to noise levels above 65 dBA (Santa Barbara County Comprehensive Plan, Noise Element, 2009). In the northern part of the County, much of the rail corridor is located in open areas. In the southern part of the County, train tracks are generally located much closer to residences.

4.11.2 Regulatory Setting

Various federal agencies have set standards for transportation-related noise and vibration sources that are closely linked to interstate commerce, such as aircraft, locomotives, and trucks. The State sets noise standards for those noise sources that are not preempted from regulation, such as automobiles, light trucks, and motorcycles. Noise and vibration sources associated with industrial, commercial, and construction activities are generally subject to local control through noise ordinances and general plan policies.

a. Federal Regulations

Relevant federal regulations include those established by the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Federal Aviation Administration (FAA), and Department of Housing and Urban Development (HUD).

Federal Highway Administration

Traffic Noise

Traffic noise impacts, as defined in 23 CFR § 772.5, occur when the predicted noise level in the design year approach or exceed the noise abatement criteria (NAC) specified in 23 CFR § 772, or a predicted noise level substantially exceeds the existing noise level (a “substantial” noise increase). A “substantial increase” is defined as an increase of 12 dB Leq during the peak hour of traffic. For sensitive uses, such as residences, schools, churches, parks, and playgrounds, the NAC for interior and exterior spaces is 57 dB Leq and 66 dB leq, respectively, during the peak hour of traffic noise. Table 4.11-1 summarizes NAC corresponding to various land use activity categories. Activity categories and related traffic noise impacts are determined based on the actual land use in a given area.

Federal regulations also establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR Part 205, Subpart B. The federal truck passby noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers. The FHWA regulations for noise abatement apply to federal or federally-funded projects involving the construction of a new highway or significant modification of an existing freeway when the project would result in a substantial noise increase or when the predicted noise levels approach or exceed the NAC.

Table 4.11-1 Noise Abatement Criteria (NAC)

Activity Category	Hourly Leq	Hourly L10 ¹	Analysis Location	Description of Activity Category
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67	70	Exterior	Residential
C	67	70	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings
D	52	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools and television studios
E	72	75	Exterior	Hotels, motels, offices, restaurants/bars and other developed lands, properties or activities not included in A-D or F
F				Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical) and warehousing
G				Undeveloped lands that are not permitted

¹ L10 is the level of noise exceeded for 10% of the time.
 Source: FHWA 2017

Railroad Noise

Federal regulations for railroad noise are contained in 40 CFR Part 201 and 49 CFR Part 210. The regulations set noise limits for locomotives and are implemented through regulatory controls on locomotive manufacturers.

Federal and Federal-Aid Highway Projects

Title 23 of the Code of Federal Regulations (23 CFR § 772) provides procedures for preparing operational and construction noise studies and evaluating noise abatement for federal and federal-aid highway projects. Under 23 CFR § 772.5, projects are categorized as Type I, II, or III projects.

FHWA defines Type I projects as the construction of a highway on a new location, the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. Type I projects include those that create a completely new noise source, increase the volume or speed of traffic, or move the traffic closer to a receiver. Type I projects include the addition of an interchange, ramp, auxiliary lane, or truck-climbing lane to an existing highway, or widening an existing ramp by a full lane width for its entire length. Under 23 CFR § 772.11, noise abatement must be considered for Type I projects if the

project is predicted to result in a traffic noise impact. In such cases, 23 CFR § 772 requires that the project sponsor “consider” noise abatement before adoption of the environmental document. This process involves identification of noise abatement measures that are reasonable, feasible, and likely to be incorporated into the project as well as noise impacts for which no apparent solution is available

Type II projects implement noise abatement on an existing highway. For a Type II project to be eligible for Federal-aid funding, an agency must develop and implement a Type II program in accordance with section 772.7(e). Type II projects include installation of noise barrier or other noise abatement along an existing highway where noise levels have increased, retrofitting existing noise abatement features that have been damaged or are not structurally sound.

Type III projects are Federal or Federal-aid highway projects that do not meet the classification of a Type I or Type II project. Noise analysis is not required for Type III projects. Projects unrelated to increased noise levels, such as striping, lighting, signing, and landscaping projects, are considered Type III projects.

Federal Aviation Administration

Aircraft operated in the U.S. are subject to federal requirements regarding noise emissions levels. These requirements are set forth in Title 14 CFR, Part 36. Part 36 establishes maximum acceptable noise levels for specific aircraft types, taking into account the model year, aircraft weight, and number of engines.

Federal Transit Administration

The FTA has developed guidance to evaluate noise impacts from operation of surface transportation modes (i.e. passenger cars, trucks, buses, and rail) in the 2006 FTA *Transit Noise Impact and Vibration Assessment*. All mass transit projects receiving federal funding must use these guidelines to predict and assess potential noise and vibration impacts. As ambient levels increase, smaller increments of change are allowed to minimize community annoyance related to transit operations.

U.S. Department of Housing and Urban Development

The mission of HUD includes fostering “a decent, safe, and sanitary home and suitable living environment for every American.” Accounting for acoustics is intrinsic to this mission as safety and comfort can be compromised by excessive noise. To facilitate the creation of suitable living environments, HUD has developed a standard for noise criteria. The basic foundation of the HUD noise program is set out in the noise regulation 24 CFR Part 51 Subpart B, Noise Abatement and Control.

HUD's noise policy requires noise attenuation measures be provided when proposed projects are to be located in high noise areas. Within the HUD Noise Assessment Guidelines, potential noise sources are examined for projects located within 15 miles of a military or civilian airport, 1,000 feet from a road or 3,000 feet from a railroad.

HUD exterior noise regulations state that 65 dBA Ldn noise levels or less are acceptable for residential land uses and noise levels exceeding 75 dBA Ldn are unacceptable. HUD's regulations do not contain standards for interior noise levels. The HUD regulations establish a goal of 45 decibels, and the attenuation requirements are focused on achieving that goal. The HUD guidelines assume that with standard construction methods and materials, any building will provide sufficient

attenuation so that if the exterior level is 65 dBA Ldn or less, the interior level will be 45 dBA Ldn or less. Noise criteria are consistent with FHWA and related state requirements

b. State Regulations

Relevant State noise regulations include those established by the California Department of Health Services and the California Department of Transportation (Caltrans), as well as standards in the California Code of Regulations. The Governor's Office of Planning and Research have also established guidelines regarding sound level and land use compatibility. There are no adopted State policies or standards for ground-borne vibration. However, Caltrans recommends that extreme care be taken when sustained pile driving occurs within 7.5 meters (25 feet) of any building, 15 to 30 meters (50 to 100 feet) of a historic building or near a building in poor condition.

State of California General Plan Guidelines

The Governor's Office of Planning and Research is required to adopt and periodically revise guidelines for the preparation and content of local general plans. The 2017 General Plan Guidelines (Governor's Office of Planning and Research, 2017) establish land use compatibility guidelines. Where a noise level range is denoted as "normally acceptable" for the given land use, the highest noise level in that range should be considered the maximum desirable for conventional construction that does not incorporate any special acoustic treatment. The acceptability of noise environments classified as "conditionally acceptable" or "normally unacceptable" will also depend on the anticipated amount of time that will normally be spent outside the structure and the acoustic treatment to be incorporated in structural design.

With regard to noise-sensitive residential uses, the recommended exterior noise limits are 60 dBA CNEL for single-family residences and 65 dBA CNEL for multi-family residences. The recommended maximum interior noise level is 45 dBA CNEL, which could normally be achieved using standard construction techniques if exterior noise levels are within the levels described above.

California Department of Transportation

The State of California establishes noise limits for vehicles licensed to operate on public roads. For heavy trucks, the State passby standard is consistent with the federal limit of 80 dB. The State passby standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dB at 15 meters from the centerline. For new roadway projects, Caltrans uses the NAC discussed above in connection with FHWA. In addition, Caltrans has published the Traffic Noise Analysis Protocol (May 2011) for assessing noise levels associated with roadway projects.

Section 216 of the California Streets and Highways Code relates to the noise effects of a proposed freeway project on public and private elementary and secondary schools. Under this code, a noise impact occurs if, as a result of a proposed freeway project, noise levels exceed 52 dBA Leq in the interior of public or private elementary or secondary classrooms, libraries, multipurpose rooms, or spaces. If a project results in a noise impact under this code, noise abatement must be provided to reduce classroom noise to a level that is at or below 52 dBA Leq. If the noise levels generated from roadway sources exceed 52 dBA Leq prior to the construction of the proposed freeway project, then noise abatement must be provided to reduce the noise to the level that existed prior to construction of the project.

California's Airport Noise Standards

The State of California has the authority to establish regulations requiring airports to address aircraft noise impacts near airports. The State of California's Airport Noise Standards, found in Title 21 of the California Code of Regulations, identify a noise exposure level of 65 dB CNEL as the noise impact boundary around airports. Within the noise impact boundary, airport proprietors are required to ensure that all land uses are compatible with the aircraft noise environment or the airport proprietor must secure a variance from Caltrans.

California Noise Insulation Standards

The California Noise Insulation Standards found in Title 24 of the California Code of Regulations set requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation-related noise. For exterior noise, the noise insulation standard is 45 dBA Ldn in any habitable room and requires an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA Ldn.

California Aeronautics Act

The State Aeronautics Act (Public Utilities Code, Section 21670 et seq.) requires the establishment of Airport Land Use Commissions (ALUCs), which are responsible for developing airport land use compatibility plans (ALUCPs) for noise-compatible land uses in the immediate proximity of a commercial or public airport (Section 21675). ALUCs have two major roles: preparation and adoption of airport land use compatibility plans, which address policies for both noise and safety and review of certain local government land use actions and airport plans for consistency with the land use compatibility plan.

The ALUCP is the major tool for ALUC land use regulation. The intent of the ALUCP is to encourage compatibility between airports and the various land uses that surround them. ALUCPs typically include the development of noise contours to identify excessive airport-related noise levels and measures to reduce noise levels. For example, Monterey Regional Airport encourages noise abatement procedures related to quiet departure techniques.

The Aeronautics Division of the California Department of Transportation has published the *California Airport Land Use Planning Handbook* (Caltrans 2011). The purpose of the *California Airport Land Use Planning Handbook* is to provide guidance for conducting airport land use compatibility planning. This handbook includes a section related to noise and states, "The basic strategy for achieving noise compatibility in the vicinity of an airport is to prevent or limit development of land uses that are particularly sensitive to noise. Common land use strategies are ones that either involve few people (especially people engaged in noise-sensitive activities) or generate significant noise levels themselves (such as other transportation facilities or some industrial uses)."

Within the SBCAG region, SBCAG serves as the ALUC and is responsible for protecting public health, safety and welfare by ensuring that vacant lands in the vicinity of airports are planned and zoned for uses compatible with airport operations. The Santa Barbara County Airport Land Use Plan was adopted in 1993 (SBCAG 1993).

c. Local Regulations

Santa Barbara County has eight incorporated cities, each of which has its own adopted noise standards. Noise standards for the County and the cities within the County typically apply land-use compatibility criteria of 60-65 dBA Ldn as being the normally acceptable range for new residential developments, and interior noise criteria of 45 dBA Ldn, consistent with the overall State recommendations.

4.11.3 Impact Analysis

a. Methodology and Significance Thresholds

Pursuant to the *CEQA Guidelines*, potentially significant noise impacts would result if the project would:

- a) Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
- b) Generate excessive groundborne vibration or groundborne noise levels
- c) For a project located within the vicinity of a private airstrip or 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.

Thresholds a and b are discussed further in this section. Threshold c is discussed in Section 4.15, *Effects Considered Less than Significant*. In addition to the *CEQA Guidelines*, the County of Santa Barbara *Environmental Thresholds and Guidelines Manual (2021)* contains criteria for determining the significance of noise impacts.

- If existing exterior noise levels, including at outdoor living areas, experienced by sensitive receptors is below 65 dBA CNEL, and if the proposed project will generate noise that will cause the existing noise levels experienced by the sensitive receptors to exceed 65 dBA CNEL – either individually or cumulatively when combined with other noise-generating sources – then the proposed project is presumed to have a significant impact.
- If existing exterior noise levels, including at outdoor living areas, experienced by sensitive receptors exceeds 65 dBA CNEL, and if the proposed project will generate noise that will cause the existing noise levels experienced by the sensitive receptors to increase by 3 dBA CNEL – either individually or cumulatively when combined with other noise-generating sources – then the proposed project is presumed to have a significant impact.
- If existing noise levels experienced by sensitive receptors in interior living areas is below 45 dBA CNEL, and if the proposed project will generate noise that will cause the existing noise levels experienced by the sensitive receptors in interior living areas to exceed 45 dBA CNEL – either individually or cumulatively when combined with other noise-generating sources – then the proposed project is presumed to have a significant impact.
- If existing noise levels experienced by sensitive receptors in interior living areas exceeds 45 dBA CNEL, and if the proposed project will generate noise that will cause the existing noise levels experienced by the sensitive receptors in interior living areas to increase by 3 dBA CNEL – either individually or cumulatively when combined with other noise-generating sources – then the proposed project is presumed to have a significant impact.

- Noise from grading and construction activity proposed occur within 1,600 feet of sensitive receivers, including schools, residential development, commercial lodging facilities, hospitals, or care facilities. This is based upon an assumed average construction noise level of 95 dBA at a distance of 50 feet from the source, which would result in a noise level of approximately 65 dBA at a distance of 1,600 feet. To mitigate this impact, construction within 1,600 feet of sensitive receptors shall be limited to weekdays between the hours of 8 AM to 5 PM only. Noise attenuation barriers and muffling of grading equipment may also be required. Construction equipment generating noise levels above 95 dBA may require additional mitigation.

The operational and construction noise limits used in this analysis are set at reasonable levels at which a substantial noise level increase as compared to ambient noise levels would occur. Because these noise limits are tailored to specific uses (e.g., exterior and interior areas), they account for typical ambient noise levels associated with each use such that an increase in ambient noise levels that exceeds these limits would be considered a substantial increase above ambient noise levels.

b. Project Impacts and Mitigation Measures

The following section presents a programmatic-level discussion of the potential for noise impacts to sensitive receptors from implementation of Connected 2050. Impacts and associated mitigation measures would apply in Santa Barbara County and all cities within the County. Section c summarizes the impacts associated with capital improvement projects proposed in the Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible at this time. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could result in the impacts as described in the following section.

Threshold:	Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
Threshold:	Generate excessive groundborne vibration or groundborne noise levels.

Impact N-1 CONSTRUCTION ACTIVITY ASSOCIATED WITH TRANSPORTATION IMPROVEMENT PROJECTS AND OTHER LAND-USE DEVELOPMENT ENVISIONED BY CONNECTED 2050 WOULD CREATE TEMPORARY NOISE AND VIBRATION LEVEL INCREASES IN DISCRETE LOCATIONS THROUGHOUT THE SBCAG REGION. CONSTRUCTION-RELATED NOISE AND VIBRATION IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Noise

The operation of equipment during the construction of roadway infrastructure, as well as land-use development envisioned in Connected 2050 would result in temporary increases in noise in the immediate vicinity of individual construction sites. As shown in Table 4.11-2, average noise levels associated with the use of heavy equipment at construction sites typically range from 76 to 89 dBA at 50 feet from the source, depending upon the types of equipment in operation at any given time and the phase of construction. The highest noise levels generally occur during excavation and

foundation development, which involves the use of such equipment as backhoes, bulldozers, pile drivers, and front-end loaders.

Noise generated by construction activity would vary depending on the project and intensity of equipment use. Roadway widening projects and new roadway projects would likely require the operation of multiple pieces of heavy-duty equipment that generate high noise levels. Alternatively, repainting/restriping requires minimal, would typically be less intense requiring minimal, if any, use of heavy equipment. This conservative analysis assesses construction noise based on the operation of heavy-duty equipment. Noise levels from point sources such as construction sites typically attenuate at a rate of about 6 dBA per doubling of distance. Therefore, areas within 800 feet of a construction site with heavy-duty equipment may be exposed to noise levels exceeding 65 dBA. Projects that include pile driving using the impact method would have a noise level of 77 dBA at 800 feet. The listed Mitigation Measures would reduce impacts from construction noise to a less-than-significant level. The mitigation methods include not using impact pile driving if near sensitive resources.

Table 4.11-2 Typical Noise Levels for Construction Equipment (dBA)

Equipment	Typical Level 25 feet from the Source	Typical Level 50 feet from the Source	Typical Level 100 feet from the Source
Air Compressor	86	80	74
Backhoe	86	80	74
Concrete Mixer	91	85	79
Dozer	91	85	79
Grader	91	85	79
Jack Hammer	94	88	82
Loader	86	80	74
Paver	91	85	79
Pile-drive (Impact)	107	101	95
Pile-driver (Sonic)	101	95	89
Roller	91	85	79
Saw	82	76	70
Scarified	89	83	77
Scraper	91	85	79
Truck	90	84	78

Source: FTA 2018

Vibration

Construction-related vibration has the potential to damage structures, cause cosmetic damage (e.g., crack plaster), or disrupt the operation of vibration-sensitive equipment. Vibration can also be a source of annoyance to individuals who live or work close to vibration-generating activities. Heavy construction operations can cause substantial vibration near the source. Table 4.11-3 shows vibration levels associated with typical construction equipment. Similar to construction noise,

vibration levels would be variable depending on the type of construction project and related equipment use.

Typical project construction activities, such as the use of jackhammers, other high-power or vibratory tools, compactors, and tracked equipment, may also generate substantial vibration in the immediate vicinity, typically within 15 feet of the equipment. Through the use of scheduling controls, typical construction activities would be restricted to hours with least potential to affect nearby properties. Thus, perceptible vibration can be kept to a minimum and not result in human annoyance or structural damage.

Some specific construction activities result in higher levels of vibration. Pile driving has the potential to generate the highest vibration levels and is the primary concern for structural damage to nearby structures, especially when near fragile and/or historic structures. Vibration levels generated by pile driving activities would vary depending on project conditions, such as soil conditions, construction methods and equipment used. Depending on the proximity of existing structures to each construction site, the structural soundness of the affected buildings and construction methods, vibration caused by pile driving or other foundation work with a substantial impact component such as blasting, rock or caisson drilling, and site excavation or compaction may be high enough to be perceptible outside the construction area and potentially damage existing structures. Impacts related to vibration from construction activities would be significant but mitigable.

Table 4.11-3 Vibration Source Levels for Construction Equipment

Equipment	Approximate Vibration Level (VdB)				
	25 feet from Source	50 feet from Source	100 feet from Source	200 feet from Source	
Caisson Drilling	87	78	69	60	
Jackhammer	79	70	61	52	
Large Bulldozer	87	78	69	60	
Loaded Truck	86	77	68	58	
Pile Driver (impact)	Upper range	112	103	94	84
	Typical	104	95	86	77
Pile Driver (sonic)	Upper range	105	96	87	78
	Typical	93	84	75	65
Small Bulldozer	58	48	39	30	
Vibratory Roller	94	85	76	67	

Source: FTA 2018

Mitigation Measures

Transportation project sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects that would result in noise impacts. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

The following mitigation measures would apply to Connected 2050 projects.

N-1 *Construction Noise and Vibration Reduction*

- a. **Compliance with local Construction Noise and Vibration Regulations.** Project sponsors of Connected 2050 projects shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites without pile driving, appropriate measures shall be implemented to ensure consistency with local noise ordinance requirements relating to construction. Specific techniques may include, but are not limited to, restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise.
- b. **Pile Driving.** For any project within 3,200 feet of sensitive receptors that requires pilings, the project sponsor shall require caisson drilling or sonic pile driving as opposed to pile driving, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review.
- c. **Construction Equipment Noise and Vibration Control.** Project sponsors shall ensure that equipment and trucks used for project construction utilize the best available noise control techniques (including mufflers, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds).
- d. **Impact Equipment Noise Control.** Project sponsors shall ensure that impact equipment (e.g., jack hammers, pavement breakers, and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, use of an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can achieve a reduction of 5 dBA. Whenever feasible, use quieter procedures, such as drilling rather than impact equipment operation.
- e. **Construction Activity Timing Restrictions.** The following timing restrictions shall apply to Connected 2050 activities creating noise levels at or above 65 dBA at a nearby dwelling unit, except where timing restrictions are already established in local codes or policies. Construction activities shall be limited to:
 - Monday through Friday: 7 a.m. to 6 p.m.
 - Saturday: 9 a.m. to 5 p.m.
- f. **Placement of Stationary Noise and Vibration Sources.** Locate stationary noise sources as far from sensitive receptors as possible.
- g. **Physical Impacts Due to Vibration.** Implementing agencies of Connected2050 projects utilizing heavy construction equipment shall estimate vibration levels generated by construction activities and use the Caltrans vibration damage potential threshold criteria to screen for and screen out projects as to their potential to damage buildings on site or near a project.

Caltrans Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/ Frequent Intermittent Sources
Extremely fragile historic buildings	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older Residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial structures	2.00	0.50

Source: Transportation and Construction Vibration Guidance Manual, April 2020

If construction equipment would generate vibration levels exceeding the threshold criteria, a structural engineer or other appropriate professional shall be retained to ensure vibration levels do not exceed the thresholds during project construction. The structural engineer shall perform the following tasks, at minimum:

- Review the project’s demolition and construction plans
- Survey the project site and vulnerable buildings, including geological testing, if necessary
- Prepare and submit a report to the lead agency or other appropriate party containing the following, at minimum:
 - Any information obtained from the surveys identified above
 - Any modifications to the estimated vibration thresholds based on building conditions, soil conditions and planned demolition and construction methods to ensure that vibration levels would remain below levels potentially damaging to vulnerable buildings
 - Specific mitigation measures to be applied during construction to ensure vibration thresholds (or Caltrans guidelines, in lieu of specific limits) are not exceeded, including modeling to demonstrate the ability of mitigation measures to reduce vibration levels below set limits
 - A monitoring plan to be implemented during demolition and construction that includes post-demolition and post-construction surveys of the vulnerable building(s) and documentation demonstrating that the mitigation measures identified in the report have been applied

Examples of mitigation that may be applied during demolition or construction include:

- Prohibiting of certain types of construction equipment
- Specifying lower-impact methods for demolition and construction, such as sawing concrete during demolition
- Phasing operations to avoid simultaneous vibration sources
- Installing vibration measure devices to guide decision-making

The implementing agency shall be responsible for implementing all the mitigation measures recommended in the report as detailed in the report’s monitoring plan.

Significance After Mitigation

Mitigation Measures N-1(a)-(e) would assure that construction noise and vibration impacts would not be substantial through a variety of measures to minimize exposure of existing receptors. If a project is located near a sensitive receptor, the project sponsor would ensure that noise and vibration reduction measures are implemented during construction that would reduce noise and vibration levels below local and/or Caltrans standards. With implementation of mandatory local noise and vibration control requirements and Mitigation Measure N-1, construction noise and vibration impacts would be reduced to less than significant.

Threshold: Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance?

Impact N-2 IMPLEMENTATION OF THE CONNECTED 2050 WOULD INCREASE OPERATIONAL (PERMANENT) NOISE SOURCES INCLUDING TRAFFIC-GENERATED NOISE LEVELS ON HIGHWAYS AND ROADWAYS WHICH COULD EXPOSE EXISTING AND FUTURE SENSITIVE RECEPTORS TO NOISE IN EXCESS OF NORMALLY ACCEPTABLE LEVELS. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Traffic

Connected 2050 includes several projects that would potentially increase traffic noise by increasing traffic levels along and in the vicinity of affected facilities. Such projects include intersection improvements (CT-10, CT-11, SB-10, and SBCAG-1), addition of high occupancy vehicle lanes on US 101 (CT-2, CT-3, CT-4, and CT-5), and road widening (CT-26, Go-20, Go-22, Go-24, Sol-4), as well as improvements to roads (B-1, C-1, G-1, Go-4, Go-8, Go-23, Gu-1, L-1, SB-1, SM-1, Sol-1, SBC-1, SBC-2, and SBC-15) that would allow increased traffic volumes. These projects would not in themselves introduce new traffic, but rather are intended to relieve current or projected future traffic congestion or unacceptable safety conditions. However, in some cases, projects that expand roadway capacity would accommodate additional traffic volumes and/or relocate noise sources closer to receptors. It should be noted that while traffic may increase in certain locations, the expected number of annual vehicle miles traveled (VMT) in 2050 would be reduced from 13,485,845 annually without the RTP ('No Project' scenario) to 11,466,002 annually with the RTP, a reduction of approximately 2.0 million VMT annually. In general, as the VMT decreases, noise associated with VMT would also decrease.

Mitigation Measures would reduce impacts to sensitive receptors resulting from traffic noise to a less than significant level.

Airports

Connected 2050 does not include any airport improvement projects or programs that would directly or indirectly increase aircraft operations at the four operating airports in the County. Therefore, Connected 2050 would not increase ambient noise levels associated with airports. *No impacts* due to aircraft operations would occur.

Rail Operations

Connected 2050 includes investments in passenger rail and train service, such as replacement of the UPRR bridge over Cabrillo Boulevard (CT-12, SB-9), implementation and support of one additional peak-hour commuter train by 2020 and a second by 2035 (SBCAG-15), construction of a second

platform and pedestrian undercrossing at the Carpinteria train station (SBCAG-16), construction of a new multi-modal train station at the existing Amtrak platform in Goleta to improved services (Go-18), and construction of a rail spur in Goleta for train storage (SBCAG-17). Further, Connected 2050 Policy 1.1 encourages transit-oriented development by concentrating residences and commercial centers in urban areas near rail stations, transit centers and along transit development corridors and Policy 2.3 promotes inter-regional commuter transit and rail service. The FTA has developed a screening procedure to identify locations where a rail project may cause a noise impact. The screening distances for requiring noise assessments for various types of projects are presented in Table 4.11-4. Sensitive land uses would be located within proximity to new and expanded rail corridors, and would potentially be exposed to noise levels that exceed acceptable standards, a significant impact.

Table 4.11-4 Screening Distances for Noise Assessments – Rail Transit Projects

Type of Project	Screening Distance (Feet)		
	Unobstructed	Intervening Buildings	
Commuter Rail Mainline	750	375	
Commuter Rail Station	With Horn Blowing	1,600	1,200
	Without Horn Blowing	250	200
Commuter Rail -Highway Crossing with Horns and Bells	1,600	1,200	
Light Rail Transit	350	175	
Street car	200	100	
Access Roads	100	50	
Low- and Intermediate-Capacity Transit	Steel Wheel	125	50
	Rubber Tire	90	40
	Monorail	175	70
Yards and Shops	1,000	650	
Parking Facilities	125	75	
Access Roads to Parking	100	50	
Ventilation Shafts	200	100	
Power Substations	250	125	

Source: FTA 2018

Bus Operations

Connected 2050 includes projects to expand transit bus service, such as capital assistance for trolley and bus expansion in downtown Santa Maria (SM-10), construction of infrastructure for electric-battery bus fleet and transit properties (SM-17), and purchase of electric-battery buses (SM-24). Additionally, Connected 2050 includes numerous funding projects for existing transit services throughout the county. The FTA has developed a screening procedure to identify locations where a bus project may cause a noise impact. The screening distances for requiring noise assessments for various types of projects is presented in Table 4.11-5.

Increased frequency of bus lines and enhancing exiting bus routes may increase noise for existing sensitive receptors along bus routes. However, bus routes would be in urban areas with high ambient noise levels. The use of electric-battery buses in some urban areas would decrease noise

from this type of transit. Therefore, the addition of local buses to existing streets is not expected to substantially increase noise and impacts would be less than significant.

Table 4.11-5 Screening Distances for Noise Assessments – Rail Transit Projects

Type of Project	Screening Distance (Feet)	
	Unobstructed	Intervening Buildings
Busway	500	250
Bus Rapid Transit (BRT) on Exclusive Roadway	200	100
Bus Facilities	Access Roads	100
	Transit Mall	225
	Transit Center	225
	Storage and Maintenance	350
	Park and Ride Lots with Buses	225

Source: FTA 2018

Mitigation Measures

For transportation projects under SBCAG jurisdiction, SBCAG shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects that would result in noise impacts. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

The following mitigation measures would minimize operational noise generated by proposed transportation improvements and land use patterns near sensitive receptors.

N-2 Traffic Noise Reduction

- a. Sponsor agencies of a Connected 2050 projects shall complete detailed noise assessments for projects that may impact noise sensitive receptors using applicable guidelines (e.g., FTA Transit Noise and Vibration Impact Assessment for rail and bus projects and the Caltrans Traffic Noise Analysis Protocol for roadway projects). The project sponsor shall ensure that a noise survey is conducted that, at minimum:
 - Determines existing and projected noise levels
 - Determines the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards
 - Identifies potential alternate alignments that allow greater distance from, or greater buffering of, noise-sensitive areas
 - If warranted, recommends methods for mitigating noise impacts, including:
 - Appropriate setbacks
 - Sound attenuating building design, including retrofit of existing structures with sound attenuating building materials
 - Use of sound barriers (earthen berms, sound walls, or some combination of the two)

- b. Where new or expanded roadways or transit are found to expose receptors to noise exceeding normally acceptable levels, the individual project lead agency shall implement techniques as recommended in the project-specific noise assessments. The preferred methods for mitigating noise impacts will be the use of appropriate setbacks and sound attenuating building design, including retrofit of existing structures with sound attenuating building materials where feasible. In instances where use of these techniques is not feasible, the use of sound barriers (earthen berms, sound walls, or some combination of the two) will be considered. Long expanses of walls or fences should be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements should be used, including open grade paving, solid fences, walls, and, landscaped berms. Determination of appropriate noise attenuation measures will be assessed on a case-by-case basis during a project's individual environmental review pursuant to the regulations of the applicable lead agency.

Significance After Mitigation

With implementation of Mitigation Measures N-2(a) and (b), operational transportation noise impacts would be reduced to less than significant.

Threshold: Would the project result in excessive groundborne vibration or groundborne noise levels?

Impact N-3 CONNECTED 2050 WOULD RESULT IN NEW TRUCK, BUS, AND TRAIN TRAFFIC THAT COULD EXPOSE SENSITIVE RECEPTORS AND FRAGILE BUILDINGS TO EXCESSIVE VIBRATION LEVELS. RAIL PROJECT VIBRATION AS A RESULT OF CONNECTED 2050 WOULD NOT BE EXCESSIVE. HOWEVER, ROADWAY VIBRATION IMPACTS AS A RESULT OF CONNECTED 2050 WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

The primary vibration sources associated with transportation system operations include heavy truck and bus traffic along roadways and train traffic along rail lines. However, vehicle traffic, including heavy trucks traveling on a highway, rarely generate vibration amplitudes high enough to cause structural or cosmetic damage, except in rare cases (e.g., where heavy truck traffic passes near fragile older buildings). Heavy trucks traveling over potholes or other pavement irregularities can cause vibration high enough to result in complaints from nearby residents. These conditions are commonly addressed by smoothing the roadway surface. Based on vibration measurements throughout California by Caltrans, worst-case traffic vibrations were shown to drop below the threshold of perception at distances of 150 feet or greater (Caltrans 2013a). Given that sensitive receptors are located within 150 feet of transportation facilities within the SBCAG region, and that Connected 2050 transportation projects include roadway expansion and construction of high occupancy vehicle lanes on US 101 highways, significant impacts related to vibration associated with truck traffic could occur.

Rail activity is also a source of vibration. Caltrans conducted measurements of vibration levels associated with train activity throughout the State and found a peak vibration level of 0.36 inches per second PPV at ten feet from the track (Caltrans 2004). Based on this reference vibration level, vibrations from train activity drop below the threshold of perception at distances greater than 250 feet. Connected 2050 includes implementation and support of one additional peak-hour commuter train by 2020 and a second by 2035 (SBCAG-15), construction of a second platform and pedestrian undercrossing at the Carpinteria train station (SBCAG-16), construction of a new multi-modal train station at the existing Amtrak platform in Goleta to improve services (Go-18), and construction of a

rail spur in Goleta for train storage (SBCAG-17). These potential increases in rail activity along existing lines would not be expected to expose nearby sensitive receptors and fragile buildings to significant increases in vibration levels relative to the existing condition. Rail vibration impacts would be less than significant due to the minimal increase in train traffic under Connected 2050.

Mitigation Measure

Transportation project sponsor agencies can and should implement, the following mitigation measures for applicable roadway transportation projects that could generate excessive vibration impacts. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

N-3 *Vibration Mitigation for Transportation Projects*

Implementing agencies of Connected 2050 projects shall comply with all applicable local vibration and groundborne noise standards, or in the absence of such local standards, comply with guidance provided by the FTA in *Transit Noise and Vibration Impact Assessment* (FTA 2018) to assess impacts to buildings and sensitive receptors and reduce vibration and groundborne noise. FTA recommended thresholds shall be used except in areas where local standards for groundborne noise and vibration have been established. Methods that can be implemented to reduce vibration and groundborne noise impacts include, but are not limited to:

- Bus and Truck Traffic
 - Constructing of noise barriers
 - Use noise reducing tires and wheel construction on bus wheels
 - Use vehicle skirts (i.e., a partial enclosure around each wheel with absorptive treatment) on freight vehicle wheels

Significance After Mitigation

Implementation of the above mitigation measure would reduce potential impacts to a less than significant level.

Threshold: Would the project generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance?

Impact N-4 CONNECTED 2050 ENVISIONS LAND DEVELOPMENT NEAR TRANSIT AND OTHER TRANSPORTATION FACILITIES, WHICH MAY PLACE SENSITIVE RECEPTORS IN AREAS WITH UNACCEPTABLE NOISE LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Connected 2050 is based on a land use and transportation scenario which defines a pattern of future growth and transportation system investment for the region emphasizing TOD and infill development near transit and other transportation facilities, but development outside these areas could occur as well. Population and job growth is allocated principally within existing urban areas near public transit and existing transit corridors. New noise-sensitive development in infill areas could be exposed to noise levels exceeding the 65 dBA Ldn standard for residential land uses, with a lesser potential in more suburban and rural areas. Potential sources of noise exposure include

traffic, rail and/or bus operations, commercial activity and industrial activity. New development in infill areas near transit may also expose existing noise-sensitive uses to noise levels exceeding local noise thresholds. Impacts would be significant because applicable noise standards could be exceeded, or because infill project residents could be exposed to a substantial increase in ambient noise levels.

Mitigation Measures

Cities and counties in the SBCAG region can and should implement the following measures, where relevant to land use projects implementing Connected 2050. The mitigation measure outlined below does not apply to transportation projects. Project-specific environmental documents may adjust this mitigation measure as necessary to respond to site-specific conditions.

N-4 Noise Mitigation for Land Uses

If a Connected 2050 land use project is located in an area with exterior ambient noise levels above local noise standards, the implementing agency shall ensure that a noise study is conducted to determine the existing exterior noise levels in the vicinity of the project. If the project would be impacted by ambient noise levels, feasible attenuation measures shall be used to reduce operational noise to meet acceptable standards. In addition, noise insulation techniques shall be utilized to reduce indoor noise levels to thresholds set in applicable State and/or local standards. Such measures may include, but are not limited to: dual-paned windows, solid core exterior doors with perimeter weather stripping, air conditioning system so that windows and doors may remain closed, and situating exterior doors away from roads. The noise study and determination of appropriate mitigation measures shall be completed during the project's individual environmental review.

Significance After Mitigation

Implementation of the above mitigation measure would reduce noise for sensitive land uses near transit. However, even with implementation of Mitigation Measure N-4 noise from buildout of Connected 2050 may continue to impact nearby noise sensitive receptors and exceed acceptable standards. Impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

c. Specific RTP Projects That May Result in Impacts

The Connected 2050 projects listed in Section 2.0, *Project Description*, would have the potential to result in noise impacts described in Impacts N-1, N-2, N-3, and N-4. All projects that involve construction activities would result in temporary increases in noise and vibration associated with Impact N-1. The individual projects that would accommodate additional roadway, freeway, or bus traffic could create significant noise and vibration impacts associated with Impact N-2 and N-3. In addition, road widening/extension projects or construction of new roadways have the potential to place roadway traffic noise closer to sensitive receptors. With the number of projects meeting those categories few, this potential impact would be minimal. Land use projects that would include TOD and infill development may create significant impacts associated with Impact N-4. Additional specific analysis described in the above mitigation measures would need to be conducted as individual projects are implemented in order to determine the magnitude of project-specific impacts.

4.11.4 Cumulative Impacts

The analysis in this section examines noise impacts of the Connected 2050 transportation projects and land use strategies throughout the SBCAG region that are cumulative in nature. Construction and operation noise and vibration impacts are generally localized and not cumulative in nature. For example, the increase in noise at one location is not worsened by noise created at another location. Rather these effects are independent and the determination as to whether they are adverse is specific to the project and location where they are created.

Connected 2050 is not expected to substantially increase inter-regional travel, because it addresses the accommodation of projected traffic growth coming from outside the region. Therefore, the Connected 2050 related contributions to traffic noise outside the region are expected to be minimal. Land use development within the SBCAG region combined with the growth outside of its region could potentially contribute to a cumulatively considerable increase in noise and vibration as a result of increased activity resulting from that combined growth. This activity would include aircraft overflights, railroads, as well as freeway, arterial and transit noise. As a result, Connected 2050 could result in a cumulatively considerable increase in noise and vibration. Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.

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4.12 Transportation and Circulation

4.12.1 Setting

a. Freeway, Highway, and Arterial Network

The SBCAG region, which encompasses all of Santa Barbara County, contains approximately 2,475 miles of roadway infrastructure. Of this total, there are approximately 300 miles of State highway that serve as interregional connections to other urban areas. Major State highways include U.S. 101 and State Routes 1, 135, 154, 166, 192, and 246. Examples of some of the County's major arterials include State Street in the City of Santa Barbara, Hollister Avenue in unincorporated Santa Barbara County and City of Goleta, and Betteravia Road in the City of Santa Maria.

State Freeway Network

U.S. 101 connects Santa Barbara County to Ventura and Los Angeles Counties to the south and San Luis Obispo and other northern California counties to the north. Within Santa Barbara County, U.S. 101 extends westward from the Ventura County line and through the South Coast portion of the County and then northward through the Gaviota area and Santa Maria Valley to the San Luis Obispo County line. North of the Las Cruces junction where U.S. 101 and California State Route 1 diverge, U.S. 101 transitions from a limited-access freeway to an expressway with at-grade intersections and returns to freeway status in some areas, particularly in urban centers.

The most heavily-traveled facility in the County is U.S. 101, particularly in the South Coast area, which is characterized by heavy morning and evening peak period congestion (7:00AM to 9:00AM and approximately 3:00PM to 6:00PM) between the Ventura County line and the Milpas Street interchange in the City of Santa Barbara. This section also experiences heavy congestion on weekends due to tourism. Average daily traffic (ADT) on U.S. 101 at the San Luis Obispo County line is 50,000 and 73,000 near the Ventura County line¹. At the same locations truck traffic makes up 13% and approximately 5% of the ADT, respectively. Construction is underway to extend high-occupancy vehicle (HOV, or carpool) lanes from Carpinteria to Sheffield Drive in Montecito. The segments from Sheffield Drive to Cabrillo Boulevard in Santa Barbara are future phases still in planning.

The other freeway facilities located in the County are State Route 217 and a 1.5-mile segment of Route 135 between Route 1 (near Vandenberg Air Force Base) and Clark Avenue in Orcutt.

State Multi-Lane and Two-Lane Highway Facilities

The multi-lane State highways in the County are largely contained within urbanized areas, such as segments of Routes 135 and 166 (Broadway and Main Street, respectively) within Santa Maria, Route 1 (H Street) within Lompoc, Route 246 through Buellton and Solvang, and Route 225 (Las Positas Road/Cliff Drive) within Santa Barbara. The two-lane highway facilities in the County, such as Route 154, tend to be rural interregional routes connecting the County's urbanized areas. Some two-lane facilities, such as Route 192 on the South Coast and Route 246 in Solvang extend through urbanized areas.

¹ Caltrans Truck Volumes AADT (GIS version updated 5/8/2020). Accessed 2/19/21, Year 2018 data for U.S. 101. https://gisdata-caltrans.opendata.arcgis.com/datasets/dfe7fd95282946db98145e9bcdf710fb_0

Route 1 extends west from U.S. 101 near Gaviota and then curves northwest through the City of Lompoc, Vandenberg Air Force Base, and rural areas of the Santa Maria Valley to the San Luis Obispo County line, just north of the City of Guadalupe. This segment between U.S. 101 and the City of Lompoc is a 2-lane rural highway which is heavily utilized by commuters living in the Lompoc Valley and working in the South Coast area. Route 1 is designated as H Street within the City of Lompoc, and is a heavily traveled, 4-lane north-south arterial.

The second most heavily traveled State highway in the County is Route 135, a 4 to 6-lane highway, which serves as the primary north-south route through the Santa Maria/Orcutt area. Within the City of Santa Maria, Route 135 is a 4 to 6-lane urban arterial with signalized intersections.

Within Santa Barbara County, Route 150 is a 2-lane highway that extends 1.65 miles from the Ventura County line to Carpinteria Avenue.

Route 154 is a rural 2-lane highway that extends north from U.S. 101 in the City of Santa Barbara through the Lake Cachuma and Los Olivivos areas in the Santa Ynez Valley to U.S. 101 north of Buellton.

Within Santa Barbara County, Route 166 is a 2 to 4-lane highway that extends east from Guadalupe to U.S. 101 in Santa Maria. Within the City of Santa Maria, Route 166 is designated as Main Street and joins briefly with U.S. 101 to the San Luis Obispo County line. The highway continues east over the mountain range to the Cuyama Valley, in Santa Barbara County. As the road meanders through the mountains, many portions fall in San Luis Obispo County.

Route 192 is a 2-lane highway that extends west from Route 154 and through the Santa Barbara foothills to Route 150 in Carpinteria. Route 192 provides access to residential areas in Mission Canyon, Montecito, Summerland, and Carpinteria and serves as an alternate route to U.S. 101 on the South Coast. Through the Carpinteria Valley, Route 192 serves numerous agricultural land properties. As a result of passing through residential areas, Route 192 features many driveways and access points.

Route 246 is a 2 to 4-lane highway that extends east from Lompoc and through the Santa Ynez Valley to its terminus at Route 154, east of the City of Solvang. Route 246 is the primary connection between communities in the Lompoc Valley and Santa Ynez Valley.

Table 4.12-1 shows the range of ADT and the percentage of trucks at a representative point on each of the state routes.

Table 4.12-1 Average Daily Traffic on State Highways

Route	ADT Measured At	Vehicle ADT	Truck ADT %
Route 1	Highland Drive	29,300	7.0%
Route 135	Santa Maria, Junction Route 166, Main Street	28,500	6.8%
Route 150	Carpinteria, Junction Route 101	5,300	10.2%
Route 154	Junction Route 192 East	16,500	6.0%
Route 166	Santa Maria, Junction Route 101	27,200	8.9%
Route 192	Junction Route 154	11,800	6.0%
Route 246	Buellton, Junction Route 101	24,300	6.0%

Source: Caltrans Truck Volumes AADT (GIS version updated 5/8/2020). Accessed 2/19/21. https://gisdata-caltrans.opendata.arcgis.com/datasets/dfe7fd95282946db98145e9bc9f710fb_0

Vehicle miles traveled (VMT) is a metric for understanding the total utilization of the road network. A “VMT” is one vehicle traveling on a roadway for one mile. Regardless of how many people are traveling in the vehicle, each vehicle on the roadway generates one “VMT” for each mile it travels. VMT can be estimated by counting traffic on roadways at different locations and is a measure of transportation performance that is consistently monitored over time throughout any given region. Table 4.12-2 shows the estimated VMT in the SBCAG region for Existing (2020) conditions. Slightly more than half of all VMT in the region is carried on the state highway network.

Table 4.12-2 Existing (2020) Regional VMT

Freeways	All Other Roads	Total
5,798,871	5,107,083	10,905,954
53%	47%	100%

Source: SBCAG, 2021.

b. Transit Service

The Santa Barbara Metropolitan Transit District (MTD) is the primary provider of fixed-route transit services within the South Coast area. MTD offers over 20 local routes, several express services (such as Santa Barbara Transit Center to Downtown Goleta), Downtown and Waterfront Santa Barbara shuttles, and secondary school “tripper” routes. For persons with disabilities that would prevent them from using fixed-route services, Easy Lift provides ADA paratransit services in the area. According to MTD, in Fiscal Year (FY) 2018-2019 (concluded in June 2019), the agency served over 6,288,000 passenger trips². The most recent completed FY19-20 ridership was significantly diminished as a result of the global COVID-19 pandemic beginning in March 2020, as were transit agencies everywhere.

Transit service in the urbanized areas of the Santa Maria Valley is provided by Santa Maria Area Transit (SMAT). SMAT has eight regular fixed routes and operates complementary paratransit service for ADA-eligible riders, as well as regional service between Santa Maria, Lompoc, and Vandenberg Air Force Base as the Breeze Route 100, and between Santa Maria, Los Alamos and the Santa Ynez Valley (Breeze 200). In FY2018-2019, SMAT served approximately 687,000 passenger trips³.

City of Lompoc Transit (COLT) provides transit services within the Lompoc, Mission Hills, and Vandenberg Village areas. COLT operates four fixed routes plus complementary ADA paratransit service and a twice-weekly route to the City of Santa Barbara. COLT also operates the regional Wine County Express service between Lompoc and the Santa Ynez Valley. In FY2018-2019, COLT served approximately 89,000 passenger trips⁴.

Santa Ynez Valley Transit (SYVT) provides fixed-route and paratransit services between Buellton, Solvang, Santa Ynez, Ballard, and Los Olivos. In FY2018-2019, SYVT served over 35,444 passenger trips⁵.

² MTD FY2018-2019 and FY2019-2020 4th Quarter Ridership Reports. <https://sbmtd.gov/about/agendas-archives/>

³ National Transit Database, Unlinked Passenger Trips (Adjusted), December 2020.

⁴ Ibid

⁵ SBCAG FY2016-2018 Triennial Performance Audit of Santa Ynez Valley Transit, October 2019.

http://meetings.sbcag.org/Meetings/SBCAG/2019/11%20Nov/Item%2040%20Perf%20Audits/audits/Attach%20e%20FY%202016_18%20TDA%20performance%20audit%20SYVT_Final.pdf

SMOOTH (Santa Maria Organization of Transportation Helpers) operates transit services on behalf of the City of Guadalupe including the local Guadalupe Shuttle, the Guadalupe Flyer between Guadalupe and Santa Maria, as well as complementary ADA paratransit services.

Cuyama Transit provides a twice-weekly reservation-based shuttle from the Cuyama Valley to Santa Maria. Formerly, the Los Alamos Shuttle provided a connection to Santa Maria; this was discontinued when Breeze Route 200 added a stop in Los Alamos.

SBCAG operates the Clean Air Express commuter services from the communities of Santa Maria, Lompoc, and the Santa Ynez Valley to Goleta and the City of Santa Barbara. In FY2018-2019, Clean Air Express served over 177,000 passenger trips⁶.

The Ventura County Transportation Commission (VCTC) operates the Coastal Express intercounty service from points in Ventura County to the City of Santa Barbara and Goleta, with limited stops along the South Coast on some trips.

San Luis Obispo Regional Transportation Authority operates Route 10 between San Luis Obispo County and the City of Santa Maria.

Easy Lift Transportation is the South Coast's Consolidated Transportation Service Agency (CTSA) and SMOOTH is the Santa Maria Valley's CTSA, providing coordinated social services transportation in their respective regions.

c. Air Transportation

Santa Barbara County has four public airports: Santa Barbara Municipal Airport, Santa Maria Public Airport, Lompoc Airport, and Santa Ynez Valley Airport. Vandenberg Air Force Base is a military airport. The New Cuyama Airport is indefinitely closed according to the FAA⁷.

Santa Barbara Municipal Airport

The Santa Barbara Municipal Airport is the County's largest airport. It is a commercial service facility located approximately nine miles (14.5 km) west of the City of Santa Barbara's central business district (CBD). It is situated west of Route 217 between U.S. 101 and the Pacific Ocean, just southwest and contiguous to Goleta's downtown business area.

Regional access to the airport is provided via Route 217, Hollister Avenue and Fairview Avenue. The airport's long-term parking area can be accessed via two driveways on Fowler Road. Access to the terminal, short-term parking, and drop-off/pick-up areas is provided via an entrance on Fowler Road, which then winds in a one-way loop, approximately a quarter-mile long, and past the terminal to the exit driveway on William L. Moffet Place. Two additional driveways to the south provide access to rental car agencies and other businesses. The driveways on Fowler Road and William L. Moffet Place are all controlled by stop signs. Santa Barbara MTD provides service to the passenger terminal on Route 11 with stops located along William L. Moffet Place, approximately a 300' walk from the main entrance.

Additional access to the commercial areas along the airport's northern boundary is provided by three driveways on Hollister Avenue: Aero Camino Road, Love Place, and Lopez Road. These three access points provide a connection to Firestone Road, which parallels Hollister Avenue and runs east-west along the airport's northern boundary. Two of the three access points on Hollister Avenue

⁶ Clean Air Express Short Range Transit Plan, October 2019.

⁷ <https://nfdc.faa.gov/nfdcApps/services/ajv5/airportDisplay.jsp?airportid=L88> Accessed 2/16/21

are controlled by traffic signals. MTD provides access on Routes 6 and 12X along Hollister Avenue and Clean Air Express and VCTC Coastal Express routes also serve stops on and near Hollister in this area.

Principal activities at the airport consist of the passenger terminal, general aviation fixed base operations, and a variety of aviation and non-aviation related businesses. Operations (landings and takeoffs) at the Santa Barbara Municipal Airport averaged 276 per day in 2018⁸.

Santa Maria Public Airport

The Santa Maria Public Airport is the second largest airport in the region and the County's second commercial service airport. The airport is located in the southern portion of the City of Santa Maria, west of Route 135. Its boundaries are coterminous with the southern city limits and most of the land around the airport is unincorporated. Access to the airport is provided via driveways on Skyway Drive and Foster Road. There are three driveways on Skyway Road that provide access to the internal roadways within the airport: South Terminal Drive, North Terminal Drive, and Hangar Drive. Terminal Drive is a two-way loop road that provides access to the terminal and on-site parking areas. Hangar Drive provides access to some of the hangars adjacent to the runways. Foster Road, Blosser Road and Mitchell Road provide access to commercial areas along the airport's southern boundary. SMAT Route 4 and Breeze 100 serve stops near the airport on Skyway Drive as well as a stop at the passenger terminal.

The airport contains approximately 2,600 acres, of which approximately half is devoted to aviation sources. A 260-acre industrial park is located on the airport district property, as is the 88-space Airport Mobile Park Home development. Principal activities at the airport consist of the passenger terminal, four primary fixed base operators, general aviation sales and repair, and aviation and non-aviation storage. Operations (landings and takeoffs) at the Santa Maria Public Airport averaged 97 per day in 2019⁹.

Lompoc Airport

Lompoc Airport, owned by the City of Lompoc, is a general aviation airport. Offshore oil platform crew transport via helicopters, agricultural air services (crop dusting), flight instruction, sky diving, air taxi service and general aviation are among the services offered at this airport. Administration of the airport is provided by the City of Lompoc. The airport is on the south bank of the Santa Ynez River west of Route 1 and adjacent to the north boundary of the City of Lompoc. H Street (Route 1) provides access to the airport via a connection to George Miller Road. Airport operations in 2020 averaged 82 landings and takeoffs per day¹⁰.

Santa Ynez Valley Airport

The Santa Ynez Valley Airport is owned by the County of Santa Barbara, and managed by the Santa Ynez Valley Airport Authority, Inc., a private non-profit public benefit corporation created to administer the airport. The airport is located southeast of the community of Santa Ynez, south of Route 246 and can be accessed by Santa Ynez Airport Road. Daily commuting by private aircraft, air

⁸ <https://www.airnav.com/airport/KSBA>

⁹ <http://www.airnav.com/airport/KSMX>

¹⁰ <http://airnav.com/airport/klpc>

taxis, and flight instruction makes up much of the airport activity. Operations in 2019 averaged 83 landings and takeoffs per day¹¹.

Vandenberg Air Force Base

Vandenberg Air Force Base (VAFB), located to the west of Lompoc along the west coast of the County, is a large military installation. The base, located entirely within the County, comprises 5.6 percent of the County's total land and 33 percent of its coastline. VAFB's only runway lies well within the base and Airport Areas of Influence for building height and safety are entirely within the base, except for the precision instrument approach to Runway 30.

d. Marine Transportation

Marine transportation activities along the coastal land areas of the County are related to recreation, commercial fishing, and oil production. There are no general cargo or passenger ship terminals in the County. The only general public use marine facility is the Santa Barbara Harbor. The harbor contains four marinas with five piers, 1,139 slips (10 percent commercial fishermen and 90 percent recreational/other), three open water areas; two free anchorages (one summer, one year-round) and one permitted mooring area¹². There are three navigational lights, and a Coast Guard facility. The harbor in Santa Barbara is the only sheltered harbor between the City of Ventura Morro Bay. Land access to the Santa Barbara Harbor is provided via Shoreline Drive at Harbor Way. MTD serves the harbor with the Waterfront Shuttle along Shoreline Drive and Cabrillo Boulevard. VAFB also has a coastal access site which is not open to the general public, north of Jalama Beach County Park.

e. Rail Transportation

Passenger rail service in the County is provided exclusively by Amtrak. Rail freight operations in Santa Barbara County are conducted by the Union Pacific Railroad and the Santa Maria Valley Railroad.

Passenger Rail

Amtrak provides the only commercial intercity passenger rail service in Santa Barbara County. Trains operate over the tracks owned by the Union Pacific Railroad throughout the County. There are five passenger rail stations: Guadalupe (Santa Maria), Surf (west of Lompoc), Goleta, Santa Barbara, and Carpinteria. Only the City of Santa Barbara station is staffed.

One round-trip Coast Starlight train passes through the County daily (although as a result of the COVID-19 pandemic ridership decline, the train is currently operating three days per week). The Coast Starlight route operates from Los Angeles to Seattle. The Coast Starlight train only serves the Santa Barbara station within the County.

The Pacific Surfliner is funded by the State of California (Caltrans) and cross-branded with (and operated by) Amtrak. The full route operates between San Diego and San Luis Obispo passing through Los Angeles and Orange County. Five daily round trips serve Santa Barbara County with two extending the full length to San Luis Obispo and the remaining three trains operating only as far as Goleta. Continuing service to or from San Luis Obispo is provided by Amtrak Thruway bus service. As a result of the COVID-19 pandemic, service is currently reduced to four daily round trips with only one train extending beyond Goleta to San Luis Obispo and continuing Thruway bus service provided

¹¹ <http://airnav.com/airport/KIZA>

¹² Mark Kronman, Harbor Operations Manager, personal communication, January 14, 2013.

for all others. The Pacific Surfliner train serves all five passenger rail stations in the County. Amtrak Thruway buses do not provide an exact replacement for train trips, as these routes may serve alternative stops (for example, the Thruway bus serves the City of Santa Maria instead of the Guadalupe train station, and downtown Lompoc instead of the Surf train station). The Pacific Surfliner-related Thruway routes also serve Buellton and Solvang on some trips.

Amtrak Thruway also provides connecting bus service to the Amtrak San Joaquin train in Bakersfield continuing through the Central Valley to Sacramento or Oakland. In 2021, these included a route from Carpinteria, Santa Barbara and Goleta, and another route from Santa Maria.

Table 4.12-3 shows total annual boardings and alightings by station within the SBCAG region. The Santa Barbara and Goleta stations respectively serve the majority of passenger rail activity in the County.

Table 4.12-3 Amtrak Station Boardings and Alightings

City	Rail Boardings and Alightings
Carpinteria	32,597
Goleta	110,409
Grover Beach	13,293
Guadalupe-Santa Maria	9,298
Lompoc-Surf	6,610
San Luis Obispo	72,922
Santa Barbara	317,664
Total	645,888

Source: Amtrak California 2019 Fact Sheet. Ridership in FY2019.

<https://www.amtrak.com/content/dam/projects/dotcom/english/public/documents/corporate/statefactsheets/CALIFORNIA19.pdf>

Rail Freight

Freight operations are conducted by the Union Pacific Railroad (UP) along the coastal mainline. UP is one of the largest Class I railroads in the United States and the coastal mainline links to major freight terminals in the Los Angeles region including the Ports of Los Angeles and Long Beach. Freight service in the County is light although the exact number of trains varies. The Santa Maria Valley Railroad (SMVR) is a shortline railroad providing local freight service along 14 miles of track between Guadalupe (where the SMVR interchanges with UP) and the City of Santa Maria. The frequency of shipments varies throughout the year. In the Santa Maria area, frozen food, lumber, and agricultural shipments contribute to rail freight. Vandenberg Air Force Base also uses rail for occasional shipments.

f. Bicycle and Pedestrian Facilities

Santa Barbara County has over 230 centerline miles of bikeways. The relatively flat coastal terrain and urbanized areas, as well as fair year-round weather conditions support two major routes through the County, the California Pacific Coast Bike Route (CPCBR) and the California Coastal Trail (CCT). Table 4.12-4 shows the bicycle facilities as of 2020 by facility type and community. Bikeway miles below include Class I bike paths (off-street), Class II bike lanes (including standard striped lanes as well as buffered on-street lanes), and Class IV cycletracks (physically separated bikeways in the roadway). The area around the University of California at Santa Barbara (UCSB), Goleta, and the

Isla Vista community feature extensive bicycle networks, as do the City of Goleta and the City of Santa Barbara.

Table 4.12-4 Bicycle Facilities by Class and Community

Location	Class I Off-Street Bike/ Multi-Use Paths	Class II On-Street Bike Lanes	Class III On-Street Bike Routes	Class IV On-Street Cycletracks
Cities				
Buellton	0.0	3.0	0.6	0.0
Carpinteria	1.8	7.9	0.0	0.0
Goleta	5.3	24.1	0.6	1.5
Guadalupe	0.0	1.2	0.0	0.0
Lompoc	5.0	20.6	1.4	0.4
Santa Barbara	6.6	34.9	3.1	0.4
Santa Maria	6.7	30.4	0.2	0.0
Solvang	1.6	5.3	0.0	0.0
Unincorporated Communities				
Ballard	0.0	0.2	0.0	0.0
Isla Vista	8.4	2.5	0.0	0.4
Los Olivos	0.0	1.8	0.0	0.0
Mission Hills	0.0	3.3	0.0	0.0
Montecito	0.3	3.1	0.0	0.0
Orcutt	0.0	6.4	0.0	0.0
Santa Ynez	0.0	3.0	0.0	0.0
Summerland	0.5	2.8	0.0	0.0
Toro Canyon	0.0	0.3	0.0	0.0
Vandenberg Village	0.0	0.6	0.0	0.0
All Other Unincorporated Areas	14.2	21.7	0.0	0.0
Total	50	173	6	3

Source: Santa Barbara Bicycle Coalition, 2021.

g. Emerging Travel and Mobility Options and Technology

Several new options for travel or that affect vehicle trips began emerging around the nation in the last decade. Ridesharing or ride-hailing is similar to taxi-for-hire service, but reserved on-demand by users through a smartphone app. The most well-known services are Uber and Lyft, which began operations in roughly 2013 and continue today. These services are referred to in the State of California as Transportation Network Companies (TNCs). The services contract drivers using their personal vehicles to provide on-demand rides. Micromobility, in the form of app-reservation-based e-scooters and bikeshare, is a trend that swept the nation beginning largely in 2017. The micromobility industry has been highly volatile as many startup companies have emerged, consolidated, and/or discontinued operations in just a few years. The City of Santa Barbara launched bikeshare through vendor BCycle in late 2020¹³. Between 2018 and 2020, HOPR operated bikeshare

¹³ <https://www.santabarbaraca.gov/civicax/filebank/blobdload.aspx?blobid=233735> Accessed March 29, 2021

on the UCSB campus and Isla Vista but the vendor has since discontinued service and no replacement is in operation¹⁴.

App-based food delivery services have also expanded dramatically in recent years, fueled even further by the COVID-19 pandemic which limited or periodically closed dining at restaurants through most of 2020 and early 2021. These services are provided through a number of apps including Uber, Grubhub, Doordash, Postmates and others. Some drivers may operate trips for multiple food delivery and passenger apps simultaneously, depending on where demand is highest. Delivery of packages and parcels through traditional methods such as the Postal Service, UPS and FedEx has also expanded as a result of the pandemic and the long trend towards online shopping, with fewer trips to traditional retail centers.

Beyond new travel options, emerging vehicle technology is beginning to influence travel behavior and safety. For example, smartphone applications such as Google Maps and Waze better inform travelers regarding route options, comparative costs and offering dynamic routing to avoid significant delays. This is likely most significant in the South Coast region where traffic congestion in the County is greatest, shifting travelers off congested corridors onto parallel streets. Safety technology on newer vehicles can include assisted braking, lane guidance, and attentiveness alerts, which could reduce risk of collisions. These features will likely become standard on most vehicles in the coming years. If collisions decline, some congestion related to collisions could be reduced overtime. Finally, many companies are currently testing various levels of automated or semi-autonomous driving vehicles. As these technologies mature and adoption becomes more prevalent, the effective capacity of highways could increase.

4.12.2 Regulatory Setting

a. Federal Regulations

Fixing America's Surface Transportation

The Fixing America's Surface Transportation (FAST) Act was signed into law on December 4, 2015 and legislates U.S. transportation funding and set expectations for metropolitan transportation planning. In general, FAST continues all the metropolitan planning requirements that were in effect under the previous federal legislation, Moving Ahead for Progress in the 21st Century Act (MAP-21).

Under MAP-21, the U. S. Department of Transportation (DOT), FHWA, and Federal Transit Administration (FTA) require that Metropolitan Planning Organizations (MPOs) prepare and submit long-range transportation plans. In regions that are designated federal air quality non-attainment areas, these plans must be updated at least every four years. The federal requirements for metropolitan transportation plans include the following (23 U.S. Code Section 134(i)):

- **Transportation Facilities.** An identification of transportation facilities (including major roadways, transit, multimodal and intermodal facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions.
- **Mitigation Activities.** A long-range transportation plan shall include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the

¹⁴ <https://www.edhat.com/news/bike-sharing-program-leaves-ucsb> Accessed March 29, 2021

environmental functions affected by the plan. The discussion shall be developed in consultation with federal, state, and tribal wildlife, land management, and regulatory agencies.

- **Financial Plan.** A financial plan that demonstrates how the adopted transportation plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs. The financial plan may include, for illustrative purposes, additional projects that would be included in the adopted transportation plan if reasonable additional resources beyond those identified in the financial plan were available. For the purpose of developing the transportation plan, the metropolitan planning organization, transit operator, and state shall cooperatively develop estimates of funds that will be available to support plan implementation.
- **Operational and Management Strategies.** Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.
- **Capital investment and Other Strategies.** Capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs.
- **Transportation and Transit Enhancement Activities.** Proposed transportation and transit enhancement activities.

According to the FHWA Fact Sheet for the FAST Act¹⁵, the following changes or emphasis were added to MAP-21 expectations:

Scope of Planning Process

The FAST Act expands the scope of consideration of the metropolitan planning process to include -

- Improving transportation system resiliency and reliability;
- Reducing (or mitigating) the stormwater impacts of surface transportation; and
- Enhancing travel and tourism. [23 U.S. Code 134(h)(1)(I) & (J)]

Capital Investment and Other Strategies

The FAST Act continues to require a metropolitan transportation plan to include strategies to meet current and projected transportation infrastructure needs. [23 U.S. Code 134(i)(2)(G)]

Resilience and Environmental Mitigation Activities

The FAST Act expands the focus on the resiliency of the transportation system as well as activities to reduce stormwater runoff from transportation infrastructure. In addition, it newly requires strategies to reduce the vulnerability of existing transportation infrastructure to natural disasters. [23 U.S. Code 134(d)(3) & (i)(2)(G)]

Transportation and Transit Enhancement Activities

The FAST Act continues to require a metropolitan transportation plan to include transportation and transit enhancement activities. When proposing these activities, the plan must now include—

¹⁵ <https://www.fhwa.dot.gov/fastact/factsheets/metropolitanplanningfs.cfm>

- Consideration of the role that intercity buses may play in reducing congestion, pollution, and energy consumption in a cost-effective manner; and
- Strategies and investments that preserve and enhance intercity bus systems (including those that are privately owned and operated. [23 U.S. Code 134(i)(2)(H)])

Participation by Interested Parties in the Planning Process

The FAST Act explicitly adds public ports and certain private providers of transportation, including intercity bus operators and employer-based commuting programs to the list of interested parties that an MPO must provide with reasonable opportunity to comment on the transportation plan. [23 U.S. Code 134(i)(6)(A)]

Congestion Management

As a federally designated Transportation Management Area, SBCAG is responsible for fulfilling federal congestion management requirements by implementing policies, programs, and projects in the Regional Transportation Plan (RTP) and Transportation Improvement Program (Title 23 Part 450 Section 320). The federal congestion management provisions utilize the RTP as the primary tool to provide solutions for congestion. The RTP includes identification and evaluation of anticipated performance and expected benefits of appropriate congestion management strategies (such as demand management, operational improvements, transit improvements, and systems management improvements).

In order to accomplish the data collection requirement under the federal requirements, SBCAG will be working to implement a dynamic, web-based congestion tool using data collected from the National Performance Monitoring Research Dataset (NPMRDS). The tool will report archived travel time and average speeds on the National Highway System (NHS) in the region. The availability of the tool and reporting system will further align the SBCAG region with the federal Congestion Management System requirement and the National Highway System Travel Time Reliability performance measure required through MAP-21.

SBCAG was the designated as the Congestion Management Agency (CMA) for Santa Barbara County in 1991, after the passage of Proposition 111, which increased the state gasoline tax. In July 2018, the SBCAG Board directed staff to work with local jurisdictions to explore becoming exempt from the state's Congestion Management Program statutes. The exemption process outlined in Assembly Bill (AB) 2419 (1996) requires *"a majority of local governments collectively comprised of the city councils and the county board of supervisors, which in total also represent a majority of the population in the county, each adopt resolutions electing to be exempt from the congestion management program."* (Gov. Code § 65088.3). In October and November 2018, SBCAG staff coordinated with local public works staff to adopt local resolutions of support for exemption from the state CMP statute. In January 2019, the SBCAG Board approved a resolution exempting the region from the state CMP statute.

b. State Regulations

State requirements for long-range transportation plans are similar to the federal regulations. However, key additional requirements described in Government Code Section 65080 include:

- Compliance with CEQA
- Consistency with state Transportation Improvement Program

- Use of program level performance measures that include goals and objectives
- Inclusion of a policy element, an action element, and a financial element, and
- Inclusion of a Sustainable Communities Strategy for MPOs (see Senate Bill [SB] 375 discussion below).

California Transportation Commission Regional Transportation Plan Guidelines

The California Transportation Commission (CTC) publishes and periodically updates guidelines for the development of long-range transportation plans, such as SBCAG's RTP/SCS. Pursuant to Government Code Section 65080(d), each regional transportation planning agency (RTPA) is required to adopt and submit an updated regional transportation plan (RTP) to CTC and Caltrans every four years. SBCAG is the designated RTPA for Santa Barbara County.

Under Government Code Section 14522, the CTC is authorized to prepare guidelines to assist in the preparation of RTPs. The most recent update to the RTP guidelines was published in 2017 and includes separate guidance for RTPAs and MPOs and new checklists for RTP content.

CEQA Streamlining

SB 226 (Stats. 2011, ch.469) revises the CEQA Guidelines to set forth a streamlined review process for infill projects, including performance standards to determine an infill project's eligibility for that streamlined review. One of the requirements for streamlined review is that the project be consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a Sustainable Communities Strategy or an alternative planning strategy.

Sustainable Communities and Climate Protection Act

In March 2018, CARB established new and higher GHG emissions reduction targets for all MPOs in the state. While increasing the SB 375 targets, CARB also noted that the increase fell short of what was needed to fully achieve state goals on GHG emissions reduction and climate change mitigation. In combination, the staff report and presentation materials to the CARB Board show that in total, the revised SB 375 GHG emissions reduction targets for all of the state's MPOs would result in a statewide reduction of 19 percent (compared to 18 percent from the prior SCS achievement), but that a 25 percent reduction was needed to fully meet the GHG emissions reduction goals of the Scoping Plan (CARB 2018). The difference between the 19 percent resulting from CARB's updated SB 375 targets and the 25 percent identified need is referred to in other various CARB documents as the "gap."

In the SB 375 target resetting, CARB recognized that additional state action was needed to close this gap. With the help of MPOs and other organizations, the categories of state action to accomplish this were: funding mechanisms to incentivize infill development; improved performance analysis to assist agencies in funding supportive transportation projects; expanding investment in transit and active transportation; and pricing policies and programs. A common theme to all the additional actions is the focus on VMT reduction.

Three additional state documents provide context for understanding how these GHG emissions reduction targets relate to VMT. One is the Scoping Plan itself, which also recognizes that statewide collaboration is needed to address the gap; and further, that the gap in GHG emissions reductions would be closed through VMT reduction strategies (CARB 2017). The second document, published by CARB in January 2019, *California Air Resources Board 2017 Scoping Plan-Identified VMT*

Reductions and Relationship to State Climate Goals (CARB 2019), provided additional detail on the scope of the challenge, and its relationship to CEQA. Setting aside the historic base years for the Scoping Plan (Year 1990) and for SB 375 (Year 2005), CARB focused on the VMT reductions needed over current conditions (2015-2018) to meet the state's 2030 and 2050 climate goals. CARB concluded that a 14.3 percent reduction in daily VMT per capita and a 16.8 percent reduction in light-duty VMT per capita was needed to meet these goals. These reductions are needed from the full population of California and do not include specific reduction goals associated with new population and employment growth. The final document is the Draft 2020 Mobile Source Strategy (CARB 2020). This document reiterates the need for greater VMT reduction to meet GHG reduction goals and to achieve attainment of the 70 parts per billion (ppb) 8-hour ozone standard in 2037.

California's Sustainable Communities and Climate Protection Act (SB 375) (Stats. 2008, ch.728) requires MPOs to prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG per capita emissions reduction targets through integrated land use, housing, and transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions (over a 2005 base year) from automobiles and light trucks in accordance with targets set by the California Air Resources Board (CARB). In March 2018, CARB established new GHG emissions reduction targets for all MPOs in the state. While increasing the SB 375 targets, CARB also noted that the increase fell short of what was needed to fully achieve state goals on GHG emissions reduction and climate change mitigation. In combination, the staff report and presentation materials to the CARB Board show that in total, the revised SB 375 GHG emissions reduction targets for all of the state's MPOs would result in a statewide reduction of 19 percent (compared to 18 percent from the prior targets), but that a 25 percent reduction was needed to fully meet the GHG emissions reduction goals of the Scoping Plan (CARB 2018b). The difference between the 19 percent resulting from CARB's updated SB 375 targets and the 25 percent identified need is referred to in other various CARB documents as the "gap."

In the SB 375 target resetting, CARB recognized that additional state action was needed to close this gap. "The recommended targets also recognize that additional State policy and funding tools are being developed to support further VMT reduction that will both help the State overall in achieving needed emission reductions and support MPOs in their ability to achieve higher targets by 2035." The categories of state action to accomplish this, with help of MPOs and other organizations, were: funding mechanisms to incentivize infill development; improved performance analysis to assist agencies in funding supportive transportation projects; expanding investment in transit and active transportation; and pricing policies and programs. A common theme to all the additional actions is the focus on VMT reduction.

Two additional state documents provide context for understanding how these GHG emissions reduction targets relate to the transportation issues discussed in this chapter. One is the *Scoping Plan* itself, which also recognizes that statewide collaboration is needed to address the gap; and further, that the gap in GHG emissions reductions would be closed through VMT reduction strategies (CARB 2017b):

"Discussions among a broad suite of stakeholders from transportation, the building community, financial institutions, housing advocates, environmental organizations, and community groups are needed to begin the process to pursue and develop the needed set of strategies to ensure that we can achieve necessary VMT reductions, and that the associated benefits are shared by all Californians. Appendix C further details potential actions for discussion that can be taken by

State government, regional planning agencies, and local governments, to achieve a broad, statewide vision for more sustainable land use and close the VMT gap.”

The second document, published by CARB in January 2019, provided additional detail on the scope of the challenge, and its relationship to CEQA (CARB 2019):

“An RTP/SCS that meets the applicable SB 375 targets alone will not produce the GHG emissions reductions necessary to meet state climate goals in 2030 nor in 2050. This means that SB 375 targets are not stand-alone CEQA thresholds for GHG or transportation impact analysis (though SCS compliance may nonetheless entitle projects to certain CEQA exemptions or streamlining procedures pursuant to statute). In other words, a project that is consistent with an SCS may be eligible for certain exemptions, but compliance does not necessarily more broadly imply consistency with state climate goals nor with science-based GHG reduction targets, in CARB staff’s non-binding view. Some land use development projects contemplated in an SCS that will be operational in 2030 and 2050 will be consistent with state climate goals, and SB 375 defines project circumstances under which CEQA streamlining is available to qualified projects consistent with an SCS. Other projects may need to consider additional mitigation measures to further reduce per capita light-duty transportation-related GHG emissions to levels that would not conflict with state climate goals. Likewise, certain transportation infrastructure projects that will be operational in 2030 and 2050 that substantially increase VMT may conflict with state climate goals, even if they are included in an SCS that meets the applicable SB 375 targets.”

Setting aside the historic base years for the Scoping Plan (Year 1990) and for SB 375 (Year 2005), CARB focused on the VMT reductions needed over current conditions (2015-2018) to meet the state’s 2030 and 2050 climate goals. CARB concluded that a statewide 14.3 percent reduction in daily VMT per capita and a 16.8 percent reduction in light-duty VMT per capita were needed to meet these goals.

Senate Bill 743 Vehicle Miles Traveled Analysis (Public Resources Code Section 21099)

On September 27, 2013, Governor Jerry Brown signed SB 743 (Steinberg, 2013) into law and started a process that fundamentally changed the criteria for determining the significance of a project’s transportation impacts under the California Environmental Quality Act (CEQA). Specifically, SB 743 required new criteria that “... promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.”

In response to SB 743, the California Natural Resources Agency adopted revisions to the CEQA Guidelines on December 28, 2018. CEQA Guidelines Section 15064.3 and Appendix G: Environmental Checklist Form, Section XVII, Transportation. Section 15064.3 includes new criteria for determining the significance of a project’s transportation impacts. Specifically, Section 15064.3(a) states “vehicle miles traveled is the most appropriate measure of transportation impacts.” With this change, SBCAG and other public agencies can no longer use automobile delay, as measured by “level of service” (LOS) or similar measures of vehicular capacity or traffic congestion, to assess transportation impacts under CEQA.

The State has several requirements for long-range transportation plans that are relevant when considering VMT impacts. The first is California’s Sustainable Communities and Climate Protection Act (SB 375) that requires MPOs to prepare an SCS that demonstrates how the region will meet its GHG per capita emissions reduction targets through integrated land use, housing, and

transportation planning. Specifically, the SCS must identify a transportation network that is integrated with the forecasted development pattern for the plan area and will reduce GHG emissions (over a 2005 base year) from automobiles and light trucks in accordance with targets set by CARB.

SB 743 (Stats. 2013, ch. 386) resulted in several statewide CEQA changes. It required the Governor's Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the metrics beyond TPAs. OPR selected VMT as the preferred transportation impact metric and applied their discretion to require its use statewide. This legislation also established that aesthetic and parking effects of a residential, mixed-use residential, or employment center projects on an infill site within a TPA are not significant impacts on the environment. The revised CEQA Guidelines that implement this legislation became effective on December 28, 2018, and state that vehicle level of service (LOS) and similar measures related to delay shall not be used as the sole basis for determining the significance of transportation impacts, and that as of July 1, 2020, this requirement shall apply statewide, but that until that date, lead agencies may elect to rely on VMT rather than LOS to analyze transportation impacts. Finally, the legislation establishes a new CEQA exemption for a residential, mixed-use, and employment center project a) within a TPA, b) consistent with a specific plan for which an EIR has been certified, and c) consistent with an SCS. This exemption requires further review if the project or circumstances change significantly.

To aid in SB 743 implementation, the following state guidance has been produced.

- *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018);
- *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* (CARB 2019);
- *2018 Progress Report, California Sustainable Communities and Climate Protection Act* (CARB 2018);
- *Local Development – Intergovernmental Review Program Interim Guidance, Implementing Caltrans Strategic Management Plan 2015-2020 Consistent with SB 743* (Caltrans 2016);
- *Transportation Analysis Framework First Edition, Evaluating Transportation Impacts of State Highway System Projects* (Caltrans 2020); and
- *Transportation Analysis under CEQA First Edition, Evaluating Transportation Impacts of State Highway System Projects* (Caltrans 2020).

Of these documents, the *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* is most relevant for transportation impact analysis of Connected 2050. It provides recommendations for VMT reduction thresholds that would be necessary to achieve the state's GHG reduction goals and acknowledges that the SCS targets alone are not sufficient to meet climate goals.

c. Local Regulations

Bicycle, Pedestrian and Trails Master Plans and Active Transportation Plans

SBCAG adopted a Regional Active Transportation Plan in 2015 to integrate the bicycle and pedestrian planning of the region's nine member governments and improve the active transportation network in the County. The plan is also intended to establish eligibility criteria for

funding through Active Transportation Program (ATP) grants for projects. The major goals of the plan are to:

1. **Enhance Mobility:** Promote increased bicycling and walking to reduce vehicle trips, vehicle miles traveled, auto congestion, and vehicle emissions regionwide.
2. **Increase Connectivity:** Promote increased bicycling and walking to reduce vehicle trips, vehicle miles traveled, auto congestion, and vehicle emissions regionwide
3. **Promote Equity for All Users in All Communities:** Increase bicycle and pedestrian network coverage within RTP-SCS communities of concern.
4. **Improve Safety and Public Health:** Encourage well-designed bicycle and pedestrian infrastructure to improve multi-modal safety and promote improvements in public health.

SBCAG also developed the Santa Ynez Valley Bicycle Master Plan, adopted in 2019, to fill a gap in subregional bicycle planning. The major goals of the plan are to:

1. Establish a safe and secure bicycle network that addresses key areas of concern including highways, intersections, and routes to school.
2. Provide infrastructure throughout the region to encourage bicycling.
3. Develop a well-planned and coordinated network between origins and destinations such as schools and residential areas, community centers, transit stops, park & rides, and neighboring jurisdictions.
4. Provide equitable access to bicycling for all.
5. Recognize the economic importance of bicycling in the region as it relates to tourism and stimulates the local economy.

The City of Santa Maria adopted a Bikeway Master Plan in November 2009. This plan provides a blueprint for bicycle transportation and recreation in the City of Santa Maria. The City is currently in the process of updating this plan.

The City of Santa Barbara adopted a Bicycle Master Plan in 2016 with four overarching goals to improve safety for all users, close gaps in the bicycle network, provide multi-modal access through complete streets policies, and utilize local context in developing bike infrastructure.

The City of Goleta adopted a Bicycle and Pedestrian Master Plan in 2018 to identify barriers to walking and biking, improve community health, reduce vehicle miles traveled, improve equitable access to opportunity, and increase sense of community pride.

The City of Lompoc adopted a Pedestrian and Bicycle Master Plan in 2020 to identify and prioritize future projects that create a safe and accessible bicycle and pedestrian network.

Each of Santa Barbara County's nine local governments each have an adopted bicycle or active transportation plan. Additionally, Caltrans District 5 is in the process of completing a district-wide active transportation plan.

Transit Performance Standards and Thresholds

The four major transit operators in the County (MTD, SMAT, COLT, SYVT) have undergone strategic planning processes and have developed transit performance standards. A summary of the goals and policies for each of these transit operators is provided below.

SBMTD (2017-2021 Strategic Plan Update, MTD, 2017)

- Deploy new tech tools for operations and customer service.
- Set schedules that take into account changing road conditions.
- Work with partner agencies to ensure adequate traffic management.
- Support mode shift to reduce traffic congestion.
- Establish new operational positions within MTD Expand service as feasible.
- Recognize that on-time performance affects customer satisfaction.

SMAT (Short Range Transit Plan, City of Santa Maria, 2020)

- Provide affordable, reliable, and efficient transit service that effectively meets the needs of those residents of or visitors to the SMAT service area who have limited mobility options. Where practical, also serve the needs of those who choose transit for some or all of their local travel needs for environmental or lifestyle reasons.
- Where practical, support City and regional land-use planning, economic development, travel demand management, congestion mitigation and environmental goals.
- These goal statements are supported by policies, each of which are defined by more specific objectives or metrics in the SRTP:
 - Maximize service availability, reliability and convenience, achieved by prioritizing service for low-income households, seniors, people with disabilities, and ensuring equitable access for non-white communities. Includes standards for maximum passenger loads, a 95% on-time performance standard for fixed-routes, and a 90% on-time performance standard for ADA service.
 - Maximize operating efficiency without negatively impacting service quality, achieved by regular review of operating contracts and productivity, setting a minimum of 20% farebox recovery ratio for fixed routes, adhering to a vehicle life cycle program and other practices consistent with Federal Transit Administration guidance.
 - Operate a productive service that remains affordable to the priority transit markets, achieved through offering low fares for fixed-route to manage ADA demand and maintaining affordable fare options for low-income or otherwise disadvantaged individuals.
 - Promote the coordination of service with other regional transit services, achieved through maintaining connections with the Guadalupe Flyer, SLORTA Route 10, and the Clean Air Express.
 - Promote public/private partnerships to market or operate transit services in support of City of Santa Maria economic and land use development goals, achieved through participation in the City's development review process and other economic strategies.
 - Ensure ongoing service monitoring, evaluation and planning, achieved through staffing strategies.

COLT (Draft City of Lompoc Short Range Transit Plan, City of Lompoc, 2011)

- Maintain a vehicle spare ratio of no less than one vehicle per service and no more than 20% of the total fleet.
- Fleet age and mileage for medium-duty buses (cutaways) shall not exceed 5 years or 150,000 miles. Heavy-duty buses (i.e., 30 feet and over) should be replaced every ten years or 350,000 miles, whichever comes first.
- Customer amenities: No less than 20% of all bus stop locations on each fixed route should have a bench or shelter for customer uses.
- Operating cost per vehicle service hour: Increasing no greater than the Consumer Price Index, not including fuel cost.
- Maintenance costs: Increasing no more than 10% per annum.
- Farebox recovery: Maintain a recovery rate of no less than 20% for fixed-route and 10% for demand-responsive.
- Administrative cost: No more than 15% of total operating costs.
- Passengers per revenue vehicle mile: 1.25 for fixed route and 0.30 for demand responsive.
- Passengers per vehicle revenue hour: 16.0 for fixed-route and 3.0 for demand responsive.
- Percent of scheduled departures on-time: A minimum of 90 percent of all trips are on time (0-5 minutes late); and no trips depart scheduled stops before scheduled time.
- Missed trips: Less than one percent of trips missed or more than 15 minutes late.
- Average trip duration: Shall not exceed three times the equivalent auto trip during peak travel periods.
- Frequency of service: Minimum 30-minute headways for in-city routes and 60-minute headways for county routes.

SYVT (Short Range Transit Plan Update, SYVT, September 2017)

- The 2017 SRTP Update focuses on a short list of near-term scenarios for enhancing service to meet community and stakeholder objectives. There are no specific policies or service standards identified in this update.
- The 2017 recommendations to consider include:
 - Potential for express bus service in the Santa Ynez Valley to increase overall ridership
 - Replacing Saturday fixed-route service with a general public-eligible dial-a-ride program
 - Transition all operations to a general public-eligible dial-a-ride program
- Prior (2003) SRTP Performance Metrics:
 - 11.0 passengers per revenue vehicle hour
 - 1.0 passenger per revenue vehicle mile
 - 20% farebox recovery ratio
 - 85% of the activity centers within the Santa Ynez Valley are within ¼ mile of the fixed route system.
 - On-time performance: 95% of departures on-time (0-5 minutes late).

4.12.3 Impact Analysis

a. Methodology and Significance Thresholds

Thresholds of significance to determine whether implementation of the Connected 2050 would result in significant transportation and circulation impacts were chosen in part by determining which effects of the Connected 2050 can be measured by available modeling tools. The thresholds of significance outlined in this section are consistent with the policies and performance standards detailed in the Connected 2050.

The criteria for determining whether the Connected 2050 would have significant environmental impacts related to transportation and traffic were based in part on the environmental checklist in Appendix G of the State CEQA Guidelines (14 CCR 15000 et seq.) and performance measures established by SBCAG. Significant impacts to transportation and traffic would occur if the plan would:

- a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- b) Cause the SBCAG regional VMT per capita with the project to exceed 14.3% below the regional baseline VMT per capita.

It is important to emphasize that population growth, urbanization and volume of average daily traffic generated in the SBCAG region will increase by 2050, with or without implementation of the Connected 2050. This increase is expected to occur as a result of a range of demographic and economic factors independent of policy and land use decisions by SBCAG and its member agencies. The analysis below describes the full effect of the proposed Connected 2050 in combination with future growth, as compared to existing baseline conditions.

Travel Demand Forecasting Model

Travel projections for Connected 2050 were generated by SBCAG's travel demand forecasting model. The travel demand model allows SBCAG to understand the transportation network performance characteristics (e.g., vehicle speeds, volume to capacity relationships, travel time, VMT, fuel consumption, vehicle emissions, and transit use and estimate how socioeconomic changes (e.g., population increases and land use development) will impact travel demand in the region. The regional travel demand model allows for comparisons of different scenarios. Furthermore, consequences of future changes or absence of change to the transportation system itself (e.g., building new facilities, improving existing facilities, or doing nothing at all) can be analyzed.

The travel demand model is developed to capture observed travel behavior in the base year (2015). The process of measuring the degree to which the model captures observed travel in the base year is known as "validation." In addition to validation, sensitivity testing is performed to ensure the model is appropriately sensitive to key factors affecting travel (e.g., cost of travel, household income, age, etc.). For impact analysis, all impacts and thresholds are defined as differences or changes between the Existing (2020) and the RTP/SCS horizon year (2050).

Travel behavior and transportation systems are changing quickly in response to emerging trends, new technologies, and different preferences. Some of the new travel options and technologies emerging are discussed below.

- Substitution of internet shopping and home delivery for some shopping or meal-related travel:
 - The 2018 SHTS showed that adults reported receiving a home delivery of a package on 17 percent of the travel days in the survey – and an additional 4 percent received packages at work, food deliveries at home, etc. How these percentages compare to earlier years is unknown.
 - NHTS showed the number of online purchases with home delivery doubling between 2009 and 2017, from about 2.5 to 4.9 per household per month (FHWA, 2018).
 - Comparisons of 2017 to 2009 NHTS data show that nationally, non-work trips per household declined by 11 percent. Most of that decline is attributed to lower rates of shopping trips and other family-related errands (FHWA 2018).
- Substitution of telework for commute travel:
 - The 2018 SHTS showed that 17 percent of the respondents reported working at home at least one day per week. Telework greatly increased in 2020 during the COVID-19 pandemic; however, the longer-term preference for telework is uncertain. There is potential that the attractive climate and community choice in Santa Barbara County could attract new residents whose work is entirely remote.
 - Santa Barbara County Supervisors approved allowing the permanent continuation of telework (approximately 3,000 employees) on March 16, 2021.
- New travel modes and choices:
 - TNCs, car share, bike share, scooter share, and on-demand microtransit have increased the travel options available to people in the region and have contributed to changes in traditional travel demand relationships.
- Automation of vehicles:
 - Both passenger vehicles and commercial vehicles and trucks are evolving to include more automation. Research, development, and deployment testing is proceeding on fully AV, for which no human driver would be required, and the vehicle itself can navigate the roadways to take people or goods where they need to go. Forecasts of how quickly research, development, and deployment testing will transition to full deployment and marketing of fully AV vary widely both on the pace of the transition, and the market acceptance of fully autonomous operation. More uncertainty exists for the behavioral response to AVs. In terms of impact on the transportation system and the environment, a scenario of concern would be one in which AVs are privately owned, like the present, but the automated function of the vehicles would entice users to travel more. Examples of this phenomenon could include:
 - Vehicles are repositioned to serve different members of a household (e.g., have a car drop a worker at their workplace, then drive back home empty to serve another trip, such as a student going to school). The repositioning of driverless vehicles could add significantly to traffic volumes and VMT.
 - The time spent in a vehicle is reevaluated by travelers, resulting in an increase in the willingness to make longer trips. For example, if a person could read or do work in a vehicle instead of focusing on driving, they might be willing to commute longer to work. Conversely, a worker who prefers to live in a rural area, but is unwilling to drive far enough to act on that preference in a conventional vehicle, may be willing to do so in an AV.

- There may be an increasing willingness to drive more to avoid parking costs or tolls. For example, a person going to a sporting event in an area that charges for parking may use an AV to be dropped off at the venue, with the AV repositioning to an area that does not charge for parking.
- **Connected vehicles:**
 - Connected vehicles (CVs) can communicate wirelessly with its surroundings, including other vehicles, bicyclists, pedestrians, roadway infrastructure (i.e., traffic signals, toll facilities, traffic management facilities, etc.), and the internet. The influence that CVs may have is still speculative but includes the potential for reductions in collisions and congestion, and greater overall network performance optimization.

The travel demand model does not explicitly capture the above-mentioned modes of travel and emerging travel behavior trends. Through validation of the base year model, the cumulative effect of these changes is reflected in the resulting travel demand estimates, but the underlying behavioral impact of the modes are not modeled. Significant uncertainties remain that prevent explicit modeling of these emerging trends for the analysis of the proposed RTP/SCS.

Additionally, future deployment levels for new modes of travel are unknown. For example, Uber and Lyft were both significantly increasing services through 2019, but both also continued to run large operating losses and are reliant on investors to cover losses. A sustainable business model may require significant changes to services and/or fares, both of which could affect the trajectory of use and impact on travel behavior. Similar issues apply to bike share and other micro-mobility services.

The impact of new modes on individual and household travel behavior also is not fully understood and is the subject of ongoing research. Limitations on accessing utilization data directly from TNC vendors in particular constrains the ability to fully understand the impact of those services. Regulatory and legislative efforts to address the limits on access are underway in California and elsewhere, but these efforts will take time. Only a few household travel surveys, including the 2018 SHTS, have surveyed TNC use in detail. Other major research studies focused on TNC use, and TNC driver behavior, are just being launched in California, and data collection and analysis has not yet started. Until this research is completed, there is no effective way to incorporate even the known new modes into travel demand models.

Treatment of Travel Induced by Addition of New Roadway Capacity

Research suggests that provision of new roadway capacity, all other things being equal, can itself result in generating additional vehicle travel. This phenomenon is often labeled “induced travel,” and is in reality composed of many different effects. Those effects fall into two general categories:

- **Short-term Effects.** Changes in the near term to individual and household travel behavior due to a new or expanded roadway. All of the short-term effects are the result of travel on the new or expanded roadway being faster or more reliable than the prior condition:
 - Driving slightly out of one’s way in order to use a new facility, compared to prior routes;
 - Shifting trips made by walking, biking, transit, or some non-private-vehicle mode to a private vehicle; or
 - Making more trips using a vehicle compared to the prior condition.

- **Long-term Effects.** Changes in long-term individual or household choices, or causing new growth and development in areas where options to driving are few, or where the density and mix of uses require longer-than-average (regional) vehicle trips:
 - An individual deciding to relocate his or her place of residence from an area where lower-than-average vehicle use is required, to an area where higher-than-average vehicle use is required, simply because new roadway capacity makes the move more attractive.
 - A property owner or developer deciding to build in an area where higher-than-average vehicle use is required for future residents, simply because new roadway capacity makes that area more marketable and valuable to future homebuyers.

The analysis of Connected 2050 using the SBCAG model includes an analysis of the potential for induced travel. Both the short-term and long-term effects of induced travel can be estimated using the SBCAG model. The short-term effects are captured directly in the model itself, since a) the impact of new capacity on vehicle travel speed is captured in the model, and b) the impact of speed of travel on roadways affects the frequency of trip-making, mode of travel, and travel routing. The long-term effects of induced travel are captured through SBCAG's iterative process of developing the land use forecast and identifying the roadway capacity projects for the region. This iterative process considers the magnitude and location of growth within the SBCAG region and then considers if the roadway widening projects are increasing capacity beyond what is needed to accommodate anticipated growth. Once the land use forecast and roadway capacity projects are finalized, as proposed in Connected 2050, the SBCAG model can be used to reasonably capture the long-term induced travel effects of the land development and transportation projects.

Connected 2050 includes policies focused on improving access to alternative modes of transportation besides reliance on single-occupancy vehicle trips. This includes transit, bicycling, walking, and limiting the expansion of the existing roadway system to only when facilities exceed acceptable levels of service, and other means of capacity enhancement have been explored. The transportation project list includes new roadway capacity to accommodate growth and reduce existing bottlenecks in the roadway network. A reasonableness check of the SBCAG modeling results, including the long-term induced travel effects, was completed by reviewing the change in roadway miles in the region with Connected 2050 and congestion levels in comparison to current conditions.

Table 4.12-5 shows that the Connected 2050 plans for 40 new lane miles by 2050 which is a very minimal increase (1.0%) in roadway miles over the next three decades. The most substantial change is related to the expansion of high-occupancy vehicle (HOV) lanes (commonly called "carpool" lanes), as part of a planned expansion of U.S. 101 in South County from Carpinteria to the City of Santa Barbara, which has already started construction.

Table 4.12-5 Roadway Miles by Functional Class

Functional Class	Existing (2020)	Connected 2050	Change in Miles	% Change
HOV-Freeway	5	23	18	360%
Freeway	456	458	2	0.4%
Other Principal Arterial	246	250	4	1.6%
Minor Arterial	743	753	9	1.3%
Urban Collector	488	490	2	0.4%
Rural Collector	613	614	1	0.2%
Local Road	1403	1405	3	0.1%
Ramp	58	59	1	1.7%
Total	4,012	4,052	40	1.0%

Source: SBCAG, 2021.

Congestion levels with Connected 2050 can be compared to existing conditions to assess whether additional roadway capacity could potentially lead to reduced congestion, and therefore, potentially induce more vehicular travel. Table 4.12-6 below shows local and freeway congested VMT in Existing (2020), Future without Connected 2050, and with Connected 2050 (2050). As the table shows, compared with the 2050 Baseline, the Connected 2050 results in substantial reductions to congested VMT (approximately 830,000 fewer vehicle miles of congested travel which is a 32% reduction). However, when compared to Existing (2020), Connected 2050 results in a 24% increase in congested VMT. In addition, while congested VMT makes up a relatively low percentage of total countywide VMT, congested VMT makes up a majority of the total VMT growth projected between Existing (2020) and Connected 2050 (2050). This is reflective of the relatively minimal increases in roadway capacity planned as part of the RTP/SCS.

Table 4.12-6 Congested VMT by Facility Type

Congested VMT by Facility Type	Existing (2020)	Future without Connected 2050	Connected 2050	Change from Existing	% Change from Existing
HOV-Freeway	0	14,300	12,400	12,400	100%
Freeway	1,166,800	2,041,100	1,422,700	255,900	22%
Other Principal Arterial	100,400	194,600	137,300	36,900	37%
Minor Arterial	141,500	307,200	158,500	17,000	12%
Urban Collector	9,800	18,300	17,000	7,200	73%
Rural Collector	1,200	4,900	2,300	1,100	92%
Local Road	17,900	27,400	25,300	7,400	41%
Total Congested VMT	1,437,600	2,607,800	1,775,500	337,900	24%
Congested VMT % of Total VMT	13%	19%	15%	–	–
Total VMT	10,958,000	13,676,600	11,539,600	581,600	5%

Source: SBCAG, 2021.

Performance Measures for Assessing Transportation Impacts

The impact analysis considers the roadway, transit, bicycle, and pedestrian components of the regional transportation system. Quantitative analysis focuses on the following performance measures derived from the forecasting results of the SBCAG model.

- Total VMT
- Total VMT per Service Population

In addition to these quantitative measures, qualitative analysis is included to address the overall connectivity of the pedestrian and bicycle system, and safety. Connected 2050 contains a number of bicycle and pedestrian projects. These projects are generally designed to expand and complement the existing bicycle and pedestrian network. An objective of Connected 2050 is to plan and develop a continuous and easily accessible pedestrian and bikeway network throughout the region.

Transportation safety is also assessed based on how the transportation projects in Connected 2050 will comply with applicable design standards of the implementing agencies. As part of planning, design, and engineering for projects that result from the proposed RTP, the implementing agency shall ensure that transportation systems and related issues are treated in accordance with applicable federal, state, and local laws and regulations.

b. Project Impacts and Mitigation Measures

This section describes generalized impacts associated with the Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 would result in transportation and traffic impacts as described in the following sections.

Threshold: A significant impact would occur if the project conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Impact T-1 CONNECTED 2050 WOULD GENERALLY BE CONSISTENT WITH PROGRAMS, PLANS, ORDINANCES AND POLICIES AFFECTING THE CIRCULATION SYSTEM. THIS WOULD BE A LESS-THAN-SIGNIFICANT IMPACT.

Connected 2050 plans how the Santa Barbara County region will meet its transportation needs for the 30-year period from 2020 to 2050, considering existing and projected future land use patterns as well as forecast population and job growth. Connected 2050 is based on a preferred land use and transportation scenario which lays out a pattern of future growth and transportation system investment for the region emphasizing a transit-oriented development and an urban infill approach to land use and housing, located near existing high quality transportation corridors. Accordingly, population and employment growth is allocated principally within existing urban areas near public transit. Allocation of future growth directly addresses jobs-housing balance issues by emphasizing job growth and economic opportunity in the North County and housing growth in the South County.

The preferred scenario consists of three core, inter-related components:

- A land use plan, including residential densities and building intensities sufficient to accommodate projected population, household and employment growth;
- A multi-modal transportation network to serve the region's transportation needs; and
- A "regional greenprint" cataloguing open space, habitat, and farmland as constraints to urban development.

Connected 2050 includes comprehensive lists of programmed and planned transportation investments that are intended to meet performance goals for mobility, safety, congestion relief, system preservation and environmental protection. In addition, an enhanced transit strategy creates a framework for future transit service expansion at such time as new revenue sources become available. Recognizing the uncertain nature of future new revenue sources, it takes a targeted, balanced and flexible approach to expanding transit service as needed in the future. The enhanced transit strategy commits to transit service expansion as new revenue sources become available, (1) identifying when transit enhancements are actually needed through quantitative triggers, and (2) protecting existing funding for competing local demands, such as street and road maintenance. The enhanced transit strategy is a strategy for the future. It does not change the list of fiscally constrained, programmed and planned transportation projects.

Chapter 2 provides the mobility and system reliability goals of Connected 2050. Policy 2.6, Consistency with Other Plans, specifically states that the planning, construction, and operation of transportation facilities shall be consistent with relevant plans, including, but not limited to: (1) the California Transportation Plan, (2) SBCAG's Transportation Connections: The Public Transit Human Services Transportation Plan for Santa Barbara County, (3) adopted local General Plans, (4) short-range transit plans, and (5) other regional policies. Additional information on Connected 2050 transit, bicycle and pedestrian performance are provided below.

Transit

The four major transit operators in the County (MTD, SMAT, COLT, SYVT) have undergone strategic planning processes and have developed transit performance standards. Due to the programmatic nature of Connected 2050, a precise-project level analysis of the potential specific conflicts with performance standards is not possible. In general, however, RTP/SCS transit projects would be consistent with applicable plans and policies because the transit improvements in Connected 2050, including the expansion of transit services, are primarily aimed to support the use of alternative modes of transportation, and because transit authorities in the region have been consulted during the preparation of Connected 2050.

Table 4.12-7 shows that under Connected 2050 average peak and off-peak transit travel time would decrease compared to Existing and Future without Connected 2050 conditions. Ridership is projected to increase as part of the Future without Connected 2050 conditions and would increase even further as part of the proposed project. The transit percent mode share would also increase as a result of the project. Transit access for the total population as well as the low-income population would improve compared to Existing and Future without Connected 2050 proportions. Note that all results are based on the travel demand model and do not reflect the COVID-19 effects on travel patterns (even for the "Existing (2020)" conditions, which are assumed to be temporary relative to the time frame of the RTP/SCS.

Table 4.12-7 Transit Performance

Variable	Unit	Existing (2020)	Future without Connected 2050	Connected 2050
Average Peak Transit Travel Time	Minutes	55.1	62.8	53.4
Average Off-Peak Transit Travel Time	Minutes	46.0	43.0	44.8
Average All Transit Travel Time	Minutes	48.7	48.9	47.4
Transit Ridership (Unlinked)	Passengers	30,990	36,960	38,980
% Mode Share Transit (All)	Percent Share	1.1	1.1	1.2
All 0.5 Mile Transit Accessible Pop (All Routes)	Percent	88.8	88.7	90.1
All 0.5 Mile Transit Accessible Emp (All Routes)	Percent	87.5	84.9	87.3
Low Inc 0.5 Mile Transit Accessible Pop (All Routes)	Percent	92.8	94.1	94.2
Low Inc 0.5 Mile Transit Accessible Emp (All Routes)	Percent	93.6	89.4	92.7

Source: SBCAG, 2021.

Bicycles and Pedestrians

Connected 2050 includes goals and policies to support bicycle and pedestrian travel, and projects identified in the Plan are aimed at improving safety and expanding bicycle and pedestrian facilities. Connected 2050 is consistent with applicable plans and policies. Table 4.12-8 shows that walking and bicycle trips are forecast to increase even further under the RTP/SCS (2050) scenario compared with the Future without Connected 2050 conditions. Note that all results are based on the travel demand model and do not reflect the COVID-19 effects on travel patterns (even for the “Existing (2020)” conditions, which are assumed to be temporary relative to the time frame of the RTP/SCS.

Table 4.12-8 Bicycle and Pedestrian Performance

Variable	Unit	Existing (2020)	Future without Connected 2050	Connected 2050
Walk/Bike Trips	Trips	121,920	138,760	142,360
Active Transportation Trips/Capita	Trips	0.3	0.3	0.3
All-Day Walk Average Time	Minutes	28.7	28.6	28.5
All-Day Walk Average Distance	Miles	1.4	1.4	1.4
All-Day Bike Average Time	Minutes	13.7	13.9	14.0
All-Day Bike Average Distance	Miles	3.1	3.1	3.1
% Mode Share Walk (All)	Percent Share	4.3	4.2	4.3
% Mode Share Bike (All)	Percent Share	1.4	1.3	1.4

Source: SBCAG, 2021.

Connected 2050 would generally be consistent with programs, plans, ordinances and policies affecting the circulation system. Therefore, this is a less than significant impact.

Mitigation Measures

No mitigation measures are required.

Threshold: A significant impact would occur if the SBCAG regional VMT per capita with the project exceeds 14.3% below the regional baseline VMT per capita.

Impact T-2 CONNECTED 2050 WOULD RESULT IN A VMT PER CAPITA REDUCTION OF 7% WHEN COMPARED TO THE REGIONAL BASELINE VMT WHICH DOES NOT MEET THE VMT REDUCTION THRESHOLD OF 14.3%. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The CARB documents are directly relevant for setting VMT per capita reduction expectations consistent with state GHG reduction goals whereas the Caltrans documents, *Transportation Analysis Framework First Edition, Evaluating Transportation Impacts of State Highway System Projects* and *Transportation Analysis under CEQA First Edition, Evaluating Transportation Impacts of State Highway System Projects* (Caltrans 2020) set expectations for total VMT changes related exclusively to state highway capacity expansion projects. Given the limited roadway capacity enhancing projects in the Connected 2050 plan, the use of CARB guidance on VMT per capita reductions is more relevant than Caltrans guidance for highway expansion projects, and therefore, a significant impact would occur if the SBCAG regional VMT per capita with the project exceeds 14.3% below the regional baseline VMT per capita.

Vehicle Miles Traveled

The basic measure of the amount of vehicle travel generated by the project is VMT, defined and described above. Two slightly different measures of VMT are commonly used in analysis: Total VMT and VMT per capita. Both measures are directly from SBCAG model outputs and reflect VMT generated by land uses in the SBCAG region (external trips are not included).

For the reasons described above, VMT per capita is the measure used in the analysis of impacts for Connected 2050. Although the absolute amount of VMT is reported, the impact analysis is based on VMT normalized to population as “per capita” rates. This metric provides a measure of travel efficiency and helps depict whether people are traveling by vehicle more or less over time. A goal of Connected 2050 is to reduce VMT per capita, even though the absolute amount of VMT may increase. A per capita decline in VMT indicates that the transportation network is operating more efficiently, and that people have more travel choices.

Two forecasts were generated for the 2050 conditions: the 2050 Baseline, which accounts for future growth without implementation of Connected 2050, and the 2050 “with project” scenario, which accounts for the future growth and transportation projects envisioned by Connected 2050.

Table 4.12-9 shows the change in VMT, population, and VMT per capita from Existing (2020) to Future without Connected 2050 and with Connected 2050. While total VMT increases as a result of population growth, the strategies of Connected 2050 to avoid significant roadway expansion, improve active transportation and transit, and concentrate land use development around transit, allow growth to incur while VMT per capita decreases. In comparison to Future without Connected 2050 conditions, the proposed project would reduce VMT per capita by 15.6%. However, in comparison to Existing (2020) conditions, the decrease in VMT per capita with Connected 2050 would be 7%. The 7% reduction in VMT per capita does not meet the VMT reduction threshold of 14.3% below regional baseline levels. Therefore, Connected 2050 would have a significant impact on VMT.

Table 4.12-9 Total Vehicle Miles Traveled

Variable	Unit	Existing (2020)	Future without Connected 2050	Connected 2050
Vehicle Miles Traveled	Miles	10,958,000	13,676,600	11,539,600
Population	People	460,800	521,600	521,600
VMT Per Capita	Total VMT/Pop	23.8	26.2	22.1
VMT per Capita Change from Existing	%		10.3%	-7.0%
VMT per Capita Change from Baseline	%			-15.6%

Source: SBCAG, 2021

Mitigation Measures

Transportation project sponsor agencies can and should implement the following mitigation measures. These mitigation measures have been developed for Connected 2050 where applicable for land use and transportation projects that would potentially impact regional VMT per capita. SBCAG does not have authority to require the implementing agencies to adopt the identified mitigation measures; the mitigation measures are within the responsibility and jurisdiction of other public agencies. However, implementation of the following measure(s) would reduce VMT impacts and local agencies with jurisdiction to adopt these measures. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

The state recognized that additional state policy actions and funding would be required to close the VMT gap between what the MPOs could achieve through implementation of their SCSs, and reductions needed to meet state goals. Though the state must initiate these additional actions and funding programs, the exact form of the policies and funding programs must be collaboratively developed with input from MPOs, local agencies, and other organizations to ensure they provide the tools and incentives necessary to go beyond the SCSs in reducing VMT. SBCAG will be an active participant in this process. As part of the development of Connected 2050, SBCAG has identified and prioritized the expenditure of anticipated funding for transit, rail, bicycle and pedestrian, as well as transportation demand management measures, that are envisioned in the 2017 Scoping Plan as key elements of filling that VMT gap.

T-2a Strategies to Reduce VMT from Future Land Use Development

Implementing agencies shall require implementation of VMT reduction strategies through transportation demand management (TDM) programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, and other land use project conditions that reduce VMT. Programs shall be designed to reduce VMT from existing land uses, where feasible, and from new discretionary residential or employment land use projects. The design of programs and project-specific mitigation shall focus on VMT reduction strategies that increase travel choices and improve the comfort and convenience of sharing rides in private vehicles, using public transit, biking, or walking. Modifications may include but are not limited to:

- Provide car-sharing, vanpool, bike sharing, and ride-sharing programs
- Implement or provide access to commute reduction programs
- Provide a bus rapid transit system
- Improve pedestrian or bicycle networks, or transit service

- Provide transit passes
- Encourage tele-commute programs
- Incorporate affordable housing into the project
- Increase density
- Increase mixed uses within the project area
- Incorporate improved pedestrian connections within the project/neighborhood
- Incentivize development in low VMT communities
- Incentivize housing near commercial and offices
- Increase access to goods and services, such as groceries, schools, and daycare
- Incorporate neighborhood electric vehicle network
- Orient the project toward transit, bicycle, and pedestrian facilities
- Provide traffic calming
- Provide bicycle parking
- Limit parking
- Separate out parking costs
- Provide parking cash-out programs

T-2b Strategies to Reduce VMT from Planned Transportation Projects

Roadway capacity expansion projects shall include demand management and transportation systems management and operations (TSMO) including the implementation of complementary facilities that expand travel options for transit, rideshare, biking, and walking. Options could include, but are not limited to:

- Tolling new lanes to encourage carpools and fund transit improvements
- Converting existing general-purpose lanes to HOV or HOT lanes
- Implementing Intelligent Transportation Systems strategies to improve passenger throughput on existing lanes

Significance After Mitigation

If the implementing agency adopts this mitigation measure, Impact T-2 would likely be reduced to a less than significant level in the urban areas of the region, although additional state policy actions and funding would be required to close the VMT gap at the state level between what the MPOs could achieve through implementation of their SCSs, and reductions needed to meet state goals. The strategies identified are programmatic, and they would need to be refined and matched to local conditions in any subsequent project level environmental analysis. For projects proposing to streamline environmental review, lead agencies must conduct project-level analysis for each project to analyze whether, based on substantial evidence in the record, the proposed mitigation would reduce the impact to less than significant. However, the implementation of project-level VMT-reducing measures may not be feasible and cannot be guaranteed on a project-by-project basis. Additionally, it is unlikely that an increase in daily per capita VMT above existing conditions could be fully avoided in 2050, due to factors unrelated to discretionary approvals, such as population growth in the region. Therefore, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

c. Specific Connected 2050 Projects That May Result in Impacts

The analysis within this section discusses the potential transportation and circulation related impacts associated with the transportation improvement projects and the land use scenario envisioned by Connected 2050. The projects within Connected 2050 are evaluated herein in their entirety and all are intended to improve traffic circulation rather than cause adverse impacts. However, as described above, Connected 2050 would increase existing 2020 VMT by approximately 5 percent in 2050, as well as increase total Congested VMT by 24 percent. These effects were found to be significant and unavoidable impacts, as described above. The Connected 2050 transportation project list includes new roadway capacity to accommodate growth and reduce existing bottlenecks in the roadway network. A reasonableness check of the SBCAG modeling results, including the long-term induced travel effects, was completed by reviewing the change in roadway miles in the region with Connected 2050 and congestion levels in comparison to current conditions. Connected 2050 plans for 40 new lane miles by 2050 which is a very minimal increase (1.0 %) in roadway miles over the next three decades. The most substantial change is related to the expansion of high-occupancy vehicle (HOV) lanes (commonly called “carpool” lanes), as part of a planned expansion of U.S. 101 in South County from Carpinteria to the City of Santa Barbara, which has already started construction.

Overall, the combined projects create a VMT increase as a result of population growth. The strategies of Connected 2050 to avoid significant roadway expansion, improve active transportation and transit, and concentrate land use development around transit allow growth to incur while VMT per capita decreases. The 7 percent reduction in VMT per capita achieved in Connected 2050 does not meet the VMT reduction threshold of 14.3 percent below regional baseline levels. Therefore, Connected 2050 would still have a significant impact on VMT.

4.12.4 Cumulative Impacts

The analysis in this section examines transportation impacts of the Connected 2050 transportation projects and land use strategies throughout the SBCAG region that are cumulative in nature. The allocation of population and employment growth within existing urban areas near public transit in Connected 2050 is intended to reduce VMT. In addition, the envisioned jobs-housing balance shortens commute trips by emphasizing job growth and economic opportunity in the North County and housing growth in the South County. The comprehensive lists of programmed and planned transportation investments include projects to improve transit, biking, and walking in the region. Connected 2050, nonetheless, increases overall VMT and does not meet the VMT reduction threshold of 14.3 percent below regional baseline levels, as discussed above. This five percent increase in overall VMT, with an anticipated increase in VMT from surrounding regions from just population growth and new development, would lead to a cumulatively considerable increase in VMT.

Connected 2050 is not expected to substantially increase inter-regional travel, because it addresses the accommodation of projected traffic growth coming from outside the region. Therefore, the Connected 2050 related contributions to VMT outside the region are expected to be minimal. While the majority of the VMT would be expected to remain within the SBCAG region, some portion of the VMT would inevitably extend to areas within adjoining counties to the region. The most reasonable assumption is that VMT to adjoining counties would be concentrated to the most heavily travelled roadway in the county, mainly Highway 101. It can be assumed residents in the SBCAG region commute to neighboring jurisdictions for work and that would increase with the expected increase in population in SBCAG and surrounding regions through 2050. These longer commutes would also lead to an increase in overall VMT per capita.

Land use development within the SBCAG region combined with the growth outside of its region could potentially contribute to a cumulatively considerable increase in VMT as a result of increased travel demand resulting from that combined growth. As a result, Connected 2050 could result in a cumulatively considerable increase in VMT. Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.

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4.13 Tribal Cultural Resources

This section analyzes the impacts of the implementation of Connected 2050 on tribal cultural resources. Tribal cultural resources are those resources identified by California Native American tribes in consultation with lead agencies during tribal consultation (also referred to as Assembly Bill (AB) 52 consultation. See Section 4.13.3, *Regulatory Setting*, for a description of AB 52 and its requirements.

4.13.1 Setting

Ethnographic Setting

The SBCAG region lies within Chumash ethnographic territory, which extends from the current city of Malibu, north beyond San Luis Obispo, and inland as far as 68 kilometers (42 miles) (Glassow 1996). The Chumash also inhabited the northern Channel Islands. The Chumash spoke six closely related languages, divided into two broad groups – Northern Chumash, consisting of only Obispeño, and Southern Chumash, including Purisimeño, Ineseño, Barbareño, Ventureño, and Island Chumash (Mithun 1999). The Chumash are divided into three main groups, including Interior, Coastal, and Northern Channel Islands Chumash. The coastal Barbareño Chumash referred to themselves as the Wal-wa-ren-na, and “occupied the narrow coastal plain from Point Conception to Punta Gorda in Ventura County” (Grant 1978:509).

Chumash villages generally ranged between 30 and 200 people, with the largest settlements numbering anywhere from 500 to 800 people (Glassow 1996:14). Grant (1978) describes a typical Chumash village along the Santa Barbara Channel as consisting of “several houses, a sweathouse, store houses, a ceremonial enclosure, gaming area, and a cemetery usually placed well away from the living area.” Archaeological investigations have recognized separate areas within cemeteries for elites and non-elites (King 1969).

Permanent Chumash villages included hemispherical or rounded mud-covered (insulated) pole and thatch dwellings arranged in close groups (Brown 2001). Thatching was made from tule, Carrizo grass, wild alfalfa, and fern (Grant 1978). Smaller Chumash groups correspondingly occupied short-term special-purpose camps throughout the year to acquire seasonal resources (Glassow 1996). Cooking fires were centered within the dwelling to allow smoke to ventilate through a hole in the roof (Grant 1978).

The Chumash are well-known for their wooden plank canoe, or tomol. The tomol facilitated the procurement of marine resources and the trade network between the mainland and the Channel Islands. Sea mammals were hunted with harpoons, while deep-sea fish were caught using nets and hooks and lines. In addition to marine resources, the Chumash subsistence focused on acorns, pine nuts, prickly pear cactus, and other plant resources, and land animals such as mule deer, antelope, quail, dove, and other waterfowl (Brown 2001). The Chumash also manufactured various other utilitarian and non-utilitarian items. Eating utensils, ornaments, fishhooks, harpoons, and other items were made using bone and shell. Olivella shell beads were especially important for trade.

Spanish explorers first arrived in the Santa Barbara Channel region in 1542. Contact had much more of an impact starting in 1770 with the establishment of the missions. Mission life led to severe population decline and culture loss (Johnson 1987). Although the Chumash languages are no longer commonly spoken (Timbrook 1990), many descendants of the Chumash still live in the region and a cultural revitalization has been ongoing since the 20th century (Glassow et al. 2007).

Existing Conditions

SBCAG has conducted AB 52 consultation as the lead agency for implementation of the 2050 RTP/SCS. This consultation included written communication with the nine tribes who had previously requested formal notice to consult on December 15, 2020 and one tribe, the San Gabriel Band of Mission Indians, was added subsequently and a written communication was sent to this tribe on December 15, 2020 as well. SBCAG received one response, from the Santa Ynez Band of Chumash Indians, on December 23, 2020 requesting consultation. SBCAG reached out to the representative of the tribe on the following dates to coordinate consultation:

- 1/4/2021: Email sent to Kelsie Merrick to invite to EIR scoping meeting and as offer for individual consult
- 1/5/2021: Phone call and multiple emails sent to Pat Tumamait to invite to EIR scoping meeting and as offer for individual consult. His wife was able to attend Scoping meeting and provide comments.
- 1/5/2021: Phone call and three emails sent to Frank Arredondo to invite to EIR scoping meeting and as offer for individual consult. Mr. Arredondo attended EIR scoping meeting and provided comments.
- 1/5/2021: SBCAG sent email to Sam Cohen inviting to attend scoping meeting
- 3/2/2021: Email sent to Kelsie Merrick to invite with offer for individual consult
- 3/18/2021: SBCAG received request from Kelsie Merrick requesting a consultation on Tribal Cultural Resources.
- 4/5/2021: Tribal consultation meeting held with the Chumash via Zoom. Attending from the Santa Ynez Band of Chumash Indians: Sam Cohen, Nakia Zavalla, Kelsie Merrick, and Allison McAdams. Mr. Cohen stated he would provide a letter response regarding Tribal Cultural Resources by 4/16/2021. A second request for a response was sent on 4/21/2021.

As of April 28, 2021, no other consultation requests or responses had been provided.

4.13.2 Regulatory Setting

a. Federal Regulations

Tribal cultural resources area a category of resource identified by state law; there are no federal regulations pertaining to tribal cultural resources.

b. State Regulations

Assembly Bill 52 of 2014

AB 52 expanded CEQA by defining a new resource category, “tribal cultural resources.” AB 52 establishes that “a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment” (Public Resources Code [PRC] Section 21084.2). AB 52 further states when feasible, the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as “sites, features, places, cultural landscapes, sacred places,

and objects with cultural value to a California Native American tribe,” and meets either of the following criteria:

- a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k).
- 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 PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments and with respect to the interests and roles of project proponents, it is the intent AB 52 to accomplish all of the following:

1. Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.
2. Establish a new category of resources in CEQA called “tribal cultural resources” that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.
3. Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.
4. Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated (because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources).
5. In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, early in the CEQA environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision-making body of the lead agency.
6. Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to CEQA.
7. Ensure that local and tribal governments, public agencies, and project proponents have information available, early in CEQA environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.
8. Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources.
9. Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified or adopted. AB 52 requires that lead agencies “begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project.” Native American tribes to be included in the process are those that have requested notice of projects proposed in the jurisdiction of the lead agency.

Senate Bill 18

SB 18 of 2004 (California Government Code §65352.3) requires local governments to contact, refer plans to and consult with tribal organizations prior to making a decision to adopt or amend a general or specific plan. The tribal organizations eligible to consult have traditional lands in a local government’s jurisdiction and are identified, upon request, by the Native American Heritage Commission (NAHC). As noted in the California Office of Planning and Research’s Tribal Consultation Guidelines (2005), “The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places.”

c. Local Regulations

County of Santa Barbara Cultural Resource Guidelines

The Santa Barbara County *Environmental Thresholds and Guidelines Manual* (2021) includes Cultural Resources Guidelines, Archaeological Historical, and Ethnic Elements that provide local criteria for determining the significance of archaeological resources. Under County criteria, an “important archaeological resource” can be defined by one of several factors. A resource is considered significant for the purposes of CEQA if it demonstrates one or more of the following:

- Is associated with an event or person of recognized significance in California or American history or recognized scientific importance in prehistory;
- Can provide information that is of demonstrable public interest and is useful in addressing scientifically consequential and reasonable research questions;
- Has a special or particular quality such as oldest, best example, largest or last surviving example of its kind;
- Is at least 100 years old and possesses substantial stratigraphic integrity; or
- Involves important research questions that historical research has shown can be answered only with archaeological methods.

4.13.3 Impact Analysis

a. Methodology and Significance Thresholds

According to Appendix G of the State CEQA Guidelines, an impact on Tribal Cultural Resources from the proposed project would be significant if the following applies:

- 1) 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:

- 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
- 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.

b. Project Impacts and Mitigation Measures

The following section presents a programmatic-level discussion of the potential for impacts to sensitive biological resources from implementation of Connected 2050. Impacts and associated mitigation measures would apply in Santa Barbara County and all cities within the County. Section 4.13.4 summarizes the impacts associated with capital improvement projects proposed in Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible at this time. In general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could result in the impacts as described in the following section.

Threshold: 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

Impact TCR-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN CONNECTED 2050 HAVE THE POTENTIAL TO IMPACT TRIBAL CULTURAL RESOURCES. ALTHOUGH MITIGATION MEASURE TCR-1 WOULD REDUCE POTENTIAL IMPACTS TO THE EXTENT FEASIBLE, IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As part of its tribal cultural resource identification process, SBCAG sent letters via certified mail to ten Native American tribes that had previously requested to be informed through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribes. One tribe, the Santa Ynez Band of Chumash Mission Indians, requested consultation in December 2020. As discussed in the Setting, a tribal consultation meeting was held in April 2021 with the identified tribe requesting consultation. No further consultation requests nor identification of tribal cultural resources that may be impacted by Connected 2050 have been received by SBCAG. Connected 2050 is a high-level planning document, and while the tribes who were sent consultation request letters did not identify any specific tribal cultural resources impacted by the proposed Plan, it remains a possibility that tribal cultural resources may be present within geographic areas affiliated with those tribes and they did request to be reached for consultation when individual RTP projects are being developed to provide input on potential impacts to tribal cultural resources.

As such, tribal cultural resources could be encountered during implementation of the transportation improvement projects and the land use scenario envisioned by Connected 2050. Effects on tribal cultural resources are highly dependent on the individual project site conditions and the characteristics of the proposed project. Both documented and undocumented potential tribal cultural resources are known to exist throughout the SBCAG region. Impacts to tribal cultural

resources may include damage or destruction of the resources. Adherence to the requirements of AB 52 for tribal consultation with local California Native Americans, and require the identification of project-specific substantial adverse effects on tribal cultural resources and appropriate project-specific mitigation measures. If the implementing agency determines that a specific transportation or land use project could cause a substantial adverse change in the significance of a tribal cultural resource, the impact would be significant.

Mitigation Measures

Transportation project sponsor agencies can and should implement, the following mitigation measure for applicable transportation projects. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

TCR-1 Tribal Cultural Resources Impact Minimization

Implementing agencies shall comply with AB 52, which requires formal tribal consultation. If the implementing agency, through consultation with identified tribes through the AB 52 process, determines that a project may cause a substantial adverse change to a tribal cultural resource, they shall implement mitigation measures identified in the consultation process required under PRC Section 21080.3.2, or shall implement the following measures where feasible to avoid or minimize the project-specific significant adverse impacts:

- Avoidance and preservation of the resources in place, including, but not limited to: planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - Protecting the cultural character and integrity of the resource
 - Protecting the traditional use of the resource
 - Protecting the confidentiality of the resource
- Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- Native American monitoring by the appropriate tribe for all projects in areas identified as sensitive for potential tribal cultural resources and/or in the vicinity (within 100 feet) of known tribal cultural resources.
- If potential tribal cultural resources are encountered during ground-disturbing activities; work in the immediate area must halt and the appropriate tribal representative(s), the implementing agency, and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service [NPS] 1983) shall be contacted immediately to evaluate the find and determine the proper course of action.

Significance After Mitigation

Mitigation Measure TCR-1 would require AB 52 compliance and would result in necessary mitigation being identified through tribal consultation to avoid impacts to tribal cultural resources. These measures would protect the resource's character, traditional use and confidentiality. With such protection, implementation of the above measure would reduce impacts to tribal cultural resources to the extent feasible, however some project-specific impacts may be unavoidable. Therefore, this impact is significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

c. Specific Projects that May Result in Impacts

All Connected 2050 projects that require construction may result in impacts as discussed above; and therefore, are not specifically identified in table format below. All Connected 2050 projects are listed in Section 2, *Project Description*. Additional analysis and AB 52 consultation with local tribes would be needed as the individual projects are implemented in order to determine the project-specific impact. Mitigation Measure TCR-1 discussed above would apply to these specific projects.

4.13.4 Cumulative Impacts

Tribal cultural resources are regionally specific and determined by the local tribes. However, development in the SBCAG region would increase under buildout of Connected 2050 by increasing mobility and growth. The increase in growth in previously undisturbed areas contributes to regional impacts on tribal cultural resources. If there may be tribal cultural resources at the location of a project site, tribal consultation in accordance with AB 52 would occur to ensure protection of tribal cultural resources. However, tribal territory often crosses the boundaries of multiple jurisdictions within and outside of the SBCAG region, and there could be several minor impacts to tribal cultural resources that together would result in a significant cumulative impact. Therefore, the potential for cumulative impacts related to tribal cultural resources is significant and Connected 2050's contribution would be cumulatively considerable. Mitigation Measure TCR-1 would reduce these impacts, but not to less-than-cumulatively-considerable levels.

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4.14 Wildfire

This section analyzes wildfire impacts from buildout of Connected 2050. Impacts related to emergency response plans, exposure to wildfire risk factors, associated infrastructure, and exposure to people or structures due to post-fire risks are addressed.

4.14.1 Setting

Physical Setting

Wildfires

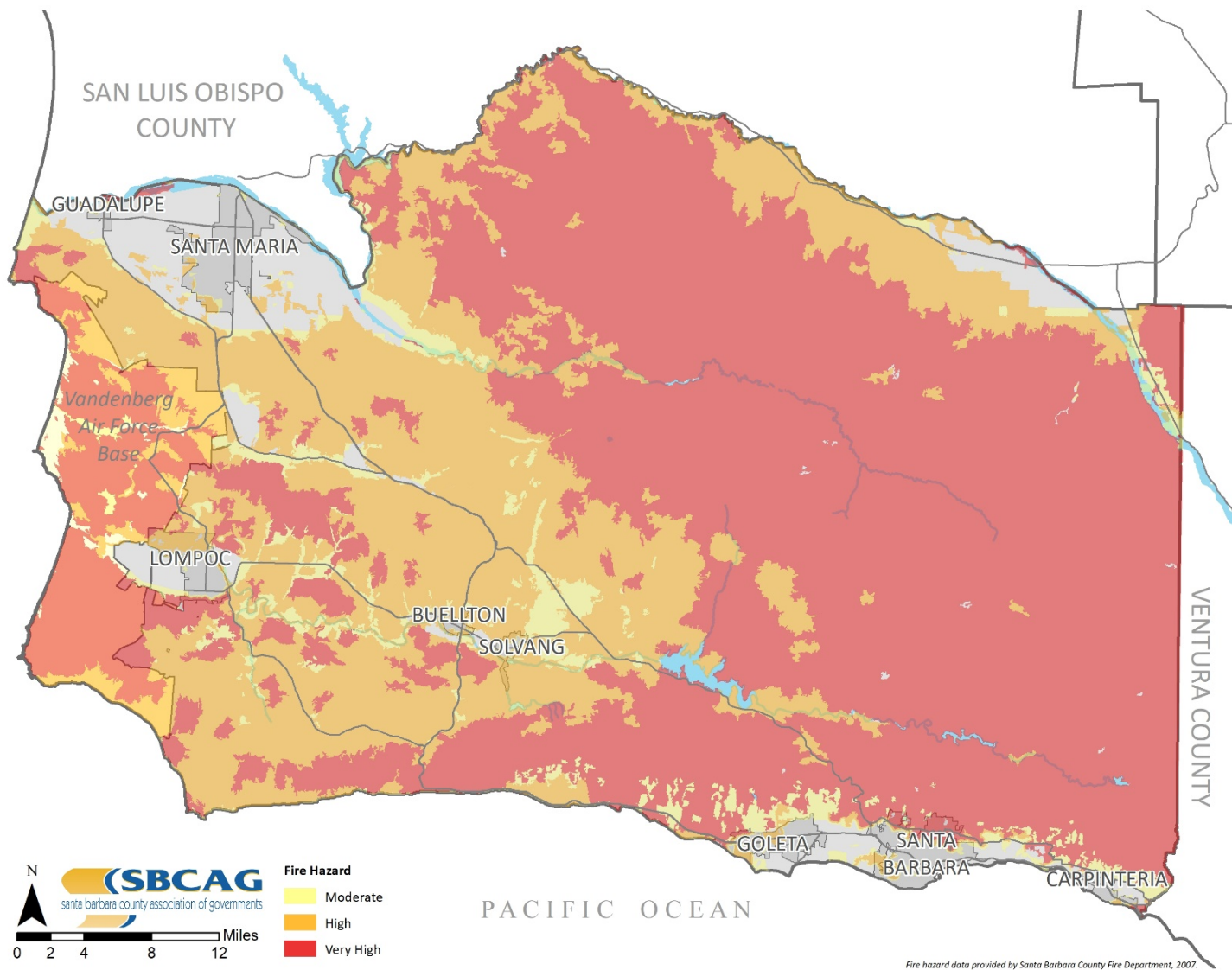
In California, responsibility for wildfire prevention and suppression is shared by federal, State, and local agencies. Federal agencies are responsible for federal lands in Federal Responsibility Areas. California has determined that some non-federal lands in unincorporated areas with watershed value are of statewide interest and have classified those lands as State Responsibility Areas (SRA), which are managed by the California Department of Forestry and Fire Protection (CAL FIRE). All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRA).

While all of California is subject to some degree of wildfire hazard, there are specific features that make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather and other relevant factors (Public Resources Code [PRC] 4201-4204 and California Government Code 51175-89). Factors that increase an area's susceptibility to fire hazards include slope, vegetation type and condition and atmospheric conditions. CAL FIRE has identified two types of wildfire risk areas: 1) Wildland Areas That May Contain Substantial Forest Fire Risks and Hazards and 2) Very High Fire Hazard Severity Zones. Each risk area carries with it code requirements to reduce the potential risk of wildfires. Under state regulations, areas within very high fire hazard risk zones must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life within these areas.

Throughout the SBCAG region, there is a full range of conditions and fire hazards as indicated in the applicable Fire Hazard Severity Zone Maps for the region. According to the Santa Barbara County Fire Hazard Severity Zones in SRA (CAL FIRE 2007), large amounts of the county are designated Very High Fire Hazard Severity Zone, with the majority of it being within CAL FIRE responsibility areas. Figure 4.14-1 displays the fire hazard severity zones for Santa Barbara County.

Development that has spread into less densely populated, often hilly areas, has increased the number of people living in heavily vegetated areas that are prone to wildfire and more difficult to battle due to the hilly terrain. The area where wildlands meet urban development is referred to as the wildland-urban interface, where urban wildfires occur. The 2017 Thomas Fire that devastated Ventura and Santa Barbara counties is considered one of the largest wildfires in California history. The Thomas Fire resulted in 281,893 burned acres and destroyed 1,063 structures (CAL FIRE 2017) and is an example of the major losses that can result from a fire in the wildland-urban interface.

Figure 4.14-1 Santa Barbara County Fire Hazard Severity Zone Map



4.14.2 Regulatory Setting

Federal Regulations

Federal Disaster Mitigation Act

The Disaster Mitigation Act of 2000 provided a new set of mitigation plan requirements that encourage state and local jurisdictions to coordinate disaster mitigation planning and implementation. States are encouraged to complete a “Standard” or an “Enhanced” Natural Mitigation Plan. “Enhanced” plans demonstrate increased coordination of mitigation activities at the state level and, if completed and approved, increase the amount of funding through the Hazard Mitigation Grant Program. The State of California Multi-Hazard Mitigation Plan (SHMP) complies with this act.

State Regulations

The California Fire Plan

The Strategic Fire Plan for California is the State’s road map for reducing the risk of wildfire. The most recent version of the Plan was finalized in August 2018 and directs each CAL FIRE Unit to revise and update its locally specific Fire Management Plan (CAL FIRE 2018b). These plans assess the fire situation within each of the 21 CAL FIRE units and six contract counties. The plans address wildfire protection areas, initial attack success, assets and infrastructure at risk, pre-fire management strategies, and accountability within their geographical boundaries.

California Office of Emergency Services

The California Office of Emergency Services prepares the State of California Multi-Hazard Mitigation Plan (SHMP), which identifies hazard risks and includes a vulnerability analysis and a hazard mitigation strategy. The SHMP is required under the Disaster Mitigation Act of 2000 in order for the State to receive federal funding. The Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance.

California Building Code (2019)

Chapter 7A of the California Building Code (California Code of Regulations, Title 24, Part 2) includes specific requirements related to exterior wildfire exposure. These requirements establish minimum standards to protect buildings located in Fire Hazard Severity Zone within SRAs and Wildland-Urban Interface Fire Areas. This code includes provisions for ignition-resistant construction standards for new buildings.

California Fire Code

The 2019 California Fire Code (California Code of Regulations, Title 24, Part 9) establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and

occupancy, location, maintenance, removal, and demolition of buildings or structures or any appurtenances connected or attached to such building structures throughout California.

Local Regulations

a. General Plans

County of Santa Barbara General Plan

The Santa Barbara County Comprehensive Plan Seismic Safety and Safety Element contains goals and policies with the specific intention of reducing the region's risk of fire hazards. It was adopted in 2015 and demonstrates the County's compliance with fire prevention and protection requirements outlined in State law (Santa Barbara 2015).

- **Fire Policy 1:** Continue to pursue and promote County fire prevention programs and control measures.
 - Fire Implementation Measure 1 - Maintain and Enforce Fire Prevention Programs and Plans
 - Fire Implementation Measure 2 - Continue Development Review Process
 - Fire Implementation Measure 3 - Enforce Title 24 of the California Code of Regulations, Part 9 California Fire Code
 - Fire Implementation Measure 4 - Enforce Title 24 of the California Code of Regulations, Part 2 California Building Code
 - Fire Implementation Measure 5 - Maintain and Enforce County Code Chapter 10-Building Regulations
 - Fire Implementation Measure 6 - Maintain and Implement the Santa Barbara County Multi-Jurisdiction Hazard Mitigation Plan
 - Fire Implementation Measure 8 - Maintain and Enforce County, Carpinteria, and Montecito Fire Department Development Standards where applicable
 - Fire Implementation Measure 12 - Maintain and Enforce County Code Chapter 15-Fire Prevention
- **Fire Action 1.1:** Work with SBCoFD, Cal Fire, and interested stakeholders to address and incorporate, as appropriate, State Board of Forestry and Fire Protection recommendations pursuant to Senate Bill 1241, in the Seismic Safety and Safety Element upon the next revision of the Housing Element.
- **Fire Policy 2:** The County shall use California Department of Forestry and Fire Protection-Fire Hazard Severity Zones to determine appropriate construction materials for new buildings in State Responsibility Areas (SRA), local agency Very-High Fire Hazard Severity Zones and designated Wildland-Urban Interface areas pursuant to the California Code of Regulations Title 24, Part 2, California Building Code.
 - Fire Implementation Measure 5 - Maintain and Enforce County Code Chapter 10-Building Regulations
 - Fire Implementation Measure 4 - Enforce Title 24 of the California Code of Regulations, Part 2 California Building Code
 - Fire Implementation Measure 12 - Maintain and Enforce County Code Chapter 15-Fire Prevention

- **Fire Policy 3:** Fire Hazard Severity Zone Maps, as maintained by the California Department of Forestry and Fire Protection, shall be used to illustrate the official areas of Very High Fire Hazard Severity Zones (VHFHSZ) in the Local and State Responsibility Areas.
 - Fire Implementation Measure 7 - Enforce County of Santa Barbara maps for Very High Fire Hazard Severity Zones (VHFHSZ)
 - Fire Implementation Measure 5 - Maintain and Enforce County Code Chapter 10 Building Regulations
 - Fire Implementation Measure 12 - Maintain and Enforce County Code Chapter 15-Fire Prevention
- **Fire Policy 4:** To reduce the potential for fire damage, the County shall continue to require consistency with County Fire Department Development Standards pursuant to the California Fire Code, Public Resource Code §4291, and Government Code §51175-51188.
 - Fire Implementation Measure 5 - Maintain and Enforce County Code Chapter 10 Building Regulations
 - Fire Implementation Measure 8 - Maintain and Enforce County, Carpinteria, and Montecito Fire Department Development Standards where applicable
 - Fire Implementation Measure 12 - Maintain and Enforce County Code Chapter 15-Fire Prevention
- **Fire Policy 5:** The County shall continue to require defensible space clearance around all structures in unincorporated Local Responsibility Areas pursuant to Public Resource Code §4291, and Government Code §51175-51188.
 - Fire Implementation Measure 8 - Maintain and Enforce County, Carpinteria, and Montecito Fire Department Development Standards where applicable
 - Fire Implementation Measure 12 - Maintain and Enforce County Code Chapter 15-Fire Prevention
- **Fire Policy 6:** The County should continue to collaborate with the California Department of Forestry and Fire Protection in the revision of Fire Hazard Severity Zone Maps.
 - Fire Implementation Measure 7 - Enforce County of Santa Barbara maps for Very High Fire Hazard Severity Zones (VHFHSZ)
 - Fire Implementation Measure 5 - Maintain and Enforce County Code Chapter 10-Building Regulations
- **Fire Policy 7:** The County should strive to maintain partnerships with tribal governments, state, local, and federal agencies to identify, prioritize, and implement fire prevention and protection measures in the County.
 - Fire Implementation Measure 9 - Continue to Encourage Interagency Agreements
- **Fire Policy 8:** The County Office of Emergency Services (OES) shall continue coordinating emergency planning for the Santa Barbara Operational Area pursuant to the California Emergency Services Act of 1970.
 - Fire Implementation Measure 9 - Continue to Encourage Interagency Agreements
 - Fire Implementation Measure 10 - Maintain and Enforce County Code Chapter 12-Civil Defense and Disaster

- Fire Implementation Measure 11 - Enforce the California Emergency Services Act
- **Fire Policy 9:** The County shall minimize the potential effects of fire hazards through the development review process pursuant to State law.
 - Fire Implementation Measure 2 - Continue Development Review Process
 - Fire Implementation Measure 3 - Enforce Title 24 of the California Code of Regulations, Part 9 California Fire Code
 - Fire Implementation Measure 4 - Enforce Title 24 of the California Code of Regulations, Part 2 California Building Code
 - Fire Implementation Measure 5 - Maintain and Enforce County Code Chapter 10-Building Regulations
 - Fire Implementation Measure 6 - Maintain and Implement the Santa Barbara County Multi-Jurisdiction Hazard Mitigation Plan
 - Fire Implementation Measure 8 - Maintain and Enforce County, Carpinteria, and Montecito Fire Department Development Standards where applicable
 - Fire Implementation Measure 12 - Maintain and Enforce County Code Chapter 15-Fire Prevention
- **Fire Policy 10:** The County should reference the Santa Barbara County Multi-Jurisdiction Hazard Mitigation Plan when considering measures to reduce potential harm from fire-related activity to property and lives.
 - Fire Implementation Measure 6 - Maintain and Implement the Santa Barbara County Multi-Jurisdiction Hazard Mitigation Plan

City of Santa Barbara General Plan

The City of Santa Barbara's Safety Element was adopted in 2011 and addresses many aspects of fire prevention and planning such as evacuation routes, defensible space, fire hazard reduction design requirements, and post-fire recovery (Santa Barbara 2011).

- **Policy S33: Fire Hazard Programs.** The City shall continue to implement programs that reduce the risk of wildland and structure fires, and that minimize the short- and long-term effects of fires.
 - a) **Wildfire Risk Reduction.** Continue to implement risk reduction measures identified by the Wildland Fire Plan, such as vegetation fuels management and vegetation chipping.
 - b) **Limit Residential Development in High Fire Hazard Areas.** Land use map designations limit residential density in High Fire Hazard Areas.
 - c) **Wildland Fire Suppression Assessment District.** Continue to implement wildfire risk reduction programs facilitated by the Wildland Fire Suppression Assessment District, such as vegetation management and homeowner education and assistance programs.
 - d) **Coordination.** Continue to coordinate fire risk prevention, management, response, recovery, and public education programs with the County of Santa Barbara, Montecito Fire Protection District, U.S. Forest Service, California Emergency Management Agency, CAL FIRE, Federal Emergency Management Agency and other agencies.
 - *Possible Implementation Actions to be Considered 533.1.*
Offer incentives and/or an option for property owners to transfer development rights from the High Fire Hazard Area to the High-Density residential land use designations.

- **Policy S34: Evacuation Routes.** Development projects located in the Extreme Foothill and Foothill High Fire Hazard Zones shall be evaluated to determine if the project would have the potential to substantially affect emergency evacuation. A project would result in a substantial effect on evacuation if it would result in either of the following conditions:
 - a) Physically interfere with evacuation capabilities. A project could physically interfere with evacuation capabilities if it would reduce evacuation capacity by substantially decreasing the width of road or other access way or result in the closure of a road or access way.
 - b) Add substantial additional evacuees to routes with limited capacity. A project could substantially reduce evacuation capacity if it would add a considerable amount of traffic to probable evacuation routes that do not meet current Fire Department roadway or access standards; or add a considerable amount of traffic to probable evacuation routes in relation to roadway capacity and evacuation traffic volumes reasonably expected to be generated by existing development in the project area.
- **Policy S35: Evacuation Route Evaluation.** The Fire Department shall periodically evaluate the effectiveness of existing and proposed fire emergency evacuation routes and develop standards or conditions that can be applied to projects to assure that adequate evacuation capacity is provided and maintained.
- **Policy S36: Fire Department Tactical Areas.** To increase fire fighter safety during wildfire emergencies, new development and major redevelopment proposals located in designated high fire hazard areas shall be reviewed to assess the potential for the project to provide on-site fire suppression tactical areas, such as staging areas, operational safety zones, and escape routes. Fire suppression tactical areas should be provided consistent with criteria provided by the Fire Department.
- **Policy S37: Fire Hazard Reduction Design Requirements.** Project designs shall adequately address fire hazard, providing for appropriate site layout; building design and materials; fire detection and suppression equipment; landscaping and maintenance; road access and fire vehicle turnaround; road capacity for evacuation; and water supply.
- **Policy S38: Fire Education and Training.** The Fire Department shall continue working with the Planning Commission, Design Review Boards, development review staff and the public to enhance understanding and appropriate application of measures to reduce fire hazard.
- **Policy S39: Defensible Space.** Require that defensible space be provided around existing and proposed development projects located in high fire hazard areas in accordance with the Wildland Fire Plan, or as recommended by the Fire Department.
- **Policy S40: Vegetation Management.** Vegetation management programs to reduce fire fuel loads, as well as project-related landscape and maintenance plans, shall protect and preserve environmentally sensitive habitat areas (ESHAs) and balance fire risk reduction benefits with possible aesthetic, habitat, and erosion impacts. Potential effects resulting from fuel management activities shall be avoided or reduced as feasible.
- **Policy S41: Fire Prevention and Creek Restoration.** Coordinate fire prevention and vegetation management activities with creek and riparian resource protection by developing and implementing Best Management Practices for vegetation/fuel management operations conducted within and adjacent to creek corridors.
 - *Possible Implementation Actions to be Considered 541.1*
Vegetation Management Practices. Develop guidelines for conducting fuel management activities in creek areas. The guidelines should include the following parameters:

- a) Describe conditions that may warrant vegetation management activities within or adjacent to creek banks.
 - b) Establish requirements to prepare site-specific vegetation management evaluations. Avoid fuel management operations within or adjacent to sensitive habitat areas.
 - c) Delineate requirements regarding when a Streambed Alteration Agreement (Fish and Game Code 1601) from the California Department of Fish and Wildlife and a Coastal Development Permit are required prior to the implementation of the vegetation management work.
 - d) Identify standard approaches and measures to be implemented to protect biological and water resources if planned vegetation management operations have the potential to result in substantial direct or indirect effects to sensitive habitat, species, erosion, or water quality.
 - Avoid impacts to nests of migratory birds and special-status species. Develop standards for when vegetation management operations may be conducted to minimize the potential for impacts to nesting birds and sensitive species.
 - If, after careful consideration of need and environmental effects including biological, erosion, and water quality impacts, clearing may be necessary in or near creeks and habitats, hand clearing shall be utilized to the greatest extent feasible.
- **Policy S42: Post Fire Recovery.** Rebuilding that occurs in designated high fire hazard areas shall incorporate all applicable design measures that reduce the risk of future fire-related impacts. Expedited project review and permitting shall occur as determined by the Community Development Director.
 - **Policy S43: Building Code Updates.** Periodically adopt amendments or updated provisions of the California Building Code to implement new building design measures that reduce fire risks.
 - **Policy S44: Public Water System Improvements for Fire Fighting.** Continue to periodically evaluate the potential for additional water system improvements to assist in emergency preparedness and incorporate feasible measures into the City Capital Improvement Plan.
 - **Policy S45: Private Water Supplies for Fire Fighting.** Encourage and assist homeowners in High Fire Hazard Areas to install their own emergency water supplies to support firefighting operations.

City of Goleta General Plan

Similarly, the Goleta General Plan contains policies aimed at incorporating fire safety measures when considering development, such as Policy SE 7.1 which requires “Applications for new or expanded development to be reviewed by appropriate Santa Barbara County Fire Department personnel to ensure they are designed in a manner that reduces the risk of loss due to fire.” (Goleta 2006).

- **Policy SE 7:** To reduce the threat to life, structures, and the environment caused by urban and wildland fires.
 - a) **SE 7.1** Fire Prevention and Response Measures for New Development. [GP/CP] New development and redevelopment projects shall be designed and constructed in accordance with National Fire Protection Association standards to minimize fire hazards, with special attention given to fuel management and improved access in areas with higher fire risk, with access or water supply deficiencies, or beyond a 5- minute response time.

- b) **SE 7.2** Review of New Development. [GP/CP] Applications for new or expanded development shall be reviewed by appropriate Santa Barbara County Fire Department personnel to ensure they are designed in a manner that reduces the risk of loss due to fire. Such review shall include consideration of the adequacy of “defensible space” around structures at risk; access for fire suppression equipment, water supplies, construction standards; and vegetation clearance. Secondary access may be required and shall be considered on a case-by-case basis. The City shall encourage built-in fire suppression systems such as sprinklers, particularly in high-risk or high-value areas.
- c) **SE 7.3** Identification of Fire Hazard Areas. [GP/CP] The Santa Barbara County Fire Department should identify high-value and high-risk areas, including urban/wildlife interface areas, and develop mitigation efforts to reduce the threat of fire.
- d) **SE 7.4** Fuel Modification Plans. [GP/CP] Applications for new development that require fuel modification shall include a Fuel Modification Plan for the project. This plan shall be prepared by a landscape architect or resource specialist and shall include measures to minimize removal of native vegetation, minimize disturbance to environmentally sensitive habitat areas (ESHAs), and incorporate fire-retardant vegetation in new plantings. Such plans shall be reviewed and approved by the Santa Barbara County Fire Department.
- e) **SE 7.5** Automatic Fire Sprinkler Systems. [GP] The City shall require the installation of automatic fire sprinklers for: a) all new buildings that have a total floor area of 5,000 square feet or more and b) any existing building proposed for remodeling or an addition, which, upon completion of the remodel or addition, will have a total floor area of 5,000 square feet or more. The 5,000-square-foot threshold cited in criteria a) and b), above, shall be reduced to 1,000 square feet for any building zoned or used for commercial or industrial purposes if such building is within 100 feet of any residentially zoned parcel.
- f) **SE 7.6** Standards for Rebuilding in High Fire Hazard Areas. [GP] Any rebuilding in high fire hazard areas shall incorporate development standards and precautions that reduce the chance of structure losses from fire.

City of Solvang General Plan

Solvang’s General Plan was adopted in 2016 and contains objectives, policies, and implementation measures intending to incorporate applicable fire safety standards into new development and to manage vegetation to reduce fire hazards (Solvang 2016).

- **Policy 5.1:** New development, and especially new development on the City’s urban/wildland interface, shall be designed to protect life and property from the effects of wildfires and structural fires.
 - a) **Action Item (A)** Require new development to be constructed according to fire safety and structural stability standards contained in the latest adopted California Fire and Building Codes and related regulations.
 - b) **Action Item (B)** Require that new development provide all necessary water service, fire hydrants, and roads consistent with Fire Department standards.
 - c) **Action Item (C)** Minimize the dependence of new commercial and industrial developments on County firefighting personnel and equipment by requiring on-site fire suppression systems which include sprinklers and pumps, as deemed necessary.
 - d) **Action Item (D)** Require property owners to remove fire hazards, including vegetation, hazardous structures and materials, and debris, as directed by the Fire Department.

- e) **Action Item (E)** Ensure that new development provides for adequate fire equipment access and, where appropriate, includes the use of fire-resistant landscaping and building materials.
 - f) **Action Item (F)** Require that all roads and buildings are properly identified by name or number with clearly visible signs in order to promote faster response times.
 - g) **Action Item (G)** Ensure that all proposed developments are reviewed for compliance with the California Fire Code and other applicable State laws.
 - h) **Action Item (H)** Maintain an ongoing fire and life safety inspection program for all public, commercial, and industrial buildings.
- **Policy 5.2:** The City shall work with Santa Barbara County Fire Department to maintain fire department staffing levels and response times consistent with National Fire Protection Association standards.
 - a) **Action Item (A)** Work with Santa Barbara County Fire Department to achieve and maintain staffing, facilities and response time goals for the City.
 - b) **Action Item (B)** Encourage the Santa Barbara County Fire Department to continue to train fire fighters to a level appropriate to their position and responsibilities, provide emergency medical care training, job-required specialized training, maintain and enhance training materials and instruction techniques, and provide educational incentives for all personnel.
 - c) **Action Item (C)** Maintain mutual aid agreements among fire protection and emergency service providers to ensure residents and property are adequately served and to facilitate the efficient use of available resources.
 - **Policy 5.3:** The City shall work to improve structures and other values at risk to reduce the impact of fire.
 - a) **Action Item (A)** Inform homeowners of the dangers and appropriate responses to fire and ways to prevent loss. Mail a bulletin to homeowners along the urban/wildland interface describing methods for fire protection.
 - b) **Action Item (B)** Require a “defensible space” around structures and values at risk. The area need not be cleared of all vegetation but be able to provide fire fighters with enough room to defend structures and maneuver.
 - c) **Action Item (C)** Ensure that adequate peak load water fire-flows are maintained throughout the city and shall regularly monitor fire-flows to ensure adequacy.
 - d) **Action Item (D)** Work with homeowners to improve fire safety and defensibility on developed parcels. Defensible space should be required around all structures in high and very high fire hazard areas.

City of Carpinteria General Plan

The Carpinteria General Plan Safety Element contains four policies specifically related to fire hazards that call for requiring development standards that are based on local and county fire authority recommendations, and to consult with fire protection service providers when reviewing development proposals (Carpinteria 2003).

- **Policy S-5a:** All new structures must adhere to the Carpinteria-Summerland Fire Protection District Ordinance and the Santa Barbara County Fire Department Ordinances, where applicable.

- **Policy S-5b:** All new structures, whether within or outside the urban limit zone, must adhere to the city Fire Sprinkler Ordinance.
- **Policy S-5c:** Roads shall be installed or improved to the standards specified in the County of Santa Barbara Private Road and Driveway Standard, Section 8 of the County of Santa Barbara Municipal Code.
- **Policy S-5d:** The City will work in conjunction with the Carpinteria-Summerland Fire Protection District to adhere to, and enforce, all fire codes.

City of Buellton General Plan

The City of Buellton's Safety Element was adopted in 2007 and contains one policy surrounding wildland and urban fire hazards (Buellton 2008).

- **Policy S-14:** Work with the Santa Barbara County Fire Department to ensure that existing and future development is not exposed to unnecessary risk due to wildland and urban fire hazards.

City of Lompoc General Plan

The Lompoc General Plan includes ten policies relating to maintaining effective fire prevention and response services, ensuring development projects plan for potential fire hazards, and coordination between departments and agencies for mitigation and response (Lompoc 2011).

- **Policy 3.1:** The City shall use the Wildland Fire Hazard Map and the International Wildland Urban Interface Code as amended and adopted by the City in determining the suitability and design of development in wildland fire hazard areas.
- **Policy 3.2:** The City shall work with governmental agencies, landowners, and the public to minimize wildland fire risks by managing fuel and vegetation in wildland fire hazard areas, while protecting biologically sensitive species and habitats.
- **Policy 3.3:** The City shall restrict those activities in wildland fire hazard areas which increase the danger of wildland fire.
- **Policy 3.4:** The City shall continue to implement programs to increase public awareness of fire hazards, and procedures to minimize injury and property damage before, during, and after a fire.
- **Policy 3.5:** The City shall continue to coordinate with the State Board of Forestry and Comprehensive Emergency Management and Recovery Plan procedures annually.
- **Policy 3.6:** The City shall continue to participate in the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan updates, which occur every 5 years. New information and safety measures from this process that are pertinent to Lompoc shall be incorporated into the City's Hazard Mitigation Plan and Comprehensive Emergency Management and Recovery Plan
- **Policy 3.7:** All new development in Very High Fire Hazard Zones shall incorporate provisions avoid or minimize wildfire hazards.
- **Policy 3.8:** Whenever possible, new essential facilities (i.e., schools, hospitals, emergency shelters) shall not be located in Very High Fire Hazard Zones.
- **Policy 3.9:** New development located in High and Very High Fire Hazard Zones shall demonstrate safe access for emergency response, visible street signs and adequate water supplies for fire suppression.

City of Santa Maria General Plan

The Santa Maria General Plan's Safety Element was adopted in 1995 and the City is in the process of adopting a new Safety Element by 2023 (Santa Maria 1995). Their most current Safety Element contains one policy that relates to wildfire.

- **Policy 3:** Discourage construction of habitable structures in areas susceptible to wildland fires and assure the availability of adequate firefighting capabilities.
 - **Objective 3.1.a - Fire Suppression**
Achieve a 5-minute response capability to all areas within the City Limits and maintain adequate water storage standards for fire flow pressure requirements.
 - **Objective 3.1.b - Weed Abatement Program**
Continue the weed abatement program to minimize the amount of ignitable material within the City Limits and support the efforts of the County of Santa Barbara to enforce a similar program outside of the City Limits.
 - **Objective 3.1.c - Inspection Program**
Maintain a fire inspection program to identify fire hazards in wildland areas and within and around buildings in urban areas.
 - **Objective 3.1.d - Uniform Fire Code**
Enforce the Uniform Fire Code as it relates to fire hazards, including hazardous activities involving fires, oil wells and oil pipelines, and the storage of explosive materials.
 - **Objective 3.1.e - Wildland Fires**
Ensure that habitable structures are not constructed in areas susceptible to wildland fire hazards.
 - **Objective 3.1.f - Mutual Aid**
Continue to assist and be assisted by other jurisdictions and the State of California in the event of a major fire through participation in the California Master Mutual Aid Agreement.

City of Guadalupe General Plan

The City of Guadalupe is in the process of updating their General Plan. Their most recent update is from 2002 and has one policy relating to fire safety (Guadalupe 2002).

- **Policy 2:** Every building and development project should be reviewed and evaluated by the fire department prior to issuance of final building permit.

b. Community Wildfire Protection Plans

City of Santa Barbara Community Wildfire Protection Plan

The City of Santa Barbara completed a Wildland Fire Plan in 2004 that focused on mitigating wildfires and their impacts. At the time, Community Wildfire Protection Plans (CWPP) were not well-known or widely recognized. In 2011, the City Council formally recognized the 2004 Wildfire Protection Plan as the Community Wildfire Protection Plan.

A CWPP is a community-based plan that focuses on identifying local hazards and risks from wildfire. It provides a roadmap of actions for the community. The Santa Barbara City Fire Department was awarded a CalFire grant to update the existing CWPP and the City is looking to submit a final plan to CAL FIRE in March 2021.

Carpinteria-Summerland Fire Protection District Community Wildfire Protection Plan

The Carpinteria-Summerland Fire District (CSFD) is comprised of the City of Carpinteria, Summerland, and the unincorporated areas between the coastal Santa Ynez Mountain Range and the Pacific. The CSFD prepared a CWPP in 2013 that identified communities within their jurisdiction that are most at risk for wildfires. These were categorized into Fire Hazard Severity Zones and four Fuel Management Zones. The CWPP also outlines general wildfire mitigation measures and potential community risk reduction strategies.

City of Goleta Community Wildfire Protection Plan

In 2012, the City of Goleta completed a Community Wildfire Protection Plan (CWPP) that focused on mitigating wildfires and their impacts. The plan outlines an action plan that prioritizes community preparedness, protecting valuable resources and areas, fuel mitigation, and evacuation routes. It addresses maintenance and monitoring requirements as well as an advisory to review the plan every two years, at minimum.

Montecito Community Wildfire Protection Plan

The community of Montecito prepared a CWPP in 2016 that evaluates the wildfire threat to the area and potential mitigation strategies to protect human life. Montecito's Wildland Urban Interface (WUI) presents many life safety issues surrounding evacuation routes, lack of defensible space, and structural vulnerability. This plan guides the community to address these issues through strategies such as an early warning system and fuel reduction methods. The CWPP also identifies future funding opportunities for plan implementation. It was amended in 2019 after the Thomas Fire to include strategies to improve interagency cooperation as well as continuously working on community wildfire preparedness.

Mission Canyon Community Wildfire Protection Plan

The community of Mission Canyon is an unincorporated residential community on the southern side of the Santa Ynez Mountains. The Mission Canyon CWPP was adopted in 2011 and focuses on identifying potential areas for hazardous fuel reduction strategies, improving community awareness, and recommending best practices for reducing structural ignitability. The CWPP acknowledges the unique topography and land use that puts the Mission Canyon community within the Wildland Urban Interface (WUI).

San Marcos Pass – Eastern Goleta Valley Mountainous Communities Community Wildfire Protection Plan

The San Marcos Pass and Eastern Goleta Valley (SMP/EGV) Mountainous Communities are located in the unincorporated area of Santa Barbara County. It encompasses roughly 19,588 acres and twelve communities in total. The CWPP is a thorough document that helps guide the community towards wildfire hazard mitigation and community preparedness. The SMP/EGV CWPP identified four recommended future actions for wildfire preparedness: evacuations, fuels modification strategy, and community preparedness. The plan recommends that the CWPP development team meet on an annual basis to ensure the plan stays current.

c. Local Hazard Mitigation Plan

Due to the extensive history of natural disasters occurring throughout California, the State encourages communities to adopt Local Hazard Mitigation Plans (LHMPs) to gather hazard risk data and ensure local-level mitigation and preparedness. Local jurisdictions develop, adopt and update hazard mitigation plans to establish guiding principles for reducing hazard risk, as well as specific mitigation actions to eliminate or reduce identified vulnerabilities. The Santa Barbara County Local Hazard Mitigation Plan (2017) serves to reduce or eliminate long-term risk to people and property from natural hazards and their effects in the SBCAG region, including the cities of Buellton, Carpinteria, Goleta, Guadalupe, Lompoc, Santa Barbara, Santa Maria, and Solvang. The plan includes goals and policies to reduce the fire severity and intensity in the county through wildfire prevention, fuels management, and maintenance of evacuation routes. The Local Hazard Mitigation Plan is required to be updated every five years.

4.14.3 Impact Analysis

a. Methodology and Significance Thresholds

Pursuant to the CEQA Guidelines, potentially significant impacts would result if the project, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would:

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan.
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.
- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The methodology used for the following evaluation is based on a review of documents and publicly available information about wildfire conditions in the SBCAG region to determine the potential for implementation of project in Connected 2050 to result in increased wildfire risks. This includes city and county planning documents. This program-level analysis is based on an overall understanding of the key fire safety concerns that could result from implementation of Connected 2050. The evaluation of wildfire impacts reasonably assumes that the construction and development under Connected 2050 would adhere to the latest federal, state and local regulations, and conform to the latest required standards in the industry, as appropriate for individual projects.

b. Project Impacts and Mitigation Measures

The following section presents a programmatic-level discussion of the potential for impacts to wildfire from implementation of Connected 2050. Impacts and associated mitigation measures would apply in Santa Barbara County and all cities within the County. Section 4.3.3 summarizes the impacts associated with capital improvement projects proposed in Connected 2050. Due to the programmatic nature of Connected 2050, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible at this time. In

general, however, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by Connected 2050 could result in the impacts as described in the following section.

Threshold:	Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (Hazards)
Threshold:	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?
Threshold:	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
Threshold:	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
Threshold:	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Potential impacts associated with the proposed circulation and emergency access routes for Connected 2050 are discussed in Section 4.13, *Transportation and Circulation*. As discussed therein, Connected 2050 projects would require adequate emergency access and the approval of project-specific on-site circulation plans that would comply with County design standards to accommodate emergency vehicles and service vehicles. Therefore, impacts associated with impairment of emergency response and evacuation plans would be less than significant and are not discussed further in this section.

Impact WF-1 CONNECTED 2050 INCLUDES PROJECTS WITHIN AREAS OF MODERATE, HIGH, AND VERY HIGH FIRE SEVERITY ZONES AND NEAR (WITHIN 2 MILES OF) SRAs THAT COULD EXPOSE PEOPLE OR STRUCTURES, EITHER DIRECTLY OR INDIRECTLY, TO A SIGNIFICANT RISK OF LOSS, INJURY OR DEATH INVOLVING WILDLAND FIRES. CONNECTED 2050 PROJECTS COULD ALSO POTENTIALLY IGNITE FIRES AND THEREFORE RISK EXACERBATING THE POTENTIAL FOR LOSS OR DAMAGE FROM WILDFIRES. IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

Wildland Fire

As shown in Figure 4.14-1, CAL FIRE has mapped much of Santa Barbara County as having a high or very high fire hazard, both in SRAs and LRAs. The land use scenario envisioned by Connected 2050 concentrates the forecasted population and employment growth in urban areas and corridors of the County, such as incorporated cities, unincorporated towns, and major roadways, where the risk of wildfire is less than in more rural areas where fuels are more abundant. However, as evidenced by the 2017 Thomas Fire, urban areas are also susceptible to wildfires, despite the lower abundance of typical wildfire fuels. The Connected 2050 land use scenario concentrates the forecasted regional

population and employment growth in urban areas and corridors of the County while preserving the distinct identity of existing cities and towns. However, not all projects and development included in Connected 2050 would be infill projects in urbanized areas, and some projects would inevitably be located in areas at risk of wildfires. Additionally, CAL FIRE has mapped some urbanized areas within the region as moderate, high, or very high fire hazard severity zones (see Figure 4.14-1), and, as evidenced by the 2017 Thomas Fire, urban areas are still at risk from wildfire.

During extreme weather conditions, a grass fire originating at the site could spread off site, potentially posing a risk to life and property. The consequences of a such a fire could be severe depending on weather conditions at the time and the ability of firefighting personnel to quickly respond to the fire. Given the remote nature of some of the Connected 2050 project sites, a grass fire start also poses a risk to workers. If such a fire were to start during hazardous conditions (such as Red Flag weather), construction personnel could become surrounded or be hampered in their evacuation.

In addition, other construction activities involving the use of vehicles and heavy machinery could result in the ignition of a wildfire. During construction, heavy equipment and passenger vehicles driving on vegetated areas prior to clearing and grading could increase the risk of fire. Heated mufflers, explosives used during site preparation or line spicing, and improper disposal of cigarettes could potentially ignite surrounding vegetation. The use of heavy equipment, such as bulldozers and graders, has the potential to accidentally ignite a fire from sparks created when equipment blades strike rocks or metal objects. If noticed by the equipment operator or other project-specific personnel, small ignitions can easily be suppressed by the construction equipment and/or on-site fire watch personnel. A fire could also be started by Project personnel improperly disposing of burning cigarettes in areas covered with wildland vegetation and within 50 feet of combustible material storage.

If the introduction of invasive, non-native plants is not controlled during construction, over time a project site could become dominated by non-native plants that tend to increase the frequency and severity of wildfires. As discussed above, based on recent scientific evidence, it is likely that anthropogenic climate change will continue to chronically enhance the potential for western U.S. forest fire activity when fuels are not limiting.

New construction would be subject to the latest California Fire Code, which includes safety measures to minimize the threat from wildfires, including ignition-resistant construction with exterior walls of noncombustible or ignition resistant material from the surface of the ground to the roof system and sealing any gaps around doors, windows, eaves and vents to prevent intrusion by flame or embers. Title 14 of the California Code of Regulations sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent loss of structures or life by reducing wildfire hazards. The codes and regulations would reduce the risk of loss, injury or death from wildfire for new development envisioned by Connected 2050, but not entirely.

Land use development projects in Connected 2050 that would be located within or less than 2 miles from an SRA or very high fire hazard severity zones, would have potentially significant wildfire impacts, as existing codes and regulations cannot fully prevent wildfires from damaging structures or populations. These projects would increase the exposure of transportation infrastructure to risk of loss or damage from wildfire. However, requirements to adhere to the local hazards mitigation plan, as well as the local general plan policies and programs aimed at reducing the risk of wildfires through land use compatibility, training, sustainable development, brush management, public outreach and service standards for fire departments in addition to implementation of Mitigation

Measure WF-1 reduce the risk of wildfire for these projects. However, it is not possible to prevent a significant risk of wildfires or fully protect people and structures from the risks of wildfires and therefore impacts would be significant.

Exacerbated Fire Risks

Although there are limited instances where the proposed land use pattern and planned transportation investments of Connected 2050 may result in growth in or near wildfire prone areas, substantial wildfire-related effects could still occur. Fire risks are still present despite the limited regional growth within an SRA or Wildland-Urban Interface (WUI) area, and adherence to CBC standards. They include specific standards for construction materials and methods for new buildings located in Fire Hazard Severity Zones within SRAs, Local Agency Very-High Fire Hazard Severity Zones, or WUI Fire Areas mapped by CAL FIRE or the local enforcing agency. These regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in SRA. Title 14 sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which are intended to result in development that avoids or minimizes the hazards associated with development including associated infrastructure to roads, fuel breaks, emergency water sources, power lines or other utilities in wildfire-prone areas. Because Connected 2050 plans for the construction and maintenance of associated infrastructure and envisions land development within and near these areas and due to the unpredictable nature of wildfires in California, it is anticipated that Connected 2050 could exacerbate wildfire risk associated with those activities. Impacts would remain significant.

Wildfire risk in California has been exacerbated in recent years due to the physical effects of anthropogenic climate change. On average, global temperatures have increased. This, combined with changes in precipitation in the state and historical fire suppression methods, has produced conditions that support wildfire within rural communities in the state, including those located in the plan area of Connected 2050. As discussed in Chapter 2, *Project Description*, a primary objective of Connected 2050 is to reduce greenhouse gas (GHG) emissions associated with passenger vehicles through focusing development in denser, more urban environments. The projected land use pattern under Connected 2050 would result in fewer emissions of GHGs as compared to conditions without Connected 2050, which would ultimately serve to minimize the impacts of global climate change and its relation to increase wildfire risk. For a more detailed discussion regarding Connected 2050's relationship to climate change, see Section 4.8, *Greenhouse Gas Emissions and Climate Change*.

The potential for slope failure and landslides can be exacerbated in these regions in the aftermath of a wildfire, even with adherence to the above sited regulations. Hillsides can become denuded of vegetation and become unstable, increasing the potential for landslide risks and associated hazards downslope from such landslides. Potential impacts related to slope stability and landslides are discussed in Section 4.7, *Geology and Soils*. As discussed therein, stable slope conditions vary depending on location of the project within the region and the potential for substantial landslides was found to be low to moderate in most of the proposed project regions. In addition, in areas of high susceptibility to landslides (near coastal and mountainous areas) Connected 2050 projects would be required to conform to Santa Barbara county slope stability guidelines of Chapter 14 Grading Ordinance 4477, prior to approval of construction. This impact would remain significant.

This same issue applies to runoff and flooding potential after a wildfire with denuded and unstable hillsides. Potential impacts related to flooding, runoff, and drainage are discussed in Section 4.9, *Hydrology and Water Quality*. The project would be required to comply with existing design

guidelines, applicable Santa Barbara County Flood Control & Water Conservation District (Flood Control) requirements for post-development peak stormwater flows and Best Management Practices, and maintenance requirements described in the Neighborhood Stormwater Control Plans to avoid and/or minimize flooding impacts and impacts to on-site and off-site drainage. Even through adherence to these regulations, impacts associated with exposure of people or structures to downslope or downstream flooding or landslides as a result of runoff due to post-fire slope instability would remain significant.

Mitigation Measures

Transportation project sponsor agencies can and should implement, the following mitigation measures for applicable transportation projects that would result in wildfire impacts. The County and cities in the SBCAG region can and should implement these measures, where relevant to land use projects implementing Connected 2050. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

WF-1(a) Wildfire Risk Reduction

If an individual transportation or land use project included in Connected 2050 is located within or less than 2 miles from an SRA or very high fire hazard severity zones, the implementing agency shall require appropriate mitigation to reduce the risk. Examples of mitigation to reduce risk of loss, injury or death from wildlife include, but are not limited to:

- Require the use of fire-resistant vegetation native to Santa Barbara County and/or the local microclimate of the project site and discourage the use of fire-prone species especially nonnative, invasive species.
- Require a fire safety plan be submitted to and approved by the local fire protection agency. The fire safety plan shall include all of the fire safety features incorporated into the project and the schedule for implementation of the features. The local fire protection agency may require changes to the plan or may reject the plan if it does not adequately address fire hazards associated with the project as a whole or the individual phase of the project.
- Prohibit certain project construction activities with potential to ignite wildfires during red-flag warnings issued by the National Weather Service for the project site location. Example activities that should be prohibited during red-flag warnings include welding and grinding outside of enclosed buildings.
- Require fire extinguishers to be onsite during construction of projects. Fire extinguishers shall be maintained to function according to manufacturer specifications. Construction personnel shall receive training on the proper methods of using a fire extinguisher.

WF-1(b) Fire Protection Plan

Individual transportation or land use projects included in Connected 2050 shall prepare a Fire Protection Plan that meets SBCFD requirements. The plan shall contain (but not be limited to) the following provisions:

- All construction equipment shall be equipped with appropriate spark arrestors and carry fire extinguishers.
- A fire watch with appropriate firefighting equipment shall be available at the Project site at all times when welding activities are taking place. Welding shall not occur when sustained winds exceed that set forth by the SBCFD unless a SBCFD-approved windshield is on site.

- A vegetation management plan shall be prepared to address vegetation clearance around all WTGs and a regularly scheduled brush clearance of vegetation on and adjacent to all access roads, power lines, and other facilities.
- Operational fire water tanks shall be installed prior to construction.
- Provisions for fire/emergency services access if roadway blockage occurs due to large loads during construction and operation
- Cleared, maintained parking areas shall be designated; no parking shall be allowed in non-designated areas.
- The need for and/or use of dedicated repeaters for emergency services.
- Appropriate Hot work permits (such as cutting and welding permits) shall be obtained from the jurisdictional fire agency.
- Compliance with California PRC 4291, 4442, and 4443.

WF-1(c) Smoking and Open Fires

Smoking and open fires shall be prohibited at individual transportation or land use projects sites included in Connected 2050 during construction and operations. A copy of the notification to all contractors regarding prohibiting smoking and burning shall be provided to the County.

WF-1(d) Red Flag Warning

Individual transportation or land use projects included in Connected 2050 shall participate in the Red Flag Warning program with local fire agencies and the National Weather Service. The Applicant shall stop work during Red Flag conditions to reduce the risk of wildlife ignition.

Significance After Mitigation

With implementation of this mitigation, the risk of loss of structures and transportation infrastructure and the risk of injury or death due to wildfires would be reduced. These measures would make structures and transportation infrastructure more fire resistant and less vulnerable to loss in the event of a wildfire. These measures would also reduce the potential for construction of Connected 2050 projects to inadvertently ignite a wildfire. In addition, specific project impacts regarding wildfire risk would be addressed prior to project implementation during the planning and design process. However, it is not possible to prevent a significant risk of wildfires or fully protect people and structures from the risks of wildfires, despite implementation of mitigation WF-1. As well, potential impacts resulting from the aftermath of wildfires potentially exacerbated by Connected 2050 projects cannot be fully mitigated. Therefore, this impact would remain significant and unavoidable. No additional mitigation measures which are able to reduce this impact to less than significant levels are feasible.

4.14.4 Cumulative Impacts

The analysis in this section examines wildfire impacts of the Connected 2050 transportation projects and land use scenario throughout the SBCAG region that are cumulative in nature. Land use development within the SBCAG region combined with the growth outside of its region could potentially contribute to a cumulatively considerable increase in wildfire risk as much of the area has been mapped by CAL FIRE as high or very high fire hazard severity zones.

Connected 2050 is not expected to substantially increase wildfires, but the occurrence of wildfires always exists within the SBCAG region and transportation and land use projects under Connected 2050 could place people and structures within or less than 2 miles from an SRA or very high fire hazard severity zones. Construction and operation of projects would risk exacerbating these existing fire hazards by creating additional potential sources of fire ignition.

During construction and operation of Connected 2050 projects, if one of these cumulative projects were to simultaneously result in a wildland fire ignition during construction, they could combine and increase the frequency of wildland fires beyond existing conditions. The combination of these projects being constructed concurrently could substantially increase the frequency of fire in the area above natural conditions. Implementation of mitigation measures WF-1(a)-WF(d) would minimize the contribution to this cumulative impact. Additionally, mitigation measures required by SBCFD for the other Connected 2050 projects which would also minimize the potential for wildland fire ignitions from those sources. However, the overall cumulative increase in fire frequency would continue to be substantial and impacts for risks exacerbated by construction and from the aftermath of wildfires would remain significant and unavoidable.

Land use development projects in Connected 2050 that would be located within or less than 2 miles from an SRA or very high fire hazard severity zones, would have potentially significant wildfire impacts, as existing codes and regulations cannot fully prevent wildfires from being generated and damaging structures or populations. Connected 2050 land use scenario concentrates the forecasted regional population and employment growth in urban areas and corridors of the County, however, not all projects and development included in Connected 2050 would be infill projects in urbanized areas, and some projects would inevitably be located in areas at risk of wildfires. These projects would increase the potential to ignite fires and therefore risk exacerbating the potential for loss or damage from wildfire. This added risk could start wildfires that could spread outside the SBCAG region impacting adjacent counties and communities. As a result, Connected 2050 could result in a cumulatively considerable increase in wildfire risk. Mitigation measures described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.

a. Specific Connected 2050 Projects That May Result in Impacts

As discussed above, specific Connected 2050 projects that would result in significant wildfire impacts are those located within or less than 2 miles from an SRA or very high fire hazard severity zones. These projects would increase the potential to ignite fires and therefore risk exacerbating the potential for loss or damage from wildfire. The public that would use that infrastructure and land uses developed within those areas and the maintenance personnel that would service that infrastructure or work within those areas would also be exposed to exacerbated risk of loss or damage due to wildfire. Connected 2050 projects that do not meet these criteria would have a lesser wildfire impact.

Table 4.14-1 shows all Connected 2050 projects that would occur within or less than 2 miles from an SRA. All transportation or land use projects located within or less than 2 miles from an SRA or very high fire hazard severity zones would result in potentially exacerbated risks associated with Impact WF-1. Additional specific analysis described in the above mitigation measure would need to be conducted as individual projects are implemented in order to determine the magnitude of project-specific impacts.

Table 4.14-1 Connected 2050 Planned and Programmed Projects Occurring In or Less Than 2 Miles from an SRA or Very High Fire Severity Zone

Description	Impact
Sidewalk Infill and frontage improvements along Ash Avenue in Carpinteria.	WF-1
Adjust crosswalk locations to enhance safety at Carpinteria Avenue/Elm Avenue in Carpinteria.	WF-1
Study Feasibility of constructing a pedestrian bridge on 5th Street over Franklin Creek near Aliso School, in Carpinteria.	WF-1
Sidewalk infill along Carpinteria Ave from Dump Road to Bluffs trail in Carpinteria.	WF-1
Sidewalk infill along Walnut Avenue and 6th Street around the perimeter of Main Elementary School, in Carpinteria.	WF-1
Construct Class I/Class II bike path adjacent to San Jose Creek, from Hollister Avenue to the Atascadero Creek Bike Path at Goleta Beach.	WF-1
Improve sidewalks in residential areas of Old Town Goleta, north of Hollister Avenue from Fairview Avenue to Kellogg Avenue, and on Pine Avenue south of Hollister Avenue.	WF-1
Construct Class II bike lanes along Ward Drive. Construct new sidewalks where no sidewalk currently exists along the west side of Ward Drive in front of the Rancho Goleta Mobile Home Park.	WF-1
Install approximately 12 independent solar powered LED lighting fixtures along the Maria Ygnacio Bike Trail in Goleta.	WF-1
Install upgraded pedestrian activated traffic control system at the crosswalk in front of the Goleta Valley Community Center.	WF-1
Construct pedestrian activated Rectangular Rapid Flashing Beacons (RRFB's) on Hollister Avenue at Orange Avenue in Goleta.	WF-1
Remove existing fencing and install path lighting from Hollister Avenue to the back of the property where the Boys & Girls Club is located in Goleta.	WF-1
Construct High Intensity Activated Crosswalk (HAWK) system at Calle Real and Kingston Avenue in Goleta.	WF-1
Construct Infill sidewalk on Fairview Avenue at Calle Real intersection near U.S. Hwy 101 in Goleta.	WF-1
Construct sidewalk, class II bike lane, striping, signage, and lighting for approximately 750 feet along the east side of Fairview Avenue south of Stow Canyon Road in Goleta.	WF-1
Construct sidewalk infill and Class II Bike Lanes along both sides La Patera Road between the Amtrak terminal and Hollister Avenue in Goleta.	WF-1
Add green-backed bicycle share the road markings to sections of Hollister Avenue in Goleta.	WF-1
Pedestrian corridor improvements along Calle Real, in Goleta.	WF-1
Construct a sidewalk on the east side of Magnolia Avenue, south of Hollister Avenue in Goleta.	WF-1
Install a mid-block crosswalk (HAWK signal) on Calle Real approximately 500 feet east of Encina Lane in Goleta.	WF-1
Install green anti-skid thermoplastic material	WF-1
Construct new curb, gutter, and sidewalk extending the existing sidewalk	WF-1
Construct pedestrian and bicycle facilities throughout Isla Vista.	WF-1
Install contactless fare media technology in all SBMTD revenue vehicles.	WF-1
Improve A.M. peak-period frequency on SBMTD Lines 1 and 2 from 15 minutes to 10 minutes.	WF-1
Introduce new SBMTD Line 28 and make enhancements to Lines 12x and 24x.	WF-1
Construct a sidewalk on the east side of Magnolia Avenue, south of Hollister Avenue in Goleta.	WF-1
Install a mid-block crosswalk (HAWK signal) on Calle Real approximately 500 feet east of Encina Lane in Goleta.	WF-1
Install green anti-skid thermoplastic material.	WF-1

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Description	Impact
Construct new curb, gutter, and sidewalk extending the existing sidewalk.	WF-1
Construct pedestrian and bicycle facilities throughout Isla Vista.	WF-1
Construct a multiuse path along Franklin Creek from Carpinteria Avenue to 7th Street in Carpinteria.	WF-1
Place lighting facilities along the new 9th Street Pedestrian Bridge and proposed Franklin path in Carpinteria.	WF-1
Replace existing pedestrian bridge over Santa Monica Creek at Via Real in Carpinteria.	WF-1
Add green Class II bike lanes and operational improvements on State Street between De La Vina Street and Constance Avenue in the city of Santa Barbara.	WF-1
Create a separate/protected Class I bikeway Adjacent to Las Positas Road from Modoc Road to State Street.	WF-1
Construct interchange and frontage improvements at San Ysidro Road and U.S. Hwy 101 interchange near Montecito.	WF-1
Install streetscape improvements including parking, sidewalks, landscaping and a Park & Ride area along Santa Claus Lane near Carpinteria.	WF-1
Implement improvements along Mission Canyon Road from the Santa Barbara city limits north to SR 192.	WF-1
Analysis of SBMTD Facility Needs.	WF-1
Indirect Bus Battery Charging.	WF-1
Bridge removal of the Alamo Pintado Creek Pedestrian Bridge (BR # 51-0076Y) adjacent to SR 154 near Los Olivos.	WF-1
Bridge removal of the Alamo Pintado Creek Pedestrian Bridge (BR # 51-0076Y) adjacent to SR 154 near Los Olivos.	WF-1
ADA pedestrian infrastructure improvements on U.S. Hwy 101 at the Butterfly Lane undercrossing	WF-1
Replace bridge deck at U.S. Hwy 101 and SR 135 separation (BR # 51- 0073R/L)	WF-1
Vertical clearance improvements at U.S. Hwy 101 and Bailard Avenue, in Carpinteria.	WF-1
SR 1 pavement preservation from the junction of U.S. Hwy 101 to SR 246, near Lompoc.	WF-1
Replace bridge rails on Nojoqui Creek Bridges (BR # 51- 0018L/R) on U.S. Hwy 101.	WF-1
Bridge seismic retrofit on San Antonio Creek Bridge (BR # 51-0006) on SR 135, near Los Alamos.	WF-1
Bridge seismic retrofit on San Antonio Creek Bridge (BR # 51-0006) on SR 135, near Los Alamos.	WF-1
SR 1 pavement preservation from Solomon Road to junction of SR 166, near Santa Maria.	WF-1
Upgrade wastewater system at the Gaviota Safety Roadside Rest Area on U.S. Hwy 101.	WF-1
Install inspection access system below bridge and paint structure at Cold Spring Canyon Bridge (BR # 51-0037) on SR 154.	WF-1
Replace the Refugio Road undercrossing bridges (BR # 51-0215L/R) on U.S. Hwy 101 near Goleta.	WF-1
Replace the Refugio Road undercrossing bridges (BR # 51-0215L/R) on U.S. Hwy 101 near Goleta.	WF-1
San Antonio Creek Bridge (BR # 51-0237L/R) scour mitigation on SR 1 near Lompoc.	WF-1
San Antonio Creek Bridge (BR # 51-0237L/R) scour mitigation on SR 1 near Lompoc.	WF-1
Rehabilitate roadway (3R) on U.S. Hwy 101 between Casitas Pass and west of Sandpiper Drive in Carpinteria.	WF-1
Landscape mitigation on U.S. Hwy 101 from 0.2 mile east to 0.7 mile west of the Fairview Avenue overcrossing, in and near Goleta.	WF-1
Landscape mitigation at SR 154/SR 246 roundabout near Santa Ynez.	WF-1
Landscape mitigation on U.S. Hwy 101 from 0.7 mile north of Beckstead overcrossing to 0.8 mile south of Gaviota Tunnel, in Gaviota.	WF-1
Rehabilitate pavement on SR 246 from 0.4 mile east of Santa Rosa Creek Bridge to U.S. Hwy 101/SR 246 separation, near Buellton.	WF-1
Rehabilitate pavement on SR 154 from Baseline Avenue to Cold Spring Canyon Bridge, near Santa Ynez.	WF-1

Description	Impact
Roadside safety improvements on U.S. Hwy 101 from Patterson Avenue to Gaviota State Park Entrance, in and near Goleta	WF-1
Restore roadway facilities damaged by wildfire on U.S. Hwy 101 in Santa Barbara and San Luis Obispo counties.	WF-1
Operational improvements on high performing transit routes from across the region.	WF-1
Maintain the local transportation network and construct locally-funded projects in Lompoc.	WF-1
Implement City of Lompoc high priority projects listed in the Regional Active Transportation Plan.	WF-1
Maintain the local transportation network and construct locally-funded projects in Solvang.	WF-1
Implement City of Solvang high priority projects listed in the Regional Active Transportation Plan.	WF-1
Maintain the local transportation network and construct locally-funded projects in Lompoc.	WF-1
Implement City of Lompoc high priority projects listed in the Regional Active Transportation Plan.	WF-1

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4.15 Effects Considered Less Than Significant

Section 15128 of the California Environmental Quality Act (CEQA) Guidelines requires an EIR briefly describe any possible effects that were determined not to be significant. The environmental factors discussed below are in response to the checklist questions listed in Appendix G of the CEQA Guidelines that were not discussed in Sections 4.1 through 4.14 of the DEIR.

4.15.1 Agriculture and Forestry Resources

Would the project 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))?

Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Connected 2050 would neither conflict with existing zoning for forest land nor result in the loss of forest land as no projects would occur on land designated as such. There would be no impact.

4.15.2 Biological Resources

Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Implementation of Connected 2050 would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, as there are no adopted habitat or natural community conservation plans in the region. Therefore, impacts would be less than significant.

4.15.3 Geology and Soils

Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Connected 2050 does not include projects that would require the use of septic tanks or alternative wastewater disposal systems. The only proposed projects that involves wastewater are the Gaviota Safety Roadside and Rest Area Improvements and construction of a Transit Operations and Maintenance Center for City of Lompoc Transit, however these projects are anticipated to connect to existing wastewater infrastructure and would comply with local regulatory requirements for soil suitability, ensuring soils would adequately support these systems. Therefore, impacts related to having soils incapable of adequately supporting the use of septic tanks and alternative wastewater disposal systems would be less than significant.

4.15.4 Hazards and Hazardous Materials

Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Would the project 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?

Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Transportation improvement projects under Connected 2050 could facilitate the transport of hazardous materials on roadways or railways in Santa Barbara County, but would not directly result in a transport-related hazard. In California, transportation of hazardous materials on roadways is regulated by the California Highway Patrol and Caltrans, and the use of these materials is regulated by California Department of Toxic Substances Control (DTSC). Compliance with existing laws and regulations, such as the federal Resource Conservation and Recovery Act (RCRA), the State Hazardous Waste Control Act, and California Vehicle Code, would ensure that the transport of hazardous materials, the handling of acute hazardous substances within close proximity to schools, and the release of hazardous materials would be adequately controlled such that impacts would be less than significant.

Would the project 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?

With respect to hazardous materials sites listed under Government Code Section 65962.5, the majority of transportation improvements involve modification of existing facilities and roadways, rather than construction of new facilities, and would not occur on known hazardous sites. With regard to future projects that would develop new facilities, due to the programmatic nature of the project, it is not possible to determine with accuracy whether future projects located on previously undisturbed land would contain hazardous materials. However, such projects would be required to address any on-site contamination issues, including any potential hazardous materials and mitigate such impacts accordingly. Impacts would be less than significant.

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 or excessive noise for people residing or working in the project area?

Most of the projects included in Connected 2050 would not result in safety hazards to people from an airport because they would be located over two miles away from the airport. Additionally, projects that only involve maintenance activities would not include any new structures or residences and therefore would not expose people to safety hazards or excessive noise from airports. Any transportation projects or land development project facilitated by implementation of Connected 2050, located within an airport land use plan zone and/or applicable noise contour, would be required to complete project specific environmental review and comply with local jurisdictional standards. Impacts would be less than significant.

Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction of the transportation projects and the land use scenario envisioned in Connected 2050 would require temporary road closures that could impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Some of the transportation projects may require multiple years to construct. However, standard construction practices include notification of emergency responders where road closures are required. Because road closures are temporary and would be coordinated with emergency responders such that

alternative evaluation routes could be developed and employed, construction activities would have a less than significant impact.

The land use scenario proposed by Connected 2050 emphasizes infill and transit-oriented development, which would generally focus growth in existing urbanized areas of Santa Barbara County and along existing transportation corridors. Thus, population density in urbanized areas would increase, which may improve emergency response by eliminating the need to travel to more rural and dispersed locations in the region. Alternatively, large concentrations of people could also cause adverse effects related to the implementation emergency plans because the increased population may overburden adopted evacuation routes and other emergency response resources. However, the management of emergency response and emergency evacuation plans includes regular updates to these plans that incorporate new or proposed developments. Thus, land use projects in Connected 2050 would be reflected in the regular updates of emergency and evacuation plans applicable to the SBCAG region. In addition, project-level CEQA reviews routinely assure that individual projects do not adversely impact emergency response or evacuation plans.

Additionally, the proposed transportation projects would generally increase mobility and circulation capacity and, thereby, have the potential to improve response times for police, fire and emergency service providers, especially in heavily-congested areas. Overall, VMT for the region is projected to increase between the baseline 2015 conditions and 2050, as discussed in Section 4.12, *Transportation*. However, as described above, emergency and evacuation plans are regularly updated to incorporate current conditions. Therefore, potential impacts related to interference with emergency response and evacuation plans would be less than significant.

4.15.5 Mineral Resources

Would the project 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?

Would the project 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?

Implementation of Connected 2050 primarily involves modifications to existing roadways, including improvements related to intersections, and safety, as well as alternative transportation projects such as constructed bicycle paths. In addition, the land use scenario envisioned by Connected 2050 would be infill and TOD and would be located within existing urbanized areas. Land development projects along existing transit corridors projects would not be located on sites with known mineral resources or locally important mineral resources. Local jurisdictions have policies to manage mineral resources through general plans and are required to respond to mineral resource recovery areas that have been designated MRZ-2 locations under the state's Surface Mining and Reclamation Act (SMARA). The MRZ-2 designation is an area where significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. Any projects located within MRZ-2 areas would be identified and impacts would be mitigated during the environmental review for project-specific impacts pertaining to mineral resources. In addition, as discussed in the Conservation Element of the Santa Barbara County General Plan, any and all proposed surface mining operations are required to be consistent with the policies of the County Comprehensive General Plan, all relevant sections of the Santa Barbara County Code, and all relevant sections of State law¹.

¹ Resolution No. 10-277 (Case No. 10-GP-1) Amended August 10, 2010 (Modified recommendation regarding mining operations)

There are no projects included in Connected 2050 that would directly result in the extraction, exploration, or digging for mineral resources, or prevent such activities, and therefore would not result in the loss of availability of minerals. Impacts pertaining to mineral resources would be less than significant.

4.15.6 Noise

For a project located within the vicinity of a private airstrip or 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?

Any future land development project facilitated by implementation of Connected 2050, located within an airport land use plan zone and/or applicable noise contour, would be subject to the policies of the Airport Land Use Commission pertaining to noise exposure, which would ensure that noise attenuation features are implemented into the project as necessary. Impacts would be less than significant.

4.15.7 Population and Housing

Would the project induce substantial unplanned 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)?

The SBCAG Board adopted the 2019 Regional Growth Forecast in January 2019. The purpose of the Regional Growth Forecast is to provide a consistent economic and population growth forecast to the year 2050 for use in long-range comprehensive planning. The forecast served as an input towards the development of Connected 2050. SBCAG does not hold land use authority and cannot directly affect population growth. SBCAG growth forecasts are projections used to plan for public infrastructure, housing, and employment throughout the region. The 2050 projections indicate that population in the SBCAG region is expected to grow by 68,200 people, an increase of approximately 15 percent, between 2017 and 2050. Employment within the region is expected to grow by 58,400 jobs, an increase of approximately 26 percent. Approximately 38,000 new households are expected by 2050, an increase of approximately 26 percent. Connected 2050 identifies areas within the region sufficient to house all the forecast population of the region to the plan horizon year as well as accommodate the identified housing needs under RHNA. The preferred scenario is just shifting the location of the projected population and housing needs in the SBCAG region. It does not induce unplanned population growth.

As discussed in Section 4.10, *Land Use and Planning*, the land use scenario envisioned in Connected 2050 was developed in close coordination with SBCAG member agency planning staff and also builds on local general plans and general plan updates currently in process or completed. The preferred scenario identifies areas within the region sufficient to house all the forecast population of the region to the plan horizon year as well as identified housing need. Central to the SCS is a land use plan identifying the general location of uses, residential densities, and building intensities within the region. Starting with land uses allowed by existing, adopted local General Plans, the land use plan envisioned by Connected 2050 provides for intensification of residential and commercial land uses in urban areas proximate to existing transit, aligning with existing and future transit priority areas (TPAs). Importantly, the land use scenario envisioned by Connected 2050 was modeled using UPlan, which allocates the future population increase across generalized UPlan land use categories. The result is a spatial projection of future, allowable urbanization within each land use type that is

broadly consistent with adopted local general plans, 0 and would generally be on properties identified as vacant or underutilized within applicable local jurisdictions. Connected 2050 is consistent with local agencies' adopted General Plans and relies principally on available land use capacity in these plans. Connected 2050 would not require or promote any unplanned growth to meet its goals and is consistent with the RHNA allocation and projected housing needs. Impacts related to growth-inducing or unplanned housing or population growth would be less than significant.

Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Land use development included in Connected 2500 could displace existing housing and people, primarily low- and medium-density single-family, multi-family, or mobile home dwelling units, as existing housing units are removed to make way for new development. Specific sites or areas for suggested intensification were chosen in consultation with local agency planning staff based on available land use capacity, plans in process, and land use changes that might realistically be contemplated. The land use scenario envisioned in Connected 2050 involves changes to the land uses allowable under adopted General Plans to promote infill and transit-oriented development along existing transit routes within certain urbanized areas. In these core areas, residential and/or commercial densities are increased within close proximity to transit in order to facilitate transit, bike and walking trips. However, new residential development would generally occur at higher densities and with more modern housing, frequently as part of mixed-use development. For example, in the City of Santa Maria, Connected 2050 increases residential densities chiefly along Broadway and Main Street, two key arterials in the city presently served by transit. During construction of individual projects, residents may be temporarily displaced. However, there are normal factors in the marketplace to offset this impact. Historically, vacancies within the existing housing stock absorb displacement of residents. In addition, existing laws and regulations would provide assistance in relocating households. The Federal Uniform Relocation and Real Property Acquisition Policies Act requires public agencies to provide relocation assistance when an action by the agency displaces residences. Thus, short-term displacement would be mitigated through both existing regulation and normal market factors.

In the long run, Connected 2050 would result in a net increase in housing units. Between 2020 and 2050, the projected increase in housing capacity in the region would be 34,900 units, or an increase of 22 percent. The most dramatic increases would occur in the cities of Buellton, Lompoc, Santa Maria, and Guadalupe. Because Connected 2050 would result in a net increase in housing units, it would not displace substantial numbers of existing housing or people and would not necessitate the construction of replacement housing. In effect, Connected 2050 includes the replacement housing that would be necessitated by individual projects.

Implementation of Connected 2050 could also result in the displacement of some existing businesses. However, as with residential development, new commercial development generally would occur at higher densities and with more modern structures, frequently as part of a mixed-use development. The Federal Uniform Relocation and Real Property Acquisition Policies Act requires public agencies to provide relocation assistance when an action by the agency displaces businesses or farms.

Some transportation network improvements would require acquisition of right-of-way, potentially in areas with high density housing or businesses along transportation corridors displacing residential or commercial units. Specific projects would be required to undergo separate environment review

under CEQA. The corresponding project-specific environmental documentation would identify potentially significant impacts with regard to displacement of private property, if any, and provide the appropriate mitigation measures. Impacts from transportation improvements would consider relocation assistance in accordance with the Federal Uniform Relocation and Real Property Acquisition Policies Act of 1970. In addition, as noted above, Connected 2050 would result in a net increase of 34,900 housing units in the region. Therefore, any units displaced by individual transportation projects would be offset by the net increase in housing units included in the SCS land use scenario. As a result, impacts related to housing and population displacement would be less than significant.

4.15.8 Public Services

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: fire protection; police protection; schools; parks; other public facilities?

Transportation projects facilitated by Connected 2050 would not generate demand for public services, including fire and police protection, schools, or parks. The majority of projects are maintenance, or pedestrian improvement projects that do not involve the construction of new infrastructure. In fact, certain improvements would result in more efficient traffic flow or improved road surfaces. Transportation projects that reduce levels of congestion and/or improve emergency access would improve response times for police, fire and emergency medical services.

The land use scenario envisioned by Connected 2050 could result in increased demand for public services that exceeds existing service capabilities as predicated in local general plans. In order to meet the increased demand for these facilities, existing facilities would require additional personnel and equipment to maintain adequate service levels. Depending on the exact timing and location of future development, it may become necessary to construct new facilities or modify existing facilities to maintain adequate capital capacity, equipment and personnel. However, facilities to support public services, such as fire and police stations, schools and parks, are planned in advance through the general plan process in each jurisdiction consistent with their growth projections. As communities grow, the need for specific services would be assessed by each local jurisdiction and additional facilities would be constructed as needed. The construction of these facilities would be subject to project-specific CEQA review. In addition, implementation of new or physically altered public facilities to serve new land use development is incorporated into the SCS, the environmental effects of which are evaluated in Section 4 of the EIR. Any significant impact associated with new or physically altered governmental facilities have already been disclosed previously in Section 4.

4.15.9 Recreation

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?

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?

Transportation projects identified in Connected 2050 would not generate regional demand for parks or recreation resources. The land use scenario envisioned by Connected 2050 could increase localized demand on parkland, however this demand would not exceed that already anticipated by

the respective areas in which these projects would be located. Development facilitated by Connected 2050 would be required on a project-by-project basis to pay development fees to the applicable jurisdiction. Since the passage of the 1975 Quimby Act (Government Code § 66477 *et seq.*), cities and counties have been authorized to adopt ordinances requiring that developers set aside land, donate conservation easements, or pay fees that can be used for purposes of acquiring parkland. For example, and in accordance with this regulation, Santa Barbara County requires that new residential development provide parkland and/or pay in lieu fees for the provision of parkland (SBCMC Chapter 21, Article IV – Park and Recreation Dedication and Fees). All future development included in Connected 2050 would be required to comply with these regulations, and would thus offset additional demand for parkland, minimizing the potential for substantial deterioration of existing recreational facilities.

Some of the active transportation projects included in Connected 2050 are related to upgrading and introducing new bicycle routes and paths which would result in a positive recreational impact. Significant environmental impacts of these active transportation projects, as well as any new or expanded recreational facilities to serve land use development under the SCS, have already been disclosed previously in Section 4 of this EIR.

4.15.10 Transportation

Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

Connected 2050 contains various projects that would modify or expand the regional transportation network. These projects were developed to address existing deficiencies and/or in anticipation of future needs given projected population, employment, and travel growth in the SBCAG region. The proposed transportation projects are required to conform to the design standards of the public agency responsible for implementation. Design standard conformance is a key part of developing networks that provide common expectations for users to minimize conflicts and conditions that could contribute to collisions. These standards cover all aspects of the transportation right-of-way including physical and operational features as well as appropriate actions during construction activity. Connected 2050 would not change the applicable design standards of the implementing agencies. In addition, the SCS land use component envisions the development of housing and jobs within existing and planned transit corridors, areas which are already compatible with such uses. Projects in more suburban and rural areas would be required to conform to the same design standards as just discussed. As such, the proposed project would not increase hazards due to geometric design features or incompatible uses and this impact would be less than significant.

Would the project result in inadequate emergency access?

Transportation projects included in Connected 2050 would comply with federal, state and local regulatory requirements and design guidelines to minimize safety hazards, such as requirements for curve radii on curving road segments, maximum road grade/slope, and minimum separating distance between intersections and driveways.

Existing regulations provide that any work within existing Caltrans rights of way would have to comply with Caltrans permitting requirements. This includes a traffic control plan that adheres to the standards set forth in the California Manual of Uniform Traffic Control Devices (MUTCD)

(Caltrans 2014).² As part of these requirements, there are provisions for coordination with local emergency services, training for flagmen for emergency vehicles traveling through the work zone, temporary lane separators that have sloping sides to facilitate crossover by emergency vehicles, and vehicle storage and staging areas for emergency vehicles. MUTCD requirements also provide for construction work during off-peak hours and flaggers. These requirements also include provisions for “Detour for Bike Lanes on Roads with Closure of One Travel Direction.” Measures similar to MUTCD requirements are typically applied to local projects, such as requiring at least two points of ingress/egress to residential developments for emergency access. For these reasons, impacts associated with inadequate emergency access would be less than significant.

4.15.11 Utilities and Services Systems

Would the project require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction or relocation of which could cause significant environmental effects?

Would the project 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?

As discussed in Section 4.5, *Energy*, transportation improvement projects facilitated by Connected 2050 would not generate substantial increased need for electric or natural gas supply as energy usage resulting from Connected 2050 projects would not be considered wasteful, inefficient, or unnecessary and individual projects would be consistent with regional and statewide goals to achieve energy use reductions, including California Energy Efficiency Action Plan fuel efficiency standards, building energy efficiency standards, and clean energy usage goals. In addition, implementation of Connected 2050 includes transportation improvement projects, which would not generate substantial increased use of telecommunication systems. Since Connected 2050 would not require or result in the relocation, construction, or expansion of new or expanded electric power, natural gas, or telecommunications facilities, environmental impacts related to the construction or relocation of such facilities would be less than significant.

As discussed in Section 4.9, *Hydrology and Water Quality*, Connected 2050 projects are required to adhere to state and local regulations to prevent stormwater runoff from creating significant impacts. The only proposed RTP projects that involve wastewater are the Gaviota Safety Roadside and Rest Area Improvements and construction of a Transit Operations and Maintenance Center for City of Lompoc Transit. If any sewer connections need to be upgraded and resized to accommodate additional flow, the necessary improvements would be determined by local member agencies at the time such projects are proposed. Any necessary wastewater and stormwater improvements would generally occur within existing utility easements and would not create new environmental impacts. Construction-related impacts would be similar to the construction impacts discussed throughout this EIR and are not expected to disturb sensitive environmental resources based on the generally developed nature of urban land development. The land use scenario envisioned by Connected 2050 would not exceed wastewater treatment requirements, require construction or expansion of storm or wastewater treatment facilities, or require a determination by a wastewater treatment provider. Impacts would be less than significant.

² Caltrans Manual on Uniform Traffic Control Devices available online at http://www.dot.ca.gov/hq/traffops/engineering/mutcd/ca_mutcd2014rev1.htm.

Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Construction activities would generate solid waste that would need to be disposed at local landfills, and individual contributions on a project-by-project basis would be analyzed under planning review prior to project implementation. Impacts associated with transportation infrastructure projects would be temporary and reduced by compliance with the California Green Building Code and Senate Bill 1016, which requires that construction operations recycle a minimum of 50 percent of waste generated. Similarly, land use development projects would also be required to comply with a 50 percent diversion rate, as required by California's Integrated Waste Management Act of 1989 (State Assembly Bill [AB] 939) and a future 75 percent diversion established by AB 341 in October 2011. Compliance with these requirements would ensure that solid waste generated from land use development would be minimized the extent practical, and that diversion rates would increase into the future, as development facilitated by Connected 2050 is built out.

For the non-diverted waste generated by transportation improvement projects included in Connected 2050, solid waste would require disposal in area landfills. There are nine permitted and active operating solid waste facilities Santa Barbara County (CalRecycle 2020). These landfills are adequate for the existing solid waste generated in Santa Barbara County, and include additional unused capacity, the volume of which varies by specific facility. In addition, AB 939 requires that all California counties provide at least 15 years of ongoing landfill capacity. With this long-range landfill capacity planning, as well as consideration of project-by-project demand for solid waste facilities during the planning review process, adequate landfill capacity would exist or be constructed to accommodate the solid waste generated by individual projects. Construction of new solid waste facilities or expansions of existing landfills to increase capacity would be subject to project-specific CEQA review. Impacts related to generation of excess solid waste and compliance with solid waste statutes and regulations would be less than significant.

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5 Other CEQA Required Discussions

This section discusses growth-inducing impacts, irreversible environmental impacts, and significant and unavoidable impacts that would be caused from implementation of Connected 2050.

5.1 Growth Inducement

Section 15126.2(g) of the *State CEQA Guidelines* requires a discussion of a project's potential to induce growth. Specifically, an EIR must discuss the ways in which the proposed project could foster economic or population growth. Included in this category are projects that would remove obstacles to population growth. In addition, the EIR must discuss how the project may encourage and/or facilitate other activities that could significantly affect the environment. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

5.1.1 Employment, Household, and Population Growth

The SBCAG Board adopted the 2019 Regional Growth Forecast in January 2019. The purpose of the Regional Growth Forecast is to provide a consistent economic and population growth forecast to the year 2050 for use in long-range comprehensive planning. The forecast served as an input towards the development of Connected 2050. SBCAG does not hold land use authority and cannot directly affect population growth, as development would be facilitated through implementation of the RTP/SCS, rather than proposing individual growth inducing projects. SBCAG growth forecasts are projections used to plan for public infrastructure, housing, and employment throughout the region. Connected 2050 intends to address jobs/housing balance issues by emphasizing job growth in the North County and housing growth in the South County. The net increase in households and employment opportunities, according to the 2019 Regional Forecast, is shown in Table 5-1.

Table 5-1 Net Increase in Households and Employment by Jurisdiction

Jurisdiction	2015-2020		2020-2035		2035-2050		2015-2050	
	HHs	Emp.	HHs	Emp.	HHs	Emp.	HHs	Emp.
Buellton	29	201	378	1,047	361	0	768	1,248
Carpinteria	304	265	42	0	0	0	346	265
Goleta	1,858	320	4,515	55	2,724	0	9,097	375
Guadalupe	87	183	63	633	0	0	150	816
Lompoc	571	530	672	8,482	639	1,375	1,882	10,387
Santa Barbara	3,622	183	6,111	358	3,211	182	12,944	723
Santa Maria	253	5,978	6,468	15,009	4,879	13,467	11,600	34,453
Solvang	65	18	252	0	0	0	317	18
Unincorporated	441	1,462	2,499	1,955	2,085	5,197	5,025	8,614
Total	7,229	9,140	21,000	27,540	13,900	20,220	42,129	56,900

Source: SBCAG 2019 Regional Growth Forecast

The land use scenario envisioned by Connected 2050 would facilitate the development of infill and TOD projects within existing urbanized areas and therefore redistribute growth patterns. As discussed in Section 4.10, *Land Use and Planning*, and Section 4.15, *Effects Considered Less than Significant*, Connected 2050 identifies areas within the region sufficient to house all the forecast population of the region to the plan horizon year as well as identified housing needs under RHNA.

As discussed in Section 4.10, *Land Use and Planning*, the land use scenario envisioned in Connected 2050 was developed in close coordination with SBCAG member agency planning staff and also builds on local general plans and general plan updates currently in process or completed. Central to the SCS is a land use plan identifying the general location of uses, residential densities, and building intensities within the region. Starting with land uses allowed by existing, adopted local General Plans, the land use plan envisioned by Connected 2050 provides for intensification of residential and commercial land uses in urban areas proximate to existing transit, aligning with existing and future transit priority areas (TPAs). Connected 2050 accounts for existing county land uses including the significant proportion of its land area that is in undeveloped national forest lands, federally-owned or in agricultural uses. Connected 2050 accounts for the land uses of the eight incorporated cities, five Supervisorial Districts with their eleven unincorporated area community plans. Connected 2050 is consistent with local agencies' adopted General Plans and relies principally on available land use capacity in these plans. Connected 2050 would not require or promote any unplanned growth to meet its goals and is consistent with the RHNA allocation and projected housing needs.

Implementation of Connected 2050 would create short-term economic growth in the region as a result of construction-related job opportunities for the construction of transportation and land use projects. Implementation of Connected 2050 would also generate additional employment opportunities for roadway, vehicle, and landscape maintenance and transportation facility clean-up. The employment increase may subsequently increase the demand for support services and utilities, which could generate secondary employment opportunities. This additional economic growth would likely raise the existing revenue base within the region. Although such growth may incrementally increase economic activity in the county, significant physical effects are not likely to result from economic growth generated by Connected 2050.

5.1.2 Removal of Obstacles to Growth

Connected 2050 transportation improvement projects are primarily located in existing urbanized areas and transit corridors in the cities of Lompoc, Santa Barbara, Carpinteria, Goleta, and Santa Maria; however, projects are also located in rural or semi-rural areas (ex. bridge replacement/retrofitting or roadside facilities). Such transportation improvements can be perceived as removing an obstacle to growth by either creating additional traffic capacity (in the case of a roadway widening) or providing new or easily facilitated access to undeveloped areas (in the case of a road extension). New infrastructure may also serve to accelerate, or shift planned growth or encourage and intensify unplanned growth. These transportation network improvements would remove obstacles to growth in some areas of the region, which would support additional housing, population and economic growth, and could therefore be considered growth inducing.

Connected 2050 transportation improvements are designed to fully support infill development along existing transit corridors as outlined in Chapter 3, *Sustainable Community Strategy*, of the SCS and fully support the complementary transportation needs of the growing population. As a result, Connected 2050 would not induce growth beyond that anticipated by 2050; rather, it is intended to accommodate it by encouraging infill and TOD development within existing urban areas. Therefore, Connected 2050 is consistent with projected and planned growth. Further, all transportation

improvement projects are anticipated by the general plans of the applicable local jurisdictions of the Planning Area, as all improvements have been coordinated with the applicable local jurisdiction.

5.2 Irreversible Effects

Section 15126.2(c) of the *State CEQA Guidelines* requires a discussion of significant irreversible environmental changes that would occur as a result of a proposed project.

Although Connected 2050 forecasts to a horizon year of 2050, transportation improvement projects would have an indefinite life span, assuming regular maintenance of the proposed improvements and long-term occupancy of infill and TOD projects. The proposed improvements would be located primarily in areas where transportation facilities already exist, where transportation facilities are already planned, or where transportation facilities are needed to support the new land use patterns identified in the SCS. Therefore, most proposed transportation projects are not generally expected to dramatically alter development patterns in the County and projects would support planned future development patterns. Connected 2050 would provide a foundation for local, regional, and State officials in making decisions aimed at achieving a coordinated and balanced transportation system.

Many of the adverse impacts that could occur from implementation of Connected 2050 are short-term in nature resulting primarily from construction of the proposed transportation projects, urban infill, and TOD projects along existing corridors. Typical construction-related impacts can involve the following issues: noise, air quality, aesthetics and construction-related erosion and associated water quality impacts. In addition, as discussed in detail Section 4.5, *Energy*, though such materials would not be used in a wasteful manner, all construction activity would involve the use of non-renewable energy sources, potable water and building materials. The use of these resources during construction would increase demand and impact supplies across the SBCAG region.

Long-term irreversible environmental impacts are associated with increased asphalt or concrete paving and related direct and cumulative impacts to geology/soils, biological and cultural resources (historic resources); traffic circulation; and hydrology/water quality, as discussed in their respective sections of this DEIR. In addition, as discussed in Section 4.1, *Aesthetics*, Connected 2050 would contribute to an overall increase in the urbanized character of the region. This shift would incrementally increase demand for potable water, electricity and other resources. The supply versus demand for these resources is evaluated by service/utility providers; thus, impacts would be determined during project specific review and as part of the overall planning process addressing regional growth. Although mitigation measures have been prescribed in their respective environmental issue areas to minimize identified significant but mitigable impacts, in certain instances, as discussed in Section 5.3 below, some issues could remain significant and unavoidable.

5.3 List of Significant and Unavoidable Impacts

As discussed in Sections 4.1 through 4.15 of the EIR, implementation of Connected 2050 would result in the following significant and unavoidable impacts.

- Impact AES-1: adverse effect on a scenic vista, scenic resources within a state scenic highway
- Impact AES-2: degradation of existing visual character (non-urbanized areas)
- Impact AES-3: generation of new sources of light and glare

- Cumulative – Aesthetics (adverse effect on a scenic vista, scenic resources within a state scenic highway, visual character, and light/glare)
- Impact AQ-2: fugitive dust and ozone precursor emissions during construction
- Impact AQ-4: exposure of sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors
- Cumulative – Air Quality (fugitive dust and ozone precursor emissions during construction and exposure to substantial air pollutant concentrations/odors)
- Impact BIO-3: interference with wildlife movement
- Cumulative – Biological Resources (wildlife movement)
- Impact CR-1: disturbance of known or unknown historical resources
- Impact CR-2: disturbance of known and unknown archeological resources
- Cumulative – Cultural Resources (historical and archaeological resources)
- Impact GEO-3: disturbance of known and unknown paleontological resources
- Cumulative – Geology and Soils (paleontological resources)
- Impact GHG-3: conflict with SB 32, the 2017 Scoping Plan, and EOs S-3-05 and B-55-18
- Cumulative – Greenhouse Gas Emissions (conflict with applicable plans/policies)
- Impact HYD-2: increased water demand potentially requiring new or expanded water supplies, entitlements, or facilities
- Cumulative – Hydrology and Water Quality (water supplies)
- Impact LU-2: consistency with State and local land use plans, policies or regulations adopted for the purpose of avoiding or mitigating environmental effects
- Impact LU-3: conversion of Important Farmland to nonagricultural use
- Cumulative - Land Use and Planning (conversion of agricultural land)
- Impact N-4: placement of sensitive receptors in areas with unacceptable noise levels
- Cumulative – Noise (exposure to excessive operational noise)
- Impact T-2: increase in VMT per capita
- Cumulative – Transportation and Circulation (increase in VMT)
- Impact TCR-1: adverse change to tribal cultural resources
- Cumulative – Tribal Cultural Resources (adverse change to tribal cultural resources)
- Impact WF-1: expose people or structures, either directly or indirectly, to wildfire risk and exacerbating the potential for loss or damage from wildfires
- Cumulative – Wildfire (direct and indirect exposure to wildfire hazards)

6 Alternatives

As required by Section 15126(d) of the State CEQA Guidelines, this EIR examines a reasonable range of alternatives to Connected 2050. Section 15126.6 of the CEQA Guidelines requires that an EIR “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives.”

Additionally, the CEQA Guidelines state the following:

- An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly discuss the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency’s determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. (CEQA Guidelines Section 15126.6(a),(c).)
- “Feasible” means capable of being accomplished within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. (CEQA Guidelines Section 15364.)

Key objectives of the project are outlined and discussed in detail in Section 2.0, *Project Description*. The five primary goals, with specific objectives, guiding development and implementation of Connected 2050 include the following:

1. **Environment.** Foster patterns of growth, development and transportation that protect natural resources and lead to a healthy environment.
 - Reduce GHG emissions in compliance with CARB regional targets
 - Reduce criteria pollutant emissions
 - Encourage affordable and workforce housing and mixed-use development within urban boundaries
 - Promote transit use and alternative transportation
 - Reduce vehicle miles traveled
 - Preserve open space, agricultural land, and sensitive biological resources
2. **Mobility & System Reliability.** Ensure the reliability of travel by all modes.
 - Manage congestion at acceptable levels
 - Increase bike, walk, and transit mode share
 - Employ best available transportation system management technologies

- Work cooperatively with schools and school districts to reduce congestion surrounding schools
3. **Equity.** Ensure that the transportation and housing needs of all socio-economic groups are adequately served.
- Comply with California Department of Housing and Community Development (HCD)/Regional Housing Needs Assessment
 - Support the development of affordable and workforce housing near jobs and educational institutions
 - Support State and federal goals for reducing the frequency and severity of collisions
4. **Health & Safety.** Improve public health and ensure the safety of the regional transportation system.
- Increase public outreach and education
 - Optimize network performance to reduce time lost to commuting
5. **A Prosperous Economy.** Achieve economically efficient transportation patterns and promote regional prosperity and economic growth.
- Encourage measures that bring worker housing closer to job sites
 - Promote a mix of land uses responsive to the needs of businesses, including agriculture and tourism

One of the objectives of the RTP/SCS is to comply with applicable regulatory requirements, including CTC Guidelines and SB 375, including SB 375's regional GHG reduction targets. As such, Connected 2050 intends to achieve a coordinated and balanced regional transportation system while reducing GHG emissions from passenger vehicles and light trucks to meet the regional GHG reduction targets set by the California Air Resources Board (ARB).

The analysis of alternatives focuses on the various land use and transportation scenarios that incorporate different assumptions regarding the combinations of future land uses and transportation system improvements. Connected 2050 is specifically intended for the SBCAG region; therefore, an alternative location for Connected 2050 as a whole is not possible. However, within the SBCAG region, Connected 2050 considers different patterns of land use and transportation investments to accommodate forecast future growth and regional housing needs.

The alternative land use and transportation scenarios modeled and analyzed by SBCAG and the preferred scenario (proposed project) is described in detail within Chapter 3, *Sustainable Communities Strategy*, of Connected 2050 (Appendix D of Connected 2050 includes additional performance data). Scenarios were based on policies and goals adopted by the SBCAG Board of Directors. Performance measures were then developed to measure the effectiveness of any given scenario in meeting the goals and objectives for the region. The policies and goals are described in Chapter 2 of Connected 2050 whereas the performance measures are described in Chapter 3. Scenarios also were selected based on their ability to meet GHG reduction targets required by SB 375. The performance measures were calculated for each scenario using UPlan, TransCAD travel demand model, as well as the EMFAC 2014 model.

6.1 Alternatives Development and Screening Process

During the development of Connected 2050, SBCAG developed and evaluated scenarios that included various land use assumptions and transportation system improvements and investments to see how each scenario could achieve the GHG targets established by CARB as well as other performance measures. Extensive outreach with partner agencies, local jurisdictions, key stakeholders and the public was ongoing throughout the Connected 2050 planning process through workshops and meetings, surveys and interactive tools.

Beginning in January 2020, SBCAG staff met with all SBCAG member jurisdictions' planning staff to discuss the Connected 2050 land use planning assumptions and received input. A staff report was prepared in September 2020 presenting the results of the preliminary travel demand model runs completed for the RTP/SCS per the direction of the local jurisdictions and the Joint Technical Advisory Committee (JTAC) direction received on the recommended scenarios. During its November meeting, JTAC voted to recommend the Board select Scenario 3 (Transit Oriented Development/Infill + Enhanced Transit Strategy) as the preferred scenario. The preferred scenario, or Connected 2050 as proposed, is summarized in Section 2.0, *Project Description*, of this EIR and the environmental effects of this scenario are addressed in Sections 4.1 through 4.15.

This alternatives analysis herein includes the following alternatives to Connected 2050:

- **Alternative 1: No Project Alternative (RTP/SCS Scenario 1).** Only currently programmed and funded transportation system improvements (the current RTP/SCS's programmed projects list) would be implemented, with no changes to existing allowable land uses. Assumes current sub-regional growth trends continue consistent with the 2019 Regional Growth Forecast. This alternative also assumes the land use pattern described in the 2017 RTP/SCS.
- **Alternative 2: North County-weighted Jobs, South County-weighted Housing Alternative (RTP/SCS Scenario 4).** This scenario begins with existing, adopted land uses, but applies weights to make specific growth distribution assumptions emphasizing job growth in the North County and housing growth in the South County, within existing available land use capacity. It does not continue past trends and does not focus on infill development along transit corridors. Infill occurs only as supported by local plans.
- **Alternative 3: Alternative Transportation Emphasis (RTP/SCS Scenario 5).** This alternative includes implementation of all programmed and planned transportation projects, as well as additional illustrative alternative transportation and transit projects. Illustrative projects are those included in the RTP, but that are conceptual and not tied to a specific funding source. Examples of such illustrative projects include expansion of the Metropolitan Transit District downtown transit center in the City of Santa Barbara, Bicycle Master Plan improvements in the City of Solvang, and construction of numerous active/multi-use paths (pedestrian and bicycle) throughout the SBCAG region. Unlike Connected 2050, which emphasizes infill and transit-oriented development, this alternative assumes current sub-regional growth trends continue consistent with the 2019 Regional Growth Forecast, and the land use scenario assumes existing adopted General Plan land uses. This alternative also assumes that by 2035, all local transit operators will double transit frequencies during peak hours and offer free fares; auto operating costs will be doubled to increase mode share to alternative transportation (bike, walk, and transit).

Each alternative is described and analyzed below to determine whether environmental impacts would be similar to, less than, or greater than those of the preferred scenario in Connected 2050. As

required by CEQA, this section also includes a discussion of the “environmentally superior alternative” among those studied.

6.2 Alternatives Eliminated from Detailed Consideration

The CEQA Guidelines state that an EIR should identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency’s determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts. (CEQA Guidelines Section 15126.6(a),(c).)

SBCAG’s development of strategy alternatives was based off of previous RTP/SCS cycles, while also considering those alternatives that were able to satisfy the greenhouse gas reduction targets assigned to the region. For that reason, a narrow suite of alternatives/scenarios was considered in this cycle. Connected 2050’s Scenario 2 (No Project and No Build) assumes that only programmed projects to be constructed from the RTP under Scenario 2 No Project and no projects constructed under the Scenario 2 No Build option. Scenario 2 was considered and rejected since it is infeasible to assume SBCAG or its member agencies would choose to not build any planned projects, or any projects that have identified funding or are funded, since those projects have been identified and requested for funding by those member agencies as needed projects to increase safety and operation of their transportation systems.

Significant and unavoidable impacts from development of Connected 2050 have been identified in this EIR in the environmental issue areas of aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hydrology and water quality, land use, noise, transportation, and wildfire. Some of the environmental impacts would occur with development of specific RTP projects and land uses in sensitive biological, cultural, or wildfire areas, or areas with agricultural resources or existing high volumes of noise. Because the projects in Connected 2050 are site-specific, such as improvements to a road within a wildfire area or bridge repair over a waterway, it is not feasible to have an alternative or alternatives that would completely avoid these sensitive areas or to exclude those projects as maintenance and improvements will be required on these existing facilities to at least maintain operational safety. The alternatives analysis in this EIR intends to identify potential options to reduce significant and unavoidable impacts associated with implementation of Connected 2050.

6.3 Alternative 1: No Project

6.3.1 Description

The No Project Alternative includes a land use pattern comprised of existing land use trends. In other words, it assumes that current sub-regional growth trends would continue, but it updates the total growth to be consistent with the updated SBCAG 2019 Regional Growth Forecast. Rather than focusing on coordinating transportation projects that serve infill and transit-oriented development near existing transportation corridors, the transportation network would be comprised of committed transportation projects included in the RTIP.

6.3.2 Impact Analysis

a. Aesthetics

Implementation of this alternative would result in slightly fewer visual impacts as compared to Connected 2050, because many of the proposed interchanges, bridges and roadway extensions, as well as transit facilities and other site-specific visual obstructions from land uses would not be constructed. Nevertheless, some capital improvements would still be constructed under this alternative with the potential to impact scenic vistas on designated scenic highways, along with the gradual transformation toward a more urban/suburban character would occur in many parts of the SBCAG region. In fact, because this alternative would continue current sub-regional growth trends rather than emphasizing an infill approach to land use and housing, more development would occur outside of existing urban areas, which may result in new sources of light and glare and greater impacts to scenic resources in the less developed portions of the SBCAG region. Thus, impacts related to visual character, scenic resources in proximity to scenic highways, generation of light and glare would be significant and unavoidable as with Connected 2050. The overall level of impact resulting from combined transportation improvement and land use projects would be similar when compared to the Connected 2050 with some impacts greater while other impacts less but would remain significant and unavoidable.

b. Air Quality

Implementation of this alternative would result in slightly reduced short-term air quality impacts from construction activity. As discussed in Section 4.2, *Air Quality*, total regional emissions of ROC would be 0.05 ton per day higher, NOX would be 0.24 ton per day higher, and PM₁₀ and PM_{2.5} emissions would be 0.05 and 0.11 tons per day higher, respectively, under this alternative than emissions anticipated with implementation of Connected 2050. The higher emissions would be due to higher VMT expected under this alternative. The SCS is intended to increase residential and commercial land use capacity within existing transit corridors which would shift a greater share of future growth to these corridors, ultimately increasing density and improving circulation and multimodal connections. If this alternative were selected, improvements in the transportation infrastructure and infill development projects anticipated under Connected 2050 would not occur. Since these developments would not occur, sensitive receptors would not be exposed to health risks from TACs during construction or operation. Although total criteria pollutant emissions during construction would be slightly lower, due to the increase in total regional emissions, overall air quality impacts would be greater under this alternative when compared to Connected 2050. Long term operational impacts related to fugitive dust and ozone precursor emissions and exposing sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors would remain significant and unavoidable.

c. Biological Resources

This alternative would result in slightly less overall construction activity and ground disturbance, and therefore would slightly reduce potential impacts to special status plants and animals as compared to Connected 2050. Implementation of this alternative may result in slightly fewer impacts to biological resources resulting from transportation improvement projects, as fewer roadway extensions, widening and bridge replacement projects and creek crossings would occur under this alternative. However, because this alternative would continue current sub-regional growth trends rather than emphasizing an infill and TOD approach to land use and housing, more development

would be expected to occur outside of existing urbanized areas, including in areas providing habitat for special status plant and animal species. As a result, overall impacts to special status plants, animals, wetlands and/or riparian habitat and wildlife movement outside developed urban areas would therefore be greater than under Connected 2050. While impacts to sensitive plant and animal species and wetlands would be reduced under this alternative, impacts would remain significant but mitigable and all related mitigation measures would apply. Impacts related to wildlife movement would be reduced to an extent; however, programed projects under this alternative would similarly have the potential to impact wildlife movement. Potential impacts related to wildlife movement would remain potentially significant and unavoidable and all related mitigation measures would apply.

d. Cultural Resources

As described in Section 4.5, *Cultural and Historic Resources*, some of the Connected 2050 projects may be located in proximity to historical resources or include repair or replacement of potentially historical structures (e.g., bridges). Because some of these projects would not be developed under the No Project Alternative, these impacts would be eliminated unless determined to be required due to safety or seismic issues. In addition, because less infill development would occur under this alternative, fewer impacts involving redevelopment or demolition of existing structures resulting from land use development would occur. Impacts to historical resources would therefore be reduced when compared to Connected 2050. However, project-specific impacts may still be significant.

Implementation of this alternative would involve slightly less ground disturbance associated with transportation improvements than would occur under Connected 2050. However, because more land use development could occur outside of existing urbanized areas, more ground disturbance would be expected to occur in previously undeveloped areas. As such, the potential for uncovering known or unknown archaeological resources deposits would increase under this alternative for new development but decrease for transportation projects. The overall level of impact resulting from combined transportation improvement and land use scenario projects would be similar when compared to Connected 2050. Impacts to archaeological resources would remain significant and unavoidable.

e. Geology and Soils

Impacts related to erosion and loss of topsoil would be less than significant pursuant to compliance with existing regulations, similar to Connected 2050. Because this alternative does not include as many new interchanges, bridges, roads and fixed facilities, there would be slightly less exposure of new structures to hazardous geologic conditions, including liquefaction, expansive soils, landslides, ground-shaking and flooding. Conversely, if inadequate structures are not replaced, the potential for these existing structures and people using these structures to be harmed by geologic hazards could be greater under the No Project Alternative than under Connected 2050. However, because mitigation for impacts related to seismic hazards and unstable soils would not be required under this alternative, mitigation is not available to reduce the impacts to less than significant levels. Therefore, seismic hazard and unstable soil related impacts would be significant and unavoidable under the No Project Alternative. Compared to Connected 2050, the overall impact of the No Project Alternative would be slightly greater to unmitigated risks of geologic hazards.

Implementation of this alternative would involve slightly less ground disturbance associated with transportation improvements than would occur under Connected 2050. However, because more

land use development could occur outside of existing urbanized areas, more ground disturbance would be expected to occur in previously undeveloped areas. As such, the potential for uncovering known or unknown paleontological resources deposits would increase under this alternative for new development but decrease for transportation projects. The overall level of impact resulting from combined transportation improvement and land use scenario projects would be similar when compared to Connected 2050. Impacts to paleontological resources would remain significant and unavoidable.

f. Greenhouse Gas Emissions

The No Project Alternative would result in slightly fewer impacts associated with GHG emissions during construction activities as fewer transportation infrastructure projects would be constructed. However, operational and total GHG emissions under the No Project Alternative would be higher than GHG emissions with Connected 2050, primarily as a result of increased VMT. Although this alternative would continue existing land use trends, long-term emissions of GHGs would be higher under this alternative, and the overall impact of this alternative would be greater than the proposed project.

g. Hydrology and Water Quality

This alternative would result in slightly fewer transportation infrastructure projects being constructed. Therefore, this alternative would reduce water quality impacts resulting from construction-related erosion and sedimentation and would generate slightly less water demand for dust suppression activities. These impacts would remain less than significant pursuant to compliance with existing regulations, similar to Connected 2050.

Because this alternative would continue current sub-regional growth trends rather than emphasizing an infill approach to land use and housing, more development would be expected to occur outside of existing urbanized areas. As such, impervious surfaces would be expected to increase under this alternative. Because projects would be located in less developed areas, runoff would include fewer urban pollutants such as heavy metals from auto emissions, oil and grease than projects under Connected 2050. However, because more development would occur in and therefore be adjacent to agricultural areas, runoff from those adjacent agricultural areas would contain more fertilizers and pesticides. While projects under this alternative may require more grading and vegetation removal, including in proximity to creeks, less urban development may result in less disturbance of soils on previously contaminated sites. As such, water quality in creeks may be more impacted, but water quality within urban areas may be less impacted. Because of these tradeoffs, the No Project Alternative would be anticipated to result in impacts to water quality that are overall comparable to Connected 2050 with some impacts greater while other impacts would be less; water quality impacts would remain less than significant, pursuant to compliance with existing regulations.

Increases to water demand are primarily associated with increased population levels. The No Project Alternative would result in the same population increase in 2050 as that under Connected 2050. However, this alternative would result in less dense land use development, which would result in a less efficient water supply system (e.g., greater areas of irrigated landscaping). As such, future water demand associated with this alternative would be greater than water demand for the Connected 2050. This impact, which is significant and unavoidable for Connected 2050, would be greater under the No Project Alternative, particularly because mitigation would not apply to this alternative. Impacts would remain significant and unavoidable.

Overall hydrology and water quality impacts would be greater under the No Project Alternative than Connected 2050.

h. Land Use and Planning

As with Connected 2050, this alternative would not be anticipated to divide an established community. As noted in Section 4.10, *Land Use and Planning*, Connected 2050 includes a list of planned and programmed projects including local and regional capital improvements that have been anticipated or accounted for in local general plans and regional, statewide and federal transportation improvement programs. In addition, the overall objective of Connected 2050 is to provide for a comprehensive transportation system of facilities and services that meets public need for the movement of people and goods, and that is consistent with the social, economic and environmental goals and policies of the region, including the reduction of greenhouse gas emissions. The No Project Alternative would not provide as many capital improvements anticipated within applicable general plans and transportation improvement programs, nor would it guide development to explicitly meet social, economic, and environmental goals and policies of the region as anticipated under Connected 2050. The amount of undeveloped land impacted would therefore be greater under this alternative. Although the No Project Alternative would continue existing land use patterns and trends, it would increase the severity of several environmental impacts, as discussed herein. As such, it would have greater conflicts with State and local policies and regulations adopted for the purpose of avoiding or mitigating environmental effects. This alternative would result in fewer impacts to agriculture and agricultural land due to direct conversion from transportation projects but would result in greater impacts due to a more dispersed urban land use pattern compared to Connected 2050. Impacts to agriculture would remain significant and unavoidable and related mitigation measures would apply. Because environmental effects would generally increase under this alternative, the overall impacts on land use would be greater under this alternative when compared to the Connected 2050 and would remain significant and unavoidable.

i. Noise

Because noise is a site-specific issue, noise studies would be prepared for each project to determine whether impacts would occur. From a programmatic perspective, slightly fewer transportation infrastructure projects would result in slightly less construction activity under the No Project Alternative. This would slightly reduce temporary noise impacts throughout the SBCAG region. In addition, because the number of infill or TOD projects would be less under the No Project Alternative, construction-related noise impacts on adjacent sensitive receptors would also decrease. However, construction noise would still occur and impacts would continue to be significant.

Although the number of transportation projects would be slightly reduced as compared to Connected 2050, increased traffic volumes resulting from regional growth would continue to occur. Whether noise impacts would be greater or less than those anticipated under Connected 2050 remains dependent on site-specific considerations that cannot currently be known. Regionally, the difference in VMT between the No Project Alternative and Connected 2050 is not enough to noticeably change overall noise levels in the region. Mobile source noise levels resulting from traffic would therefore be similar under the No Project Alternative when compared to Connected 2050.

Because most rail and transit improvements planned under Connected 2050 would not be implemented under this alternative, as well as not allocated growth along transportation corridors,

the potential for increased rail and transit noise and exposure to these noise sources, would be reduced under the No Project Alternative.

Overall, noise-related impacts across the region would be similar to Connected 2050, and would continue to be significant and unavoidable.

j. Transportation and Circulation

This alternative would not include some of the projects envisioned under Connected 2050, including new highway and intersection projects, new bikeway and pedestrian projects (active transportation), new railroad projects, new transit projects, new transportation management projects. Many of these projects are intended to address traffic congestion, and in many cases would serve as mitigation measures to reduce potential impacts associated with planned long-term development.

As discussed in Section 4.12 *Transportation*, overall VMT would increase with this alternative when compared to conditions under Connected 2050. In addition to an increase in overall freeway and roadway VMT, fewer improvements would be implemented, which would further worsen traffic conditions throughout the County. Therefore, impacts would remain significant and unavoidable.

Under the No Project Alternative, some of the projects to increase bus capacity on congested facilities and the frequency of bus lines would not be implemented. Additionally, Connected 2050 projects that are intended to ensure a reliable bus fleet would not be implemented under the No Project Alternative. Without some of these types of projects, the potential remains for operation of public transit to be unreliable or inadequately meet the frequency and performance standards established by local transit operators. Thus, compared to the Connected 2050, the No Project Alternative would have a slightly greater adverse impact on transit service in the SBCAG region.

Overall, the No Project Alternative would result in increased daily VMT in the SBCAG region compared to Connected 2050 and could result in adverse impacts to public transit. Thus, overall, impacts to transportation and circulation would be greater under the No Project Alternative.

k. Tribal Cultural Resources

Implementation of this alternative would involve slightly less ground disturbance associated with transportation improvements than would occur under the Connected 2050. However, because more land use development could occur outside of existing urbanized areas, more ground disturbance would be expected to occur in previously undeveloped or open space areas. As such, the potential to disturb tribal cultural resources, including ancestral remains and sacred sites, would increase under this alternative. Although mitigation would not apply to this alternative, future projects would be required to comply with AB 52, which may require formal tribal consultation. Compliance with this requirement would reduce impacts to the extent feasible, however, because of the increased potential to disturb tribal cultural resources from development outside of urbanized areas, the overall impact of the No Project Alternative would be greater than under Connected 2050.

l. Wildfire

The No Project Alternative would result in slightly fewer impacts associated with exacerbation of and exposure to wildfire hazards during construction activities as slightly fewer transportation infrastructure projects would be constructed. However, because more land use development could occur outside of existing urbanized areas where potentially increased wildfire hazards may be

present, this alternative could increase exposure to an exacerbation of wildfire hazards. Although this alternative would continue existing land use trends and would not include the land use scenario envisioned under Connected 2050, programmed transportation improvements would continue under this alternative, some of which are located in high fire hazard areas. Overall, the impact of this alternative would be slightly greater than Connected 2050 due to more dispersed overall development, and Mitigation Measures WF-1(a) through WF(d), making structures and transportation infrastructure more fire resistant and less vulnerable to loss in the event of a wildfire would not be applied that could increase loss of structures due to wildfires in newly develop areas. Overall wildfire impacts of the No Project Alternative would be significant and unavoidable, similar to Connected 2050.

6.4 Alternative 2: North County-weighted Jobs, South County-weighted Housing

6.4.1 Description

This scenario begins with existing, adopted land uses, but applies model weightings to make specific growth distribution assumptions emphasizing job growth in the North County and housing growth in the South County, within existing available land use capacity. This alternative applies region-wide population, employment, and housing growth forecasts consistent with the 2019 Regional Growth Forecast. This alternative does not continue past trends and does not focus on infill along transit corridors. Infill would occur only as supported by local plans. The same programmed and planned transportation projects would be implemented under this alternative compared to Connected 2050, however, this alternative does not include a policy strategy for additional and enhanced transit service, as included in the proposed project.

6.4.2 Impact Analysis

a. Aesthetics

Implementation of this alternative would result in identical aesthetic impacts from transportation projects, as the same amount of programmed and planned transportation projects would be implemented when compared to Connected 2050. However, the land use scenario would be altered from a focus on infill development to a continuation of existing adopted land use designations with no emphasis on infill and TOD along existing transportation corridors. Therefore, aesthetic impacts related to the transformation of existing urbanized areas to a denser development pattern resulting from infill development would be reduced compared to Connected 2050. However, aesthetic impacts related to a more dispersed development pattern (generation of light and glare in areas with low existing levels and new visual obstructions) would be increased when compared to Connected 2050. Therefore, overall aesthetic impacts under implementation of this alternative would have trade-offs when compared to Connected 2050. However, impacts related to scenic resources and light and glare would remain significant but mitigable and all related mitigation measures would be required. Impacts related to change in character would remain significant and unavoidable and all related mitigation measures would still be required.

b. Air Quality

Implementation of this alternative would result in identical short-term air quality impacts from planned and programmed transportation projects, as the same projects would be implemented. The mitigation measures outlined in Impact AQ-2 of Section 4.2, *Air Quality*, would still be required to reduce significant short-term emissions, however mitigation measures AQ-2(a) through AQ-2(c) would not reduce significant and unavoidable construction emission impacts to less than significant at the programmatic level. Implementation of this alternative would result in a land use scenario that continues existing land use patterns and emphasizes job growth in the North County and housing growth in the South County. Because this alternative would not emphasize infill development, it would result in lower density development and increased average VMT when compared to Connected 2050 (approximately 11,900,000 for this alternative compared to approximately 11,500,000 for Connected 2050). As a result, this alternative would result in an increase in criteria pollutant emissions, including ROG, PM₁₀, PM_{2.5} and NO_x emissions. Impacts to air quality would be greater under this alternative.

This alternative would reduce exposure to hazardous air pollutants because less infill and TOD would occur near potential sources of toxic air contaminants. However, overall toxic air emissions (diesel particulates) would be higher under this alternative when compared to Connected 2050 due to the increase in overall VMT. Impacts would remain significant and unavoidable and all related mitigation measures would still be required.

Overall, air quality impacts would be greater under this alternative when compared to Connected 2050. All mitigation measures identified in Section 4.2 *Air Quality*, would still be required.

c. Biological Resources

Implementation of this alternative would result in a land use scenario that encourages job growth in the North County, housing growth in the South County, and a continuation of existing land use patterns. As implementation of this alternative would not emphasize infill development, it could include more development on vacant undisturbed habitat that could support sensitive species of plants or animals and impacts to biological resources could potentially be greater under this alternative. Potential impacts to wildlife movement could also be greater with implementation of this alternative as development in undeveloped areas could result in greater impacts to wildlife movement. Impacts to sensitive plant and animal species and wetlands would remain significant but mitigable and all related mitigation measures would apply. Potential impacts related to wildlife movement would remain significant and unavoidable and all related mitigation measures would apply.

d. Cultural Resources

Impacts related to the ground disturbance from the proposed transportation improvement projects envisioned by Connected 2050 would be the same under this alternative because the same planned and programmed transportation projects would occur. With this alternative, development in areas that are currently undeveloped could potentially increase the likelihood for impacting known or unknown historical and archaeological resources. However, this alternative would result in lesser impacts to known or unknown historic resources as development would occur in areas that are less likely to be currently developed with structures that could be or are considered historic. Because this alternative does not emphasize infill development, impacts to historic resources would be reduced compared to Connected 2050. Therefore, this alternative would result in cultural resources

impacts that are both better and worse than Connected 2050. Impacts related to unknown archaeological resources would remain significant and unavoidable and all related mitigation measures would apply. Potential impacts to historic structures from infill and TOD projects would be reduced, but impacts would remain potentially significant and unavoidable and all related mitigation measure would be required.

e. Geology and Soils

Implementation of this alternative could result in both greater and lesser geohazard and flooding impacts as compared to Connected 2050. Implementation of this alternative would result in identical geohazard and flooding impacts from transportation projects, as the same amount of programmed and planned transportation projects would be implemented when compared to Connected 2050. However, the land use scenario would be altered from a focus on infill development to a continuation of existing adopted land use designations with no emphasis on infill and TOD along existing transportation corridors. The larger amount of land being impacted for development increases the opportunity of exposing new structures to hazardous conditions, including liquefaction, expansive soils, landslides, ground-shaking, and flooding. Therefore, the overall impact of this alternative would be higher than the proposed project, but impacts would remain significant but mitigable as all related mitigation measures would still be required.

Implementation of this alternative would result in the same ground disturbance associated with transportation improvements as would occur under Connected 2050. However, because more land use development could occur outside of existing urbanized areas than in infill areas, more ground disturbance would be expected to occur in previously undeveloped areas. As such, the potential for uncovering known or unknown paleontological resources deposits would increase under this alternative for new development but remain the same for transportation projects. The overall level of impact resulting from combined transportation improvement and land use scenario projects would be increased when compared to Connected 2050. Impacts to paleontological resources would remain significant and unavoidable.

f. Greenhouse Gas Emissions

Implementation of this alternative would result in a change in the land use scenario from a focus on future infill development to a continuation of existing land use patterns with an emphasis on job growth in the North County and housing growth in the South County. Construction-related emissions of GHGs would be identical to those of Connected 2050 as the same number of planned and programmed transportation improvement projects would be constructed under this alternative. The land use scenario identified in the Connected 2050 is designed to align transportation and land use planning to reduce VMT and transportation-related GHG emissions. As this alternative does not emphasize infill development, it would result in an increase in VMT compared to Connected 2050. Therefore, vehicle and operational GHG emissions under this alternative would be slightly higher when compared to GHG emissions under Connected 2050. For example, as a result of Connected 2050, per capita passenger vehicles CO₂ emissions would be 15.43 lbs/day in 2035. Under this alternative, per capita passenger vehicles CO₂ emissions would be roughly 15.92 lbs/day in 2035. Although this alternative would not conflict with SB 375 targets, similar to Connected 2050, long-term emissions of GHGs would be slightly higher under this alternative and this alternative may be inconsistent with SB 32, the 2017 Scoping Plan, and EOs S-3-05 and B-55-18. The overall impact of this alternative would be greater than the proposed project. Impacts would remain significant and unavoidable and all mitigation measures would be required.

g. Hydrology and Water Quality

Because the amount of future construction activity for planned and programmed transportation projects would be identical under this alternative, the amount of water needed for dust suppression activities and the potential for water quality impacts due to erosion would be similar. The amount of new landscaped areas that require irrigation would likely be increased as development would not be focused on infill development and include greenfield development requiring more landscaping. Finally, under this alternative, an overall increase in impermeable, paved surfaces may occur due to the land use scenario not emphasizing infill development near existing transportation corridors. Overall, incremental increases in water quality impacts and water supply impacts, as well as incremental reductions in groundwater recharge, would occur. Impacts under Connected 2050 would still occur, potentially to a higher extent under this alternative. As such, groundwater impacts would remain significant and unavoidable and all related mitigation measures would be required.

h. Land Use and Planning

As with Connected 2050, this alternative would not be anticipated to divide an established community. This alternative envisions identical road widenings, repairs, maintenance projects and extensions as Connected 2050, but no focus on infill development or TOD along infill corridors. This alternative would be consistent with established SB 375 GHG reduction targets, however, similar to Connected 2050 may conflict with SB 32, the 2017 Scoping Plan, and EOs S-3-05 and B-55-18. This alternative would result in similar impacts to agriculture and agricultural land due to direct conversion from transportation projects, but would result in greater impacts due to a more dispersed urban land use pattern compared to Connected 2050. Impacts to agriculture would remain significant and unavoidable and related mitigation measures would apply.

i. Noise

Implementation of this alternative would result in identical construction noise impacts from transportation projects, as the same number of programmed and planned transportation projects would be implemented when compared to Connected 2050. Overall construction activity near existing noise receptors would result in similar temporary noise impacts throughout the County, similar to Connected 2050. Construction noise would still occur and impacts would remain significant but mitigable and all related mitigation measures would still be required. Although the number of transportation projects would be the same as compared to the proposed project, the increase in traffic volumes resulting from regional growth would still be expected to occur, and this alternative would result in more overall VMT, and associated vehicle noise exposure, when compared to Connected 2050. Similar to Connected 2050, the potential for increased rail and transit traffic, and associated noise emissions, would be similar when compared to Connected 2050. Since this alternative would not envision land development near transit and other transportation facilities, this alternative would not place sensitive receptors in areas with unacceptable noise levels to the same degree as Connected 2050. Nonetheless, this alternative would result in greater long-term increases in noise levels throughout the County when compared to Connected 2050.

j. Transportation and Circulation

This alternative would include the same transportation projects envisioned under Connected 2050 including new highway projects, new bikeway and pedestrian projects, new transit projects, new intelligent transportation system/transportation demand management projects, new State highway and regional transit projects, infill and TOD projects. Many of these projects are intended to address

traffic congestion identified by local agencies, and in many cases are intended as mitigation measures to reduce potential impacts associated with planned long-term development. Overall VMT would increase with this alternative when compared to conditions under Connected 2050. Overall transportation impacts would remain significant and unavoidable under this scenario.

k. Tribal Cultural Resources

Implementation of this alternative would involve identical ground disturbance associated with transportation improvements as would occur under the Connected 2050. However, because more land use development could occur outside of existing urbanized areas without emphasis on development of infill areas along transportation corridors, more ground disturbance would occur in previously undeveloped or open space areas. As such, the potential to disturb tribal cultural resources, including ancestral remains and sacred sites, would increase under this alternative. Mitigation measures would apply to this alternative and future projects would be required to comply with AB 52 (including formal tribal consultation). Compliance with this requirement would reduce impacts to the extent feasible, however, because of the increased potential to disturb tribal cultural resources from development outside of urbanized areas, the overall impact of this alternative would be greater than under Connected 2050.

l. Wildfire

This alternative would result in identical impacts associated with exacerbation of and exposure to wildfire hazards during construction activities as the same transportation projects would be constructed. Although this alternative would continue existing land use trends, emphasizing housing growth in South County and job growth in North County, it would still locate potential future developments in high fire hazard areas. The overall impact of this alternative would be greater than Connected 2050, as land use development envisioned by the SCS would not be focused in infill, developed areas, thereby reducing the exacerbation of wildfire hazards in undeveloped areas. Under this alternative, Mitigation Measures WF-1(a) through WF(d) would be required, making structures and transportation infrastructure more fire resistant and less vulnerable to loss in the event of a wildfire. Similar to Connected 2050, it is not possible to prevent a significant risk of wildfires or fully protect people and structures from the risks of wildfires, despite implementation of Mitigation Measures WF-1(a) through WF(d). Overall wildfire impacts of this alternative would be significant and unavoidable, similar or higher than Connected 2050.

6.5 Alternative 3: Alternative Transportation Emphasis

6.5.1 Description

This alternative includes implementation of all programmed and planned transportation projects in Connected 2050, as well as additional illustrative alternative transportation and transit projects. Illustrative projects are those included in the RTP, but are conceptual and not tied to a specific funding source. Examples of such illustrative projects include expansion of the Metropolitan Transit District downtown transit center in the City of Santa Barbara, Bicycle Master Plan improvements in the City of Solvang, and construction of numerous active/multi-use paths (pedestrian and bicycle) throughout the SBCAG region. This alternative assumes current sub-regional growth trends continue consistent with the 2019 Regional Growth Forecast and the land use scenario assumes existing adopted General Plan land uses. This alternative also assumes that by 2035, all local transit

operators will double transit frequencies during peak hours and offer free fares; auto operating costs will be doubled to increase mode share to alternative transportation (bike, walk, and transit).

6.5.2 Impact Analysis

a. Aesthetics

Implementation of this alternative would result in slightly increased aesthetic impacts from transportation projects (transit and bicycle/pedestrian projects), as an increased number of alternative transportation projects would be implemented when compared to Connected 2050. Compared to Connected 2050, the land use scenario would be altered from a focus on infill development to a continuation of existing adopted land use designations with no emphasis on infill and TOD along existing transportation corridors. Therefore, aesthetic impacts related to the transformation of existing urbanized areas to a denser development pattern resulting from infill development would be reduced compared to Connected 2050. However, aesthetic impacts related to a more dispersed development pattern (generation of light and glare in areas with low existing levels and new visual obstructions) would be increased when compared to Connected 2050. Therefore, overall aesthetic impacts under implementation of this alternative would have trade-offs when compared to Connected 2050. However, impacts related to scenic resources and light and glare would remain significant and all related mitigation measures would be required. Impacts related to change in character would remain significant and unavoidable and all related mitigation measures would still be required.

b. Air Quality

Implementation of this alternative would result in slightly increased short-term air quality impacts because this alternative would implement all programmed and planned projects, as well as additional illustrative transit and bicycle/pedestrian projects. The mitigation measures outlined in Impact AQ-2 of Section 4.2, *Air Quality*, would still be required to reduce significant short-term emissions, however mitigation measures AQ-2(a) through AQ-2(c) would not reduce significant and unavoidable construction emission impacts to less than significant at the programmatic level. Implementation of this alternative would result in a land use scenario consistent with regional growth forecasts. Because this alternative would not emphasize infill development, it would result in lower density development and increased average VMT when compared to Connected 2050 (approximately 13,244,723 miles per day for this alternative compared to approximately 11,500,000 miles per day for Connected 2050). As a result, this alternative would result in an increase in criteria pollutant emissions, including ROG, PM₁₀, PM_{2.5} and NO_x emissions. Impacts to air quality would be greater under this alternative.

This alternative would reduce exposure to hazardous air pollutants because less infill and TOD would occur near potential sources of toxic air contaminants. However, overall toxic air emissions (diesel particulates) would be higher under this alternative when compared to Connected 2050 due to the increase in overall VMT. Impacts would remain significant and unavoidable and all related mitigation measures would still be required.

Overall, air quality impacts would be greater under this alternative when compared to Connected 2050. All mitigation measures identified in Section 4.2, *Air Quality*, would still be required.

c. Biological Resources

This alternative would result in slightly increased overall construction activity and ground disturbance, and would result in slightly greater potential impacts to special status plants and animals as compared to Connected 2050. In addition, because this alternative would continue current sub-regional growth trends rather than emphasizing an infill and TOD approach to land use and housing, more development would be expected to occur outside of existing urbanized areas, including in areas providing habitat for special status plant and animal species. As a result, overall impacts to special status plants, animals, wetlands and/or riparian habitat and wildlife movement outside developed urban areas would therefore be greater than under Connected 2050. Impacts would remain significant, but mitigable, and all related mitigation measures would apply. Potential impacts related to wildlife movement would remain potentially significant and unavoidable and all related mitigation measures would apply.

d. Cultural Resources

Impacts related to the ground disturbance from the proposed transportation improvement projects envisioned by Connected 2050 would be slightly greater under this alternative because all programmed and planned projects, as well as additional transit and bicycle/pedestrian projects would be constructed. This alternative assumes a more robust implementation of alternative transportation projects in addition to planned and programmed projects, therefore an increase in overall ground disturbance would occur and land use development could occur outside of existing urbanized areas rather than infill areas along transportation corridors. With this alternative, development in areas that are currently undeveloped could potentially increase the likelihood for impacting known or unknown historical and archaeological resources. Because this alternative does not emphasize infill development, development would occur in areas that are less likely to be currently developed with structures that could be or are considered historic, and impacts to historic resources would be reduced. Therefore, this alternative would result in cultural resources impacts that are both better and worse than Connected 2050. Impacts related to unknown archaeological resources would remain significant and unavoidable and all related mitigation measures would apply. Potential impacts to historic structures from infill and TOD projects would be reduced, but impacts would remain potentially significant and unavoidable and all related mitigation measure would be required.

e. Geology and Soils

Impacts related to the ground disturbance from the proposed transportation improvement projects envisioned by Connected 2050 would be the slightly greater under this alternative because all programmed and planned projects, as well as additional transit and bicycle/pedestrian projects would be constructed. This alternative assumes additional implementation of alternative transportation projects, and land use development could occur outside of existing urbanized areas rather than infill areas along transportation corridors. As such, the potential for uncovering known or unknown paleontological resources deposits would increase under this alternative for new development. The overall level of impact resulting from combined transportation improvement and land use scenario projects would be greater when compared to Connected 2050. Impacts to paleontological resources would remain significant and unavoidable.

f. Greenhouse Gas Emissions

Implementation of this alternative would result in a change in the land use scenario from a focus on future infill development to a continuation of existing land use patterns consistent with the 2019 Regional Growth Forecast. Construction-related emissions of GHGs would be slightly greater to those of Connected 2050 as all programmed and planned projects, as well as additional transit and bicycle/pedestrian projects would be constructed. The land use scenario identified in Connected 2050 is designed to align transportation and land use planning to reduce VMT and transportation related GHG emissions. Although this alternative includes additional alternative transportation projects, this alternative does not emphasize infill development, and would result in an increase in VMT compared to Connected 2050. Therefore, vehicle and operational GHG emissions under this alternative would be higher when compared to GHG emissions under Connected 2050. For example, as a result of Connected 2050, per capita passenger vehicles CO₂ emissions would be 15.43 lbs/day in 2035. Under this alternative, per capita passenger vehicles CO₂ emissions would be roughly 17.75 lbs/day in 2035. Long-term emissions of GHGs would be higher under this alternative and this alternative may be inconsistent with SB 32, the 2017 Scoping Plan, and EOs S-3-05 and B-55-18. The overall impact of this alternative would be greater than the proposed project. Impacts would remain significant and unavoidable and all mitigation measures would be required.

g. Hydrology and Water Quality

Because the amount of future construction activity would be increased under this alternative, the amount of water needed for dust suppression activities and the potential for water quality impacts due to erosion would be increased. The amount of new landscaped areas that require irrigation would likely be increased as development would not be focused on infill development and include greenfield development requiring more landscaping. Finally, under this alternative, an overall increase in impermeable, paved surfaces may occur due to the land use scenario not emphasizing infill development near existing transportation corridors. Overall, incremental increases in water quality impacts and water supply impacts, as well as incremental reductions in groundwater recharge, would occur. Impacts under Connected 2050 would still occur, potentially to a higher extent under this alternative. As such, groundwater impacts would remain significant and unavoidable and all related mitigation measures would be required.

h. Land Use and Planning

As with Connected 2050, this alternative would not be anticipated to divide an established community. This alternative envisions increased alternative transportation projects and no focus on infill development or TOD along infill corridors. Similar to Connected 2050, implementation of this alternative may conflict with plans and policies for the reduction of greenhouse gas emissions, such as SB 32, the 2017 Scoping Plan, and EOs S-3-05 and B-55-18. This alternative would result in similar impacts to agriculture and agricultural land due to direct conversion from transportation projects, but would result in greater impacts due to a more dispersed urban land use pattern compared to Connected 2050. Impacts to agriculture would remain significant and unavoidable and related mitigation measures would apply.

i. Noise

Implementation of this alternative would result in increased construction noise impacts from transportation projects compared to Connected 2050, since all programmed and planned projects, as well as additional transit and bicycle/pedestrian projects would be constructed. Overall

construction activity near existing noise receptors would result in temporary noise impacts throughout the County, similar to Connected 2050. Construction noise would still occur, impacts would remain significant but mitigable, and all related mitigation measures would still be required. Despite the focus on alternative transportation projects with this alternative, the inevitable increase in traffic volumes resulting from regional growth would still be expected to occur, and this alternative would result in more overall VMT, and associated vehicle noise exposure, when compared to Connected 2050. Similar to Connected 2050, the potential for increased rail and transit traffic, and associated noise emissions, would be slightly greater when compared to Connected 2050. Since this alternative would not envision land development near transit and other transportation facilities, this alternative would not place sensitive receptors in areas with unacceptable noise levels to the same degree as Connected 2050. Nonetheless, this alternative would result in greater long-term increases in noise levels throughout the County when compared to Connected 2050.

j. Transportation and Circulation

This alternative would include all of the projects envisioned under Connected 2050, including new roadway projects, new intelligent transportation system/transportation demand management projects, and new State highway and regional transit projects. Many of these projects are intended to address traffic congestion identified by local agencies, and in many cases are intended as mitigation measures to reduce potential impacts associated with planned long-term development. Due to longer trip lengths associated with the more dispersed land use pattern under this alternative compared to Connected 2050, overall VMT would increase with this alternative, despite the increased emphasis on transit and alternative transportation projects. Therefore, impacts would remain significant and unavoidable.

k. Tribal Cultural Resources

Implementation of this alternative would involve increased ground disturbance compared to Connected 2050, as this alternative assumes a more robust implementation of transit and alternative transportation projects. Land use development under this alternative would occur outside of existing urbanized areas without an emphasis on development in infill areas along transportation corridors, resulting in additional ground disturbance in previously undeveloped or open space areas. As such, the potential to disturb tribal cultural resources, including ancestral remains and sacred sites, would remain under this alternative. Mitigation measures would apply to this alternative, and future projects would be required to comply with AB 52 (including formal tribal consultation). Compliance with this requirement would reduce impacts to the extent feasible, however, because of the increased potential to disturb tribal cultural resources from development outside of urbanized areas, the overall impact of this alternative would be greater than under Connected 2050.

l. Wildfire

This alternative would result in increased impacts associated with exacerbation of and exposure to wildfire hazards during construction activities, as additional transit and bicycle/pedestrian projects would occur. Although this alternative would continue existing land use trends, transportation projects and overall land use development would still be located in high fire hazard areas, and many bicycle/trail projects would be located in rural areas with existing wildfire hazards. The land use scenario envisioned in Connected 2050 would not be implemented and therefore increased

development in previously undeveloped or open space areas may occur, some of which may be located in wildfire hazard prone areas. This alternative would result in increased wildfire impacts compared to Connected 2050, Mitigation Measures WF-1(a) through WF-1(d) would be applied, making structures and transportation infrastructure more fire resistant and less vulnerable to loss in the event of a wildfire. Similar to Connected 2050, it is not possible to prevent a significant risk of wildfires or fully protect people and structures from the risks of wildfires, despite implementation of Mitigation Measures WF-1(a) through WF(d). Overall wildfire impacts of this alternative would be significant and unavoidable, similar to Connected 2050.

6.6 Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that an EIR identify the environmentally superior alternative among the alternatives analyzed. CEQA Guidelines Section 15126.6(d)(2) states that if the No Project Alternative is identified as the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives analyzed. This section compares the impacts of the three alternatives under consideration to those of Connected 2050, in compliance with the CEQA Guidelines. In conducting the alternatives analysis, consideration must be given as to how, and to what extent, an alternative can meet the project's basic objectives. As discussed in Section 2.0, *Project Description*, the primary objective of Connected 2050 is to achieve a coordinated and balanced regional transportation system while reducing GHG emissions from passenger vehicles and light trucks to meet the regional GHG reduction targets set by the California Air Resources Board (ARB).

Table 6-1 shows whether each alternative would have impacts that are less than, similar to, or greater than Connected 2050 for each of the issue areas studied.

Table 6-1 Impact Comparison of Alternatives

Issue	Alternative 1: No Project	Alternative 2: North County weighted Jobs, South County weighted Housing	Alternative 3: Alternative Transportation Emphasis
Aesthetics	+/-	+/-	+/-
Air Quality	+/-	+/-	+/-
Biological Resources	+/-	-	-
Cultural Resources	+/-	+/-	+/-
Geology and Soils (Paleontological Resources)	-	-	-
Greenhouse Gas Emissions/Climate Change	-	-	-
Hydrology and Water Quality	-	-	-
Land Use (Agricultural Conversion)	-	-	-
Noise	+/-	+/-	+/-
Transportation and Circulation	-	-	-
Tribal Cultural Resources	-	-	-
Wildfire	-	-	-

- Alternative would result in greater impacts than Connected 2050
+/- Alternative would result in a mix of both greater and reduced impacts than Connected 2050

In conducting the alternatives analysis, consideration must be given as to how, and to what extent, an alternative can meet the project’s basic objectives. Key objectives of Connected 2050 are outlined and discussed in detail in Section 2.0, *Project Description*, and at the beginning of this section. Connected 2050 intends to achieve a coordinated and balanced regional transportation system while reducing GHG emissions from passenger vehicles and light trucks to meet the regional GHG reduction targets set by the California Air Resources Board (ARB). The proposed project is the environmentally superior project, but in comparison of just the alternatives, the environmentally superior alternative is the No Project Alternative. Therefore, the EIR must identify an environmentally superior alternative among the other alternatives.

Under all alternatives, land use patterns would not be focused on infill development around existing transportation corridors, to the same degree as Connected 2050. Alternative 2 could be considered environmentally superior to Connected 2050 primarily because, as shown in Table 6-1, environmental issue areas such as aesthetics, air quality, cultural resources (historic), and noise may

see a slight decrease in potential environmental effects due to lower amounts of development in infill areas that may be located near sensitive receptors and/or potential historical resources. Although Alternative 2 would include regionally identified transportation projects, it would not include an SCS that would further concentrate development in urban areas. As such, Alternative 2 would not meet the objectives of the project, including: complying with applicable regulatory requirements; serving regional goals, objectives, policies and plans; and responding to community and regional transportation needs.

The No Project Alternative (Alternative 1) would result in reduced environmental impacts, as fewer transportation projects would be implemented. In addition, this alternative would not focus on infill development, concentrating individuals in infill areas, where increased criteria air quality pollutants and exposure to high levels of operational noise may occur. Because of the increased land development outside of existing urbanized areas compared to Connected 2050, Alternative 1 would increase environmental impacts associated with geology and soils, greenhouse gas emissions/climate change, hydrology and water quality, tribal cultural resources, and wildfire hazards. The significant and unavoidable environmental impacts of Connected 2050 would remain under Alternative 1.

Although Alternative 1 could be the environmentally superior alternative, this alternative would not meet the SB 375 requirement for preparation of an SCS, nor reduce greenhouse gas emissions and vehicle miles traveled to the degree as the Connected 2050. This Alternative would not preserve open space, agricultural land, and sensitive biological resources, inconsistent with the project objectives. In addition, although Alternative 1 would implement committed transportation projects, it would not include other new transportation infrastructure projects identified by Connected 2050, as well as prioritize corridor investment projects along high quality transit corridors that serve multiple modes of travel, and prioritize projects for funding that are consistent with the Sustainable Communities Strategy goals.

Alternative 3 would result in both increased and decreased environmental impacts, in the areas of aesthetics, air quality, cultural resources, and noise, similar to Alternative 2. This is due to the addition of illustrative transit and alternative transportation projects. This alternative would result in slightly reduced environmental impacts for certain issue areas, by not concentrating infill development near sensitive receptors in urbanized areas with increased criteria air quality pollutants and noise. However, due to a more dispersed land use pattern and additional ground disturbance and operations of illustrative transit and alternative transportation projects compared to Connected 2050, this alternative would result in increased VMT and increased impacts for most issue areas. The increased overall VMT in the region from this alternative would increase potential long-term air quality and greenhouse gas emissions compared to Connected 2050. The significant and unavoidable impacts of Connected 2050 would remain and all mitigation measures would apply. Although this alternative would meet most of the project objectives, this alternative would not satisfy the basic project objectives compared to the proposed project such as reducing greenhouse gas emissions, reducing vehicle miles traveled, encouraging infill mixed use development along high quality transit corridors that serve multiple modes of travel, and prioritizing projects for funding that are consistent with the Sustainable Communities Strategy goals.

Based on this analysis and the analyses conducted for this EIR, no feasible alternatives have been identified that would reduce the significant and unavoidable effects of the project, as all impacts would remain significant and unavoidable with mitigation incorporated (where feasible). In addition, the three alternatives fail to meet the basic project objectives compared to the proposed project, such as reducing greenhouse gas emissions, reducing vehicle miles traveled, and encouraging infill

mixed use development. Therefore, the proposed project ultimately is environmentally superior to any of the analyzed Alternatives. However, for the purposes of this EIR, due to the incrementally reduced impacts in Alternative 2, Alternative 2 is considered the Environmentally Superior Alternative.

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