



2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

Final Environmental Impact Report

SCH#2015121080

prepared by

Association of Monterey Bay Area Governments

24580 Silver Cloud Court

Monterey, California 93940

Contact: Heather Adamson, Director of Planning

prepared with the assistance of

Rincon Consultants, Inc.

437 Figueroa Street, Suite 203

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Acronyms and Abbreviations

AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ADA	Americans with Disabilities Act
ADT	average daily traffic
AF	acre feet
AFY	acre feet per year
AHC	anthropogenic hydrocarbons
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AMBAG	Association of Bay Area Governments
APCD	Air Pollution Control Districts
APE	Area of Potential Effects
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
BIOS	Biogeographic Information and Mapping System
BMP	Best Management Practices
BO	Biological Opinion
BRA	Biological Resource Area
BRT	bus rapid transit
CAA	Clean Air Acts (state and federal)
CAAQS	California Ambient Air Quality Standards
CAL FIRE	California Department of Forestry and Fire Protection
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officer's Association
CARB	California Air Resources Board
CBSC	California Building Standards Code
CCAA	California Clean Air Act

CCC	California Coastal Commission
CCCC	California Climate Change Center
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CGS	California Geological Survey
CH ₄	methane
CMP	Congestion Management Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNG	compressed natural gas
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CRDPH	County of Riverside Department of Public Health
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CSUMB	California State University Monterey Bay
CTP	California Transportation Plan
CVMP	Carmel Valley Master Plan
CVMT	congested vehicle miles traveled
CVP	Central Valley Project
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
dB	decibels
dBA	A-weighted decibels
DC	direct current
DDD	Dichlorodiphenyldichloroethane
DOC	Department of Conservation
DPM	diesel particulate matter

DPR	Department of Parks and Recreation
DPS	Distinct Population Segment
DWR	Department of Water Resources
EIR	environmental impact report
EMFAC	emission factors
EO	Executive Order
ESU	Evolutionary Significant Unit
FAA	Federal Aviation Administration
FAST Act	Fixing America’s Surface Transportation Act
FCAA	Federal Clean Air Act
FCAAA	Federal Clean Air Act Agreements
FEMA	Federal Emergency Management Administration
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program
FORA	Fort Ord Reuse Authority
FPPA	Federal Farmland Protection Act
FRAP	Fire and Resource Assessment Program
FSZ	Farmland Security Zone
FTA	Federal Transit Administration
FTIP	Federal Transportation Improvement Plan
GHG	Greenhouse Gas
GSA	groundwater sustainability agencies
GWP	Global Warming Potential
HAP	Hazardous Air Pollutant
HCP	Habitat Conservation Plan
HEPA	high-efficiency particulate air
HERS	Home Energy Rating Systems
HFC	hydrofluorocarbon
HMBP	Hazardous Materials Business Plan
HMMP	Habitat Mitigation and Monitoring Plan
HRA	health risk assessment
HRI	Historic Resources Authority

HUD	Department of Housing and Urban Development
HV	heating and ventilation
IPCC	United Nations Intergovernmental Panel on Climate Change
ITC	Intermodal Transportation Center
ITP	Incidental Take Plan
LAFCO	Local Agency Formation Commission
LCP	Local Coastal Program
Ldn	day-night average sound level
Leq	equivalent noise level
LEV	Low Emissions Vehicle
LNG	liquefied natural gas
LOS	Level of Service
L RTP	Long Range Transportation Plan
LSAT	Land Surface Air Temperature
LTA	San Benito County Local Transit Authority
LUP	land use plan
MBARD	Monterey Bay Air Resources District
MBSST	Monterey Bay Scenic Trail
MERV	minimum efficiency reporting value
METRO	Santa Cruz Metropolitan Transit District
MMT	million metric tons
MPO	metropolitan planning organization
MPWMD	Monterey Peninsula Water Management District
MPWSP	Monterey Peninsula Water Supply Project
MST	Monterey-Salinas Transit
MTBE	methyl tertiary butyl ether
MTIP	Metropolitan Transportation Improvement Program
MTP/SCS	Metropolitan Transportation Plan and Sustainable Communities Strategy
N ₂ O	nitrous oxides
NAAQS	National Ambient Air Quality Standard
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NCCAB	North Central Coast Air Basin

NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NHC	Natural Hydrocarbons
NMFS	National Marine Fisheries Service
NO	nitric oxide
NO ₂	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOC	notice of completion
NOD	notice of determination
NOEP	National Ocean Economics Program
NOP	notice of preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
OCEN	Ohlone/Costanoan-Esselen Nation
OEHHA	California Office of Environmental Health Hazard Assessment
OSHA	(federal) Occupational Safety and Hazard Administration
Pb	lead
PFC	perfluorocarbons
PM	particulate matter (PM ₁₀ and PM _{2.5})
PPV	peak particle velocity
PRA	Paleontological Resources Assessment
PSD	prevention of significant deterioration
PVWMA	Pajaro Valley Water Management Agency
RAMP	Regional Advance Mitigation Planning
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
RMS	root mean square
ROG	reactive organic compound
RPM	revolutions per minute

RSL	Rural Services Line
RTDM	Regional Travel Demand Model
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWMG	Regional Water Management Group
SB	Senate Bill
SBtCOG	The Council of San Benito County Governments
SCCRTC	Santa Cruz County Regional Transportation Commission
SCS	Sustainable Communities Strategy
SDC	Seismic Design Criteria
SF ₆	sulfur hexafluoride
SGMA	Sustainable Ground Water Management Act
SO ₂	sulfur dioxide
SO _x	sulfur oxide
SR	State Route
SRA	Source Receptor Area
SSC	Species of Special Concern
STIP	Statewide Transportation Improvement Plan
SVP	Society of Vertebrate Paleontology
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TAMC	Transportation Agency for Monterey County
TDM	transportation demand management
TDS	Total Dissolved Solids
THP	Timber Harvesting Program
TNM	Federal Highway Traffic Noise Model
TOD	transportation oriented development
TPZ	Timber Production Zone
TSM	Transportation System Management
U.S. EPA	United States Environmental Protection Agency
UCSC	University of California Santa Cruz

USACE	United States Army Corps of Engineers
USC	United States Code
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USL	Urban Services Line
VAVR	voluntary accelerated vehicle retirement
VKT	vehicle kilometers traveled
VMT	vehicle miles traveled
VOC	Volatile Organic Compounds
VPD	vehicles per day
VRV	voluntary repair of vehicles
WEAP	Worker Environmental Awareness Program
WMO	World Meteorological Organization
ZEV	Zero Emissions Vehicle

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Executive Summary

Project Summary

The 2040 Association of Monterey Bay Area Governments (AMBAG) ~~Draft~~ Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS) is a long-range planning document required by both State and Federal law that is an update of the 2035 AMBAG MTP/SCS. Reference to the 2040 MTP/SCS throughout this ~~Draft~~ EIR Environmental Impact Report (EIR) refers to the ~~Draft~~ 2040 MTP/SCS. It contains a compilation of the projects proposed in the ~~Draft~~ Regional Transportation Plans (RTPs) prepared by the Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG) and the Santa Cruz County Regional Transportation Commission (SCCRTC) as the state-designated Regional Transportation Planning Agencies (RTPAs) for Monterey, San Benito and Santa Cruz Counties, respectively. Transportation system improvement projects identified in the 2040 MTP/SCS include: active transportation projects, highway and local roadway projects, transportation demand management (TDM) projects, transit projects and other projects, such as airport operations, wildlife corridor crossing and administration and planning. A full list of transportation projects is provided in Appendix B. A copy of the ~~Draft~~ 2040 MTP/SCS is available for review at AMBAG offices (24580 Silver Cloud Court, Monterey, California, 93940), the TAMC offices (55 Plaza Circle B, Salinas, California 93901), the SBtCOG offices (330 Tres Pinos Road, Suite C7, Hollister, California 95023), the SCCRTC offices (1523 Pacific Avenue, Santa Cruz, California 95060), and on the AMBAG website: <http://www.ambag.org/>.

AMBAG is also responsible for preparing a Sustainable Communities Strategy (SCS) as part of the MTP, pursuant to the requirements of California Senate Bill 375 as adopted in 2008 (discussed further below). The SCS, included in the 2040 MTP/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 duty trucks to achieve the regional GHG reduction targets set by the California Air Resources Board (CARB).

Alternatives

This Environmental Impact Report (EIR) examines three alternatives to the proposed 2040 MTP/SCS:

- **Alternative 1: No Project Alternative.** The No Project Alternative is comprised of a land use pattern that reflects existing land use trends and a transportation network comprised of transportation projects that are currently in construction or are funded in the short range Metropolitan Transportation Improvement Program (MTIP).
- **Alternative 2: Livable Communities Alternative.** The Livable Communities Alternative includes a land use pattern that further concentrates forecasted population and employment growth in urban areas with a focus on infill, mixed use and transit oriented development (TOD) in and around commercial corridors. The transportation network under this alternative includes transit investments in addition to other alternative modes of transportation to serve a more concentrated growth pattern. Specifically, active transportation investments such as bicycle

facilities, sidewalks, traffic calming measures and intersection safety improvements would be prioritized in this alternative. A greater level of investment would be focused on closing transit gaps by expanding local transit, rather than interregional or long distance services.

- **Alternative 3: Maintained Mobility Alternative.** The Maintained Mobility Alternative includes a land use pattern comprised of existing land use plans and a transportation network that includes more transportation projects focused on mobility, rehabilitation and safety. A greater level of investment is focused on local street and road projects combined with investment in long distance transit service such as rail to increase mobility within the region. Operations and maintenance projects are included to improve safety on the region's local streets and roads and transit system also are given a higher priority.

Each alternative is described in greater detail and analyzed in Section 7.0, *Alternatives*, to determine whether environmental impacts would be similar to, less than, or greater than those of the preferred scenario in the 2040 MTP/SCS (i.e., EIR proposed project).

Areas of Controversy

Section 15123 of the CEQA Guidelines requires that an EIR identify areas of controversy which are known to the Lead Agency, including issues raised by other agencies and the public. Areas of controversy associated with the proposed Plan 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 study area. Public comments received during the NOP scoping period are summarized in Table 1.

Issues to Resolve

CEQA Guidelines Section 15123(b)(3) requires that an EIR contain a discussion of issues to be resolved including the choice among 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 AMBAG and the RTPAs do 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 the ~~Draft~~ 2040 MTP/SCS or an alternative.

Table 1 NOP Comments and EIR Response

Commenter	Comment/Request	How and Where it was Addressed
Agency Comments		
Ohlone/Costanoan-Esselen Nation (OCEN)	<p>Objects to all excavation in known cultural lands, even when they are described as previously disturbed and of no significant archaeological value.</p> <p>Requests that all sacred burial items be left on burial site or where they are discovered.</p> <p>Requests that all cultural items be returned to OCEN.</p> <p>Requests to be provided with archaeological reports and surveys, including subsurface testing and presence/absence testing.</p> <p>Requests to be included in mitigation and recovery programs, reburial of any ancestral remains, placement of all cultural items, and that a Native American Monitor of OCEN, approved by the OCEN Tribal Council, be used within OCEN aboriginal territory.</p> <p>Requests consultation on projects affecting OCEN aboriginal homelands.</p>	Refer to Sections 4.5, Cultural and Historic Resources and 4.13, Tribal Cultural Resources.
Monterey Bay Unified Air Pollution Control District (MBUAPCD, now the Monterey Bay Air Resources Board [MBARD])	<p>Encourages construction of roundabouts to reduce congestion as well as criteria and GHG emissions whenever feasible. Funding is available through the District's AB 2766 program.</p> <p>Encourages signal coordination systems that respond to real-time traffic conditions and thereby reduce congestion as well as criteria pollutants and GHGs. Funding is available through the District's AB 2766 program.</p> <p>Encourages the replacement of fossil fueled vehicles with either plug-in electric (PEV) or fuel cell vehicles to support the Governor's Executive Order B-16-2012 to put 1.5 million zero-emission vehicles in the fleet by 2025.</p> <p>Encourages municipalities and project developers to support the implementation of electric vehicle charging infrastructure. The Monterey Bay PEV Readiness Plan should be consulted as a guide to the installation and permitting processes for EV charging infrastructure.</p> <p>Encourages cities and counties to adopt Climate Action Plans (CAP) that help achieve the 2035 (5 percent) regional target established for our area under SB 375. Also, develop a model CAP for jurisdictions. Consistency with the applicable CAP alleviates the need for lead agencies to adopt quantitative GHG thresholds for their areas of jurisdiction.</p> <p>Supports land use policies that improve jobs/housing balance so people work in the community where they live rather than traveling great distances.</p> <p>Requests prioritization of reducing congestion and toxic emissions along congested highway corridors which are bordered by high density residential</p>	<p>The comments primarily pertain to the project list included in the 2040 MTP/SCS and not the program-level analysis of environmental effects of the 2040 MTP/SCS. Many of these suggestions, including electric vehicle infrastructure, are accounted for in the analysis (see Modeling Methodology and Off-Model Adjustments in Appendix F). Refer to Section 4.2, <i>Air Quality and Health Impacts/Risks</i> and 4.8, <i>Greenhouse Gas Emissions/Climate Change</i>, for an analysis of air quality and GHG related impacts of the proposed 2040 MTP/SCS.</p> <p>A discussion of regional and local Climate Action Plans, and consistency or conflicts of the 2040 MTP/SCS with these plans is provided in Section 4.8, <i>Greenhouse Gas Emissions/Climate Change</i>.</p> <p>The 2040 MTP/SCS is designed to maintain and foster the balance between jobs and housing within the AMBAG region and provides a strategy to allocate growth in such a way as to achieve a more balanced jobs/housing ratio and to optimize transportation investments that support those land uses. Section 4.14, <i>Transportation and Circulation</i>, provides an analysis of traffic impacts based on the strategy of a more</p>

Commenter	Comment/Request	How and Where it was Addressed
	developments and discourages development adjacent to congested highways. Highlights AMBAG’s Commute Alternatives Program, which serves to reduce VMT, congestion and GHG emission from motor vehicles thereby helping to achieve the goals of SB 375 and the SCS.	balanced job to housing ratio. Section 4.2, <i>Air Quality and Health Impacts/Risks</i> , evaluates the potential health risks associated with toxic air emissions.
Public Comments		
Dana Bagshaw	Requested consideration of impacts from the environment on the project. Specifically, the EIR needs to evaluate impacts such as rising sea levels on fixed rail trains in the flood zone.	Impacts from the environment on the project are identified as appropriate throughout Section 4.0 based on Appendix G to the State CEQA Guidelines. Refer to Section 4.8, <i>Greenhouse Gas Emissions/Climate Change</i> , for a discussion of climate change adaptation impacts and Section 4.10, <i>Hydrology and Water Quality</i> , for a discussion of flooding-related impacts.

Summary of Impacts and Mitigation Measures

Table 2 includes a brief description of the identified environmental impacts, proposed mitigation measures and the level of significance after mitigation. Specific 2040 MTP/SCS projects that may contribute to the impacts described below are listed in the tables at the end of individual impact sections (4.1 through 4.14).

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.

As a programmatic document, this EIR presents a regional assessment of the impacts of the proposed 2040 MTP/SCS and the RTPs prepared by the Monterey, San Benito and Santa Cruz Regional Transportation Planning Agencies (RTPAs). Analysis of site-specific impacts of individual projects is not the intended use of a program EIR. Many specific projects are not currently defined to the level that would allow for such an analysis. Individual project specific environmental analysis of each project will be undertaken as necessary by the appropriate implementing agency prior to each project being considered for approval. This program EIR serves as a first-tier environmental document under CEQA supporting second-tier environmental documents for:

- Transportation projects developed during the engineering design process; and
- Land use and development projects, including residential or mixed use projects and transit priority projects consistent with the SCS.

This EIR evaluates impacts against existing conditions, which are generally conditions existing at the time of the release of the NOP (December 2015). It was determined that a comparison to current,

existing baseline conditions would provide the most relevant information for the public, responsible agencies, and AMBAG 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 (2015) baseline conditions, controlling for impacts caused by population growth and other factors that would occur whether or not the 2040 MTP/SCS or the RTPs prepared by the Monterey, San Benito and Santa Cruz RTPAs are adopted. This future baseline analysis is provided for informational purposes only. For certain issue areas (including air quality, greenhouse gas emissions/climate change, energy, noise and transportation/circulation), impacts would occur as a result of background population growth, urbanization and volume of average daily traffic increases in the region that would occur by 2040, with or without implementation of the 2040 MTP/SCS. Thus, for these issue areas, a comparison to a future 2040 baseline is provided for informational purposes. However, all impact determinations are based on a comparison to existing 2015 baseline conditions.

Mitigation identified in this EIR, as listed in Table 2, shall be implemented by the Transportation Agency for Monterey County (TAMC), San Benito County Council of Governments (SBtCOG) and Santa Cruz County Regional Transportation Commission (SCCRTC) for transportation projects under their jurisdiction. Transportation project implementing agencies can and should implement these measures. For land use projects implementing the 2040 MTP/SCS, cities and counties in the AMBAG region can and should implement these measures, where relevant. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

Table 2 Summary of Environmental Impacts, Mitigation Measures and Residual Impacts

Impact	Mitigation Measure(s)	Significance After Mitigation
Aesthetics/Visual Resources		
<p>Impact AES-1. Proposed transportation improvement projects and land use projects envisioned by the 2040 MTP/SCS may affect public views of scenic vistas and along designated scenic corridors, including state scenic highways. This would be a significant and unavoidable impact.</p>	<p>AES-1(a) Discouragement of Architectural Features that Block Scenic Views. Implementing agencies 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(b) Tree Protection and Replacement. New roadways and extensions and widenings of existing roadways shall avoid the removal of existing mature trees to the extent possible. The implementing agency of a particular 2040 MTP/SCS project shall replace any trees lost at a minimum 2:1 basis and incorporate them into the landscaping design for the roadway when feasible. The implementing agency also shall ensure the continued vitality of replaced trees through periodic maintenance.</p>	<p>Significant and unavoidable</p>

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Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact AES-2. Proposed transportation improvement projects and land use projects envisioned by the 2040 MTP/SCS may substantially degrade existing visual character in the AMBAG region. This would be a significant and unavoidable impact.</p>	<p>AES-2 Design Measures for Visual Compatibility. The implementing agency 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); ▪ Protecting or replacing trees in the project area; ▪ 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>Significant and unavoidable</p>
<p>Impact AES-3. Transportation projects envisioned in the 2040 MTP/SCS would result in increased lighting from security lighting, landscape and structure lighting and lights on vehicles. Land use projects envisioned in the 2040 MTP/SCS would also introduce new or intensified sources of lighting. This lighting may adversely affect views in the area and would be a significant but mitigable impact.</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 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, implementing agencies 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 lighting is necessary for safety purposes, the design shall include landscaping to block light from sensitive land uses, such as residences. <p>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:</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 	<p>Less than significant</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>coatings and masonry;</p> <ul style="list-style-type: none"> ▪ Screening parking areas by using vegetation or trees; ▪ Using low-reflective glass; and ▪ Complying with applicable general plan policies 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. 	
Agriculture and Forestry Resources		
<p>Impact AG-1. Proposed transportation improvements and land use projects envisioned by the 2040 MTP/SCS could result in the conversion of Important Farmland to nonagricultural use, or conflict with existing zoning for agriculture, or a Williamson Act contract. This would be a significant and unavoidable impact.</p>	<p>AG-1 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 Williamson Act contract; ▪ Compensatory mitigation at a minimum 1:1 (impacted:replaced) acreage ratio with Important Farmland of equivalent or better quality; ▪ 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 Williamson Act contracts (Government Code Section 51200 et seq.). 	<p>Significant and unavoidable</p>
Air Quality		
<p>Impact AQ-1. Since the 2040 MTP/SCS would not conflict with the regional population forecast, and would reduce emissions of ozone precursors below 2015 baseline levels, it would not conflict with or obstruct implementation of the AQMP. Therefore, impacts would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact AQ-2. Construction activities associated with transportation projects under the 2040 MTP/SCS, as well as the land use projects envisioned by the 2040 MTP/SCS, would create fugitive dust and ozone precursor emissions and could violate air quality standards,</p>	<p>AQ-2(a) Application of MBARD Feasible Mitigation Measures. For all projects, the implementing agency shall incorporate the most recent MBARD feasible mitigation measures and/or technologies for reducing inhalable particles based on analysis of individual sites and project circumstances. Current MBARD feasible mitigation measures include the following. Additional and/or modified measures may be adopted by MBARD prior to implementation of individual projects under the 2040 MTP/SCS. The most current list of feasible mitigation measures at the time of project implementation shall be used.</p> <ul style="list-style-type: none"> ▪ Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil and wind exposure. ▪ Prohibit all grading activities during periods of high wind (over 15 mph). ▪ Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). ▪ Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut 	<p>Significant and unavoidable</p>

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Impact	Mitigation Measure(s)	Significance After Mitigation
<p>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>and fill operations and hydro seed area.</p> <ul style="list-style-type: none"> ▪ Haul trucks shall maintain at least 2'0" of freeboard. ▪ Cover all trucks hauling dirt, sand, or loose materials. ▪ Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land. ▪ Plant vegetative ground cover in disturbed areas as soon as possible. ▪ Cover inactive storage piles. ▪ Install wheel washers at the entrance to construction sites for all exiting trucks. ▪ Pave all roads on construction sites. ▪ Sweep streets if visible soil material is carried out from the construction site. ▪ Limit the area under construction at any one time. ▪ Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Air Resources District shall be visible to ensure compliance with Rule 402 (Nuisance). <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 possible, construction equipment utilizes electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.</p>	
<p>Impact AQ-3. Implementation of the 2040 MTP/SCS would reduce ozone precursors compared to 2015 existing conditions. However, implementation of the 2040 MTP/SCS would increase PM₁₀ emissions compared to 2015 existing conditions, which could contribute substantially to a projected air quality violation. long-term operational impacts related to PM₁₀ emissions would be significant and unavoidable.</p>	<p>AQ-3 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 in the NCCAB. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce PM₁₀ emissions below MBARD standards to the extent feasible. PM₁₀ emissions reduction measures may include:</p> <ul style="list-style-type: none"> ▪ 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 MBARD, 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. ▪ Require new development to contribute mitigation fees to the MBARD Carl Moyer grant incentive programs that provide funding for regional PM10-reduction measures, including replacement of diesel engines in buses and other vehicles that reduce emissions of diesel particulate matter in the District. 	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact AQ-4. Implementation of the 2040 MTP/SCS would not result in a significant regional increase in toxic air emissions or odorous compounds when compared to 2015 existing conditions. However, future growth and development facilitated by the 2040 MTP/SCS land use scenario could expose sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors. Impacts would be significant and unavoidable.</p>	<p>AQ-4 Health Risk Reduction Measures. Transportation implementing agencies shall implement the following measures:</p> <ul style="list-style-type: none"> ▪ <u>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.</u> ▪ 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 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 	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>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.</p> <ul style="list-style-type: none"> ▪ 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 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>Impact AQ-5. Re-entrained dust has the potential to increase airborne PM₁₀ and PM_{2.5} levels in Monterey, San Benito and Santa Cruz Counties. The increase in growth expected through the 2040 MTP/SCS planning horizon 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 the 2040 MTP/SCS than 2015 existing conditions. Implementation of MBARD control measures would further reduce such emissions. Therefore, impacts would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
Biological Resources		
<p>Impact B-1. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS may have substantial adverse impacts on special status plant and animal species, either directly or through habitat modifications. Impacts would be significant and unavoidable.</p>	<p>B-1(a) Biological Resources Screening and Assessment. On a project-by-project basis, a preliminary biological resource screening shall be performed as part of the environmental review process 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 to document the existing biological resources within the project footprint plus a buffer and to determine the potential impacts to those resources. The biological resources assessment shall evaluate the potential for impacts to all biological resources including, but not limited to: special status species, nesting birds, wildlife movement, sensitive plant communities, critical habitat, Essential Fish Habitat, and other resources judged to be sensitive by local, state and/or federal agencies. Depending on the results of the biological resources assessment, 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 [B-1(b) through B-1(j)] shall be incorporated only as applicable into the biological resources assessment for projects where specific resources are present or may be present and impacted by the project. Note that specific surveys described in the mitigation measures below may be completed as part of the biological resources assessment where suitable habitat is present. The results of the biological resources screening and assessment shall be provided to the implementing agency for review and approval.</p> <p>B-1(b) Special Status Plant Species Surveys. If completion of the project-specific biological resources assessment determines that special status plant species have potential to occur on-site, surveys for special status plants shall be completed prior to any vegetation removal, grubbing, or other construction activity of each project (including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the target species identified in the project-specific biological resources assessment. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency no more than two years prior to project implementation (annual grassland habitats may require yearly surveys). All special status plant species identified on-site shall be mapped onto a site-specific aerial photograph or 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 for review. If special status plant species are identified, mitigation measure B-1(c) shall apply.</p> <p>B-1(c) Special Status Plant Species Avoidance, Minimization and Mitigation. If state- or federally listed and/or CRPR 1 and 2 species are found during special status plant surveys [pursuant to mitigation measure B-1(b)], then the project shall be re-designed to avoid impacting these plant species to the maximum extent feasible. If CRPR 3 and 4 species are found, the biologist shall evaluate to determine if they meet criteria to be considered special status, and if so, the same process as identified for CRPR 1 and 2 species shall apply.</p> <p>If special status plants species cannot be avoided and would be impacted by a project implemented under the 2040 MTP/SCS, all impacts shall be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for each species as a component of habitat restoration. A restoration plan shall be prepared and submitted to implementing agency overseeing the project for approval.</p> <p>B-1(d) Endangered/Threatened Species Habitat Assessment and Protocol Surveys. Specific habitat assessment and survey protocol surveys are established for several federally and/or state endangered or threatened animal species. If the results of the biological resources assessment determine that suitable habitat may be present for any such species, protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or USFWS/NMFS protocols prior to issuance of any</p>	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>construction permits/project approvals.</p> <p>Alternatively, in lieu of conducting protocol surveys, the implementing agency may choose to assume presence within the project footprint and proceed with development of appropriate avoidance measures, consultation and permitting, as applicable.</p> <p>If the target species is detected during protocol surveys, or protocol surveys are not conducted and presence assumed based on suitable habitat, mitigation measure B-1(e) shall apply.</p> <p>B-1(e) Endangered/Threatened Animal Species Avoidance and Compensatory Mitigation. If habitat is occupied or presumed occupied by federal and/or state listed species and would be impacted by the project, the implementing agency shall re-design the project in coordination with a qualified biologist to avoid impacting occupied/presumed occupied habitat to the maximum extent feasible. If occupied or presumed occupied habitat cannot be avoided, the implementing agency shall provide the total acreages for habitat that would be impacted prior to the issuance of construction permits/approvals. The implementing agency shall purchase credits at a USFWS, NMFS and/or CDFW approved conservation bank if available for the affected species and/or establish conservation easements or funds for acquisition of conservation easements as compensatory mitigation to offset impacts to federal and/or state listed species habitat.</p> <p>Compensatory mitigation shall be provided at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for permanent impacts. Compensatory mitigation may be combined/nested with special status plant species and sensitive community restoration where applicable. Temporary impact areas shall be restored to pre-project conditions.</p> <p>If on and/or off site mitigation sites are identified the implementing agency shall retain a qualified biologist to prepare a Habitat Mitigation and Monitoring Plan (HMMP) to ensure the success of compensatory mitigation sites that are to be conserved for compensation of permanent impacts to federal and/or state listed species. The HMMP shall identify long term site management needs, routine monitoring techniques, techniques and success criteria, and shall determine if the conservation site has restoration needs to function as a suitable mitigation site. The HMMP shall be submitted to the agency overseeing the project for approval.</p> <p>B-1(f) Endangered/Threatened Species Avoidance and Compensatory Mitigation. The following measures shall be applied to aquatic and terrestrial species, where appropriate. Implementing agencies shall select from these measures as appropriate depending on site conditions, the species with potential for occurrence, and the results of the biological resources screening and assessment (measure B-1(a)).</p> <ul style="list-style-type: none"> ▪ Pre-construction surveys for federal and/or state listed species with potential to occur shall be conducted where suitable habitat is present by a qualified biologist not more than 48 hours prior to the start of construction activities. The survey area shall include the proposed disturbance area and all proposed ingress/egress routes, plus a 100-foot buffer. If any life stage of federal and/or state listed species is found within the survey area, the appropriate measures in the BO or Habitat Conservation Plan (HCP)/Incidental Take Permit (ITP) issued by the USFWS/NMFS (relevant to federal listed species) and/or the ITP issued by the CDFW (relevant to state listed species) shall be implemented; or if such guidance is not in place for the activity, the qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. The results of the pre-construction surveys shall be submitted to the implementing agency for review and approval prior to start of construction. ▪ 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 Environmental Sensitive Area fencing installed 	

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>between said area and the limits of disturbance.</p> <ul style="list-style-type: none"> ▪ All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed <u>during the dry season, typically</u> between April 1 and October 31, 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 qualified 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 of the CDFW and/or USFWS/NMFS or as outlined in project permits, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are begin fully implemented. ▪ No endangered/threatened species shall be captured and relocated without authorization from the CDFW and/or USFWS/NMFS. ▪ If pumps are used for dewatering activities, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system. ▪ 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. At that point a qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. Alternatively, the appropriate measures shall be implemented in accordance with the BO or HCP/ITP issued by the USFWS (relevant to federal listed species) and/or the ITP issued by the CDFW (relevant to state listed species) and work can then continue as guided by those documents and the agencies as appropriate. ▪ All vehicle maintenance/fueling/staging shall occur not less than 100 feet 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 <u>other than equipment necessary to conduct approved dewatering activities required for project construction.</u> ▪ All equipment operating within streambeds (restricted to conditions in which water is not present) 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. ▪ At the end of each work day, excavations shall be secured with cover or a ramp shall be provided to prevent wildlife entrapment. ▪ All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling. <p>B-1(g) Non-Listed Special Status Animal Species Avoidance and Minimization. Depending on the species identified in the BRA, the following 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"> ▪ 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 100-foot buffer, 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 the implementing agency 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 	

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>unearthed by construction activities.</p> <ul style="list-style-type: none"> ▪ 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, within 30 days of the start of construction a qualified biologist shall conduct presence/absence surveys for special status bats, in consultation with the CDFW, where suitable roosting habitat is present. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may roost. If active bat roosts or colonies are present, the biologist shall evaluate the type of roost to determine the next step. <ul style="list-style-type: none"> □ If a maternity colony is present, all construction activities shall be postponed within a 250-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed or as recommended by CDFW through consultation. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately. □ If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), alternative roosts, such as bat boxes if appropriate for the species, shall be designed and installed near the project site. The number and size of alternative roosts installed will depend on the size of the hibernaculum and shall be determined through consultations with the CDFW. □ If other active roosts are located, exclusion devices such as valves, sheeting or flap-style one-way devices that allow bats to exit but not re-enter roosts discourage bats from occupying the site. <p>B-1(h) Preconstruction Surveys for Nesting Birds. For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the CFGC, the Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act shall be conducted by a qualified biologist no more than 30 days prior to vegetation removal activities.</p> <p>A qualified biologist shall conduct preconstruction surveys for raptors. The survey for the presence of bald and golden eagles, shall cover all areas within of the disturbance footprint plus a one-mile buffer where access can be secured. The survey area for all other nesting bird and raptor species shall include the disturbance footprint plus a 300-foot and 500-foot buffer, respectively.</p> <p>If active nests (nests with eggs or chicks) are located, the qualified biologist shall establish an appropriate avoidance buffer ranging from 50 to 300 feet based on the species biology and the current and anticipated disturbance levels occurring in vicinity of the nest. The objective of the buffer shall be to reduce disturbance of nesting birds. All buffers shall be marked using high-visibility flagging or fencing, and, unless approved by the qualified biologist, no construction activities shall be allowed within the buffers until the young have fledged from the nest or the nest fails.</p> <p>For bald or golden eagle nests identified during the preconstruction surveys, an avoidance buffer of up to one mile shall be established on a case-by-case basis in consultation with the USFWS and CDFW. The size of the buffer may be influenced by the existing conditions and disturbance regime, relevant landscape characteristics, and the nature, timing and duration of the expected disturbance. The buffer shall be established between February 1 and August 31; however, buffers may be relaxed earlier than August 31 if a qualified ornithologist determines that a given nest has failed or that all surviving chicks have fledged and the nest is no longer in use.</p> <p>A report of these preconstruction nesting bird surveys and nest monitoring (if applicable) shall be submitted to the implementing agency for review and approval prior to the start of construction.</p> <p>B-1(i) Worker Environmental Awareness Program (WEAP). Prior to initiation of</p>	

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>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.</p>	
<p>Impact B-2. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS may result in substantial adverse impacts on sensitive habitats, including federally protected wetlands. This impact would be significant and unavoidable.</p>	<p>B-2(a) Jurisdictional Delineation. If the results of measure B-1(a) indicates projects implemented under the 2040 MTP/SCS 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 jurisdictional delineation report that shall be submitted to the implementing agency, USACE, RWQCB, CDFW and/or CCC, as appropriate, for review and approval, and the project shall be designed to minimize impacts to jurisdictional areas to the maximum extent feasible. The delineation shall serve as the basis to identify jurisdictional areas to be protected during construction, through implementation of the avoidance and minimization identified in measure B-2(f).</p> <p>B-2(b) Wetlands, Drainages and Riparian Habitat Restoration. Impacts to jurisdictional drainages, wetlands and riparian habitat shall be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist, 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 and submitted to the agency overseeing the project for approval. Alternatively, mitigation shall be accomplished through purchase of credits from an approved wetlands mitigation bank.</p> <p>B-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 Inventory shall not be permitted. Species selected for planting shall be regionally appropriate native species that are known to occur in the adjacent native habitat types.</p> <p>B-2(d) Sensitive Vegetation Community Avoidance and Mitigation. If the results of measure B-1(a) indicates projects implemented under the 2040 MTP/SCS 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>B-2(e) Invasive Weed Prevention and Management Program. Prior to start of construction for each project that occurs within or adjacent to native habitats, 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. The plan shall be submitted to the implementing agency for review and approval. A list of target species shall be included, along with measures for early detection and</p>	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>eradication.</p> <p>The plan, which shall be implemented by the implementing agency, shall also include, but not be limited to, the following measures to prevent the introduction of invasive weed species:</p> <ul style="list-style-type: none"> ▪ During construction, the project shall make all reasonable efforts to limit the use of imported soils for fill. Soils currently existing on-site should be used for fill material. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species. ▪ To minimize colonization of disturbed areas and the spread of invasive species, the contractor shall: stockpile topsoil and redeposit the stockpiled soil after construction, or transport the topsoil to a permitted landfill for disposal. ▪ The erosion control/ restoration plans for the project must emphasize the use of sensitive species that are expected to occur in the area and that are considered suitable for use at the project site. ▪ All erosion control materials, including straw bales, straw wattles, or mulch used on-site must be free of invasive species seed. ▪ Exotic and invasive plant species shall be excluded from any erosion control seed mixes and/or landscaping plant palettes associated with the proposed project. ▪ 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 shall occur where no construction activities have occurred within six (6) 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>B-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:</p> <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)	Significance After Mitigation
<p>Impact B-3. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS may substantially interfere with wildlife movement, including fish migration, and/or impede the use of a native wildlife nursery. This impact would be significant and unavoidable.</p>	<p>B-3(a) Project Design for Wildlife Connectivity. All projects including long segments of fencing and lighting shall be designed to minimize impacts to wildlife. Fencing or other project components shall not block wildlife movement through riparian or other natural habitat. Where fencing or other project components that may disrupt wildlife movement is required for public safety concerns, they 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; and ▪ 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, or the fence may be installed with the bottom at least 16 inches above the ground level. ▪ If fencing or other project components 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. ▪ Lighting installed as part of any project shall be designed to be minimally disruptive to wildlife (see mitigation measure AES-3(a) Roadway Lighting for lighting requirements). <p>B-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).</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 AMBAG, RTPA 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>B-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:</p> <ul style="list-style-type: none"> ▪ Designation of a 20 mile per hour speed limit in all construction areas. ▪ <u>Whenever feasible, Daily</u> 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>Significant and unavoidable</p>

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Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact B-4. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS will 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>Less than significant</p>
<p>Impact B-5. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be no impact.</p>	<p>None required.</p>	<p>No impact</p>
<p>Cultural and Historical Resources</p>		
<p>Impact CR-1. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS could cause a substantial adverse change in or disturb known or unknown historical resources as defined in CEQA Guidelines Section 15064.5. Impacts to historical resources would be significant and unavoidable.</p>	<p>CR-1 Historical Resources Impact Minimization. Prior to individual project permit issuance, the implementing agency of a 2040 MTP/SCS project involving earth disturbance or construction of permanent above ground structures or roadways shall prepare a map defining the Area of Potential Effects (APE). 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 APE, 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. 	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact CR-2. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS could cause a substantial adverse change in or disturb known and unknown archeological resources as defined in CEQA Guidelines Section 15064.5. Impacts to archaeological resources would be significant and unavoidable.</p>	<ul style="list-style-type: none"> ▪ Comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect historic resources. <p>CR-2 Archaeological Resources Impact Minimization. Before construction activities, implementing agencies shall retain a qualified archaeologist to conduct a record search at the Northwest 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>Significant and unavoidable</p>
<p>Impact CR-3. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS 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>	<p>CR-3 Paleontological Resources Impact Minimization. The implementing agency of a 2040 MTP/SCS project involving ground disturbing activities (including grading, trenching, foundation work, and other excavations) 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"> ▪ <i>Paleontological Mitigation and Monitoring Program.</i> 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. 	<p>Significant and unavoidable.</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
	<ul style="list-style-type: none"> ▪ <i>Paleontological Worker Environmental Awareness Program (WEAP).</i> 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. ▪ <i>Paleontological Monitoring.</i> 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. ▪ <i>Salvage of Fossils.</i> 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. ▪ <i>Preparation and Curation of Recovered Fossils.</i> 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. ▪ <i>Final Paleontological Mitigation and Monitoring Report.</i> 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. 	
<p>Impact CR-4. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS could result in damage to or destruction of human burials. Impacts to human burials would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
Energy		
<p>Impact E-1. Future transportation improvement projects and implementation of the land use scenario envisioned by the 2040 MTP/SCS would increase demand for energy beyond existing conditions. However, the 2040 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy, and would be consistent with applicable federal, state, and local energy conservation policies. As such, this impact would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact E-2. Implementation of the 2040 MTP/SCS would generate energy demand that may require construction of new energy facilities or the expansion of such facilities. Impacts would be significant and unavoidable.</p>	<p>E-2(a) Mitigate Impacts of New or Expanded Energy Facilities. During the planning, design and project-level CEQA review process, apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion shall be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions shall include those necessary to avoid or reduce environmental impacts associated with, but not limited to: air quality, noise, traffic, biological resources, cultural resources, GHG emissions, hydrology and water quality and others that apply to specific construction or expansion of natural gas and electric facilities projects.</p> <p>E-2(b) Develop Energy Demand Calculations and Reduce Energy Demand. During the planning, design and project-level CEQA review process for individual development projects, develop electricity and natural gas demand calculations for any project anticipated to require substantial energy consumption. Implementing agencies shall implement design and mitigation measures that reduce energy consumption and promote the use of on-site renewable energy. This may include, but would not be limited to: installing energy-reducing shading mechanisms for windows, porches, patios, etc.; installing energy-reducing day lighting systems (e.g., skylights); use of low-energy interior and street lighting; and/or installation of solar photovoltaic (PV) panels or other on-site renewable energy that generates a minimum of 30 percent of the project’s total energy demand.</p>	<p>Significant and unavoidable</p>

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Impact	Mitigation Measure(s)	Significance After Mitigation
Geology and Soils		
<p>Impact GEO-1. Implementation of proposed transportation improvements and future projects facilitated by the land use scenario envisioned in the 2040 MTP/SCS could be subject to seismic hazards, including fault rupture, ground-shaking, liquefaction and landslides, that could expose people or structures to substantial adverse effects. Impacts would be significant but mitigable.</p>	<p>GEO-1 Geotechnical Design. If a 2040 MTP/SCS project is located in a zone of high potential ground-shaking intensity, implementing agencies can and should complete a site specific geotechnical report conducted by a qualified geotechnical expert. Any investigations shall comply with the California Geological Survey's Guidelines for Evaluating and Mitigating Seismic Hazards in California and projects shall comply with the recommendations stated in the geotechnical analysis (California Geological Survey 2008). Recommendations may include, but are not limited to, the following: fill placement and compaction, isolated and continuous footing, site specific pipe bedding and site specific seismic design criteria.</p>	<p>Less than significant</p>
<p>Impact GEO-2. Grading associated with transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS could cause soil erosion and loss of top soil. However, compliance with applicable regulations would ensure that impacts would remain less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact GEO-3. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS could be located on potentially unstable soils or in areas of lateral spreading, subsidence, or high liquefaction potential. Impacts would be significant but mitigable.</p>	<p>GEO-3(a) Geotechnical Analysis. If a 2040 MTP/SCS 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 RTPAs shall ensure and sponsor agencies can and should 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-3(b) Hillside Stability Evaluation. If a 2040 MTP/SCS 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. <u>In addition, to sustain a functional long-term transportation system along the coast, the strategies identified in Caltrans' 2004 Big Sur Coast Highway Management Plan shall be implemented where appropriate and when feasible. Applicable Big Sur Coast Highway Management Plan measures may include, but are not limited to:</u></p>	<p>Less than significant</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
<p><u>adaptation to the fluid landform; separation of the highway from the moving landform; and, temporary or permanent rockfall catchments.</u></p> <p>GEO-3(c) Site Specific Geotechnical Evaluation. If a 2040 MTP/SCS project is located in an area of highly expansive soils, the RTPAs shall and sponsors agencies can and should 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.</p>		
<p>Greenhouse Gas Emissions/Climate Change</p>		
<p>Impact GHG-1. Construction of the transportation improvement projects and development within future land use projects envisioned by the 2040 MTP/SCS would generate temporary short-term GHG emissions that may have a significant effect. 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 24 certified engines <u>wherever feasible for or cleaner</u> off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation. <u>Where the use of Tier 4 engines is not feasible, Tier 3 certified engines shall be used; where Tier 3 engines are not feasible, Tier 2 certified engines shall be used;</u> ▪ 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; and Use of materials sources from local suppliers; and ▪ Recycling of at least 50 percent of construction waste materials. 	<p>Less than significant</p>
<p>Impact GHG-2. Implementation of the 2040 MTP/SCS would not result in a significant increase in total GHG emissions from mobile and land use sources compared to 2015 baseline conditions. Impacts would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>

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Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact GHG-3. Implementation of the 2040 MTP/SCS would not Conflict with regional SB 375 per capita passenger vehicle CO₂ emission reduction targets. Impacts would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact GHG-4. Implementation of the 2040 MTP/SCS would not interfere with climate action plans for the Cities of Monterey, Capitola, Santa Cruz, Gonzales and Watsonville, as well as Monterey County and Santa Cruz County. However, the 2040 MTP/SCS would conflict with the state’s ability to achieve the AB 32, SB 32 and EO-S-3-05 GHG reduction goals. Impacts would be significant and unavoidable.</p>	<p>GHG-4 Project-Level Energy Consumption and Water Use Reduction. Implementing agencies shall evaluate energy consumption and water use as part of project-specific CEQA review and discretionary approval decisions for land use projects. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce energy consumption and water use below local standards, or, in the absence of local standards, below MBARD-recommended standards. Examples of energy- and water-saving measures include:</p> <ul style="list-style-type: none"> ▪ Require new residential and commercial construction to install solar energy systems or be solar-ready. ▪ Require new residential and commercial development to install low-flow water fixtures. ▪ Require new residential and commercial development to install water-efficient drought-tolerant landscaping, including the use of compost and mulch. ▪ Require new development to exceed the applicable Title 24 energy-efficiency requirements. 	<p>Significant and unavoidable</p>
<p>Impact GHG-5. Implementation of proposed transportation improvements and future projects facilitated by the land use scenario envisioned in the 2040 MTP/SCS could be subject to coastal flooding and sea level rise. Impacts would be significant and unavoidable.</p>	<p>Mitigation Measures W-4(a) and W-4(b) from <u>As described in Section 4.10, Hydrology and Water Quality, existing federal, state and local programs and ordinances would require flood prevention measures in new development, including requiring structures to be elevated above the 100-year flood zone and tsunami inundation zones, would partially reduce impacts, as they would require structures to be elevated one foot above the 100-year flood zone and 10 feet above the ground elevation in areas subject to tsunami.</u> Because sea level rise inundation areas are geographically similar to coastal flood and tsunami hazard areas, these regulations <u>measures</u> would serve to minimize impacts to some extent.</p> <p>In addition, for all transportation projects under their jurisdiction, TAMC and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects located within a potential sea level rise inundation area. Coastal cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.</p> <p>GHG-5 Sea Level Rise Adaptation. For projects located within a potential sea level rise inundation area, the implementing agency shall incorporate appropriate adaptation strategies to minimize hazards associated with sea level rise, such that project structures and other critical facilities would be located outside of an identified sea level rise inundation area. Appropriate adaptation strategies will depend on project- and site-specific considerations, including proximity to the coastline, elevation and type of structure or facility proposed. Adaptation strategies may include, but would not be limited to:</p>	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
	<ul style="list-style-type: none"> ▪ Project redesign to place structures and critical facilities outside of the potential sea level rise inundation area; ▪ Structural measures including drainage improvements, raising road surfaces or first floor elevations above the expected sea level rise inundation level, or strengthening structures to improve resiliency; ▪ Designing facilities to withstand periodic inundation and continue to function (i.e., waterproofing); ▪ Building a new levee or raising the elevation of an existing levee to protect the proposed building or structure, or construct engineered shoreline protection structures such as revetment and bulkheads; and/or ▪ Replenishment of sand from off-site locations to preserve beaches that are subject to erosion and land loss from rising sea levels (beach nourishment). 	
Hazards and Hazardous Materials		
<p>Impact HAZ-1. Proposed transportation improvement projects and land use projects included in the 2040 MTP/SCS would facilitate the routine transport, use, or disposal of hazardous material, and may result in reasonably foreseeable upset and accident conditions. Mandatory compliance with existing regulations and programs would minimize the risk associated with these activities or accident conditions. Thus, hazards to the public or environment would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact HAZ-2. Proposed transportation improvement projects and land use projects included in the 2040 MTP/SCS would facilitate hazardous emissions or handling of acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school. Existing regulations and programs would reduce the risk to</p>	<p>None required.</p>	<p>Less than significant</p>

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Impact	Mitigation Measure(s)	Significance After Mitigation
<p>schools to acceptable levels. Impacts would be less than significant.</p>		
<p>Impact HAZ-3. The 2040 MTP/SCS includes land use projects and transportation projects that could occur on previously unknown hazardous material sites or sites on the list compiled by Government Code Section 65962.5. Thus, construction of these projects could create a hazard to the public or environment. Impacts would be significant but mitigable.</p>	<p>HAZ-3 Site Remediation. If an individual project included in the 2040 MTP/SCS is located on or near a hazardous materials and/or waste site pursuant to Government Code Section 65962.5, or has the potential for residual hazardous materials and/or waste as a result of location and/or prior uses, the implementing agency shall prepare a Phase I ESA in accordance with the American Society for Testing and Materials' E-1527-05 standard. For work requiring any demolition or renovation, the Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done. All recommendations included in a Phase I ESA prepared for a site shall be implemented. If a Phase I ESA indicates the presence or likely presence of contamination, the implementing agency shall require a Phase II ESA, and recommendations of the Phase II ESA shall be fully implemented. Examples of typical recommendations provided in Phase I/II ESAs include removal of contaminated soil in accordance with a soil management plan approved by the local environmental health department; covering stockpiles of contaminated soil to prevent fugitive dust emissions; capturing groundwater encountered during construction in a holding tank for additional testing and characterization and disposal based on its characterization; and development of a health and safety plan for construction workers.</p>	<p>Less than significant</p>
<p>Impact HAZ-4. Transportation improvement projects and land use development included in the proposed 2040 MTP/SCS may be located near a public use airport or private airstrip. Existing regulations and regulatory oversight would reduce the inherent hazard of development near airports to safe levels, and impacts would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact HAZ-5. Land use development and transportation projects included in the 2040 MTP/SCS could interfere with existing emergency and evacuation. However, required regular updates to emergency response and evacuation plans would account for development and projects. Impacts related to interference or impairment of an adopted emergency</p>	<p>None required.</p>	<p>Less than significant</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>response plan or emergency evacuation plan would be less than significant.</p>		
<p>Impact HAZ-6. The 2040 MTP/SCS includes land development and transportation projects within areas of moderate, high, and very high fire hazard. Infill development emphasized in the 2040 MTP/SCS and existing regulations and programs would reduce the vulnerability of people and structures to wildland fire. However, the risk of loss, injury or death from wildland fire would be possible given the fire hazard across much of the AMBAG region. Impacts would be significant and unavoidable.</p>	<p>HAZ-6 Wildland Fire Risk Reduction. If an individual project included in the 2040 MTP/SCS is located within the wildland-urban interface or areas favorable for wildland fires such that project-specific CEQA analysis finds a significant risk of loss, injury or death from fire, 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"> ▪ <u>Avoid introducing new or expanded development such as residential subdivisions, schools and hospitals into fire-prone, fire-controlled ecologies (e.g., indigenous Monterey pine forest, Santa Cruz sand hills/knobcone pine forest, coastal maritime chaparral).</u> ▪ Require adherence to the local hazards mitigation plan, as well as the local general plan policies and programs aimed at reducing the risk of wildland fires through land use compatibility, training, sustainable development, brush management, and public outreach, and service standards for fire departments. ▪ Encourage the use of fire-resistant vegetation native to the AMBAG region and/or the local microclimate of the project site, and discourage the use of fire-prone species especially non-native, invasive species such as pampas grass or giant reed. ▪ 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 wildland fires 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>Significant and unavoidable</p>
<p>Hydrology and Water Quality</p>		
<p>Impact W-1. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS could result in substantial eroded sediments and contaminants in runoff, as well as changes in drainage patterns that could degrade surface and ground water quality. However, compliance with federal, state,</p>	<p>None required.</p>	<p>Less than significant</p>

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Impact	Mitigation Measure(s)	Significance After Mitigation
<p>and local regulations would reduce impacts to water quality. Impacts would be less than significant.</p>		
<p>Impact W-2. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS would increase water demand in the AMBAG region. This demand may potentially require new or expanded water supplies, entitlements, or facilities. Impacts would be significant and unavoidable.</p>	<p>W-2(a) Construction Dust Suppression. The RTPAs shall and sponsor agencies can and should ensure that all 2040 MTP/SCS projects, where feasible, reclaimed and/or desalinated water is 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>W-2(b) Landscape Watering. In jurisdictions that do not already have an appropriate local regulatory program related to landscape watering, 2040 MTP/SCS projects that would 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>W-2(c) Porous Pavement. In jurisdictions that do not already have an appropriate local regulatory program related to porous pavement, the sponsor of a 2040 MTP/SCS 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>W-2(d) Water Infrastructure Improvements. The sponsor of 2040 MTP/SCS 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.</p> <p>W-2(e) Bioswale Installation. The sponsor of a 2040 MTP/SCS 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>Significant and unavoidable</p>
<p>Impact W-3. implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS would incrementally increase stormwater flows in the AMBAG region. Impacts would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact W-4. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040</p>	<p>None required.</p>	<p>Less than significant</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
<p>MTP/SCS could be subject to flood hazards, dam failure, or tsunami. However, pursuant to compliance with existing regulations, the 2040 MTP/SCS would not expose people or structures to a significant risk of loss, injury, or death associated with these hazards. Impacts would be less than significant.</p>		
<p>Land Use</p>		
<p>Impact LU-1. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS would not physically divide an established community. This is impact would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact LU-2. The 2040 MTP/SCS 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>None available.</p>	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
Noise		
<p>Impact N-1. Construction activities associated with transportation projects and land use projects under the 2040 MTP/SCS would create temporary noise and vibration level increases in discrete locations throughout the AMBAG region. Impacts would be significant and unavoidable.</p>	<p>N-1(a) Measures to Ensure Compliance with Local Construction Noise and Vibration Regulations. Implementing agencies of 2040 MTP/SCS projects shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites, appropriate measures shall be implemented to ensure compliance with local ordinance requirements relating to construction noise and vibration. 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.</p> <p>N-1(b) Pile Driving. For any project within 800 feet of sensitive receptors that requires pilings, the implementing agencies shall require caisson drilling or sonic pile driving as opposed to impact pile driving, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review.</p> <p>N-1(c) Construction Equipment Noise and Vibration Control. Implementing agencies of 2040 MTP/SCS projects shall ensure that equipment and trucks used for project construction utilize the best available noise and vibration control techniques, including mufflers, intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds.</p> <p>N-1(d) Impact Equipment Noise Control. Implementing agencies of 2040 MTP/SCS projects 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.</p> <p>N-1(e) Construction Activity Timing Restrictions. The following timing restrictions shall apply to MTP/SCS project construction activities located within 2,500 feet of a dwelling unit, except where timing restrictions are already established in local codes or policies.</p> <p>Construction activities shall be limited to:</p> <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>N-1(f) Placement of Stationary Noise and Vibration Sources. Implementing agencies of 2040 MTP/SCS projects shall locate stationary noise and vibration sources as far from sensitive receptors as feasible. Stationary noise sources that must be located near existing receptors will be adequately muffled.</p> <p>N-1(g) Physical Impacts Due to Vibration. Implementing agencies of 2040 MTP/SCS 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 potential damage to buildings located on or off-site. 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:</p> <ul style="list-style-type: none"> ▪ 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: <ul style="list-style-type: none"> ▪ Any information obtained from the surveys identified above ▪ Any modifications to the estimated vibration thresholds based on building 	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
	<p>conditions, soil conditions, and planned demolition and construction methods to ensure that vibration levels would remain below levels potentially damaging to vulnerable buildings</p> <ul style="list-style-type: none"> ▪ 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>	
<p>Impact N-2. Implementation of the 2040 MTP/SCS would potentially expose existing and future sensitive receptors to significant mobile source noise levels. Impacts would be significant and unavoidable.</p>	<p>N-2 Noise Assessment and Control for Mobile and Point Sources. Sponsor agencies of 2040 MTP/SCS projects shall complete detailed noise assessments 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 that may impact noise sensitive receptors. The implementing agency 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: ▪ 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>Where new or expanded roadways, rail, or transit projects are found to expose receptors to noise exceeding normally acceptable levels, the implementing agency shall implement techniques as recommended in the project-specific noise assessment. 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) shall be considered. Long expanses of walls or fences shall 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 shall be used, including solid fences, walls, and landscaped berms.</p>	<p>Significant and unavoidable</p>

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Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact N-3. The proposed 2040 MTP/SCS land use scenario would encourage infill 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-3 Noise Mitigation for Land Uses. If a 2040 MTP/SCS 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 inapplicable 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>Significant and unavoidable</p>
<p>Impact N-4. The proposed 2040 MTP/SCS would result in new truck, bus, and train traffic that could expose sensitive receptors and fragile buildings to excessive vibration levels. Impacts would be significant and unavoidable.</p>	<p>N-4 Vibration Mitigation for Transportation Projects. Implementing agencies of 2040 MTP/SCS 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 2006) 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"> ▪ Rail Traffic <ul style="list-style-type: none"> □ Maximizing the distance between tracks and sensitive uses □ Conducting rail grinding on a regular basis to keep tracks smooth □ Conducting wheel truing to re-contour wheels to provide a smooth running surface and removing wheel flats □ Providing special track support systems such as floating slabs, resiliently supported ties, high-resilience fasteners, and ballast mats; □ Implementing operational changes such as limiting train speed and reducing nighttime operations. ▪ 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>Significant and unavoidable</p>
<p>Population and Housing</p>		
<p>Impact PH-1. The 2040 MTP/SCS would result in substantial population growth in the AMBAG region. This impact is significant and unavoidable.</p>	<p>Mitigation of the 2040 MTP/SCS impacts on population growth would be infeasible. A moratorium on building permits, for example, would restrict housing and business development, which would cause potential residents or companies to be located outside of major population centers within the AMBAG region. However, a regionwide moratorium would be difficult to implement, if not completely infeasible, for economic, political, and legal reasons, especially over an extended period of time. Additionally, a moratorium would cause potential residents to reside in neighboring regions and commute into the region, which would increase GHG emissions and counter sustainability goals included in the 2040 MTP/SCS. A regionwide restriction on public services and utilities would also serve to limit population growth, but would be difficult, if not completely infeasible, to implement for the reasons described above.</p> <p>Additionally, failing to accommodate the forecasted population growth would be inconsistent with a fundamental objective of the 2040 MTP/SCS. Moreover, Government Code Section 65080(b)(2)(B)(ii) requires that the MTP/SCS must house all the population of the region, including all economic segments of the population, over the course of the planning horizon of the MTP/SCS. The MTP/SCS itself does</p>	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
	not control local land use decisions. A building moratorium would impede the ability of local jurisdictions to construct a sufficient housing supply for the forecasted population growth. As a result, no mitigation measures to reduce this impact to less-than-significant levels are feasible.	
Impact PH-2. Land use development included in the 2040 MTP/SCS would temporarily displace existing housing and people as individual housing development sites are redeveloped. However, this displacement would be temporary and would be offset by a significant net increase in housing units by 2040. Impacts would be less than significant.	None required.	Less than significant
Transportation and Circulation		
Impact T-1. Daily hours of vehicle delay and total peak period CVMT in the AMBAG region would increase between baseline 2015 conditions and 2040 conditions with implementation of the 2040 MTP/SCS. The percent of commuter trips that are 30 minutes or less would decrease in single- and high occupancy vehicles, but would increase for transit trips. Impacts would be significant and unavoidable.	The 2040 MTP/SCS already includes policies, alternative transportation projects, and transportation demand management projects, which would encourage the use of transportation modes other than passenger vehicles. Nonetheless, the daily hours of vehicle delay, total peak period CVMT, and the percentage of commuter work trips exceeding 30 minutes in passenger vehicles would still increase in 2040 compared to the existing 2015 conditions. No feasible additional mitigation measures have been identified that would further reduce these metrics. Refer to Section 7, Alternatives, for a discussion of 2040 MTP/SCS alternatives that examine land use and transportation scenarios that incorporate different assumptions regarding the combinations of future land uses and transportation system improvements.	Significant and unavoidable
Impact T-2. The 2040 MTP/SCS would increase the percent of jobs within 0.5 mile of a high quality transit stop compared to existing 2015 conditions. This would be a beneficial impact.	None required.	Beneficial

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Impact	Mitigation Measure(s)	Significance After Mitigation
<p>Impact T-3. The 2040 MTP/SCS includes transit projects that would improve and expand transit services in the region. The 2040 MTP/SCS would increase the percentage of jobs within proximity to transit stops and the percent of transit trips less than 30 minutes during peak period. Thus, the 2040 MTP/SCS would not substantially disrupt transit service and impacts would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact T-4. The 2040 MTP/SCS would improve conditions for bicycle and pedestrian travel in the AMBAG region, and bicycle and pedestrian facilities would not be substantially disrupted. Impacts would be less than significant.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact T-5. Daily VMT would increase between the baseline 2015 conditions and 2040 conditions. Thus, impacts from implementation of the 2040 MTP/SCS would be significant and unavoidable.</p>	<p>T-5 Project-Level VMT Analysis and Reduction. <u>Transportation project sponsor agencies shall evaluate transportation projects that involve increasing roadway capacity for their potential to increase VMT. Where project-level increases are found to be potentially significant, implementing agencies shall identify and implement measures that reduce VMT. Examples of measures that reduce the VMT associated with increases in roadway capacity include tolling new lanes to encourage carpools and fund transit improvements; converting existing general purpose lanes to high occupancy vehicle lanes; and implementing or funding off-site travel demand management.</u></p> <p>Implementing agencies shall evaluate VMT as part of project-specific CEQA review and discretionary approval decisions for land use projects. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce VMT. Examples of measures that reduce VMT include infill development, mixed use and transit oriented development, complete street programs, reduced parking requirements, and providing alternative transportation facilities, such as bike lanes and transit stops.</p>	<p>Significant and unavoidable</p>

Impact	Mitigation Measure(s)	Significance After Mitigation
Tribal Cultural Resources		
Impact TCR-1. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS have the potential to impact tribal cultural resources. Impacts would be less than significant with mitigation incorporated.	TCR-1 Tribal Cultural Resources Impact Minimization. Implementing agencies shall comply with AB 52, which may require formal tribal consultation. If the implementing agency 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: <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) must be contacted immediately to evaluate the find and determine the proper course of action.	Less than significant

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1 Introduction

This document is an Environmental Impact Report (EIR) for a proposed 2040 Metropolitan Transportation Plan-Sustainable Communities Strategy (2040 MTP/SCS) proposed by the Association of Monterey Bay Area Governments (AMBAG) and the Regional Transportation Plans (RTPs) for the counties of Monterey, San Benito and Santa Cruz.

Section 21000 et seq. of the California Public Resources Code, commonly referred to as the California Environmental Quality Act of 1970 (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 AMBAG, other agencies and the general public in their consideration and evaluation of the environmental consequences of implementing of the proposed 2040 MTP/SCS and RTPs for the counties of Monterey, San Benito and Santa Cruz.

This Final EIR includes Responses to Comments on the Draft EIR (Appendix F) and the text of the Draft EIR, revised based on responses to comments and other information. New text added or edited from the Draft EIR is shown in underline format. In instances where changes to the document involve changed facts or information, the deleted text has been left in ~~striketrough~~ format.

This section discusses (1) the purpose of this EIR; (2) 2040 MTP/SCS and EIR background; (3) the type of environmental document prepared for the 2040 MTP/SCS; (4) the content and format of the EIR; (5) the environmental review process required under CEQA; and (6) the lead, responsible and trustee agencies. The proposed project is described in detail in Section 2.0, *Project Description*.

1.1 Statement of Purpose

This EIR has been prepared in compliance with the CEQA Statutes and Guidelines. In general, the purpose of an EIR is to (see CEQA Guidelines Section 15121(a)):

- Analyze the environmental effects of the adoption and implementation of the Plan;
- Inform decision-makers, responsible and trustee agencies and members of the public as to the range of the environmental impacts of the Plan;
- Recommend a set of measures to mitigate significant adverse impacts; and
- Analyze a range of reasonable alternatives to the proposed Plan.

As the lead agency for preparing this EIR, AMBAG will rely on the EIR analysis of environmental effects in their review and consideration of the proposed 2040 MTP/SCS prior to approval.

As discussed in further detail below in Section 1.3.1, *CEQA Streamlining Opportunities*, SB 375 provides streamlining benefits for certain transit oriented projects consistent with an adopted SCS. Pursuant to these provisions of SB 375, this EIR has also been prepared to allow qualifying projects to streamline their environmental review.

1.2 Project Background

The Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG) and the Santa Cruz County Regional Transportation Commission (SCCRTC) are the state-designated Regional Transportation Planning Agencies (RTPAs) for Monterey, San Benito and Santa Cruz Counties, respectively. Each RTPA prepares a county-level long-range Regional Transportation Plan (RTP).

As the metropolitan planning organization (MPO) for the tri-county region of Monterey, San Benito and Santa Cruz Counties, AMBAG is charged with developing a Monterey Bay Area Metropolitan Transportation Plan and the Sustainable Communities Strategy, the 2040 MTP/SCS, in compliance with SB 375 (Chapter 728, Statutes of 2008). The MTP is the metropolitan long-range transportation plan for the three counties and is a compilation of the transportation projects included in the Monterey County Regional Transportation Plan (2040 MC-RTP), the 2040 San Benito County Regional Transportation Plan (2040 SBC-RTP) and the 2040 Santa Cruz County Regional Transportation Plan (2040 SCC-RTP). The most recent MTP/SCS was adopted by AMBAG in June 2014. A program environmental impact report (EIR) was prepared for the 2035 MTP/SCS. This EIR will serve as the Program EIR for the Monterey Bay 2040 MTP/SCS and the RTPs prepared by the Monterey, San Benito and Santa Cruz County RTPAs.

The 2035 MTP/SCS programmed available transportation funding to 2035 and included lists of programmed and planned transportation projects to improve the transportation system during the 2011-2035 planning period. Among these listed projects were highway, road and street projects, pedestrian and bikeway projects, aviation projects, rail projects and transit projects, as well as programs for transportation demand management and intelligent transportation systems. Although a number of projects from the 2035 MTP/SCS have been completed, many have not. Additionally, new projects have been incorporated into the 2040 MTP/SCS from the RTPs prepared by the Monterey, San Benito and Santa Cruz RTPAs.

In compliance with the CEQA Guidelines (Section 15063), AMBAG, as the Lead Agency responsible for the 2040 MTP/SCS, solicited preliminary public agency comments on the project through distribution of a Notice of Preparation (Appendix A) and receipt of public comments during three scoping meetings held at the following locations:

- Hollister, California, on January 11, 2016 from 6:00 PM to 7:30 PM at the County of San Benito Board of Supervisors Chambers, 481 Fourth Street;
- Aptos, California, on January 27, 2016 from 6:30 PM to 8:00 PM at the Aptos Library, 7695 Soquel Drive; and
- Salinas, California, on January 28, 2017 from 6:00 PM to 7:30 PM at the Cesar Chavez Library, 615 Williams Road.

1.3 Type of Environmental Document

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.”

As a programmatic document, this EIR presents a regionwide assessment of the impacts of the proposed 2040 MTP/SCS and the RTPs prepared by the Monterey, San Benito and Santa Cruz RTPAs. Analysis of site-specific impacts of individual projects is not required in a program EIR. Many specific projects are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each project will be undertaken as necessary by the appropriate implementing agency prior to each project being considered for approval. This program EIR serves as a first-tier environmental document under CEQA supporting second-tier environmental documents for:

- Transportation projects developed during the engineering design process; and
- Land use and development projects, including residential or mixed use projects and transit priority projects consistent with the SCS.

Agencies implementing subsequent projects (“implementing agencies”) would undertake future environmental review for projects in the proposed 2040 MTP/SCS. Implementing agencies, as referred to in this document, are the three counties and RTPAs making up AMBAG (Monterey, Santa Cruz and San Benito), the cities within those counties, and other implementing agencies within the tri-county region. Agencies that would implement a project are also referred to herein as sponsor agencies in this EIR. This would include Caltrans, Amtrak and transit agencies operating in the region, among others. All of these agencies, as well as the AMBAG member agencies, would be able to prepare subsequent environmental documents that incorporate by reference the appropriate information from this program EIR regarding secondary effects, cumulative impacts, broad alternatives and other relevant factors. If the lead agency finds that implementation of a later activity would have no new effects and that no new mitigation measures would be required, that activity would require no additional CEQA review. Where subsequent environmental review is required, such review would focus on project-specific significant effects peculiar to the project, or its site, that have not been considered in this program EIR (CEQA Guidelines Section 15168).

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.

Section 15146 of the CEQA Guidelines further provides the following additional standards related to the adequacy of an Environmental Impact Report:

The degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR.

- (a) An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive

zoning ordinance because the effects of the construction can be predicted with greater accuracy.

- (b) An EIR on a project such as the adoption or amendment of a comprehensive zoning ordinance or a local general plan should focus on the secondary effects that can be expected to follow from the adoption, or amendment, but the EIR need not be as detailed as an EIR on the specific construction projects that might follow.

1.3.1 CEQA Streamlining Opportunities

If the 2040 MTP/SCS is adopted and the program EIR is certified by AMBAG, the California Air Resources Board (CARB) must then confirm that the MTP/SCS, if implemented, would achieve the greenhouse gas emission reduction targets required by SB 375. Upon making this determination, a number of streamlining benefits may become available to lead agencies that carry out or approve future projects consistent with the 2040 MTP/SCS.

For a lead agency to take advantage of many of the potential streamlining benefits associated with the SCS, it must be considered a Transit Priority Project that is consistent with the general use designation, density, building intensity and applicable policies specified for the project area in the SCS and meets the other statutory requirements outlined in Pub. Res. Code §§ 21155 et seq.

1.3.1.1 Streamlining Under SB 375

SB 375 provides streamlining benefits for Transit Priority Projects (TPP) and certain mixed use projects. (See PRC Sections 21155 et seq.) For details, see the Governor's Office of Planning and Research's flow charts on SB 375 streamlining (Governor's Office of Planning and Research 2011). A TPP is a project that meets all of the criteria summarized below. For the purposes of this EIR, geographic areas that meet the TPP requirements are referred to as Transit Priority Areas (TPAs).

- Consistent with the general land use designation, density, building intensity and applicable policies specified for the project area in the SCS;
- Located within half a mile of a major transit stop or high quality transit corridor;
- Comprised of at least 50 percent residential use based on total building square footage, or as little as 26 percent residential use if the project has a floor area ratio of not less than 0.75; and
- Built out with a minimum of 20 dwelling units per acre (PRC § 21155).

A major transit stop is defined in Section 21064.3 of California Public Resources Code as a site with an existing rail station or the intersection of two or more major bus routes with a 15 minute headway during peak morning and afternoon commute periods. SB 375 defines a high quality transit corridor as a corridor that contains transit service with 15 minute frequencies during peak period.

One of three potential streamlining benefits may apply to a TPP pursuant to SB 375, as described below.

First, TPPs that meet a detailed list of criteria set forth in PRC Section 21155.1 are termed Sustainable Communities Projects and are statutorily exempt from CEQA. Due to the extensive list of criteria that must be met to achieve this exemption, the exemption may only be available in limited circumstances.

Second, a TPP that does not qualify for the statutory exemption may be eligible to comply with CEQA using a Sustainable Communities Environmental Assessment (SCEA). An SCEA is similar to a

streamlined negative declaration or mitigated negative declaration that requires a 30-day public review period (rather than the otherwise available 20-day public review period). An SCEA is available for a TPP that does not result in any potentially significant environmental impacts after mitigation and that has incorporated all feasible mitigation measures, performance standards, or criteria set forth in the prior applicable EIRs including the EIR for the MTP/SCS. An SCEA is not required to discuss (1) growth inducing impacts, or (2) any project specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network (PRC Sections 21155.2 (b)(1), 21159.28 (a)). Additionally, unlike a negative declaration or mitigated negative declaration, a lead agency's decision to approve a TPP based on an SCEA is reviewed, if challenged, by a court under the substantial evidence standard (PRC Section 21155.2(b)(7)).

Third, a TPP that will result in one or more significant impacts after mitigation may be reviewed using a tiered TPP EIR as established by PRC Section 21155.2(c). A tiered TPP EIR is only required to address the significant or potentially significant effects of the TPP on the environment and is not required to include a discussion of (1) growth inducing impacts, (2) any project specific or cumulative impacts from cars and light duty truck trips generated by the project on global warming or the regional transportation network, (3) cumulative effects that have been adequately addressed and mitigated in prior applicable certified EIRs, (4) off-site alternatives, or (5) a reduced density alternative to address effects of car and light truck trips generated by the TPP (PRC Sections 21155.2 (c), 21159.28(a) and (b)).

In addition to the benefits provided for TPPs, SB 375 provides streamlining benefits for residential or mixed use residential projects, as defined in PRC Section 21159.28(d), that are consistent with the use designation, density, building intensity and applicable policies specified for the project area in the SCS but do not meet the criteria for TPPs. Projects eligible for streamlining must incorporate mitigation measures required by an applicable prior environmental document, such as this EIR after it is certified by AMBAG. EIRs for qualifying residential or mixed use residential projects are not required to include a discussion of (1) growth inducing impacts, (2) any project specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, or (3) a reduced density alternative to address effects of car and light truck trips generated by the project (PRC Section 21159.28 (a)-(b)).

Projects that qualify to use the SB 375 CEQA streamlining benefits would still need to obtain discretionary permits or other approvals from the lead agency and the local jurisdiction, in accordance with local codes and procedures, including any agreements related to zoning, design review, use permits and other local code requirements. The streamlining only applies to the CEQA processing of a project. Other development projects that do not fall into any of these categories could still use this EIR for other CEQA tiering benefits, as described in Section 1.3.1.5, *Other Tiering Opportunities*.

1.3.1.2 Streamlining Under SB 226

In 2011, the legislature enacted SB 226 to establish additional streamlining benefits applicable to infill projects that are consistent with the requirements set forth in CEQA Guidelines section 15183.3 (PRC Sections 21094.5 (c), 21094.5.5). Residential, commercial and retail, public office buildings, transit stations and schools are eligible for this streamlining provided they meet the following requirements: (1) are located in an urban area on a site that has been previously developed or adjoins existing qualified urban uses on at least 75 percent of the site's perimeter; (2) satisfy the performance standards provided in Appendix M of the CEQA Guidelines; and, (3) are

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, with some exceptions.

For these projects, more significant effects, or if uniformly applicable, development standards, would substantially mitigate such effects. If this is not the case, then a Mitigated Negative Declaration or, for TPPs, an SCEA may be prepared. If impacts cannot be mitigated through project changes, then an “Infill EIR” is prepared. An Infill EIR is only required to analyze effects on the environment that are specific to the project or to the project site and were not addressed as significant effects in a prior planning level EIR unless new information shows the effects will be more significant than described in the prior EIR (PRC Section 21094.5 (a)(1)). Moreover, an Infill EIR is not required to consider potentially significant environmental effects of the project that may be reduced to a less-than-significant level by applying uniformly applicable development policies or standards adopted by the city, county, or the lead agency (PRC Section 21094.5 (a)(2)). The Infill EIR is not required to discuss (1) alternative locations, project densities and building intensities, or (2) growth inducing impacts.

Unlike the CEQA streamlining benefits established by SB 375, the benefits created by SB 226 may apply to non-residential projects including qualifying commercial, retail, transit station, school, or public office building projects (CEQA Guidelines, Section 15183.3 (f)(1)).

1.3.1.3 Streamlining Under SB 743

SB 743 (2013) (PRC Section 21099 and 21555.4) created an exemption from CEQA for certain residential, employment center and mixed use development projects that are consistent with a Specific Plan (see Public Resources Code Section 21155.4.) (A Specific Plan implements a General Plan within a smaller geographic area, such as a downtown core or along a transit corridor; see Government Code Section 65450 et seq.). The exemption applies if a project meets all of the following criteria:

1. It is located within a transit priority area;
2. The project is consistent with a specific plan for which an environmental impact report was certified; and
3. It is consistent with an adopted SCS or alternative planning strategy.

The exemption cannot be applied if circumstances requiring preparation of a Subsequent or Supplemental EIR occur, for example if the project would cause new or worse significant environmental impacts compared to what was analyzed in the environmental impact report for the specific plan.

SB 743 also specifies that aesthetic and parking impacts of residential, mixed use residential, or employment center uses on infill sites within a TPA shall not be considered significant effects on the environment (see Public Resources Code Section 21099(d).)

1.3.1.4 Other Tiering Opportunities

Finally, for all other types of projects proposed to be carried out or approved by a lead agency within the region, the lead agency may utilize this EIR for the purposes of other allowed CEQA tiering (PRC Sections 21068.5, 21093-21094, CEQA Guidelines 15152, 15385). Tiering is the process by which general matters and environmental effects in an EIR prepared for a policy, plan, program or ordinance are relied upon by a narrower second-tier or site-specific EIR (PRC Section 21068.5).

Moreover, by tiering from this EIR (if certified by AMBAG), a later tiered EIR would not be required to examine effects that (1) were mitigated or avoided in this EIR, (2) were examined at a sufficient level of detail in this EIR to enable those effects to be mitigated or avoided by site specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project (PRC Section 21094).

1.4 EIR 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, significant but mitigable, less than significant, and beneficial. It proposes mitigation measures, where feasible, for identified significant environmental impacts to reduce project impacts, identifying when impacts can be reduced to a less than significant level. The responsible agency for each mitigation measure is also identified, as further described in Section **Error! Reference source not found.**

This EIR has been organized into eight sections and six appendices. These include:

- 1.0 **Introduction.** Provides the project background, description of the type of environmental document and CEQA streamlining opportunities, and information about the EIR content and format.
- 2.0 **Project Description.** Presents and discusses the project objectives, project location and specific project characteristics.
- 3.0 **Environmental Setting and Impact Analysis Approach.** Provides a description of the existing physical setting of the AMBAG region, including a description of the regional transportation system, and discusses the EIR baseline and approach to direct and cumulative analyses.
- 4.0 **Analysis of Environmental Issues.** Describes existing conditions found in the project area and assesses environmental impacts that may be generated by implementing the proposed project. These 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.
- 5.0 **MTP Consistency with Other Plans Analysis.** Describes consistency with other local and regional plans.
- 6.0 **Other Statutory Considerations.** Identifies growth inducing impacts that may result from implementation of the proposed project, as well as long-term effects of the project and significant irreversible environmental changes.
- 7.0 **Alternatives.** Describes alternatives to the proposed project, and compares their impacts to the proposed projects.
- 8.0 **References and 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.

Appendices

- A Notice of Preparation and NOP Response Letters
- B 2040 MTP/SCS Transportation Project List

C Performance Metric Data

D Special Status Species

E AB 52 Consultation

F Response to Comments

1.5 CEQA Review Process

AMBAG, as the CEQA Lead Agency, is preparing this EIR to satisfy all requirements under CEQA for review and approval of the 2040 MTP/SCS. This document is a Program EIR. Section 15168(a) of the *State 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.”

The CEQA process for this EIR is as follows:

1. **Notice of Preparation (NOP) and Initial Study.** AMBAG, following CEQA Guidelines section 15082(a), submitted a NOP to the State Clearinghouse which publicly released it on December ~~21~~ 15, 2015 for an extended review period that ended on January 29, 2016.
2. **Draft EIR Prepared.** ~~This~~ The Draft EIR contains the following required elements: 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) and Public Review.** AMBAG, as the lead agency, has filed an NOC with the State Clearinghouse noticing agencies and the public that it has completed a Draft EIR and prepared a Public Notice of Availability of this Draft EIR as required under CEQA. As the lead agency, AMBAG is soliciting input from other agencies and the public, and respond in writing to all comments received (Public Resources Code Sections 21104 and 21253). The public review period will be a minimum of 45 days.
4. **Final EIR.** ~~AMBAG will prepare a~~ The Final EIR that includes: 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, AMBAG will 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; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project (*CEQA Guidelines* Section 15090).
6. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, AMBAG will 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. (*CEQA Guidelines* Section 15092).

7. **Mitigation Monitoring Reporting Program.** AMBAG will ~~If AMBAG is required to make findings on significant effects identified in the EIR, it shall~~ adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
8. **Lead Agency Project Decision.** AMBAG, as 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 a statement of overriding considerations is adopted (*CEQA Guidelines* Sections 15092).
9. **Notice of Determination (NOD).** AMBAG will file a NOD after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). AMBAG will file the NOD with the applicable County Clerks to be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD will start 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

1.6 Lead and Responsible Agencies

The *CEQA Guidelines* define lead and responsible and trustee agencies. A lead agency is the public agency with principal responsibility for carrying out or approving a project; the lead agency prepares the CEQA document (*CEQA Guidelines* Section 15367). A responsible agency is an agency other than the lead agency with responsibility for carrying out or approving a project, and uses the lead agency's CEQA document in its decision-making (*CEQA Guidelines* Section 15381).

AMBAG is the lead agency for the 2040 MTP/SCS because it holds principal responsibility for approving the 2040 MTP/SCS. TAMC, SBtCOG and SCCRTC, are responsible agencies for the 2040 MTP/SCS and lead agencies for adopting their own RTPs. AMBAG is also the lead agency, and TAMC, SBtCOG and SCCRTC are each responsible agencies, for the County RTP EIRs. Project sponsors for individual projects analyzed in this program EIR may include: TAMC, SBtCOG and SCCRTC; Caltrans; Monterey, San Benito and Santa Cruz Counties; cities within the AMBAG region; transit agencies; and other project sponsors who may implement any of the projects listed in the 2040 MTP/SCS. These agencies are considered responsible agencies for the 2040 MTP/SCS, but may be lead agencies for individual transportation or land use projects.

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2 Project Description

This section describes the proposed MTP/SCS and RTPs, including the project objectives, project location and characteristics, 2040 MTP/SCS transportation projects and discretionary actions needed for approval.

2.1 Project Objectives

The 2040 MC-RTP, the 2040 SCC-RTP, the 2040 SBC-RTP and the 2040 MTP/SCS (hereafter referred to as the 2040 MTP/SCS) have been prepared to comply with the current California Transportation Commission Regional Transportation Plan Guidelines (CTC RTP Guidelines), pursuant to Government Code Section 14522, to prepare a regional transportation plan, a long-range transportation planning document which will provide policy guidelines regarding the planning and programming of transportation projects within each respective County through 2040. Further, Government Code Sections 65050, 65400, 65584.01-04, 65587, 65588 and Public Resources Code Section 21155 were amended in January 2009 when Senate Bill (SB) 375 became law, requiring coordinated planning between regional land use and transportation plans to increase efficiency and reduce GHG emissions. The following sections describe the legislative requirements and project objectives associated with the 2040 MTP/SCS.

General Legislative Requirements

The Association of Monterey Bay Area Governments (AMBAG) as the federally-designated metropolitan planning organization (MPO) representing Monterey, San Benito and Santa Cruz Counties, is required by both federal and State law to prepare a long-range (at least 20-year) transportation planning document known as a Metropolitan Transportation Plan (MTP). The MTP contains a compilation of the projects proposed in the Regional Transportation Plans (RTPs) prepared by the Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG) and the Santa Cruz County Regional Transportation Commission (SCCRTC) as the state-designated Regional Transportation Planning Agencies (RTPAs) for Monterey, San Benito and Santa Cruz Counties, respectively. The MTP is a document used to achieve a coordinated and balanced regional transportation system.

AMBAG is also responsible for preparing a Sustainable Communities Strategy (SCS) as part of the MTP, pursuant to the requirements of California Senate Bill 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 duty trucks to achieve the regional GHG reduction targets set by the California Air Resources Board (CARB).

The California Transportation Commission's document *2017 California Regional Transportation Plan Guidelines* serves as the guidance for RTP development. All RTP updates started after the 2017 RTP Guidelines were adopted by the CTC (January 18, 2017) must use the new RTP Guidelines. AMBAG started their MTP/SCS and the County RTPs, were started prior to this adoption, however, AMBAG

has chosen to follow the 2017 RTP Guidelines for the 2040 MTP/SCS. Under both federal and State law, the RTPAs and MPOs must update the RTPs and MTP every four years.¹ AMBAG adopted its most recent MTP/SCS in June 2014. The 2035 MTP/SCS covered a 25 year period between 2010 and 2035.

SB 375 Requirements

The Sustainable Communities Strategy and Climate Protection Act, SB 375 (codified at CAL. GOVT CODE §§ 14522.1, 14522.2, 65080.01, 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588; CAL. PUB. RES. CODE §§2161.3, 21155, 21159.28), 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. In addition to creating requirements for MPOs, it also creates requirements for the California Transportation Commission (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 or MTPs.
- The CARB must develop regional GHG emission reduction targets for automobiles and light trucks for 2020 and 2035 by September 30, 2010. These targets were approved on September 23, 2010.
- Each MPO must prepare an SCS as part of its RTP or MTP to demonstrate how it will meet the regional GHG targets.
- 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.
- 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 prepare and circulate a draft SCS at least 55 days before it adopts a final RTP or MTP.
- After adoption, each MPO must submit its SCS to CARB for review.
- CARB must review each SCS to determine whether or not, if implemented, it would meet the GHG targets. CARB must complete its review within 60 days.

AMBAG reduction targets from CARB are identified as a zero percent per capita change from 2005 levels by 2020 and a five percent per capita reduction from 2005 levels by 2035. These targets apply to the entire AMBAG region for all on-road light duty trucks and passenger vehicles emissions, and not to individual cities or sub-regions. Therefore, AMBAG, through the 2040 MTP/SCS, must maintain or reduce these levels to meet the 2020 target and reduce these levels to meet the 2035 targets. It should be noted that new targets for the AMBAG region will be established for the next update to the MTP/SCS, scheduled in 2022.

SB 375 specifically states that nothing in the law changes local governments local land use authorities. The 2040 MTP/SCS provides a regional policy foundation that local governments may build upon, if they so choose. The 2040 MTP/SCS includes and accommodates the growth

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

projections for the region. SB 375 also requires that forecasted development patterns 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.²

In addition, this 2040 MTP/SCS EIR lays the groundwork for the streamlined review of qualifying development projects. Qualifying projects that meet statutory criteria and are consistent with the 2040 MTP/SCS are eligible for streamlined environmental review pursuant to CEQA under SB 375 and other laws; see Section 1.3.1.

MAP-21

The Moving Ahead for Progress in the 21st Century Act (MAP-21) was enacted in 2012, preceding the FAST Act that builds upon what was started with MAP-21. Through the MTP development process, MAP-21 encourages AMBAG 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, MAP-21 requires that the MTP planning process provide for consideration of projects and strategies that will:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility of people and for freight;
- 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;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system.⁴

The 2040 MTP/SCS and the RTPs prepared by the Monterey, San Benito and Santa Cruz RTPAs have been prepared to meet these requirements.

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 (Public Law 94-114). 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

² The RHNA was updated as part of the 2035 MTP/SCS and will be updated for the next MTP/SCS scheduled for adoption in 2022.

³ 23 U.S.C. §134(g)(3)(A).

⁴ 23 U.S.C. §134(h)(1).

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 MPOs, such as AMBAG, 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.⁵

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;
 - (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.⁶

⁵ 23 U.S.C. §134(g)(3)(A).

⁶ 23 U.S.C. §134(h)(1).

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 (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 the AMBAG MTP/SCS as its projected adoption is for June 2018.

Metropolitan/Regional Transportation Plans

The procedures for developing Regional Transportation Plans – also referred to as Metropolitan Transportation Plans – are provided in the California Transportation Commission’s *2017 California Regional Transportation Plan Guidelines*. Because the AMBAG document encompasses three RTPs, it is referred to as a Metropolitan Transportation Plan as AMBAG is the MPO overseeing the tri-county area. The guidelines apply to both MTP/RTPs and identify the purpose of an MTP/RTP to be as follows:

- Provide an assessment of current modes of transportation and the potential of new travel options within the region;
- Project/estimate the future needs for travel and goods movement;
- Identify and document specific actions necessary to address the region’s mobility and accessibility needs;
- Guide and document public policy decisions by local, regional, state and federal officials regarding transportation expenditures and financing;
- Identify needed transportation improvements in sufficient detail to serve as a foundation for:
 - Development of the Federal Transportation Improvement Program (FTIP) and the Interregional Transportation Improvement Program (ITIP);
 - Facilitation of the National Environmental Protection Act (NEPA)/404 integration process; and
 - Identification of project purpose and need.
- Employ performance measures that demonstrate the effectiveness of the transportation improvement projects in meeting the intended goals.
- Promote consistency between the California Transportation Plan, the regional transportation plan and other transportation plans developed by cities, counties, districts, Native American Tribal Governments and State and Federal agencies in responding to statewide and interregional transportation issues and needs;
- Provide a forum for 1) participation and cooperation, and 2) facilitating partnerships that reconcile transportation issues which transcend regional boundaries; and
- Involve community-based organizations as part of the public, Federal, State and local agencies, Native American 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 and MTPs 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 and MTPs must also recommend a comprehensive approach that provides direction for programming decisions to meet the identified regional transportation needs. RTPs and MTPs must be fully consistent with the requirements of MAP 21 and other federal laws and regulations, including conformity with the 1990 Clean Air Act Amendments and consistency with the Federal Transportation Improvement Program (FTIP). Because the 2040 MTP/SCS is a compilation of three RTPs, consistency between the documents is addressed within the MTP.

Project Objectives

The underlying purpose of the 2040 MTP/SCS is to coordinate and facilitate the programming and budgeting of all transportation facilities and services within the Monterey Bay region through 2040 and demonstrate how the region will integrate transportation and land use planning to meet the GHG reduction targets established by CARB and in accordance with other State and Federal regulations. In developing the 2040 MTP/SCS, AMBAG followed the FAST Act requirements that the RTP planning process provide for consideration of projects and strategies that will:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- Increase the safety and security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility options available to people and freight;
- 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;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation;
- Emphasize the preservation of the existing transportation system;
- Improve resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts; and
- Enhance travel and tourism.

The primary objective of the 2040 MTP/SCS is to comply with applicable regulatory requirements, including CTC Guidelines and SB 375, including SB 375's regional GHG reduction targets. AMBAG's specific objectives for the 2040 MTP/SCS are to additionally ensure that the SCS and the transportation system planned for the AMBAG region accomplishes the following:

- Serves regional goals, objectives, policies and plans
- Responds to community and regional transportation needs
- Promotes energy efficient, environmentally sound modes of travel and facilities and services
- Promotes equity and efficiency in the distribution of transportation projects and services

2.2 Project Location

The 2040 MTP/SCS covers the entire area of Monterey, San Benito, and Santa Cruz Counties and includes all the incorporated cities and unincorporated communities contained therein (see Figure 1). Capital improvement projects identified in the 2040 MTP/SCS are located on State highways, county roads and locally owned streets, as well as on transit district property, and public utility lands. A description of the study area is provided in Section 3.0, *Environmental Setting*.

2.3 Project Characteristics

The 2040 MTP/SCS is a technical update to the 2035 MTP/SCS which was adopted in June 2014. The technical updates from the 2035 MTP/SCS consisted of changing the base year from 2010 to 2015; updating the growth forecasts from 2010-2035 to 2015-2040; updating project cost estimates; updating revenue assumptions; and minor changes to transportation project lists. The MTP/SCS vision, policies and goals/performance metrics have not changed. The 2040 MTP/SCS and the RTPs prepared by Monterey, San Benito and Santa Cruz reflect changes in legislative requirements, local land use policies and resource constraints.

The 2040 MTP/SCS plans how the AMBAG region will meet its transportation needs for the period from 2015 to 2040, considering existing and projected future land use patterns as well as forecast population and job growth. The 2040 MTP/SCS estimates approximately \$9.97 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; aviation, as well as transportation demand management measures (TDM) and transportation systems management (TSM).

The 2040 MTP/SCS is based on a preferred land use and transportation scenario which defines a pattern of future growth and transportation system investment for the region emphasizing a transit oriented development and infill approach to land use and housing. Population and job growth is allocated principally within existing urban areas near public transit. Table 3 is the projected population growth within the AMBAG region.

Figure 1 Project Location



 Project Location
 (County Boundaries)
  N

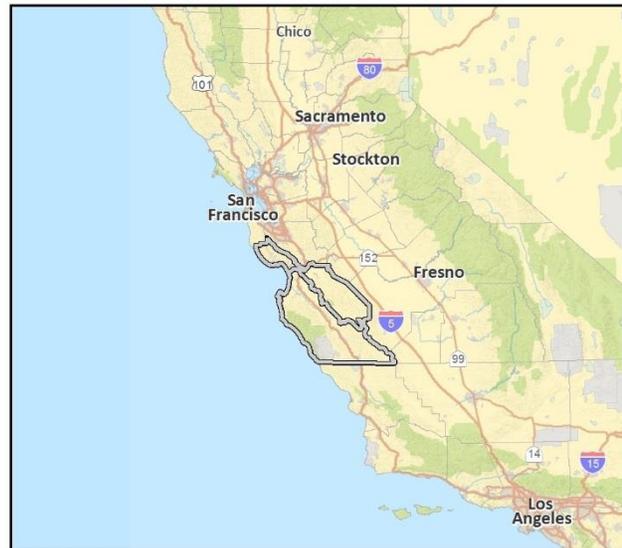


Fig 2 Project Location

Table 3 Forecasted AMBAG Population Growth 2015-2040

Jurisdiction	2015	2020	2040	Percent Change
Monterey County	432,637	448,211	501,751	16%
Carmel-By-The-Sea	3,824	3,833	3,876	1%
Del Rey Oaks	1,655	1,949	2,987	80%
Gonzales	8,411	8,827	18,756	123%
Greenfield	16,947	18,192	22,327	32%
King City	14,008	14,957	16,063	15%
Marina	20,496	23,470	30,510	49%
Monterey	28,576	28,726	30,976	8%
Pacific Grove	15,251	15,349	16,138	6%
Salinas	159,486	166,303	184,599	16%
Sand City	376	544	1,494	297%
Seaside	34,185	34,301	37,802	11%
Soledad	24,809	26,399	29,805	20%
Unincorporated County Territory	104,613	105,361	106,418	2%
San Benito County	56,445	62,242	74,668	32%
Hollister	36,291	39,862	46,222	27%
San Juan Bautista	1,846	2,020	2,251	22%
Unincorporated County Territory	18,308	20,360	26,195	43%
Santa Cruz County	273,594	281,147	306,881	12%
Capitola	10,087	10,194	10,809	7%
Santa Cruz	63,830	68,381	82,266	29%
Scotts Valley	12,073	12,145	12,418	3%
Watsonville	52,562	53,536	59,743	14%
Unincorporated County Territory	135,042	136,891	141,645	5%
AMBAG Total	762,676	791,600	883,300	16%

Source: AMBAG's Draft 2018 Regional Growth Forecast. AMBAG (2017d).

The preferred scenario consists of an intensified land use distribution approach that concentrates the forecasted population and employment growth in urban areas. The transportation network includes additional highway capacity, local street improvements, active transportation and transit investments to serve a more concentrated urban growth pattern.

The 2040 MTP/SCS is organized into seven chapters plus an Executive Summary:

- *Executive Summary.* Includes an overview of the 2040 MTP/SCS, the preferred scenario and its performance, an explanation of the planning process and the allocation of transportation funding.
- *Chapter 1 – Vision.* Discusses legal authority, the overall purpose of the 2040 MTP/SCS and transportation-related issues and challenges faced by the region.

- *Chapter 2 – Transportation Investments.* Defines how to make the most out of the existing transportation system by investing in system preservation and maintenance, along with strategic system expansion and management strategies. The transportation investments are intended to provide more travel choices for the region’s residents, businesses and visitors.
- *Chapter 3 – Financial Plan.* The financial plan presents funding strategies that are reasonably available by 2040.
- *Chapter 4 – Sustainable Communities Strategy.* Describes how the SCS was developed, identifies the land use and transportation connection, identifies the transportation system and programs, discusses resource areas and farmland, methods to accommodate the region’s housing needs, how AMBAG will meet GHG reduction targets and implementation strategies.
- *Chapter 5 – Performance Measures.* Provides an introduction to the concept of performance measures as they relate to accomplishing the 2040 MTP/SCS goals while meeting social equity responsibilities.
- *Chapter 6 – Public Participation.* Provides a public participation process including methods for engaging the community and local jurisdictions in the development of the 2040 MTP/SCS..
- *Chapter 7 – Glossary.* Identifies key terms and their definitions.
- *Appendices.* The appendices include the following:
 - A. Regional Growth Forecast
 - B. Financial Plan
 - C. Project List
 - D. Public Participation and Consultation
 - E. SCS Scenario Planning Documentation
 - F. Travel Demand Model and Land Use Model Documentation
 - G. Performance Measures
 - H. Monterey Bay Area Complete Streets Guidebook
 - I. SCS Maps
 - J. MTP Checklist
 - K. Comments and Responses on the Draft 2040 MTP/SCS

Of these seven chapters, the Vision Element, Transportation Investments, Financial Plan and Sustainable Communities Strategy (Chapters 1, 2, 3 and 4) are the four components 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.

2.3.1 Chapter 1 – Vision

The 2040 MTP/SCS serves as a blueprint for addressing the mobility and sustainability challenges faced in the region. The vision of the 2040 MTP/SCS is to improve the quality of life for residents by implementing suitable or appropriate land use and transportation choices for the future.

The 2040 MTP/SCS is built on a set of integrated policies, strategies and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2040. AMBAG began developing the 2040 MTP/SCS by adopting the following goals and policy objectives:

- **Access and Mobility.** Provide convenient, accessible and reliable travel options while maximizing productivity for all people and goods in the region.
- **Economic Vitality.** Raise the region’s standard of living by enhancing the performance of the transportation system.
- **Environment.** Promote environmental sustainability and protect the natural environment.
- **Healthy Communities.** Protect the health of residents; foster efficient development patterns that optimize travel, housing and employment choices and encourage active transportation.
- **Social Equity.** Provide an equitable level of transportation services to all segments of the population.
- **System Preservation and Safety.** Preserve and ensure a sustainable and safe regional transportation system.

It is AMBAG’s intent that the goals and policy objectives be supported by the individual RTPs prepared by Monterey, San Benito and Santa Cruz Counties. The goals, policies and objectives that create the framework for each RTP that comprise the MTP are summarized below:

2.3.1.1 2040 Monterey County RTP

The 2040 MC-RTP Policy Element is intended to address transportation issues affecting Monterey County. For each issue, a goal to address that issue is adopted, and then policies/objectives are adopted to accomplish that goal. Goals for the 2040 MC-RTP include:

- **Goal 1: Access and Mobility.** Improve ability of Monterey County residents to meet most daily needs without having to drive. Improve the convenience and quality of trips, especially for walk, bike, transit, car/vanpool and freight.
- **Goal 2: Safety and Health.** Design, operate and manage the transportation system to reduce serious injuries and fatalities, promote active living and lessen exposure to pollution.
- **Goal 3: Environmental Stewardship.** Protect and enhance the County's built and natural environment. Act to reduce the transportation system’s emission of Greenhouse Gasses.
- **Goal 4: Social Equity.** Reduce disparities in health, safe access to key destinations for transportation-disadvantaged populations. Demonstrate that planned investments do not adversely impact transportation-disadvantaged populations.
- **Goal 5: Economic Benefit.** Invest in transportation improvements – including operational improvements – that re-invest in the Monterey County economy, improve economic access and improve travel time reliability and speed consistency for high-value trips. Optimize cost-effectiveness of transportation investments.

2.3.1.2 2040 San Benito County RTP

The 2040 SBC-RTP Policy Element is intended to address transportation issues affecting San Benito County. For each issue, a goal to address that issue is adopted, and then policies/objectives are adopted to accomplish that goal. Goals for the 2040 SBC-RTP include:

- **Goal 1: Access and Mobility.** Provide convenient, accessible and reliable travel options while maximizing productivity for all people and goods in the region.
- **Goal 2: Economic Vitality.** Raise the region’s standard of living by enhancing the performance of the transportation system.

- **Goal 3: Environment.** Promote environmental sustainability and protect the natural environment.
- **Goal 4: Healthy Communities.** Protect the health of our residents; foster efficient development patterns that optimize travel, housing and employment choices and encourage active transportation.
- **Goal 5: Social Equity.** Provide an equitable level of transportation services to all segments of the population.
- **Goal 6: System Preservation & Safety.** Preserve and ensure a sustainable and safe regional transportation system.

2.3.1.3 2040 Santa Cruz County RTP

The 2040 SCC-RTP Policy Element is intended to address transportation issues affecting Santa Cruz County. For each issue, a goal to address that issue is adopted, and then policies and objectives are adopted to accomplish that goal. Goals for the 2040 SCC-RTP include:

- **Goal 1:** Improve people's access to jobs, schools, health care and other regular needs in ways that improve health, reduce pollution and retain money in the local economy. There is a strong relationship between achieving access, health, economic benefit, climate and energy goals and meeting targets. In many cases, actions to achieve one goal or target will assist in achieving other goals and targets. For example, providing more carpool, transit and bicycle trips reduces fuel consumption, retains money in the local Santa Cruz County economy and reduces congestion.
- **Goal 2:** Reduce transportation related fatalities and injuries for all transportation modes. Safety is a fundamental outcome from transportation system investments and operations. Across the United States, pedestrians and bicyclists (vulnerable users) are killed and injured at a significantly higher rate than the percentage of trips they take.
- **Goal 3:** Deliver access and safety improvements cost effectively, within available revenues, equitably and responsive to the needs of all users of the transportation system and beneficially for the natural environment. The manner in which access and safety outcomes referenced in Goal 1 and Goal 2 are delivered can impact cost-effectiveness, distribution of benefits amongst population groups and ecological function.

This framework of goals and policy objectives was used to guide the development of the 2040 MTP/SCS and specifically the performance measures developed by AMBAG to evaluate how well the 2040 MTP/SCS and alternatives perform. For reference, the performance objectives are provided in the 2040 MTP/SCS and addressed in more detail Section 7.0, *Alternatives*.

2.3.2 Chapter 2 – Transportation Investments

Chapter 2 sets forth the investments and strategies within the 2040 MTP/SCS. The investments discussed in the chapter are intended to optimize the performance and to strategically expand the existing transportation system as shown on Figure 2, Figure 5 and Figure 7. The investments address transportation system preservation, roadway, rail, bus, airport, bicycle and pedestrian facilities and demand and systems management. The Monterey Bay area has invested and placed a high priority on protecting the region's existing multimodal transportation system to ensure that the system is operating efficiently, safely and effectively as possible. Transportation investment strategies have not changed in this 2040 MTP/SCS update. As described previously, project cost estimates and

revenue assumptions have been updated, along with some minor changes to the transportation project lists. However, the vision, policies and goals/performance metrics have not changed from 2035.

One of the primary goals of the 2040 MTP/SCS is to reduce per capita greenhouse gas emissions over the next 25 years. A strategic transportation system expansion would provide the region with mobility and accessibility by targeting expansion around bus transit, rail, key roadways and active transportation. The 2040 MTP/SCS provides over \$5.76 billion for highway, local streets and roads investments which include corridor improvements, roadway widenings and extensions, new roads and maintenance/repair. Another focus of the 2040 MTP/SCS is providing \$3 billion for a long term public transit network that meets the regions mobility needs. The remaining transit funding is separated between maintenance and operation costs, as well as adding new transit vehicles and infrastructure. The 2040 MTP/SCS is focused on active transportation projects, which refers to bicycle and pedestrian facilities. Since one of the primary goals of the 2040 MTP/SCS is to reduce greenhouse gas emissions, active transportation plays a large role in reducing congestion, increasing health and overall quality of life. The 2040 MTP/SCS intends to make active transportation more attractive and feasible for all different users in the region, and the 2040 MTP/SCS has provided nearly \$6403 million for active transportation projects. These investments and improvements include addition of bike lanes, roadway widenings and extensions, sidewalks and trails. These efforts are in direct accordance with the Complete Streets Act of 2008 (AB 1358). The 2040 MTP/SCS also considers airport improvements which would improve regional and state system capacity and safety.

The transportation network is crucial for the Central Coast as the network provides the access and means of travel for the agricultural products grown in the region. The health of all the major roads, highways and railways are vital to the success and safety of the region. Lastly, the 2040 MTP/SCS address transportation demand management (TDM) and traffic systems management (TSM) which intend to improve the efficiency and effectiveness of the network. The strategies employed by these management programs would reduce vehicular demand and congestion, which is directly in line with the goal of reducing greenhouse gas emissions. The 2040 MTP/SCS allocates nearly \$42 million to TDM strategies which include vanpool and telecommuting. The 2040 MTP/SCS allocates more than \$26 million to TSM projects and programs which include, but are not limited to, autonomous vehicles, shared vehicles, incident management, ramp metering and traffic signal synchronization.

The 2040 MTP/SCS transportation projects are further described in Section 2.4, below. A complete discussion of 2040 MTP/SCS transportation investments and plans is provided in Chapter 2 of the 2040 MTP/SCS.

The 2040 MTP/SCS includes Financially Constrained projects which identify the programs and projects proposed by RTPAs, local and county government, public transit operators and airport operators in the tri-County region for which funding will likely be available. These include a full range of programs and projects intended to improve roadway capacity/vehicular flow, enhance transit operations, improve safety, support transportation planning and travel demand management, promote high occupancy vehicle use, encourage active transportation travel and improve multimodal and intermodal facilities. Specifically, the 2040 MTP/SCS includes the following types of transportation system improvement projects:

- **Active Transportation Projects.** The 2040 MTP/SCS includes projects that would complete Class I bike trails, ~~and~~ Class II bike lanes and Class III bike routes, as well as sidewalk gap closures, trail access improvements, pedestrian bridges, bicycle and pedestrian treatments such as signal

priority and amenities and related improvements to facilitate the use of transportation infrastructure by pedestrians and bicyclists such as traffic calming measures.

- **Highway and Local Roadway Projects.** Continued operation and maintenance of the region’s highway, arterial and local street system is a focus of the 2040 MTP/SCS. Caltrans and each county and local jurisdiction within the Plan area have proposed projects for the roadway system that address current and future needs based on existing traffic conditions and projected traffic increases. These include a range of road widening and extension projects, operational improvements such as auxiliary lanes, interchange/intersection improvements, safety improvements and freeway overcrossings. In addition, projects that improve or rehabilitate existing roadway infrastructure are included in the 2040 MTP/SCS. These projects include resurfacing, restriping, signal modifications and related improvements.
- **Transportation Demand Management.** The 2040 MTP/SCS includes Transportation Demand Management (TDM) projects and programs to reduce travel demand particularly during the peak period and more efficiently use the existing transportation system.
- **Transit Projects.** These projects include improvements designed to enhance express bus service as well as the expansion of passenger and freight throughout the tri-county area. Improvements include the construction of dedicated transit lanes, intermodal stations, new rail track and related infrastructure. Funding is also programmed to support transit operations, maintenance and investments in paratransit services.
- **Other Projects.** The 2040 MTP/SCS includes projects intended to improve overall operations at existing public use airports in the tri-county area, improve wildlife corridor crossings and administration and planning.

The 2040 MTP/SCS does not provide project designs or a construction schedule. Adoption of the 2040 MTP/SCS would not represent an approval action for any of the individual transportation programs and projects listed in the financially constrained Plan. Detailed site-specific alignment, location, design and scheduling of the improvement projects which are included in the 2040 MTP/SCS are not fixed by the 2040 MTP/SCS, and these individual projects may be modified substantially from their initial description in the 2040 MTP/SCS at the time they are considered for implementation.

2.3.3 Chapter 3 – Financial Plan

The Financial Plan identifies how much money is available to support the region’s surface transportation investments, including transit, highways, local road improvements, system preservation and demand management goals. It also addresses the need for investment in goods movement infrastructure. The projects included in the 2040 MTP/SCS are “financially constrained,” which means there is a plan in place to secure the funding. In most cases, future programming action will be required.

The financial forecasts in the 2040 MTP/SCS are based on reasonably foreseeable revenues. The projections are calculated using a combination of historical averages, current trends and/or state and federal actions. Actual revenues will vary from year to year. The financial projections and estimation methods used in the 2040 MTP/SCS were developed collectively with transportation planning agencies in the Monterey Bay Area including AMBAG, TAMC, SCCRTC, SBtCOG, Caltrans, Monterey-Salinas Transit (MST), the Santa Cruz County Metro Transit District, the three counties and 18 cities.

The Financial Plan identifies major federal, state and regional/local funding sources anticipated to be available during the life of the 2040 MTP/SCS. The majority of federal revenue is projected to come from the Urbanized Area Formulation Program, federal transit capital programs and miscellaneous federal highway revenue sources. State revenue sources include the State Highways Operation and Protection Program (SHOPP), State Transportation Improvement Program (STIP) and the Transportation Alternatives Program (TAP). Local revenue sources include the Transportation Development Act (TDA)/Local Transportation Fund (LTF), gas tax, transit fares and developer fees. In November 2016, TAMC and SCCRTC passed local sales tax measures, Measure X and Measure D respectively, to fund transportation projects of all modes in their respected counties. This significant local investment in transportation will account for a stable funding source for local road maintenance, transit operations, active transportation investments and other congestion reducing projects. Together, these measures are expected to generate roughly \$860 million over 22 years.

Total revenue is projected to be \$9.97 billion. A complete discussion of the 2040 MTP/SCS financial plan is provided in Chapter 3 of the 2040 MTP/SCS.

2.3.4 Chapter 4 – Sustainable Communities Strategy

The SCS ultimately consists of the preferred land use and transportation scenario selected by AMBAG as best capable of meeting MTP goals. The 2040 MTP/SCS simultaneously addresses the region's transportation needs and encourages infill development near transit investments to reduce vehicle miles traveled (VMT), the number of miles vehicles operate in congested conditions (CVMT) and overall GHG emissions. This strategy selectively increases residential and commercial land use capacity within transit corridors in existing urban areas, shifting a greater share of future growth to these corridors.

The SCS, as outlined in Chapter 4 of the 2040 MTP/SCS, includes SCS toolkits, opportunity areas, programs and strategies, protection of natural resources, and implementation strategies, as described below:

- **SCS Toolkits.** The SCS toolkits consist of examples of projects and best practices to help achieve regional and local sustainability goals and emission reduction targets through efforts to provide housing, jobs and services in proximity to one another and to better link them by transit and safe and convenient bicycle and pedestrian access. The tools are grouped in separate Infill Housing, Economic Development and Transportation sections of the toolkit.
- **Opportunity Areas.** SB 375 includes provisions for CEQA streamlining for developments that meet a specific set of criteria specified in California Public Resources Code Section 21155. At a minimum, this criteria includes proximity to high quality transit. Areas that qualify for streamlining are called “opportunity areas.”
- **Programs and Strategies.** This section describes programs and strategies that are generally less costly than infrastructure improvements to the transportation network, but that can improve traffic flow as well as the effectiveness of the transportation system as a whole. These programs and strategies include TSM measures, such as ramp metering, and TDM measures, such as promoting telecommuting and expanding vanpool services.
- **Protection of Natural Resources.** The SCS incorporates adopted habitat plans as well as the conservation of other sensitive resource lands such as steep slopes, wetlands, and floodplains as reflected in plans by local jurisdictions. These local and regional plans ensure the conservation of plant and animal species, and natural habitats through low density zoning, conservation easements, and land purchases.

- **Implementation Strategies.** This section provides a list of strategies that AMBAG, RTPAs, local jurisdictions and other stakeholders may consider in order to successfully implement the SCS.

The transportation projects, programs and strategies contained in the MTP are major components of the SCS. However, the SCS also focuses on the general land use growth pattern for the region, because the geographic relationships between land uses—including density and intensity— help determine travel demand. Thus, to meet requirements of SB 375, the SCS:

- Identifies existing and future land use patterns;
- Establishes a future land use pattern to meet GHG emission reduction targets;
- Identifies transportation needs and the planned transportation network;
- Considers statutory housing goals and objectives;
- Identifies areas to accommodate long-term housing needs;
- Identifies areas to accommodate eight-year housing needs;
- Considers resource areas and farmland;
- Presents implementation strategies; and
- Complies with federal law for developing an MTP.

Overall, the land use scenario in the SCS provides a diverse mixture of land uses, such as commercial and retail uses, in combination with residential uses that have been shown to reduce vehicle miles traveled and thereby reduce greenhouse gas emissions. Combining mixed use development with infill development, rather than building on the fringes of urbanized areas, reduces greenhouse gas emissions by reducing the distance that people have to travel to get their basic needs met. The SCS land use scenario assumes increased density via infill development and mixed use in existing commercial corridors in combination with high quality transit service that includes bus service that has headways of 15 minutes or less during the peak period or rail service. By combining increased density and accessibility to transit there is a higher likelihood that people will chose to use transit rather than drive to maximize VMT reduction. Figure 2 through Figure 8 show the SCS land use scenarios and location of the RTP projects.

In developing the SCS scenario alternatives, AMBAG created a set of place types which established a set of land use designations common to general plans for the three counties and 18 cities in the region. The following metrics and characteristics were established as the primary determinants of place type designations:

- **Density.** The general density of a particular land use, expressed as Floor to Area Ratio (FAR) and/or as dwelling units per acre
- **Setting.** The surrounding land use and development context
- **Character.** The urban and built form, including building placement, street pattern and pedestrian or auto-orientation
- **Transportation.** The level of transit access, quality of the pedestrian environment and presence of bicycle infrastructure

The SCS preferred scenario is consistent with the region’s RHNA which was last updated as part of the 2035 MTP/SCS. All three counties in the AMBAG region have enough housing capacity to accommodate the current RHNA allocations. The allocations do not exceed forecasted growth and

can be accommodated through infill and redevelopment. Housing in the AMBAG region is further discussed in Section 4.13, *Population and Housing*.

Within the Monterey Bay region, the State's Farmland Mapping and Monitoring Program has identified a total of 292,088.4 acres of Important Farmland, including 236,282 acres in Monterey County, 36,159.9 acres in San Benito County and 19,646.5 acres in Santa Cruz County. Protection of agricultural resources is further described in Section 4.2, *Agriculture and Forestry Resources*.

The SCS does not create a mandate for land use policies at the local level. In fact, SB 375 specifically states that the SCS cannot dictate local land use policies (see Government Code Section 65080(b)(2)(K)). Rather, the SCS is intended to provide a regional policy foundation that local governments may build upon as they choose and generally includes quantitative growth projections.

2.4 2040 MTP/SCS Transportation Projects

The types of transportation projects comprising the MTP are summarized below. All projects by type and jurisdiction are shown in Appendix B.

- **Active Transportation.** These projects are focused on improvements designed to benefit pedestrians and bicyclists. They include the construction of Class I-III bicycle lanes, sidewalk gap closures, ADA accessible ramps and sidewalks, pedestrian bridges, widening shoulders, maintenance, rehabilitation and repair projects, installation of traffic calming devices, roundabouts, new lighting and trail access. Within Monterey County, specific projects include the Fort Ord Regional Trail and Greenway (FORTAG), which would include approximately 30 miles of bike and pedestrian trails through the former Fort Ord; citywide intersection ADA upgrades in the City of Monterey; and sidewalk repairs at 6,000 locations. Within San Benito County, specific projects include construction of a portion of the San Benito River Recreational Trail and installation of bike lanes along Santa Ana Road, Buena Vista Road, North Street, Central Avenue, Airline Highway, Meridian Street and Sunnyslope Road. In Santa Cruz County, specific projects include several segments of the Monterey Bay Sanctuary Scenic Trail Network and installation of bicycle/pedestrian bridges over Branciforte Creek and Highway 1 at Mar Vista Drive. The Monterey Bay Sanctuary Scenic Trail (MBSST) is planned to be a multiuse transportation, recreation and interpretive pathway that links existing and newly established trail segments into a continuous coastal trail around the Monterey Bay. The MBSST Final Master Plan and Environmental Impact Report was adopted by SCCRTC in November 2013.
- **Highway Improvements.** These projects are generally focused on U.S. 101 and the state highway system throughout each of the three counties. They include the development of new infrastructure such as new interchanges, new and widened roadway lanes, ramp improvements, new overcrossings, roundabouts and other modifications designed to improve safety, traffic flow or and capacity. Specific projects in Monterey County include the State Routes (SR) 156 Corridor Widening Project, construction of a new interchange on U.S. 101 at Harris Road and construction of frontage roads along U.S. 101 in South County. In San Benito County, specific projects include a new interchange at U.S. 101 and SR 25 in Santa Clara County; the SR 25 Corridor Improvement Project; and construction of a four-lane expressway south of existing SR 156. Specific projects in Santa Cruz County include the construction of auxiliary lanes on Highway 1 from State Park Drive to Park Avenue, from Park Avenue to Bay Avenue/Porter Street, from 41st Avenue to Soquel Avenue and from San Andreas Road/Larkin Valley Road to Freedom Boulevard.

- **Highway Operations, Maintenance and Rehabilitation.** These projects focus on improvements to more efficiently use existing highway system infrastructure. These include resurfacing, restriping, signal modifications and other improvements designed to more efficiently use existing facilities. Representative actions include funding the State Highway Operations and Protection Program (SHOPP) and safety in all three counties; congestion relief improvements to SR 68 from Blanco Road to SR 1 in Monterey County; Highway 156/Fairview Road Intersection Improvements in San Benito County; and replacement of the Highway 1 bridge over San Lorenzo River in Santa Cruz County.
- **Local Street and Road Improvements.** These projects are generally focused on county and local streets and roadways. They include the development of new infrastructure such as street widening, realignments, extensions and related improvements designed to improve safety and capacity. Representative improvements include road widening projects along the Marina-Salinas Corridor, including Davis Road, Reservation Road and Imjin Parkway, in Monterey County; and widening Fairview Road from McCloskey Road to SR 25 in San Benito County.
- **Local Street and Road Operations, Maintenance and Rehabilitation.** These projects focus on improvements to existing county and local streets and roadway infrastructure. These include resurfacing, restriping, signal modifications, streetscapes and other improvements designed to maintain and more efficiently and effectively use existing facilities. Specific projects in Monterey County include the Jolon Road overlay safety improvements and operational and capacity improvements to San Miguel Canyon Road. Specific projects in San Benito County include system preservation and maintenance within unincorporated San Benito County and the City of Hollister and installation of a new bridge at Union Road over the San Benito River. Projects in Santa Cruz County include ongoing maintenance, repair and operation of the street system within unincorporated Santa Cruz County and the cities of Santa Cruz, Watsonville, Capitola and Scotts Valley
- **Rail Projects.** The only regular rail passenger train currently operating in the region is provided by Amtrak, the Coast Starlight. It connects Los Angeles to Seattle and stops in Salinas, the only Amtrak rail station in the region. This route operates one train in each direction daily. In the future, Amtrak plans to expand service by offering the Coast Starlight service with stations in Soledad and King City. There is also bus service in the region for connections to the Capital Corridor route between San Jose and Sacramento. TAMC is working to extend the Capital Corridor commuter rail service to Salinas. In addition, SCCRTC is evaluating rail service and other uses on the Santa Cruz Branch Line as part of the Unified Corridor Investment Study.
- **Other Projects.** These projects are primarily focused on the construction of various improvements at public airports within the study area. These include the construction of a new terminal building, roads and surface parking at the Monterey Airport and taxiway lighting and signage improvements at the Marina Airport in Monterey County; operations and maintenance at the Hollister Airport in San Benito County; and new hangars and other improvements at the Watsonville Airport in Santa Cruz County. Other projects in San Benito County include COG planning and administration. Other projects in Santa Cruz County include UC Santa Cruz parking operations and maintenance, RTC administration and planning and Measure D administration and implementation.
- **Transportation Demand Management.** Within Monterey County, these projects are focused on installation of Wireless Access in Vehicular Environments (WAVE) technology, ITS signal improvements and development/ implementation of the ~~Monterey Bay Area~~ Monterey Bay Area Cruz 511 Traveler Information, which includes both Monterey and Santa Cruz Counties and the Monterey and Rideshare/Commute Alternatives. Funds would cover the existing vanpool program within

Monterey County and the commute solutions rideshare program in Santa Cruz County. TDM projects include a rideshare/commute alternatives program in Monterey County; rideshare and vanpool programs in San Benito County; and various vanpool, bicycling and commuter incentive programs designed to reduce VMT in Santa Cruz County.

- **Transit ADA.** These funds would cover paratransit services and related requirements in Monterey and Santa Cruz Counties. No transit ADA projects are proposed for San Benito County.
- **Transit Improvements.** These projects include improvements such as the purchase of rolling stock, bus rehabilitation, purchase of communication equipment, bus shelters and ancillary equipment used to rehabilitate/upgrade existing transit stops/stations. Specific improvements would include a rail extension and bus rapid transit projects in Monterey County and commuter rail and express bus service to connect San Benito County with Santa Clara County.
- **Transit Operations.** Funds would cover transit operations and preventative maintenance projects. Within Monterey, San Benito and Santa Cruz County, the majority of funds would cover transit operations. Within Monterey County, funds would cover bus operations; within San Benito County funds would cover general transit operations and transit planning and technology improvements; within Santa Cruz County, funds would cover operations and maintenance for exiting bus services and ongoing capital acquisition of transit vehicles for the University of California, Santa Cruz campus.
- **Transit Rehabilitation.** Within Monterey County, these projects include bus electrification and replacement, bus station rehabilitation and preventative maintenance. In San Benito County, these projects include transit vehicle replacement and bus stop improvements. In Santa Cruz County, these projects include bus replacement and maintenance, transit system technology improvements and bus stop improvements.
- **Transportation System Management.** These projects include advanced traveler information kiosks and new signal boxes and detectors in Monterey County; emergency call boxes and wayfinding signs in San Benito County; and tow truck patrols on Highways 1 and 17, call box system maintenance and transit priority queues in Santa Cruz County.

Transportation projects and land use projects that are included in the 2040 MTP/SCS are shown in Figure 2 through Figure 8. Chapter 4 of the 2040 MTP/SCS describes the proposed Sustainable Communities, with Chapter 5 identifying the metrics to quantify the transportation, environmental, economic and equity benefits of the Plan. Appendix G of the 2040 MTP/SCS highlights the performance of the MTP/SCS for 2040. The performance of the Revenue Constrained network is compared in Appendix G to other network scenarios, such as 2015 Existing and 2040 No Build.

Figure 2 MTP Projects Monterey County



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 Additional data provided by AMBAG 2018.

Fig 3 MTP Projects Monterey

Figure 3 SCS Land Use Monterey County: North

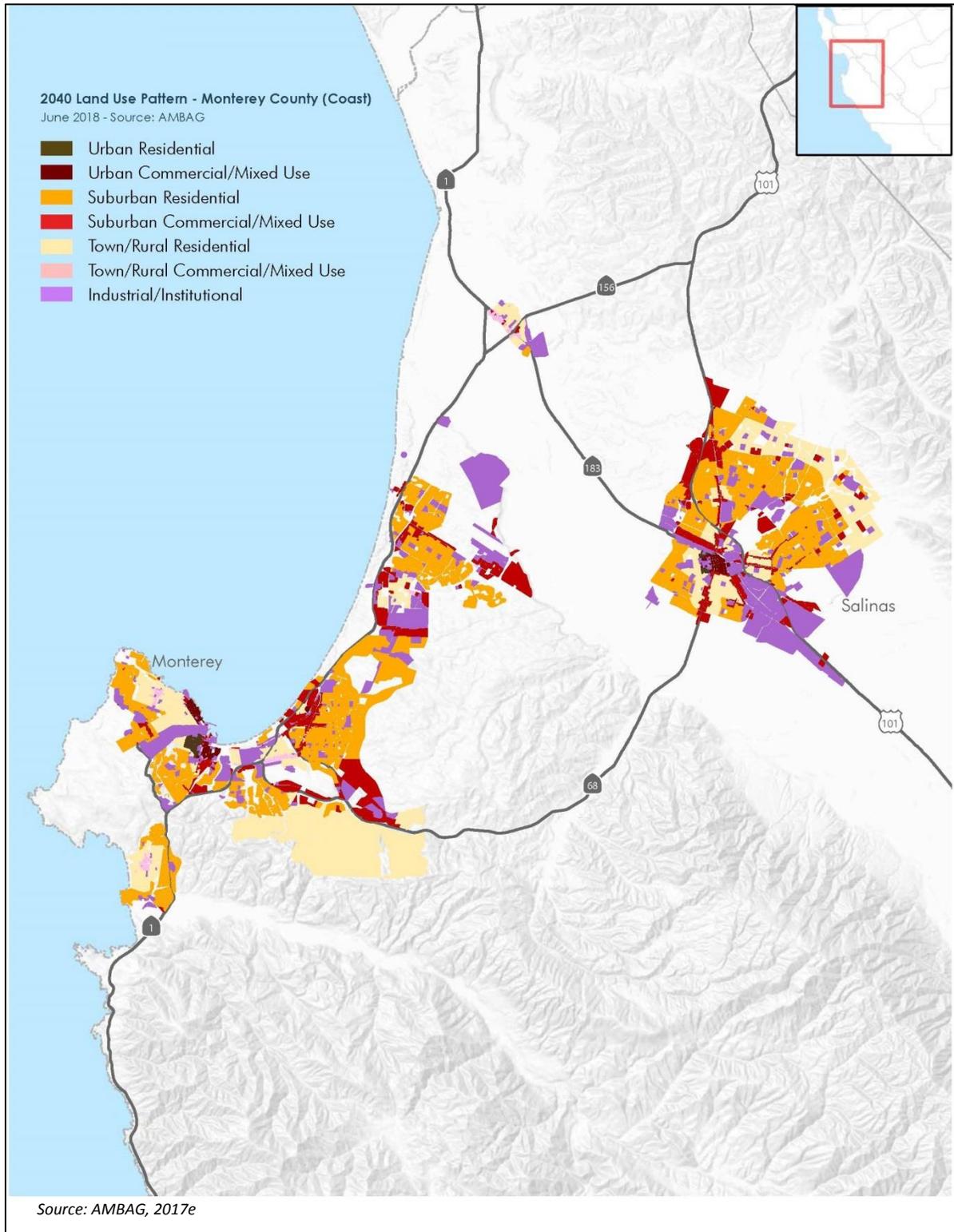


Figure 4 SCS Land Use Monterey County: South

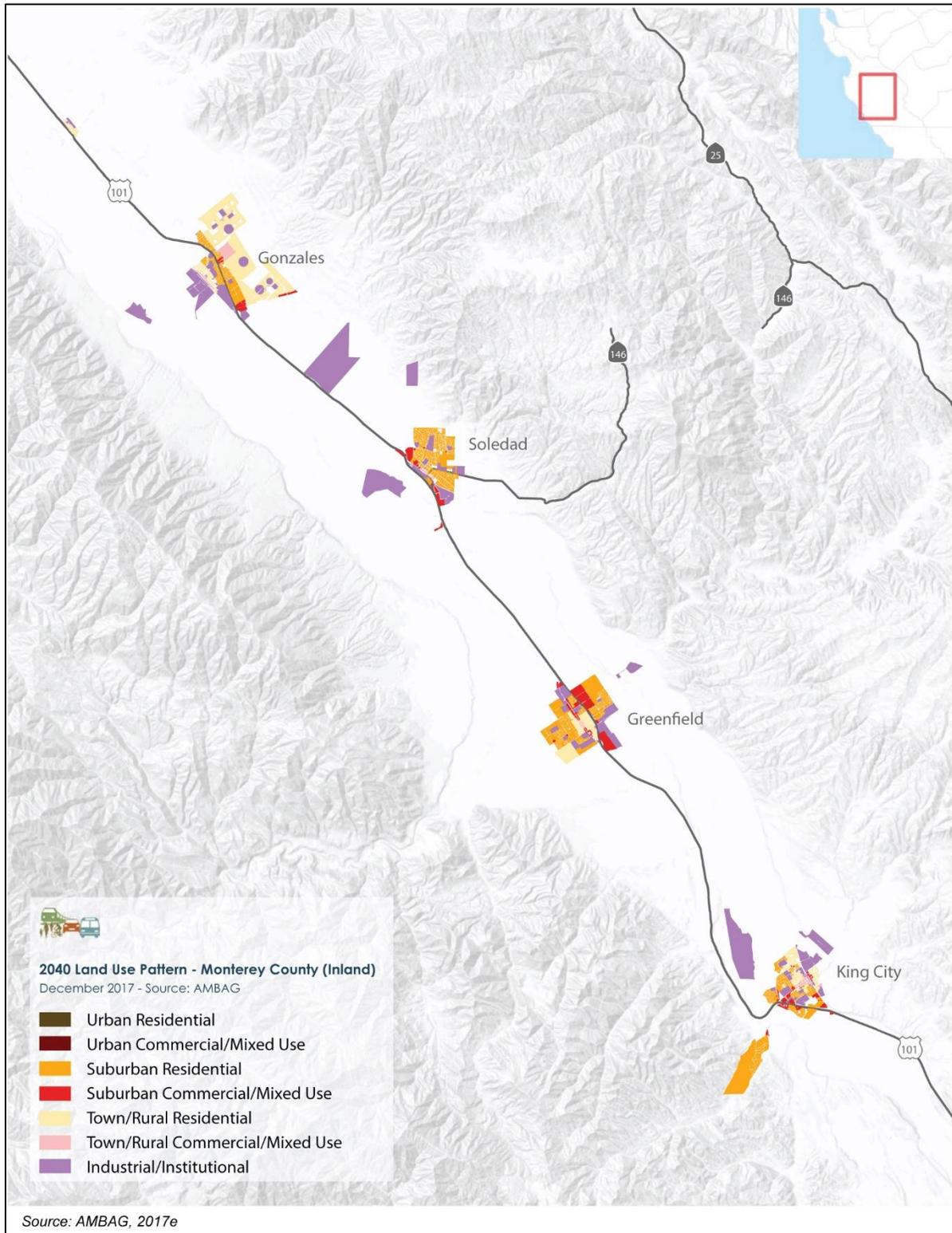
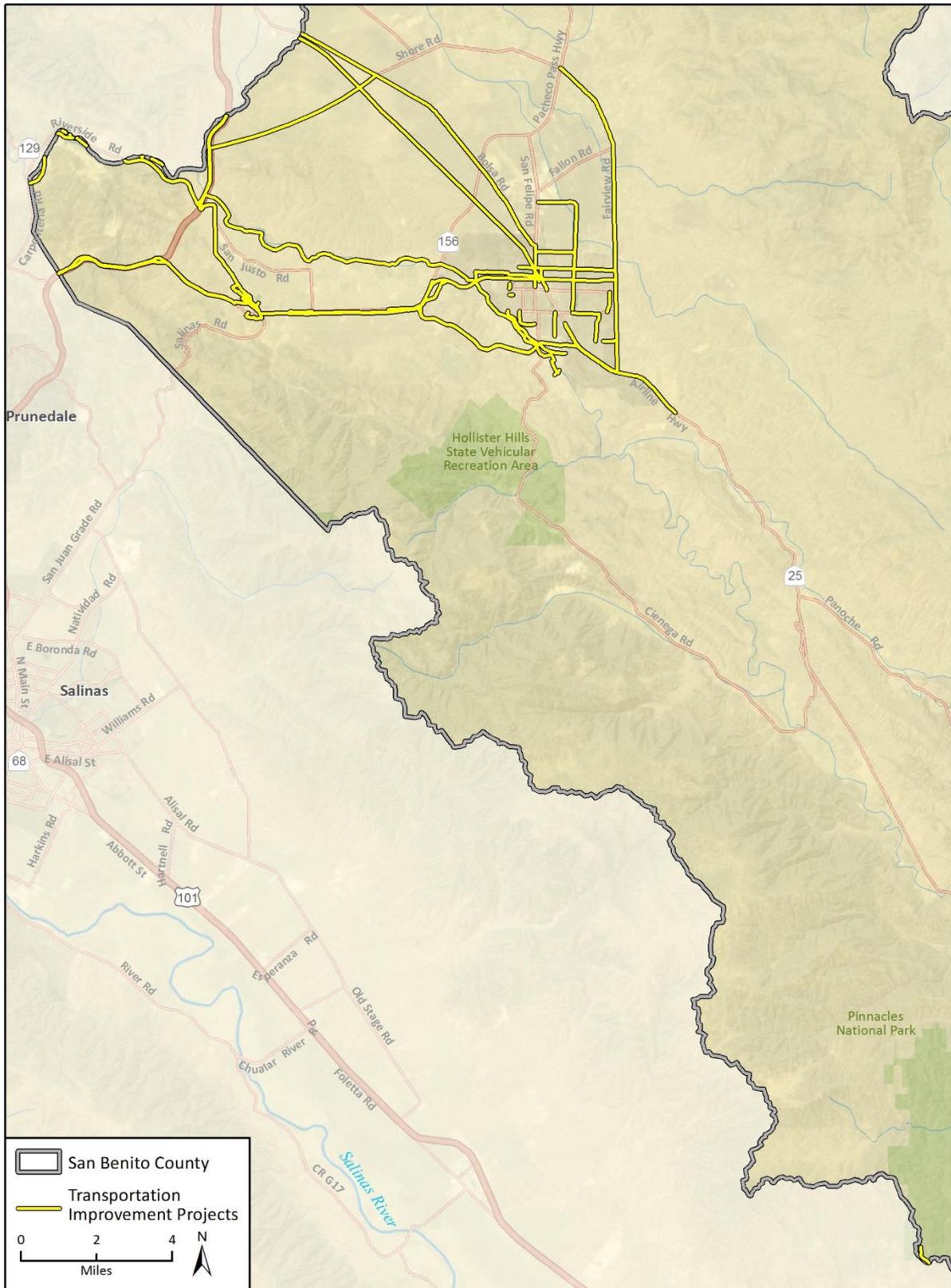


Figure 5 MTP Projects San Benito County



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Additional data provided by AMBAG 2018.

Fig 5 MTP Projects San Benito

Figure 6 SCS Land Use San Benito County

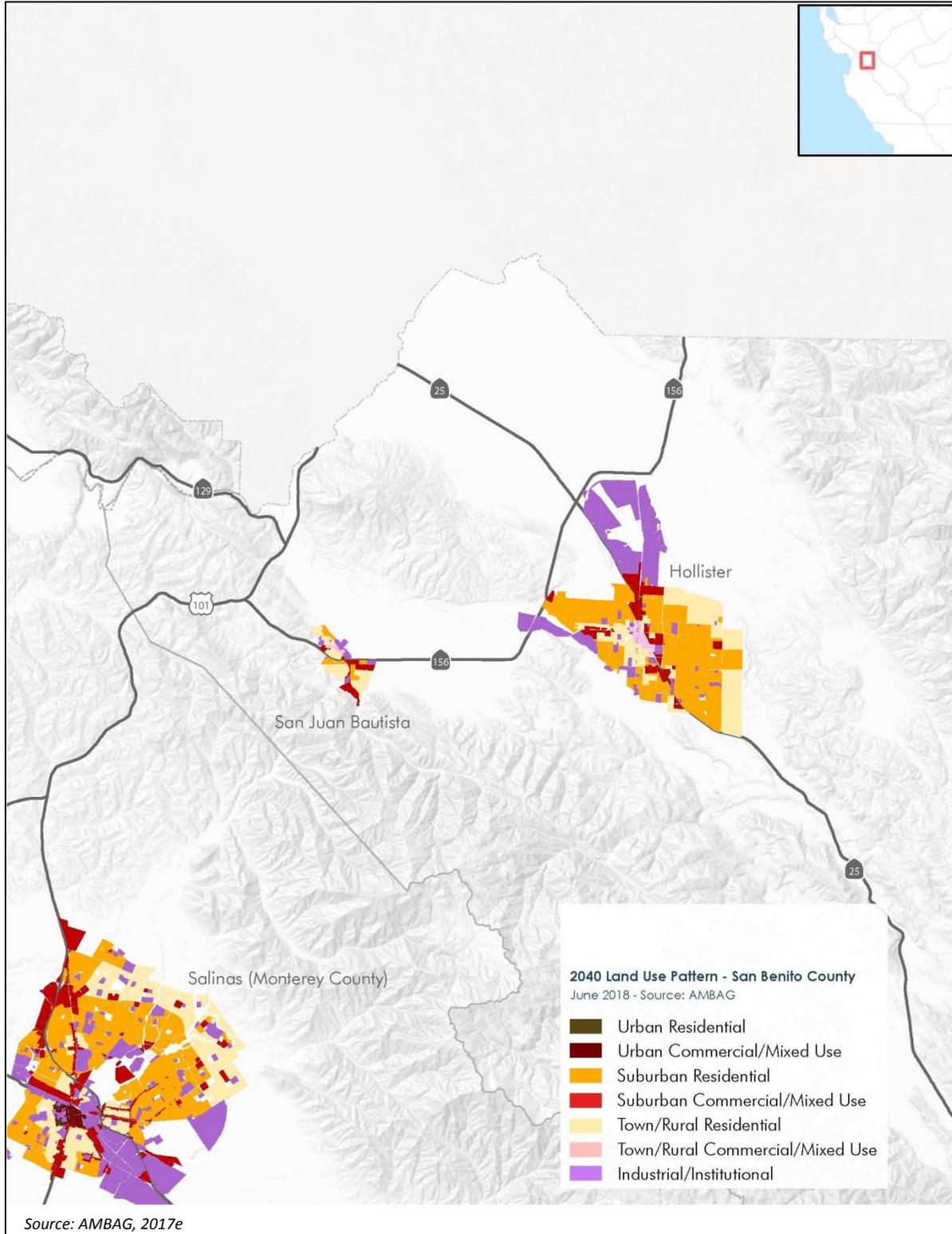
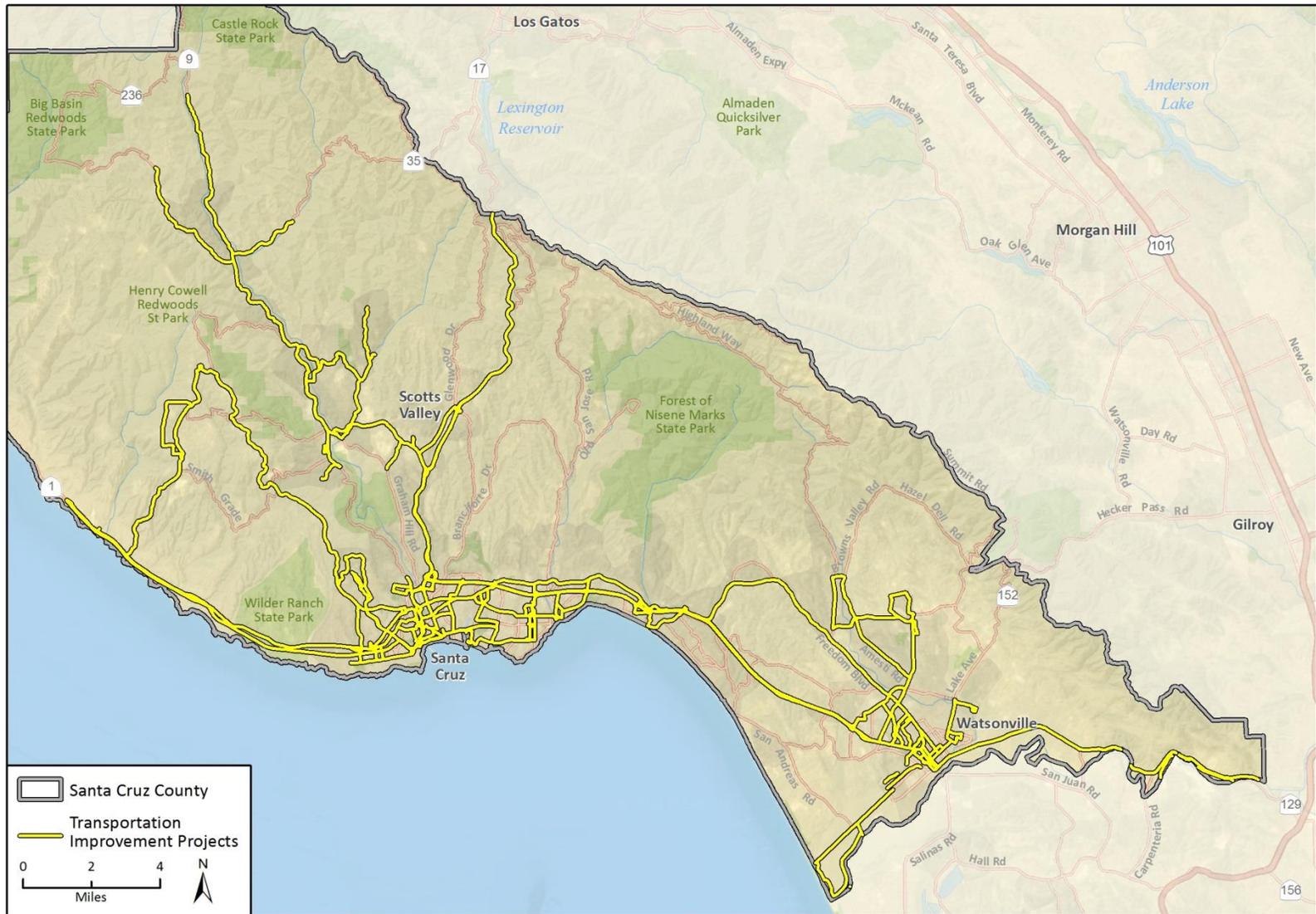


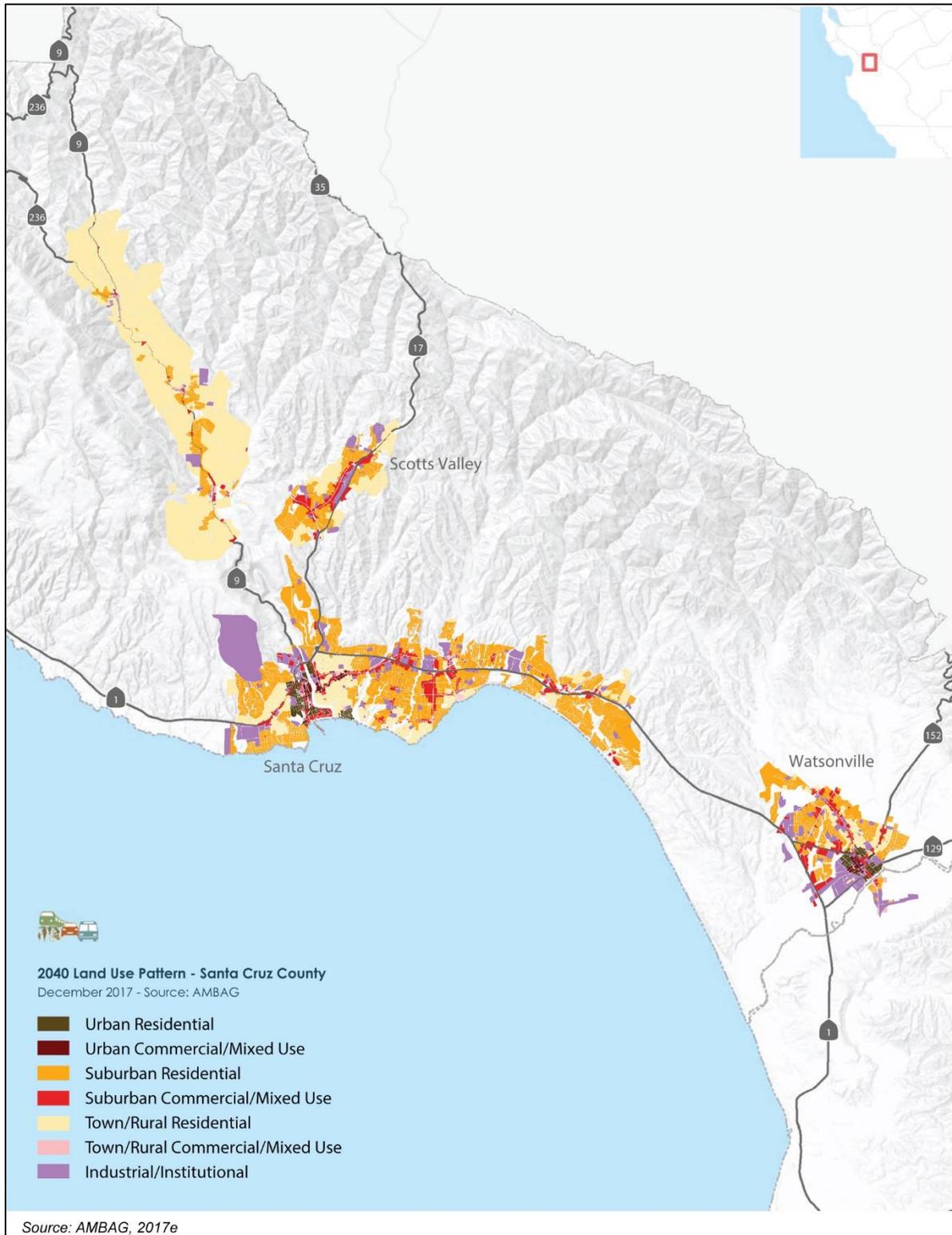
Figure 7 MTP Projects Santa Cruz County



Imagery provided by ESRI and its licensors © 2018.
 Additional data provided by AMBAG 2018.

Fig 8 MTP Projects Santa Cruz

Figure 8 SCS Land Use Santa Cruz County



2.5 Intended Use of EIR

2.5.1 Agencies Expected to Use EIR in Decision-making

The CEQA Guidelines (Section 15124(d)) require EIRs to identify the agencies that are expected to use the EIR in their decision-making and the approvals for which the EIR will be used to the extent known at the time the EIR is released. This EIR will inform AMBAG, in addition to other responsible agencies, persons and the general public, of the environmental effects of the proposed Plan and the identified alternatives. AMBAG will use the EIR for the purposes of review and approval of the 2040 MTP/SCS and the RTPAs will use the EIR for the purposes of review and approval of the county level 2040 RTPs.

The lead agencies for projects analyzed in this program EIR may use it as the basis first-tier analyses of topics such as regional growth, regional transportation and land use alternatives and cumulative impacts. RTPAs may incorporate information provided in this EIR into future transportation plans such as congestion management programs, countywide transportation plans, or county bicycle and pedestrian plans. Other agencies expected to use the EIR include: Caltrans, RTPAs, transit providers in the region (such as Monterey-Salinas Transit, Santa Cruz Metropolitan Transit District and San Benito County Express), the Monterey Bay Air Resources District, cities and counties.

Mitigation measures described in this EIR may be incorporated into project-level environmental impact analyses by implementing agencies as appropriate to mitigate identified project-level impacts. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

This EIR is also intended to facilitate the CEQA streamlining benefits of SB 375 for local jurisdictions, described in Section 1.3.1, *CEQA Streamlining Opportunities*.

2.5.2 Project Permits and Approvals

To complete the 2040 MTP/SCS process, AMBAG will first certify the EIR and then adopt the 2040 MTP/SCS. Subsequently, TAMC, SCCRTC and SBtCOG will adopt their RTPs. Additional environmental review will be conducted by implementing agencies, as the lead agency for the individual projects contained within the 2040 MTP/SCS, prior to project implementation.

Depending on the location of the project, future approvals for individual transportation projects identified in the 2040 MTP/SCS would have to be completed by one or more of the following agencies:

- California Department of Transportation
- Caltrans
- Monterey Bay Air Resources District
- California Coastal Commission
- Transportation Agency for Monterey County
- Council of San Benito County Governments
- Santa Cruz Regional Transportation Commission
- Monterey-Salinas Transit
- Santa Cruz Metropolitan Transit District
- San Benito County Express
- Cities and counties in the AMBAG region

2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

The following public agencies would need to review the assumptions inherent in the 2040 MC-RTP before it could be implemented:

- AMBAG
- Caltrans
- California Transportation Commission
- California Coastal Commission
- Cities of: Carmel, Del Rey Oaks, Gonzales, Greenfield, King City, Marina, Monterey, Pacific Grove, Salinas, Sand City, Seaside and Soledad
- County of Monterey
- Monterey Bay Air Resources District
- Monterey-Salinas Transit

The following public agencies would need to review the assumptions inherent in the 2040 SCC-RTP before it could be implemented:

- AMBAG
- Caltrans
- California Transportation Commission
- California Coastal Commission
- Cities of: Capitola, Santa Cruz, Scotts Valley and Watsonville
- County of Santa Cruz
- Monterey Bay Air Resources District
- Santa Cruz Metropolitan Transit District

The following public agencies would need to review the assumptions inherent in the 2040 SBC-RTP before it could be implemented:

- AMBAG
- Caltrans
- California Transportation Commission
- San Benito County Local Transportation Authority
- Cities of: Hollister, San Juan Bautista
- County of San Benito
- Monterey Bay Air Resources District

As future transportation system improvement projects identified in the 2040 MTP/SCS are planned and designed, site-specific environmental review will be conducted by the agencies responsible for implementing such projects.

Caltrans is a Responsible Agency for all projects planned within its rights-of-way. Any public agencies or private developers contemplating work within a Caltrans right-of-way are required to obtain an approved encroachment permit from Caltrans prior to beginning that work.

2.6 Relationship with Other Plans and Programs

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

- Describe the transportation issues and needs facing the AMBAG region and each county;
- Identify goals and policies for how AMBAG and the RTPAs 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.

The 2040 MTP/SCS and the RTPs prepared by the Monterey, San Benito and Santa Cruz RTPAs has been evaluated for consistency with the goals, policies and objectives currently being implemented by municipal and county planning agencies within the region as well as the Local Area Formation Commissions (LAFCO) for Monterey, San Benito and Santa Cruz County. This discussion is provided in Section 5.0, *MTP Consistency with Other Plans Analysis*.

The 2040 MTP/SCS would be implemented with several other existing AMBAG programs designed to reduce adverse impacts to transportation resources, air quality, greenhouse gas (GHG) emissions and energy. As the MPO for the Monterey Bay Region, AMBAG strives to provide leadership in the areas of transportation, environmental and economic planning. One of the ways AMBAG 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. AMBAG works closely with regional partner agencies such as TAMC, SCCRTC, SBtCOG, MST, SCMETRO, MBARD and local jurisdictions on various transportation and land use planning projects and activities. AMBAG staff provides technical and program related assistance to partner agencies for project and/or program implementation. The following is a summary of programs that AMBAG and partner agencies support:

1. **Regional Vanpool Program.** The Regional Vanpool Program provides a sustainable transportation solution for the region's unique land use, demographic and employment characteristics. Moreover, the Regional Vanpool Program fills in a market niche and serves traditionally underserved population groups including, but not limited to, low income and minority population, rural communities and agriculture workers. The AMBAG Regional Vanpool Program consists of the following two components:
 - a. *Traditional employment vanpools.* This initiative started due to the AMBAG rideshare program for Monterey County receiving a number of commuter inquiries regarding vanpool seats and the inability to properly match the requests with available services.
 - b. *Agriculture employment vanpools.* In 2010, AMBAG completed the AMBAG Vanpool Program Study funded by Caltrans grants, which identified the existence and extent of the unmet transportation needs among the agricultural worker population in the region. The study provided valuable information about the population and areas that needed the service.

2. **AMBAG Energy Watch Program.** AMBAG and Pacific Gas and Electric Company (PG&E) partnered to deliver the AMBAG Energy Watch Program in Monterey, San Benito and Santa Cruz Counties. The program reduces energy use in our area by providing the following resources to eligible PG&E customers:
 - a. Energy assessments and audits
 - b. Direct installation of energy efficient equipment
 - c. Technical assistance and financial incentives for energy efficient retrofits in municipal buildings
 - d. Energy efficiency seminars and training courses in the region
 - e. Information on other PG&E energy efficiency programs and services
 - f. Assistance accessing 0 percent or 3 percent financing for energy efficiency projects
 - g. Developing Energy Action Strategies for jurisdictions
 - h. Compiling greenhouse gas inventories for jurisdictions
3. **Electric Vehicle Infrastructure for the Monterey Bay Area.** AMBAG conducted a suitability study identifying the best locations for electric vehicle (EV) infrastructure in the Monterey Bay Area and successfully installed four EV station as a pilot program. TAMC, SCCRTC and other partner agency are using the EV master plan to install other charging locations under this project. AMBAG with the help of consultant, it has placed four stations in the region.
4. **Complete Streets Planning & Design Guidelines.** Complete streets are streets for everyone that are designed and operated to enable safe access for all users including pedestrians, bicyclists, motorists and transit riders. Complete streets are designed for all ages and abilities and are designed to take the focus away from automobiles. An existing transportation budget can incorporate complete streets projects with little to no additional funding, accomplished through reprioritizing projects and allocating funds to projects that improve overall mobility. Complete streets gain more productivity out of the existing roadway and public transportation system, which is vital to reducing congestion and at a low cost, can be fast to implement and have a high impact.
5. **Rideshare.** RTPAs provide Rideshare and Commute Alternatives, Rideshare and Emergency, developing Park & Ride Lots.
6. **Bike to School Day and Bike to Work Day Program.** International Programs supported by AMBAG to promote students and residents to bicycle to school and work. More information can be found at: www.walkbiketoschool.org
7. **Safe Routes to School Program.** This program aims to improve the health of kids and the community by making walking and bicycling to and from school safer, easier and more enjoyable.
8. **Regional Ecological Framework Project**
9. **Zero Emission Electric Motorcycle Pilot Project.** To reduce air pollution while contributing to the safety of the community, providing electric motorcycles to regions' police departments is an important first step in demonstrating the effectiveness of electric vehicles.
10. **Freeway Service Patrol and Motorist Assistance Program.** The Freeway Service Patrol (FSP) is a joint program provided by the California Department of Transportation (Caltrans), the California Highway Patrol (CHP) and the local transportation agency. The FSP program is a

free service of privately owned tow trucks that patrol designated routes on congested urban California freeways.

11. **Seniors & Accessible Transportation Services.** Focused transportation services to meet the unique needs of Seniors and other individuals with accessibility issues.

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3 Environmental Setting and Impact Analysis Approach

This section provides a general overview of the environmental setting for the 2040 MTP/SCS, including a regional setting, sub-regional setting and a description of the regional transportation system. 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

The Monterey Bay region is comprised of Monterey, San Benito and Santa Cruz Counties. These counties are located along the Central Coast of California and generally surround Monterey Bay. Monterey Bay is located south of the San Francisco Bay area and north of San Luis Obispo County. San Mateo and Santa Clara Counties are located to the north; Merced and Fresno Counties are located to the east. Monterey County shares a short border segment with Kings County to the southeast. The combined area encompasses approximately 3.3 million acres, incorporating the Pajaro and Salinas River Valleys, adjacent coastal lowland and surrounding mountains. Terrain within the region is varied. The Santa Cruz, Gabilan and Santa Lucia mountain ranges and the Diablo range are located along the eastern border of the tri-county region. The highest elevation is the Junipero Serra Peak (5,860 feet above sea level), located in Monterey County. The Pajaro and Salinas Valleys contain some of the most productive agricultural soils in the United States of America.

3.2 Sub-Region Descriptions

Monterey County covers approximately 2.1 million acres, of which approximately 1.3 million acres are in agricultural use (irrigated cropland, dry farming, grazing, animal husbandry and related agricultural services) (DOC, 2015). San Benito County covers approximately 890,000 acres, with approximately 670,000 acres in agricultural use (DOC, 2015). Santa Cruz County covers approximately 282,000 acres, with approximately 38,000 acres in agricultural use (DOC, 2015).

The AMBAG's ~~Draft~~ 2018 Regional Growth Forecast (AMBAG, 2017d) estimates the population of each county within the tri-county region as of January 2015, as the following:

- Monterey County: 432,637
- San Benito County: 56,445
- Santa Cruz County: 273,594

The total population within the tri-county region is estimated at approximately 762,676 people. Most of the population is concentrated within the coastal plain that extends from the Santa Cruz/Capitola area in the north and the Monterey Peninsula to the south. The largest city in Monterey County is Salinas, with an estimated population of 159,486 people or approximately 21 percent of the total population within the AMBAG region (AMBAG, 2017d). Other urban population

centers include the cities of Monterey, Carmel-by-the-Sea, Pacific Grove, Marina, Sand City, Seaside and Del Rey Oaks. The cities of Gonzales, Soledad, Greenfield and King City are located in the Salinas River Valley southeast of Salinas. Monterey County contains several unincorporated communities, including Carmel Valley, Del Monte Forest, Pine Canyon, Castroville, Elkhorn, Las Lomas, Pajaro and Prunedale. In San Benito County, the cities of Hollister and San Juan Bautista are the only urban centers. Within Santa Cruz County, the population is concentrated in Capitola, Santa Cruz, Scotts Valley and Watsonville. Unincorporated communities include Aptos, Freedom, Live Oak and Soquel.

The tri-county economy is primarily based on agriculture. Tourism also is important particularly in Santa Cruz and Monterey during summer months. Cities such as Santa Cruz/Scotts Valley, Hollister and unincorporated areas located in the northern portion of the region serve as bedroom communities for people working in Silicon and Santa Clara Valley to the north.

3.3 Regional Transportation System

3.3.1 Monterey County

Monterey County owns and maintains approximately 1,240 miles of roads. In addition, there are 575 miles of private roads, two minor highways (Highway 25 and 146) and five major highways that include State Route (SR) 1, SR 68, SR 156, SR 183 and U.S. 101.

Within northern Monterey County, U.S. 101 is a rural four-lane highway with left-turn channelization at most intersections. In southern Monterey County, U.S. 101 is the primary north-south corridor through the Salinas Valley, between Salinas and the cities of Gonzales, Soledad, Greenfield and King City. This four-lane freeway/expressway provides connections to Routes 198 and 146 in South County.

SR 183 is 10 miles in length, beginning at the junction of U.S. 101 in Salinas and continuing westerly to the junction of SR 1 in Castroville. Route 156 is a two-lane highway, serving as an east-west connector from U.S. 101 to SR 1 and the Monterey Peninsula. SR 146 is a two-lane highway beginning in Soledad and continuing to the junction of Route 25 in San Benito County. This is a primary access route to the Pinnacles National Monument.

SR 198 is a 25.8-mile, two-lane conventional highway, beginning at U.S. 101 just west of San Lucas and continuing east to the Fresno County line. SR 25 is a two-lane rural highway, beginning at the junction of Route 198 and continuing north to the San Benito County line. It primarily serves inter-regional traffic between Monterey, San Benito and Santa Clara Counties.

Both passenger and freight rail service are available in Monterey County. Amtrak provides rail services twice daily via a station stop in Salinas. Four freight stations are located at Castroville, Gonzales, Salinas and Watsonville Junction (Pajaro Community Area). Public transit services are provided by Monterey-Salinas Transit (MST) and Greyhound Lines. MST is a publicly owned and operated system providing service to the greater Monterey and Salinas areas with routes serving Carmel Valley and unincorporated areas in northern Monterey County. Additionally, MST provides service to some locations in Santa Clara County, including the Caltrain Station in the City of Gilroy and the Diridon Train Station in the City of San Jose, as well as the Watsonville Transit Center in Santa Cruz County. Greyhound provides intercity passenger service between Monterey Peninsula cities, Salinas and Salinas Valley cities, as well as destinations across California and nationally.

Monterey County has approximately 887 miles of bicycle and pedestrian routes. One of the major continuous bicycle paths in the county is the Monterey Bay Coastal Bike Trail, which is

approximately 29 miles long stretching from Castroville to the Monterey Peninsula and parts of Pebble Beach. The Monterey Bay Coastal Bike Path runs adjacent to the Fort Ord Dunes State Park located between the cities of Marina and Seaside. The state park also contains its own bike path that is accessible on both ends of the Fort Ord Dunes Park from the Monterey Coastal Bike Path. Sections of the Monterey Bay Sanctuary Scenic Trail Network have been completed in Monterey County between Pacific Grove and Monterey, between Sand City and Seaside and between Marina and Castroville. Most of these sections are Class I bikeways, but short sections are Class II and Class III (TAMC 2008).

Monterey County is served by four airports: Monterey Regional Airport, Salinas Municipal Airport, Marina Municipal Airport and Mesa Del Rey Airport (King City). The Monterey Regional Airport is owned and operated by the Monterey Peninsula Airport District and is served by commercial air carriers (Monterey County 2007).

3.3.2 San Benito County

Countywide there are approximately 90 miles of State highways and 306 miles of roadways under the jurisdiction of the California Department of Parks and Recreation. Within unincorporated San Benito County, there are approximately 384 miles of local County roadways. Caltrans maintains five State highways in San Benito County: SR 25, 129, 146, 156 and U.S. 101.

SR 25 traverses the entire length of San Benito County from the southern county boundary at the junction of SR 198 near King City north through Paicines, Tres Pinos and Hollister to the northern county boundary near Gilroy, where it connects to U.S. 101.

SR 129 extends from Santa Cruz County into the northwestern portion of San Benito County connecting to U.S. 101 approximately 2.6 miles from the Santa Cruz-San Benito County Line. SR 129 is a two-lane rural road providing access to Santa Cruz and Monterey County Beaches.

SR 146 in San Benito County is a two-lane minor arterial used primarily to provide access from SR 25 to the Pinnacles National Monument.

SR 156 traverses northern San Benito County from U.S. 101 west of San Juan Bautista through San Juan Bautista and Hollister to the San Benito-Santa Clara County Line where it connects with SR 152.

U.S. 101 passes through the northwestern portion of San Benito County for 7.4 miles and serves primarily inter-regional traffic.

San Benito County Express is the primary transit provider in the county with services in Hollister and countywide via intercity connections. The County Express system currently provides three fixed routes in the City of Hollister, complementary ADA paratransit service and a general public Dial-A-Ride. There is currently no passenger rail service in San Benito County. The County Express provides a connection to commuter and regional rail service in Gilroy which is located in south Santa Clara County. Freight rail service to Hollister and northern San Benito County is provided by the Union Pacific Hollister Branch Line.

Bicycle facilities in the county are generally concentrated in and around Hollister. Within San Juan Bautista, a short section of San Juan Highway in the northern part of town has designated bike lanes. The Juan Bautista de Anza National Historic Trail traverses San Juan Bautista and the western part of the county. The cities of Hollister and San Juan Bautista generally have continuous sidewalks on most streets in their central and core areas and in newer neighborhoods. Pedestrian sidewalks in unincorporated areas of the county are generally provided in discontinuous segments or they are non-existent.

San Benito County has one public airport (Hollister Municipal airport), one private airport (Frazier Lake Airpark) and several landing strips. Regional airport services are provided by San Jose International Airport and Monterey Peninsula Airport (San Benito County, 2010a).

3.3.3 Santa Cruz County

There are six State Highways in Santa Cruz County. SR 1 runs north/south through the entire county. Highway 17 traverses the Santa Cruz Mountains connecting the county with the San Jose/San Francisco Bay Area. Highway 9 is a mountainous road connecting Santa Cruz to towns in the San Lorenzo Valley as well as providing another route over the Santa Cruz Mountains to Los Gatos and Saratoga in Santa Clara County. Highway 236 connects Boulder Creek to Big Basin Redwoods State Park and Highways 152 and 129 connect Watsonville in south Santa Cruz County. There are 1,137 total miles of roadway in the county. Arterial roads comprise 15 percent of the roadway miles.

The Santa Cruz Metropolitan Transit District (or METRO) provides essential bus transit services for all residents, including students, Highway 17 commuters and transit dependent and choice riders. The county's network of local and express bus routes includes transit centers in Felton, Scotts Valley, Santa Cruz, Capitola and Watsonville. METRO buses serve 479 miles of road throughout the county and cover most arterial and collector routes. Transit to Monterey County is provided at the Watsonville Transit Center via connections with MST. Greyhound provides service from Santa Cruz to surrounding regions.

Freight rail service, once operated by Southern Pacific Railroad, then by Union Pacific and now by Santa Cruz and Monterey Bay Railway (Iowa Pacific Holdings), has been a historically important form of transportation within Santa Cruz County. It is anticipated that Santa Cruz and Monterey Bay Railway will not be the rail service operator much longer and the RTC is currently negotiating with a potential replacement rail service operator. There are currently three rail lines in or adjacent to Santa Cruz County. The Santa Cruz Branch rail line extends from Watsonville Junction in Pajaro north to Davenport and passes through much of the county's urban area. The Felton Branch rail line is owned and operated by the private Santa Cruz Big Trees & Pacific Railway Company and primarily provides summertime and holiday excursions between Felton and the Beach Boardwalk in Santa Cruz. The line is also occasionally used for freight. The Coast Rail Route is the Union Pacific main coastal line extending from San Jose to San Diego. A stop for the proposed Amtrak Coast Daylight service is planned at the Pajaro Station located at the Watsonville Junction.

Santa Cruz County has approximately 215 miles of bikeways, 190 of them (bidirectional) bike lanes and 25 of those are separated paths. Sidewalks and pedestrian infrastructure are located throughout the urbanized areas of the county and considered in all new project designs.

The Watsonville Municipal Airport, developed in 1942, is the only public use airport in Santa Cruz County. There are also three private airstrips within the county, located in Bonny Doon, at the Monterey Bay Academy and Las Trancas/Big Creek. The closest scheduled air service is available at Monterey Airport and San Jose International Airport (Santa Cruz County, 1994a).

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. AMBAG, TAMC, SBtCOG and SCCRTC have lead agency status; and therefore, authority to enforce mitigation measures for projects for which they have discretionary authority. However, AMBAG, TAMC, SBtCOG and SCCRTC do not have authority to require recommended mitigation measures be implemented by other implementing agencies (e.g., Caltrans, counties, cities, transit agencies, etc.) that are responsible agencies for this 2040 MTP/SCS and RTPs EIR, but will be lead agencies for future transportation and land use development projects. It is the responsibility of the lead agency implementing specific 2040 MTP/SCS projects to conduct environmental review consistent with CEQA and where applicable, incorporate mitigation measures provided herein and developed specifically for the project to reduce. 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 2015). It was determined that a comparison to current, existing baseline conditions would provide the most relevant information for the public, responsible agencies and AMBAG 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 (2015) baseline conditions, controlling for impacts caused by population growth and other factors that would occur whether or not the 2040 MTP/SCS or the RTPs prepared by the Monterey, San Benito and Santa Cruz RTPAs are adopted. This future baseline analysis is provided for informational purposes only. For certain issue areas (including air quality, greenhouse gas emissions/climate change, energy, noise and transportation/circulation), impacts would occur as a result of background population growth, urbanization and volume of average daily traffic increases in the region that would occur by 2040, with or without implementation of the 2040 MTP/SCS. Thus, for these issue areas, a comparison to a future 2040 baseline is provided for informational purposes. However, all impact determinations are based on a comparison to existing 2015 baseline conditions.

3.4.2.1 *Interim Timeframes*

2040 is the horizon year of the proposed 2040 MTP/SCS. While the 2040 MTP/SCS would be implemented gradually over the planning period, this EIR does not analyze interim time frames because the four-year update cycle of the MTP/SCS and the RTPs prepared by the Monterey, San Benito and Santa Cruz RTPAs 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 examines impacts for the year 2020, 2030 and 2035, as well as a comparative baseline of both 1990 and 2005, to satisfy statutory requirements and address state goals related to GHG emissions

(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*.

3.4.3 Approach for Direct Impact Analysis

The programmatic nature of the 2040 MTP/SCS 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 the 2040 MTP/SCS. 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 the 2040 MTP/SCS, including land development resulting from regional growth and transportation improvements identified in the 2040 MTP/SCS, project-specific CEQA documents will be prepared by the appropriate project implementation agency.

For analytical purposes, the baseline year examined throughout this EIR is 2015, except where specifically noted, as further described in Section 3.4.1.1 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.

3.4.4.1 Cumulative Impact Methodology

The 2040 MTP/SCS addresses cumulative conditions by design. The Plan area is comprised of 3.3 million acres and includes three counties and 18 cities. It integrates transportation investments with land use strategies for an entire region of the state that shares, or is connected by, common economic, social and environmental characteristics. As such, the environmental analysis of the 2040 MTP/SCS presented throughout this ~~Draft~~ EIR is a cumulative analysis consistent with CEQA policies. Furthermore, this ~~Draft~~ EIR contains detailed analysis of regional (cumulative) impacts, which are differentiated from localized impacts that may occur at the county level.

The following discussion examines impacts associated with implementation of the 2040 MTP/SCS, plus implementation of projected development for jurisdictions adjoining the AMBAG region, to

develop an approach to address cumulative impacts from growth extending beyond the region's boundaries.

When evaluating cumulative impacts, CEQA allows the use of either a list of past, present and probable future projects, including projects outside the control of the lead agency, or a summary of projections in an adopted planning document, or a combination of the two approaches. The cumulative analysis presented below uses a projections-based approach. (See CEQA Guidelines Section 15130B)(1). Land use and growth projections for the region, which are the subject of analysis throughout this Draft EIR, are combined with the growth projections for the adjoining counties. Adjoining counties are listed as follows:

- **San Mateo County.** San Mateo County is located north of the Plan area, north of Santa Cruz County along the Pacific coast. San Mateo County encompasses a major portion of the San Francisco Peninsula, covering approximately 554 square miles, including 106 square miles of inland waters and San Francisco Bay tidal areas. The eastern (bayside) portion of the County is comprised of dense urban development, while the western (coast side) is largely undeveloped except for small rural centers (San Mateo County, 1986).
- **Santa Clara County.** Santa Clara County is located northeast of the Plan area, east of Santa Cruz County and north of San Benito County. The County, which encompasses 1,300 square miles, is a major employment center for the region, providing more than 25 percent of all jobs in the Bay Area. The northern portion of the County is extensively urbanized, while the southern portion of the County is predominantly rural (Santa Clara County, 1994).
- **Merced County.** Merced County is located east of the northern portion of the Plan area, east of San Benito County. Merced County encompasses 1,980 square miles, 98 percent of which is unincorporated and sparsely populated (Merced County, 2013).
- **Fresno County.** Fresno County is located east of the Plan area, east of San Benito and Monterey Counties. The County contains substantial amounts of agricultural land. However, the Fresno/Clovis metropolitan area is one of the most populous in the state with almost 500,000 residents (Fresno County, 2000).
- **Kings County.** Kings County is located east of the Plan area, east of the southern portion of Monterey County. Kings County is a predominantly agricultural based County, with 90.2 percent of all land devoted to agricultural uses, with population centered in the cities of Avenal, Corcoran, Hanford and Lemoore (Kings County, 2010).
- **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).
- **San Luis Obispo County.** San Luis Obispo County is located south 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).

The area that includes the Monterey Bay Area and the above-referenced adjoining counties is referred to in this analysis as the "cumulative impact analysis area." As shown in Table 4, the population for the cumulative impact analysis area is projected to grow from just over 5.2 million people to 6.5 million by 2040.

Table 4 Population, Households and Employment Projections of Cumulative Impact Analysis Area, 2015-2040

Adjoining County	Acreage ¹	Population ²		Households ²		Jobs ²	
		2015	2040	2015	2040	2015	2040
Fresno	3,816,320	980,980	1,271,051	299,500	362,700	371,900	475,800
Kern	5,210,240	884,436	1,160,259	263,000	330,800	317,500	396,800
Kings	890,240	149,813	201,071	42,300	58,400	46,100	59,300
Merced	1,234,560	270,156	353,895	77,000	96,400	77,500	96,600
San Luis Obispo	2,114,560	276,142	315,287	105,000	120,200	119,400	141,600
San Mateo	287,360	762,327	880,166	261,300	292,600	392,900	494,900
Santa Clara	826,240	1,915,407	2,352,368	625,800	749,100	1,033,100	1,278,000
AMBAG Region ³	3,273,600	762,676	883,300	262,660	305,293	337,600	395,000
Total	17,653,120	6,001,937	7,417,397	1,936,560	2,315,493	2,696,000	3,338,000

¹ Caltrans 2015 (http://www.dot.ca.gov/hq/tsip/data_library/QuickFacts/QFCo.php)

² The California Economic Forecast 2016 (http://www.dot.ca.gov/hq/tpp/offices/eab/socio_economic.html)

³ AMBAG Draft 2018 Regional Growth Forecast (<http://www.ambag.org/programs-services/planning/regional-growth-forecast>)

As shown in Table 4, in the cumulative impact analysis area the AMBAG region comprises approximately 12.7 percent of the existing population, 13.6 percent of the existing number of households and 12.5 percent of the existing number of jobs and approximately 18.5 percent of the total acreage. By 2040, this proportion is expected to remain similar (11.9 percent of the population, 13.2 percent of households and 11.8 percent of jobs). Thus, under both current and forecasted future conditions, the AMBAG region represents a relatively small portion of the growth in the cumulative analysis impact area.

Analysis of the cumulative effects of the 2040 MTP/SCS for each environmental issue area is presented at the ends of Sections 4.1 through 4.14.

3.5 Plan Consistency

CEQA Guidelines Section 15125(d) requires an EIR to discuss any inconsistencies between the proposed project and applicable general plans, specific plans and regional plans. This analysis is presented in Section 5.0, MTP Consistency with Other Plans Analysis, as well as in several topical analyses in Section 4.0, including Section 4.3, *Air Quality and Heath Impacts/Risks* and Section 4.11, *Land Use*.

4 Environmental Impact Analysis

This section discusses the environmental effects of the 2040 MTP/SCS for the specific issue areas that were identified through the scoping process as having the potential to experience significant effects. “Significant effect” is defined by the *CEQA Guidelines* §15382 as:

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

The assessment of each issue includes a discussion of the setting for that issue and an analysis of the project’s impact. Within the impact analysis, the first subsection identifies the methodologies used and the “significance thresholds,” which are those criteria that are utilized by AMBAG, its member agencies, or other agencies, are universally recognized, or have been developed specifically for this analysis to determine whether effects are significant. 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 following. Each bolded impact listing also contains a statement of the significance determination for the environmental impact as follows:

Significant and Unavoidable. An impact that cannot be reduced to below the threshold level given feasible mitigation measures.

Significant but Mitigable. An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures.

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 effect discussion are recommended mitigation measures and the residual effects or level of significance remaining after the implementation of the measures. While AMBAG and the RTPAs 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 section concludes with a screening-level discussion of specific MTP/SCS transportation projects that may result in identified impacts.

The Executive Summary of this EIR summarizes all impacts and mitigation measures that apply to the 2040 MTP/SCS.

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4.1 Aesthetics/Visual Resources

This section evaluates the aesthetics and visual resource impacts of the proposed 2040 MTP/SCS.

4.1.1 Setting

a. Visual Character of the Region

AMBAG's planning area is predominantly rural, with urban development clustered along the Monterey Bay coastline and in agricultural inland valleys. The specific visual characteristics of Monterey, San Benito and Santa Cruz Counties are discussed below.

Monterey County

Monterey County is characterized by a scenic ocean coastline along its western and northern borders, with rugged coastal mountains inland along its eastern boundary. The most substantial visual resources are located along the County's approximately 100-mile long coastline. Monterey County includes some of the most magnificent ocean shoreline in the world along the Big Sur coast, which is bounded on the east by the very steep Santa Lucia Mountain range. Other scenic resources within Monterey County include the Fort Ord National Monument in western Monterey County and Pinnacles National Park located east of Soledad. Elevations in Monterey County range from sea level at the coastline to nearly 5,700 feet above sea level at Junipero Serra Peak.

The Conservation and Open Space Element of the Monterey County General Plan also identifies the Salinas and Carmel Valleys and Elkhorn Slough as prominent features (Monterey County, 2010a). The 130-mile long Salinas Valley stretches the length of the County and offers the greatest visual expanse within inland Monterey County which includes primarily agricultural areas. Development in the valleys originated with the agricultural industry and is located along major travel corridors such as U.S. 101 (Monterey County, 2008). Cities and towns within the valleys include Castroville, Salinas (the largest city in the County), Gonzales, Soledad, Greenfield, King City and Carmel Valley. Foreground, middleground and background views of agriculture fields/pastures and the surrounding ranges and hills comprise the viewshed. The majority of urban development is concentrated in northern Monterey County, in the lower Salinas Valley and around the Monterey Bay.

San Benito County

In contrast to the other two counties in the Monterey Bay region, San Benito County has no coastline. It is characterized by the Diablo and Gabilan Mountain Ranges and their associated inland agricultural valleys. Elevations range from 80 feet above sea level near Aromas in the northwest portion of the County to more than 5,200 feet above sea level at the peak of San Benito Mountain in the southeast. Prominent elements of San Benito County's scenic landscape include views of mountains, undeveloped rangelands, large agricultural fields and croplands, natural ridgelines along the Diablo and Gabilan Ranges and annual grasslands (San Benito County 2010b). Agricultural land and rangeland account for approximately 75 percent of all land in San Benito County and commonly form the foreground of scenic views. Urban development is concentrated in the City of Hollister, which is characterized by a commercial downtown with low-density residential areas to the west, south and east and industrial areas to the north (San Benito County 2010b).

Santa Cruz County

Santa Cruz County is characterized by scenic ocean coastlines along its western and southern borders, with rugged coastal mountains inland along its northern and eastern boundary, with visual resources generally similar to those of Monterey County described above. One of the distinct visual features of Santa Cruz County is the extensive forest cover of the Santa Cruz Mountains in the north and northeast, including stands of coast redwoods. The Santa Cruz Mountains are the southern edge of this species' range in coastal California (Santa Cruz County 1994b). A large portion of the County's population is located in the mid-County coastal terraces, while the alluvial south County is mainly in agricultural use. The aesthetic character of urban areas in the coastal terraces between the Santa Cruz and Aptos is influenced by coastal vistas and stream valleys running southward from the Santa Cruz Mountains. Elevations in Santa Cruz County range from sea level to more than 3,200 feet above sea level at Mt. Bielawski, which is located near the Santa Cruz-Santa Cruz county line.

b. Primary View Corridors

Monterey County

The following roadway segments within Monterey County have been officially designated as "State Scenic Highways" under the California Scenic Highway System:

- State Route (SR) 1 from San Luis Obispo County to SR 68
- SR 25 from SR 198 to the San Benito County line
- SR 68 from SR 1 in Monterey to the Salinas River
- SR 156 from one mile east of Castroville to U.S. 101 near Prunedale

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

- SR 1 from SR 68 to the San Mateo County line
- SR 68 from the Salinas River to U.S. 101 near Salinas
- U.S. 101 from SR 156 northeasterly to the San Benito County line
- SR 198 from U.S. 101 near San Lucas to the Fresno County line

In addition to the designated and eligible State Scenic Highways listed above, the Monterey County General Plan includes existing and proposed County Scenic Routes (Monterey County 2010a). These roadways are shown in Figures 13 through 16 of the Monterey County General Plan. The following roadways are designated as County Scenic Routes:

- Old Stage Road
- San Benancio Road
- Corral de Tierra Road
- Laureles Grade Road
- Robinson Canyon Road

The following roadways in Monterey County are proposed for designation as County Scenic Routes:

- Carmel Valley Road
- Reservation Road

- River Road
- Corral de Cielo Road
- Underwood Road
- Crazy Horse Canyon Road
- San Juan Grade Road
- San Miguel Canyon Road

San Benito County

The following roadways in San Benito County have been identified as eligible for inclusion in the California Scenic Highway System:

- SR 25 from the Monterey County line to SR 156
- SR 156 from the Monterey County line to the Santa Clara County line
- SR 198 from the Monterey County line to the Fresno County line
- SR 146 from Pinnacles National Monument to State Route 25
- U.S. 101 from the Monterey County line to SR 156

The Natural and Cultural Resources Element of the San Benito County 2035 General Plan (San Benito County, 2015a) also designates the following roadways as Scenic Highways and describes the widths of the associated Scenic Corridors:

- U.S. 101 (entire length within San Benito County - the Scenic Corridor width includes all land 400 feet on either side of the centerline of the road)
- SR 129 from its intersection with U.S. 101 to the San Benito County boundary (the Scenic Corridor width includes all land within 340 feet on either side of the centerline of the road)
- SR 146 between SR 25 and the Monterey County line (the Scenic Corridor width includes all land 340 feet on either side of the centerline of the road)

Santa Cruz County

Although no State Scenic Highways have been designated in Santa Cruz County, the following roadways are eligible for designation as such:

- SR 1 from the Monterey to San Mateo County lines
- SR 9 from SR 1 near Santa Cruz to the Santa Clara County line
- SR 17 from SR 1 near Santa Cruz to the Santa Clara County line
- SR 35 from SR 17 to the Santa Clara County line
- SR 152 from SR 1 to the Santa Clara County line at Hecker Pass
- SR 236 from SR 9 near Boulder Creek to SR 9 northeast of Big Basin Redwoods State Park

In addition to the above scenic routes eligible for State Scenic Highway designation, the Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994) identifies the following routes as “[valued] for their vistas”:

- SR 1 from San Mateo to Monterey County lines
- SR 9 from SR 1 to Santa Clara County line

- SR 17 from SR 1 to Santa Clara County line
- SR 35 from SR 17 to San Mateo County line
- SR 129 from SR 1 to San Benito County line
- SR 152 from SR 1 to Santa Clara County line
- SR 236 from SR 9 in Boulder Creek to SR 9 at Waterman Gap

c. 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.

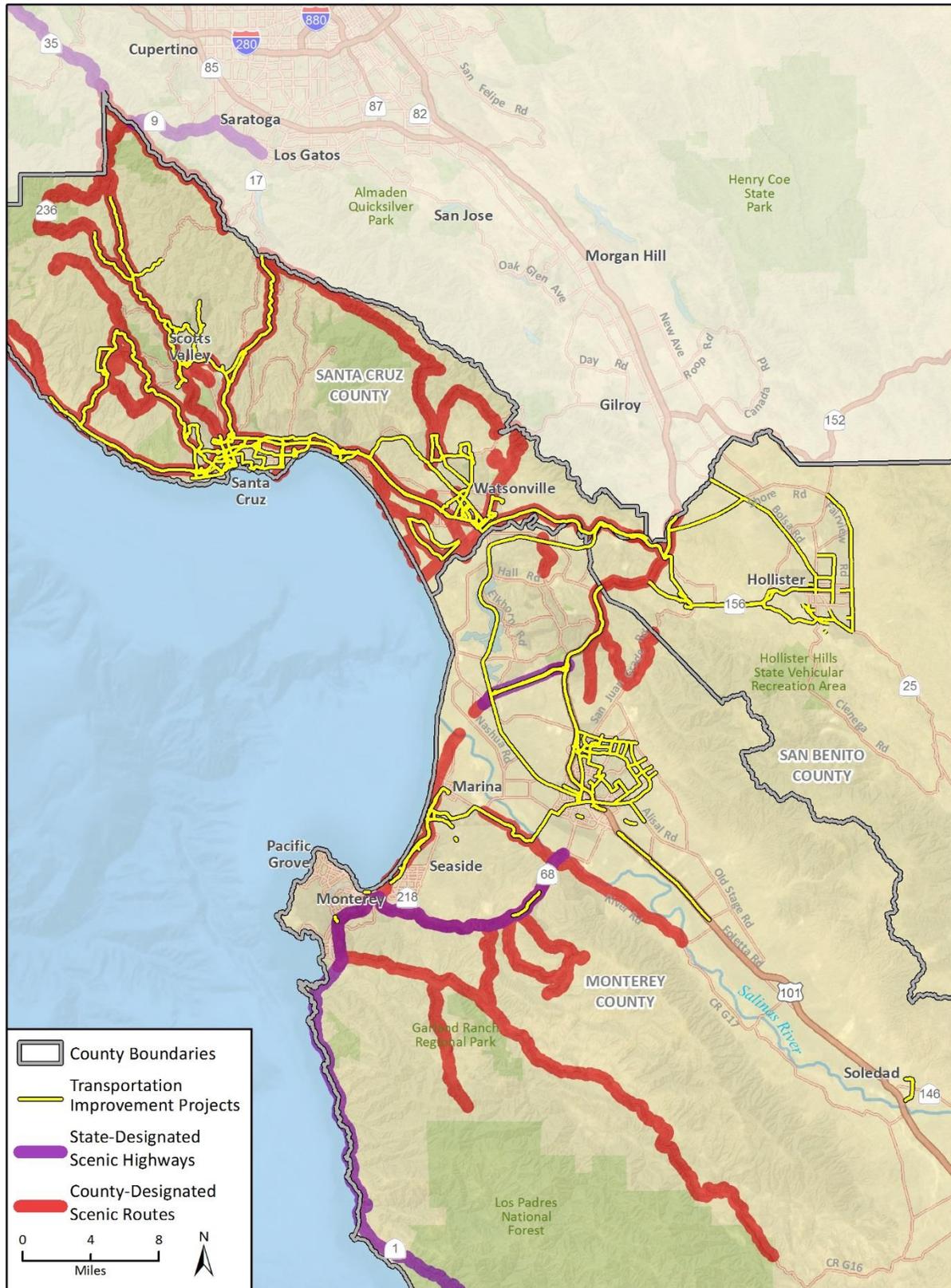
The Master Plan of State Highways Eligible for Official Scenic Highway Designation requires that proposed realignments and route improvements be evaluated for their impact on the scenic qualities of the corridor. The Plan Area includes numerous designated or eligible State Scenic Highways, which can be seen below in Figure 9.

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:

- a. 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.
- b. 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.

Figure 9 AMBAG Plan Area Designated Scenic Routes



Imagery provided by ESRI and its licensors © 2017.
 Additional data provided by AMBAG 2017e; Caltrans, 2017; Monterey County, 2014b; Santa Cruz County, 2017e.

Fig 10 Designated Scenic Routes in AMBAG Plan Area

- c. 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.
- d. 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.

Regional and Local Regulations

City and County General Plans

The general plans and zoning ordinances of the cities within the Monterey Bay area regulate design and the built environment within those communities, while the general plans for each county perform the same function within unincorporated areas. In all cases, the general plans and zoning typically prescribe visual resource policies and in some cases, require design review of projects. In general, little direction is provided regarding the design of roadways, which are typically subject to adopted Caltrans or local engineering standards related to safety and capacity, rather than aesthetics.

Local jurisdictions in the Monterey Bay area have policies for the protection of scenic corridors. In the Monterey County General Plan (Monterey County, 2010a), Policy C-5.6 requires "special scenic treatment and design within the rights-of-way of officially designated State Scenic Highways and/or County Road." The San Benito County 2035 General Plan (San Benito County, 2015a) Policy NCR-8.1 in Natural and Cultural Resources Element states that "[t]he County shall endeavor to protect the visual characteristics of certain transportation corridors that are officially designated as having unique or outstanding scenic qualities." Additionally, Policy 5.10.2 of the Conservation and Open Space Element in the Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994) states that the County shall "...[r]equire projects to be evaluated against the context of their

unique environment and regulate structure height, setbacks and design to protect these resources consistent with the objectives and policies of [the General Plan].” Cities within the AMBAG region have similar policies pertaining to scenic corridors, visual character and lighting.

Furthermore, several local jurisdictions have “dark sky” ordinances or other exterior lighting standards intended to reduce light pollution and glare, and to protect the nighttime visual environment. For example, Monterey County has specific design guidelines for exterior lighting to require that exterior lighting be unobtrusive, reduce off-site glare and only light an intended area. The design guidelines establish criteria for the location and direction of fixtures, number of fixtures and design of fixtures (Monterey County, 2016). Chapter 19.31 of the San Benito County Code (Development Lighting) establishes three lighting zones, with Zone I imposing the strictest regulations and Zone III imposing the least restrictive, and outlines specific lighting restrictions within each zone (San Benito County, 2017). In Santa Cruz County, Section 13.10.363 of the County Code requires that all exterior lighting in the Public and Community Facilities District include cut-offs that prevent light from extending beyond the boundaries of the property, while Section 13.10.581 outlines restrictions for illuminated signs (Santa Cruz County, 2017). Many cities also have similar types of ordinances. For example, the City of Seaside’s Municipal Code contains Chapter 17.30.070, Outdoor Lighting, which limits the maximum height, energy efficiency, position and maximum illumination, among other parameters, to reduce lighting and glare impacts.

4.1.2 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 a 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 change.

It is important to distinguish between public and private views. Private views are those views seen from privately-owned land, including views from private residences and are typically enjoyed by individuals. Public views are experienced by the collective public. These include views of significant landscape features such as the Monterey Bay, as seen from public viewing space, not privately-owned properties. California Environmental Quality Act (CEQA) (PRC §21000 et seq.) case law has established that only public views, not private views, need be analyzed under CEQA. See *Association for Protection etc. Values v. City of Ukiah (1991) 2 Cal. App. 4th 720* and *Topanga Beach Renters Assn. v. Department of General Services (1976) 58 Cal. App. 3d 188*. Therefore, for this analysis, only public views will be considered when analyzing the visual impacts of implementing the 2040 MTP/SCS.

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project’s impacts would have a significant impact related to aesthetics/visual resources:

1. Have a substantial adverse effect on a scenic vista;
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway;
3. Substantially degrade the existing visual character or quality of the site or its surroundings; and/or

4. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

b. Project Impacts and Mitigation Measures

This section describes generalized impacts associated with proposed transportation improvements and the future land use scenario under the 2040 MTP/SCS. Table 5 in Section 4.1.3 summarizes the specific projects that could result in aesthetics impacts. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could result in the impacts as described in the following section.

Threshold 1: Have a substantial adverse effect on a scenic vista

Threshold 2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway

Impact AES-1 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS ENVISIONED BY THE 2040 MTP/SCS MAY AFFECT PUBLIC VIEWS OF SCENIC VISTAS AND ALONG DESIGNATED SCENIC CORRIDORS, INCLUDING STATE SCENIC HIGHWAYS. THIS WOULD BE A SIGNIFICANT AND UNAVOIDABLE IMPACT.

As discussed previously, there are four officially designated state scenic highways and numerous County-designated scenic view corridors in the AMBAG region. Visual resource impacts from construction on or adjacent to these roadways could include: blockage of views by construction equipment and staging areas; disruption of views by temporary signage; and exposure of slopes and removal of vegetation. These effects would be temporary during the construction phase. In the long-term, implementation of the 2040 MTP/SCS would generally result in modification of existing transportation facilities within existing highway, roadway, or railroad rights-of-way. Further, many of the proposed projects are at-grade with the surrounding environment. As such, most of the road and highway investment are not likely to result in massive obstructions or blockages of surrounding views nor modify or substantially alter existing scenic resources viewed from a scenic vista or state scenic highway. Similarly, land use development envisioned by the 2040 MTP/SCS would be focused primarily in urban infill areas. Scenic vistas and designated scenic highways are generally located in undeveloped, rural areas, such that most future land use development envisioned in the 2040 MTP/SCS would be unlikely to block or substantially alter scenic vistas.

While most transportation and land use projects would not result in significant impacts to scenic vistas or scenic resources within a state scenic highway, some projects have the potential to result in substantial adverse effects. For example, widening projects would occur on SR 25 (a designated scenic highway) between Sunset Drive and Fairview Road and on SR 156 (an eligible scenic highway) at its intersection with U.S. 101. These projects could change existing visual conditions of the area within which they are proposed through modification or removal of existing vegetation or the introduction of structures that could block existing views from the roadway. Proposed overcrossings of SR 1 in Santa Cruz County could also obstruct scenic views from this roadway. In addition, in some areas, higher density infill development could obstruct scenic views of mountains or the coastline from urban-area roadways.

Although some of the 2040 MTP/SCS projects could result in significant impacts to scenic vistas, it should be noted that the 2040 MTP/SCS includes several active transportation projects that would create new viewpoints from which the public could enjoy a scenic vista. Specifically, the Monterey Bay Sanctuary Scenic Trail Network in Santa Cruz and Monterey Counties, the San Benito River Recreation Trail in San Benito County and the Fort Ord Regional Trail and Greenway (FORTAG) in Monterey County would all provide regional multi-use trails in rural and highly scenic areas, such as the Monterey Bay coastline, the rolling hills of the former Fort Ord and the San Benito River. These trails would introduce paving and some signage into scenic areas, but would not include structures or other features that would substantially detract from existing views. Rather, these trails would improve public access to scenic areas, thus creating new public viewpoints from which existing scenic vistas can be viewed.

Development near state-designated scenic highway corridors would be minimized to some extent through compliance with the Caltrans Corridor Protection Program, which requires that the local jurisdiction adopt ordinances, zoning and/or planning policies to preserve the scenic quality of the state-designated scenic highway corridor, or document such regulations that already exist in various portions of local codes. Many local jurisdictions also have their own general plan policies relating to the protection of scenic vistas. These policies may limit the amount or type of development in designated scenic corridors or require special design guidelines when developing in certain areas. However, because scenic vistas and scenic resources are protected unevenly among the various jurisdictions in the AMBAG region, the 2040 MTP/SCS may result in a substantial adverse effect on a scenic vista or substantially damage scenic resources within a state scenic highway.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that would potentially degrade scenic vistas or scenic resources within a state scenic highway. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

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

Implementing agencies 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

AES-1(b) Tree Protection and Replacement

New roadways and extensions and widenings of existing roadways shall avoid the removal of existing mature trees to the extent possible. The implementing agency of a particular 2040 MTP/SCS project shall replace any trees lost at a minimum 2:1 basis and incorporate them into the landscaping design for the roadway when feasible. The implementing agency also shall ensure the continued vitality of replaced trees through periodic maintenance.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies.

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 the 2040 MTP/SCS could still result in obstructions to panoramic views and views of important landscape features or landforms (mountains, oceans, rivers, bas, 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 vistas 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 3: Substantially degrade the existing visual character or quality of the site or its surroundings

Impact AES-2 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS ENVISIONED BY THE 2040 MTP/SCS MAY SUBSTANTIALLY DEGRADE EXISTING VISUAL CHARACTER IN THE AMBAG REGION. THIS WOULD BE A SIGNIFICANT AND UNAVOIDABLE IMPACT.

The proposed MTP/SCS includes improvements to existing facilities such as road widenings, intersection or interchange improvements, auxiliary and transition lanes, highway maintenance and other improvements. The 2040 MTP/SCS would include some new road and highway facilities such as new interchanges, new roadways and overcrossings and road extensions. Most road and highway projects would occur in areas where transportation infrastructure is already a dominant feature of the landscape. Such transportation projects would not likely degrade the existing visual character of the region because transportation infrastructure is already a dominant feature of the landscape in those areas. In less developed areas of the region, adding new transportation infrastructure would add an element of urban character to previously undeveloped lands. New and extended roadways would alter the character of agricultural areas near the cities of Salinas and Soledad, in particular, by converting farmland and introducing paved surfaces. 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. Depending on the design and siting of transportation projects, this could be considered a degradation of the visual character or quality of an area. A complete listing of transportation projects with potential to alter the rural character of the AMBAG region is included Table 5.

The 2040 MTP/SCS emphasizes infill development and development near existing transportation corridors, which are generally located in urbanized areas of cities and unincorporated communities.

Infill development can be favorable in terms of visual character, as it occurs in areas already designated for and receiving growth and precludes growth in undeveloped and/or agricultural and rural areas. However, when compared to existing conditions, the 2040 MTP/SCS land use scenario would intensify the built environment within existing urban areas through the implementation of infill and transit oriented development (TOD) projects, thereby resulting in an overall change in the character of existing urbanized areas to a denser development pattern. In addition, land use projects that do occur in rural or agricultural areas would introduce urban development to areas that were previously undeveloped. Depending on the design and siting of these projects, the resulting change could degrade the visual character or quality of their surroundings.

Projects implemented under the 2040 MTP/SCS would be subject to existing regulations that would help to minimize impacts to visual character. For example, in visually sensitive areas, local land use agencies would apply development standards and guidelines to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping and site grading. Nevertheless, even with compliance with these standards, the overall visual effect of planned roadway projects and envisioned land use projects would contribute to an incremental, but irreversible transformation in visual character from rural or semi-rural to more urban or suburban throughout the AMBAG region. Therefore, the impact on visual character resulting from implementation of the 2040 MTP/SCS would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measure developed for the 2040 MTP/SCS program where applicable for transportation projects that would substantially degrade visual character. Cities and counties in the AMBAG region can and should implement this measure, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

AES-2 Design Measures for Visual Compatibility

The implementing agency 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);
- Protecting or replacing trees in the project area;
- 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

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

Threshold 4: Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area

Impact AES-3 TRANSPORTATION PROJECTS ENVISIONED IN THE 2040 MTP/SCS WOULD RESULT IN INCREASED LIGHTING FROM SECURITY LIGHTING, LANDSCAPE AND STRUCTURE LIGHTING AND LIGHTS ON VEHICLES. LAND USE PROJECTS ENVISIONED IN THE 2040 MTP/SCS WOULD ALSO INTRODUCE NEW OR INTENSIFIED SOURCES OF LIGHTING. THIS LIGHTING MAY ADVERSELY AFFECT VIEWS IN THE AREA AND WOULD BE A SIGNIFICANT BUT MITIGABLE IMPACT.

New or intensified lighting from land use development envisioned in the 2040 MTP/SCS, which is focused on infill and TOD development, would be concentrated in areas with existing sources of light and glare. In these infill 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 TOD projects under the 2040 MTP/SCS, depending on site-specific conditions and lighting design associated with new structures. Exterior lighting in some areas would be limited by compliance with existing lighting regulations, as discussed in the Regulatory Setting. For example, Chapter 19.31 of the San Benito County Code (Development Lighting) (San Benito County, 2017), Section 13.10.363 of the Santa Cruz County Code (Santa Cruz County, 2017) and Chapter 17.30.070 of the City of Seaside's Municipal Code (City of Seaside 2017) contain limitations to the maximum height, energy efficiency, position and maximum illumination of new lighting fixtures, among other parameters, to reduce lighting and glare impacts. However, not all jurisdictions have adopted dark sky ordinances or similar restrictions, and because the restrictiveness of these regulations varies throughout the region, impacts from land use development on the potential for increased lighting affecting nighttime views would be 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 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 the 2040 MTP/SCS would directly introduce

light, including: the replacement of existing lighting at the Monterey Municipal Airport, construction of pedestrian lighting along various City streets and installation of lighting along bike paths in Monterey County. The introduction of light and glare could adversely affect day or nighttime views.

Overall, light and glare impacts from transportation improvements and infill and TOD development envisioned under the 2040 MTP/SCS would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures for transportation projects that would result in light and glare impacts. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. 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 hoods, low intensity lighting and using as few lights as necessary to achieve the goals of the project.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies.

AES-3(b) Lighting Design Measures

As part of planning, design and engineering for projects, implementing agencies 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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, in areas lacking existing dark sky ordinances or similar regulations, or where such regulations are insufficient, the implementation of the identified mitigation measures would reduce impacts related to light and glare to a less-than-significant level.

c. Specific MTP/SCS Projects That May Result in Impacts

Table 5 identifies projects with the potential to cause or contribute to direct or indirect impacts to aesthetics and visual resources such as those discussed above. These projects are representative and were selected based on their potential scope and likelihood to result in the impacts identified above. 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.

Table 5 2040 MTP/SCS Projects That May Result in Aesthetic/Visual Resource Impacts

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-GRN001-GR	Monterey	Greenfield	Apple Avenue Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	AES-1
MON-GRN005-GR	Monterey	Greenfield	Thorne Road Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	AES-1
MON-MAR157-MA	Monterey	Marina	Reservation Road/Beach Road Improvements	Widen roadway with sidewalk and bike lane improvements.	AES-1
MON-MRY002-MY	Monterey	Monterey	Del Monte – Washington Improvements	Construct pedestrian bridge over Del Monte and traffic signal improvements.	AES-1
MON-MYC075-UM	Monterey	Chualar	River Road Operational Improvements	Widen shoulders and improve geometrics and install class II bike lanes.	AES-1
MON-SCY009-SA	Monterey	Sand City	Bike Path Lighting	Install lighting on existing class I path.	AES-2
MON-SNS078-SL	Monterey	Salinas	Natividad Creek Bike Path	Install new bike path.	AES-1
MON-SNS141-SL	Monterey	Salinas	Laurel Drive Sidewalks	Sidewalk lighting.	AES-2
MON-SOL043-SO	Monterey	Soledad	Pedestrian Lighting	Construct pedestrian lighting along various City streets.	AES-2
MON-CT011-CT	Monterey	SR 68 Corridor	SR 68 – Commuter Improvements	Widen existing roadway to 4 lanes between existing 4-lane segment at Toro Park and Corral de Tierra Road (MON-68-4.0/15.0)	AES-1
MON-CT017-CT	Monterey	Monterey	SR 68 – (Holman Hwy – access to Community Hospital)	Widen Holman Highway SR 68 from CHOMP to SR 1 to 4 lanes and make operational improvements at the SR 68/SR 1 EA interchange. (EA 05-44800) PM 3.8/L4.3	AES-1
MON-CT022-CT	Monterey	Prunedale	SR 156 – Corridor Widening Project	Construct new 4-lane highway south of existing alignment convert existing highway to frontage road and construct new at U.S. 156 and 101.	AES-1
MON-CT030-SL	Monterey	Salinas	U.S. 101 – Salinas Corridor	Widen U.S. 101 to 6 lanes within the existing right of way at locations where feasible.	AES-1
MON-CT031-CT	Monterey	Chualar	U.S. 101 – South County Frontage Roads	Construct Frontage Roads from Harris Road to Chualar, then to Soledad. (EA 05-OH330)	AES-1
MON-CT0445-SL	Monterey	Salinas	U.S. 101 – Harris Road Interchange	Construct new interchange on U.S. 101 at Harris Road (PM 83.71).	AES-1
MON-GRN008-GR	Monterey	Greenfield	U.S. 101 – Walnut Avenue Interchange	Relocate and replace existing U.S. 101/Walnut Avenue Interchange and widen to six lanes. (EA 05-OP160) PM 53.4/54.3	AES-1
MON-MAR136-MA	Monterey	Marina	SR 1 & Imjin Bridge	Widen NB off-ramp to two lanes.	AES-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-MAR137-MA	Monterey	Marina	SR 1 & Imjin Bridge	Widen SB on-ramp to two lanes.	AES-1
MON-SOL002-SO	Monterey	Soledad	U.S. 101 – North Interchange	Install new interchange north of U.S. 101 and Front Street.	AES-1
MON-SOL003-SO	Monterey	Soledad	U.S. 101 – South Interchange	Install new interchange south of U.S. 101 and Front Street.	AES-1
MON-PGV010-PG	Monterey	Pacific Grove	SR 68 – Bishop to Sunset	Mobility Improvements including sidewalks, lighting, landscaping and roadways overlay.	AES-2
MON-MAR001-MA	Monterey	Marina-Salinas	Marina – Salinas Corridor	Widen Davis Road to 4 lanes from Blanco Road to Reservation Road; construct new 4-lane bridge over the Salinas River; widen Reservation Road to 4 lanes from Davis Road to existing 4-lane section adjacent to East Garrison at Intergarrison Road; widen Imjin Pkwy to 4 lanes from Reservation Road to Imjin Road, construct new Imjin Parkway interchange at SR 1. Include accommodations for bicyclists, pedestrians and transit; consider high quality transit service along corridor.	AES-1
MON-SNS012-SL	Monterey	Salinas	Boronda Road Widening	Widen to 6 lanes from San Juan Grade Road to Williams Road; install Class II bike lanes and fill sidewalk gaps.	AES-1
MON-SNS044-SL	Monterey	Salinas	Natividad Road Widening	Widen from 2 to 4 lanes.	AES-1
MON-SNS050-SL	Monterey	Salinas	Russel Road Widening	Widen street from U.S. 101 to San Juan Grade Road.	AES-1
MON-SNS059-SL	Monterey	Salinas	Williams Road Widening	Widen from 2 to 4 lanes.	AES-1
MON-SNS090-SL	Monterey	Salinas	Russel Road Extension	Extend 4 lane arterial.	AES-1
MON-SNS092-SL	Monterey	Salinas	San Juan Natividad Collector	Construct an east-west 2 lane collector.	AES-1
MON-SNS093-SL	Monterey	Salinas	Independence Boulevard Extension	Extend as 2 lane collector.	AES-1
MON-SNS094-SL	Monterey	Salinas	Hemingway Drive Extension	Construct 2-lane road.	AES-1
MON-SNS095-SL	Monterey	Salinas	Constitution Boulevard Extension	Construct 4-lane street.	AES-1
MON-SNS096-SL	Monterey	Salinas	Sanborn Road Extension	Construct 4-lane arterial.	AES-1
MON-SNS097-SL	Monterey	Salinas	Williams Russel Collector	Construct new north-south connection.	AES-1
MON-SNS-098-SL	Monterey	Salinas	Alisal Street Extension	Extend as 2-lane collector street with bike lanes.	AES-1
MON-SNS099-SL	Monterey	Salinas	Moffett Street Extension	Extend as 4-lane collector.	AES-1

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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-SNS100-SL	Monterey	Salinas	Rossi Street Widening	Widen to 4 lanes.	AES-1
MON-SNS101-SL	Monterey	Salinas	Bernal Drive Extension	Extend as 4-lane arterial.	AES-1
MON-SNS102-SL	Monterey	Salinas	Constitution Boulevard Extension	Construct new 2-lane street.	AES-1
MON-SNS103-SL	Monterey	Salinas	Williams Road Widening	Widen from 3 to 4 lanes.	AES-1
MON-SNS104-SL	Monterey	Salinas	Alisal Street Widening	Widen from 2 to 4 lanes.	AES-1
MON-SNS108-SL	Monterey	Salinas	Laurel Drive Widening	Widen to 6 lanes and add left turn channelization west of Constitution.	AES-1
MON-SNS121-SL	Monterey	Salinas	McKinnon Street Extension	Extend 2-lane collector.	AES-1
MON-FRA004-MA	Monterey	Marina	Patton Parkway (Abrams Road)	Construct a new 2-lane arterial and Class II bike lanes (FORA CIP FO2).	AES-1
MON-FRA010-MA	Monterey	Marina	Crescent Court	Extend existing Crescent Court southerly to join proposed Abrams Drive on the former Fort Ord (FORA CIP off-site 8).	AES-1
MON-FRA018-SE	Monterey	Seaside	Giggling Road	Upgrade/construct new 4-lane arterial (FORA CIP FO7).	AES-1
MON-FRA023-MA	Monterey	Marina	Salinas Avenue	Construct new 2-lane arterial (FORA CIP FO11).	AES-1
MON-FRA025-MA	Monterey	Marina	2nd Avenue Phase 2	Construct new arterial road and Class II bike lanes (FORA CIP FO8).	AES-1
MON-FRA026-MA	Monterey	Marina	2nd Avenue Phase 3	Construct new arterial road and Class II bike lanes (FORA CIP FO8).	AES-1
MON-FRA027-MA	Monterey	SR 68 Corridor	So. Boundary Road Improvements	Reconstruct street, add sidewalks, bike lanes, street lights, etc.	AES-1, AES-2
MON-GON005-GO	Monterey	Gonzales	Fanoe Road	Widen from 4 to 6 lanes and install Class II bike lanes.	AES-1
MON-GON007-GO	Monterey	Gonzales	La Gloria Road Widening	Widen road approximately one-half mile.	AES-1
MON-GRN003-GR	Monterey	Greenfield	Oak Road Bridge over U.S. 101	Widen bridge for dual left turn lanes.	AES-1
MON-GRN022B-GR	Monterey	Greenfield	Pine Avenue Overcrossing at U.S. 101	Construct new bridge over U.S. 101 to improve E-W traffic flow.	AES-1
MON-MAR150-MA	Monterey	Marina	2nd Avenue Extension	Construct new roadway.	AES-1
MON-MAR153-MA	Monterey	Marina	Patton (Abrams) Pkwy Extension	Construct new roadway.	AES-1
MON-MAR154-MA	Monterey	Marina	Imjin Parkway Widening Project	Measure X project to widen Imjin Parkway to 4 lanes from Reservation Road to Imjin Road.	AES-1
MON-MYC043147-UM	Monterey	Unknown	Jolon Road Overlay Safety Improvements	Shoulder widening & geometric improvements and installation of 39.2 miles of Class II bikeway.	AES-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-MYC147-UM	Monterey	Castroville	Castroville Improvements/ Blackie Road	Construct new road from Castroville Boulevard to Blackie Road.	AES-1
MON-MYC157-UM	Monterey	Carmel Valley	CVMP – Carmel Valley Road between Laureles Grade and Ford Shoulder Widening	Shoulder widening.	AES-1
MON-MYC162-UM	Monterey	Carmel Valley	CVMP – Laureles Grade at Carmel Valley Road Roundabout, Signalization, or Widening	Install signal or widen (prior to grade separation).	AES-1
MON-MYC238-UM	Monterey	Moss Landing	Salinas Road Improvements	Widen to four lanes between future Hwy 1 and Salinas Road interchange and existing four-lane section. Widen existing three-lane section of Salinas Road from Werner road to Elkhorn Road to four lanes. Add Class II bike lanes on Salinas Road from SR 1 to Elkhorn Road. Install traffic signal and construct intersection improvements at Salinas Road/Werner Road. Construct traffic signal on Elkhorn Road at Salinas Road. Re-align Salinas Road and Werner Road to intersect Elkhorn Road at a single location with a traffic signal.	AES-1
MON-MYC247-UM	Monterey	Prunedale	San Miguel Canyon Road at Castroville Boulevard	Signalization of the intersection, roadway widening and striping improvements.	AES-1
MON-SCY005-SA	Monterey	Sand City	Sand City Rehab in Old Town Area	Install street lighting, reconstruct streets in Old Town area; design shared streets (Woonerfs).	AES-2
MON-SNS006-SL	Monterey	Salinas	U.S. 101 – Alvin Drive Overpass/ Underpass and Bypass	Construct overpass/underpass and 4-lane street structure.	AES-1
MON-SNS008-SL	Monterey	Salinas	Bernal Drive East Improvements	Widen road, construct sidewalk and retaining wall on north side of road; between N. Main and Rosarita Drive.	AES-1
MON-SNS024-SL	Monterey	Salinas	Elvee Drive	Construct 44' wide culvert and extend two lanes between Work to Elvee.	AES-1
MON-SNS041-SL	Monterey	Salinas	Maryl Drive Reconstruction	Widen roadway behind Rodeo Grounds (from 36' to 40').	AES-1
MON-SNS159-SL	Monterey	Salinas	Market/ Eucalyptus Intersection Improvements	Traffic signal installation, lighting and sidewalks.	AES-2

2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SB-COG-A54	San Benito	Hollister - Gilroy	State Route 25 Corridor Improvement Project	To enhance safety, improve traffic operations and provide additional capacity to reduce congestion for all transportation modes on Highway 25 between San Felipe Road and the San Benito/Santa Clara County line.	AES-1
SB-CT-A01	San Benito	San Juan Bautista	SR 156 Widening – San Juan Bautista to Union Road	Construct a four-lane expressway south of the existing State Route 156 and use the existing SR 156 as the northern frontage road.	AES-1
SB-CT-A17	San Benito	Hollister	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	Widen to 4-lane expressway with bicycle lanes.	AES-1
SB-CT-A44	San Benito	Hollister	Highway 25 4-lane Widening, Phase 1	Widen to 4-lane expressway, San Felipe Road to Hudner Lane.	AES-1
SB-VTA-A01	San Benito	Gilroy	Highway 101/25 Interchange	New interchange at Highway 101 and Highway 25 in Santa Clara County.	AES-1
SB-CT-A02	San Benito	Hollister	Highway 156/Fairview Road Intersection Improvements	Construct new turn lanes at the intersection.	AES-1
SB-COH-A16	San Benito	Hollister	Memorial Drive Extension: Meridian Street to Santa Ana Road	Construct 4-lane road extension with bicycle lanes.	AES-1
SB-COH-A18	San Benito	Hollister	Westside Boulevard Extension	Construct 2-lane road; Nash Road to Southside Road/San Benito Street intersection with bicycle lanes.	AES-1
SB-COH-A19	San Benito	Hollister	North Street (Buena Vista) between College Street and San Benito Street	Construct 2-lane road with bicycle lanes.	AES-1
SB-COH-A55	San Benito	Hollister	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	Construct new 4-lane road and extension with bicycle lanes.	AES-1
SB-COH-A57	San Benito	Hollister	Pacific Way (New Road): San Felipe Rd. to Memorial Drive	New 2-lane road from San Felipe Road to future Memorial Drive north extension with bicycle lanes.	AES-1
SB-SBC-A04	San Benito	Hollister	Union Road Widening (East): San Benito Street to Highway 25	Widen to 4-lane arterial with bicycle lanes.	AES-1
SB-SBC-A05	San Benito	Hollister	Union Road Widening (West): San Benito Street to Highway 156	Widen to 4-lane arterial with bicycle lanes.	AES-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SB-SBC-A09	San Benito	Hollister	Fairview Road Widening: McCloskey to SR 25	Widen to 4-lane arterial; construct new bridge south of Santa Ana Valley Road with bicycle lanes.	AES-1
SB-SBC-A14	San Benito	Hollister	San Benito Regional Park Access Road	Construct new 2-lane roadway from Nash Road to San Benito Street	AES-1
SB-SBC-A50	San Benito	Hollister	Hospital Road Bridge	Hospital Road over San Benito River, between South Side Road and Cienega Road. Replace lane low water crossing with 2-lane bridge. Bridge No. 00L0026	AES-1
SB-SBC-A67	San Benito	Dunneville	Shore Road Extension	4-lane arterial with Class II bike lanes.	AES-1
SB-SBC-A79	San Benito	Hollister	Enterprise Road Extension	Extend Enterprise Road westerly from Southside Road toward Union Road.	AES-1
SB-SBC-A81	San Benito	Hollister	Meridian Street Extension: 185 feet east of Clearview Road to Fairview Road	Construct 4-lane road. Located in the City of Hollister and County with bicycle lanes.	AES-1
SB-SBC-A82	San Benito	Hollister	Flynn Road Extension	San Felipe Road to Memorial Drive north extension. New roadway construction south of McCloskey Road with bicycle lanes.	AES-1
SB-SJB-A07	San Benito	Hollister	Third Street Extension	Constructing Third Street to connect to First Street.	AES-1
SB-SJB-A08	San Benito	Hollister	Lavanigno Drive Construction	Construction of Lavanigno Drive, split lanes with island in the middle; total 4 lanes.	AES-1
SB-SJB-A09	San Benito	Hollister	Connect Lang Street to The Alameda	Construct and connect Lang Street; 2 lanes.	AES-1
SB-SBC-A51	San Benito	Unknown	Y Road Bridge	Y Road over San Benito River replace 2-lane Low-Water Crossing with 2-lane bridge. Bridge No. 00L0069	AES-1
SB-SBC-A54	San Benito	Near Paicines	Panoche Road Bridge (Bridge No. 43C0027)	Panoche Road, over Tres Pinos Creek, 12 miles west Little Panoche Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0027	AES-1
SB-SBC-A57	San Benito	Cienega Valley	Limekiln Road Bridge	Limekiln Rd over Pescadero Creek, 0.1 mi. S Cienega Rd. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0054.	AES-1
SB-SBC-A58	San Benito	San Juan Bautista	Rocks Road Bridge	Rocks Road over Pinacate Rock Creek, East Little Merrill Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0053.	AES-1
SB-SBC-A86	San Benito	Hollister	John Smith Realignment at Fairview Intersection	This project will realign John Smith Road to intersect Fairview Road at St. Benedict Way and add left and right turn lanes into John Smith Road.	AES-1
SB-LTA-A5348	San Benito	Hollister-Gilroy	Commuter Rail to Santa Clara County	Commuter rail from Hollister to Gilroy.	AES-1

2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
RTC 30SC	Santa Cruz	Aptos	Hwy 1 Bicycle/Ped Overcrossing at Mar Vista	Construct a bicycle/pedestrian overcrossing of Hwy 1 in vicinity of Mar Vista Drive, providing improved access to Seacliff and Aptos neighborhoods and schools.	AES-1
SC-SC-P105-SCR	Santa Cruz	Santa Cruz	Market Street sidewalks and Bike Lanes	Completion of sidewalks and bicycle lanes. Includes retaining walls, right-of-way, tree removals and a bridge modification.	AES-1
SC-WAT-P65-WAT	Santa Cruz	Watsonville	Upper Struve Slough Trail	Construction of 450 foot long pedestrian/bicycle path along upper Struve Slough from Green Valley Road to Pennsylvania Drive. The trail shall consist of a twelve-foot wide by one foot deep aggregate base section with the center eight feet covered with a chip seal. Additional improvements include installing a 130-foot length of modular concrete block retaining wall, reinforcing 160-foot length of slough embankment with rock slope protection and installing a 175-foot long by eight foot wide boardwalk.	AES-1
SC-RTC-24e-RTC	Santa Cruz	Soquel	3 – Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street 3 – Hwy 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	<u>Construct approximately 2.5 miles of auxiliary lanes northbound and southbound between State Park Drive and Park Avenue interchange and the Park Avenue and Bay/Porter interchange. Includes retaining walls, soundwalls and reconstruction of Capitola Avenue overcrossing with wider sidewalks and bike lanes. [Part of Highway 1 CIP project (RTC 24a)].</u> Construct auxiliary lanes and reconstruct Capitola Avenue overcrossing.	AES-1
SC-RTC-24f-RTC	Santa Cruz	Soquel	2 – Hwy 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Ped Bridge	Construct auxiliary lanes and a bicycle/pedestrian overcrossing of Hwy 1 at Chanticleer Avenue.	AES-1
SC-RTC-24g-RTC	Santa Cruz	Soquel	4 – Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue	Construct auxiliary lanes.	AES-1
SC-RTC-24r-RTC	Santa Cruz	Aptos	94 – Hwy 1: Northbound Auxiliary Lane from San Andreas Road/Larkin Valley Road to Freedom Boulevard	Construct northbound auxiliary lane.	AES-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SC-SC-38-SCR	Santa Cruz	Santa Cruz	Hwy 1/San Lorenzo Bridge Replacement	Replace the Highway 1 bridge over San Lorenzo River to increase capacity, improve safety and improve seismic stability, from Highway 17 to the Junction of Hwys 1/9. Reduce flooding potential and improve fish passage. Caltrans Project ID 05-0P460	AES-1
SC-CAP-P05-CAP	Santa Cruz	Rio Del Mar	Cliff Drive Improvements	Installation of sidewalks, pedestrian crossing and slope stabilization of embankment, including seawall.	AES-1
SC-CO-P88-USC	Santa Cruz	Riverside Grove	Either Way Lane Bridge Replacement Project	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane clear span precast voided concrete slab bridge and standard bridge approaches.	AES-1
SC-CO-P89-USC	Santa Cruz	Boulder Creek	Redwood Road Bridge Replacement Project	The project will consist of completely replacing the existing steel army tread way bridge cording a tributary of Brown's Creek on Redwood Road with a reinforced concrete slab bridge and standard bridge approaches.	AES-1
SC-CO-P90-ESC	Santa Cruz	Boulder Creek	Fern Drive at San Lorenzo River Bridge Replacement Project	The project will consist of completely replacing the existing three span single lane structure and roadway approaches with a new two lane clear span reinforced concrete box girder bridge and standards bridge approaches.	AES-1
SC-CO-P91-USC	Santa Cruz	Brookdale	Larkspur Bridge San Lorenzo River	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane bridge and standard bridge approaches.	AES-1
SC-CT-P48-CT	Santa Cruz	Pasatiempo - Glenwood	Hwy 17 Wildlife Habitat Connectivity	Wildlife crossing.	AES-1

d. Cumulative Impacts

The analysis in this section examines impacts of the 2040 MTP/SCS on aesthetics/visual resources throughout the AMBAG 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 impact 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 Salinas, 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 2040 MTP/SCS 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 the 2040 MTP/SCS.

With regard to the visual environment experienced throughout the cumulative impact analysis area (AMBAG region and adjoining counties), as planned cumulative development occurs over time the overall visual environmental will change. The combination of forecasted development in the AMBAG 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 the 2040 MTP/SCS 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.

4.2 Agriculture and Forestry Resources

This section evaluates the agriculture and forestry resource impacts of the proposed 2040 MTP/SCS.

4.2.1 Setting

AMBAG's planning area includes expansive agricultural lands. The specific agricultural resources of Monterey, San Benito and Santa Cruz Counties are discussed below.

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 2016a):

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.

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.

As noted in Chapter 4 of the 2040 MTP/SCS, the AMBAG region contains a total of 292,088.4 acres of Important Farmland, including 236,282 acres in Monterey County, 36,159.9 acres in San Benito County and 19,646.5 acres in Santa Cruz County.

a. Important Farmland Trends

According to the DOC, Important Farmland in California decreased by 70,632 acres, or 0.6 percent, between 2010 and 2012 (DOC 2016b). The highest-quality agricultural soils, known as Prime Farmland, comprised 67 percent of the loss. Although this farmland conversion was partially caused by increased urbanization, long-term land idling was the largest factor contributing to irrigated land decreases over this time period.

In contrast to statewide trends of decreasing agricultural lands, between 2012 and 2014, total Important Farmland in the counties of Monterey, Santa Cruz and San Benito saw a net increase of

174 acres, or approximately 0.06 percent (DOC 2015). As shown in Table 6, Monterey County and San Benito County experienced an increase of 417 acres (+0.17 percent) and 92 acres (+0.25 percent), respectively, while Santa Cruz County experienced a decrease of 335 acres (-1.67 percent) (DOC 2015).

Table 6 Important Agriculture Land Conversion by County 2012-2014

Land Use Category	Total Acreage Inventoried		2012-2014 Acreage Changes			
	2012	2014	Acres Lost (-)	Acres Gained (+)	Total Acreage Changed	Net Acreage Changed
Monterey County						
Important Farmland ¹	235,866	236,283	1,299	1,716	3,015	+417
San Benito County						
Important Farmland ¹	36,063	36,155	1,506	1,598	3,104	+92
Santa Cruz County						
Important Farmland ¹	19,981	19,646	452	117	569	-335
Total	291,910	292,084	3,257	3,431	6,688	+174

Sources: California Department of Conservation (DOC). 2015. *California Farmland Conversion Report 2015*. Available at: http://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2010-2012/FCR/FCR%202015_complete.pdf. Accessed August 14, 2017.

¹Important Farmland represents all Prime Farmland, Farmland of Statewide Importance and Unique Farmland within the given County.

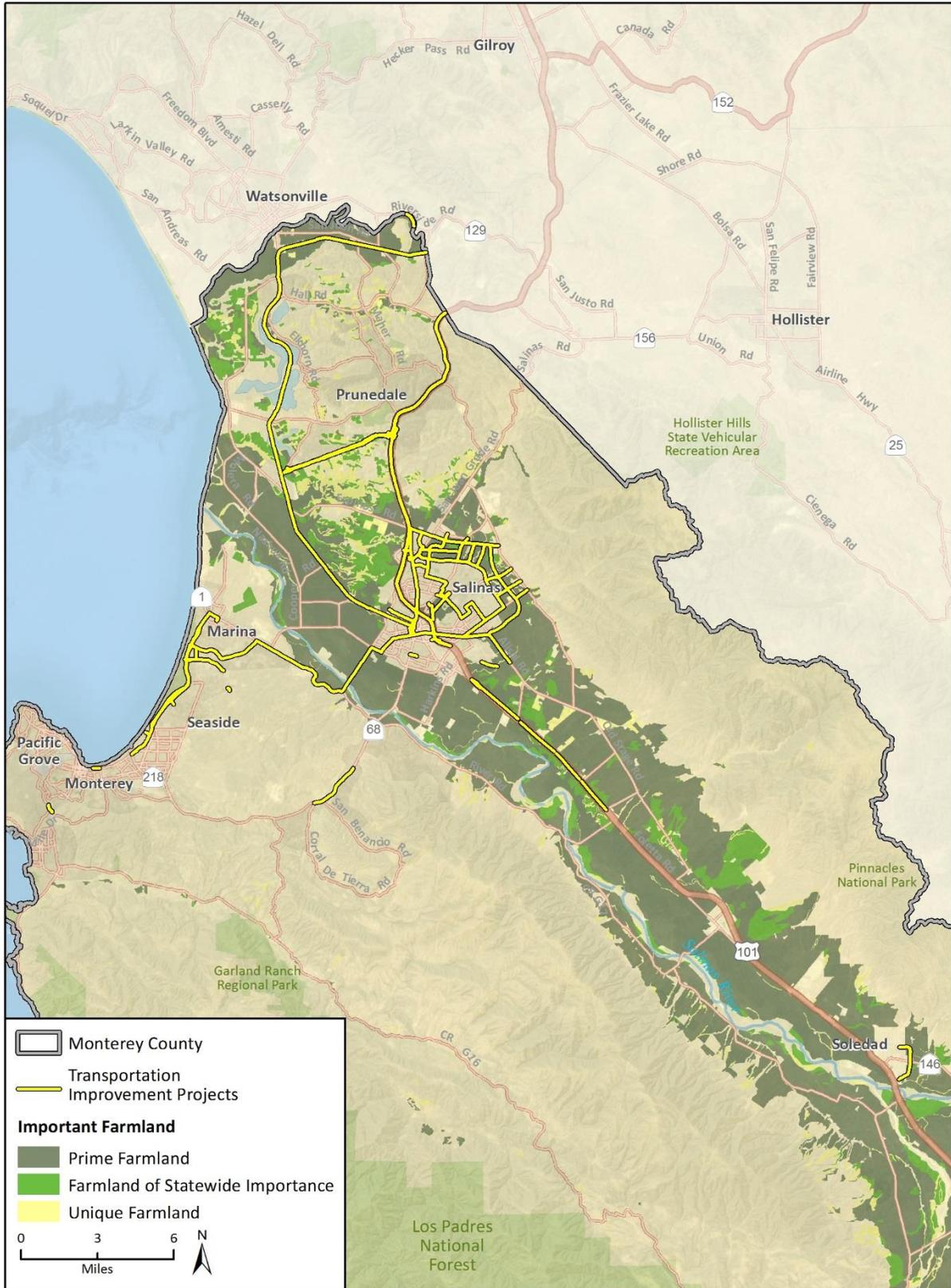
b. Agricultural Productivity

Monterey County

Agriculture consisting of crop farming and livestock grazing is the largest industry in Monterey County and contributes a substantial amount of money to Monterey County’s economy. Out of approximately 1.3 million acres of County land dedicated to agriculture, most of this area (approximately 81 percent) is used for grazing (DOC 2015). The most productive and lucrative farmlands in the County are located in the North County, Greater Salinas and Central Salinas Valley Planning Areas (Monterey County 2010b). The main type of crop production in the County consists of cool season vegetables, strawberries, wine grapes and nursery crops.

As of January 1, 2015, 795,543 acres of land are under Williamson Act contract in Monterey County with 61,020 acres under the Farmland Security Zone (“FSZ”) (DOC 2016c). As noted previously, 236,282.0 acres in Monterey County are designated under the FMMP as containing Important Farmlands. According to the FMMP, between the years 2012 and 2014, Important Farmland in Monterey County saw a net increase of over 400 acres (DOC 2015). Figure 10 compares the locations of Important Farmland to the locations of transportation projects included in the 2040 MTP/SCS in Monterey County.

Figure 10 Important Farmland in Monterey County



Imagery provided by ESRI and its licensors © 2017.
 Additional data provided by AMBAG 2017e; DOC, 2016d.

Fig 11 FMMP Monterey

San Benito County

The San Benito River Valley supports some of the most productive farmland in the State. Agriculture makes a substantial contribution to the County economy and accounts for an overwhelming amount of the privately-owned land in the County. The primary crops are fruits and nuts, vegetables and other row crops and small grains, and County lands also support the livestock industry, namely beef cattle and sheep (San Benito County 2016).

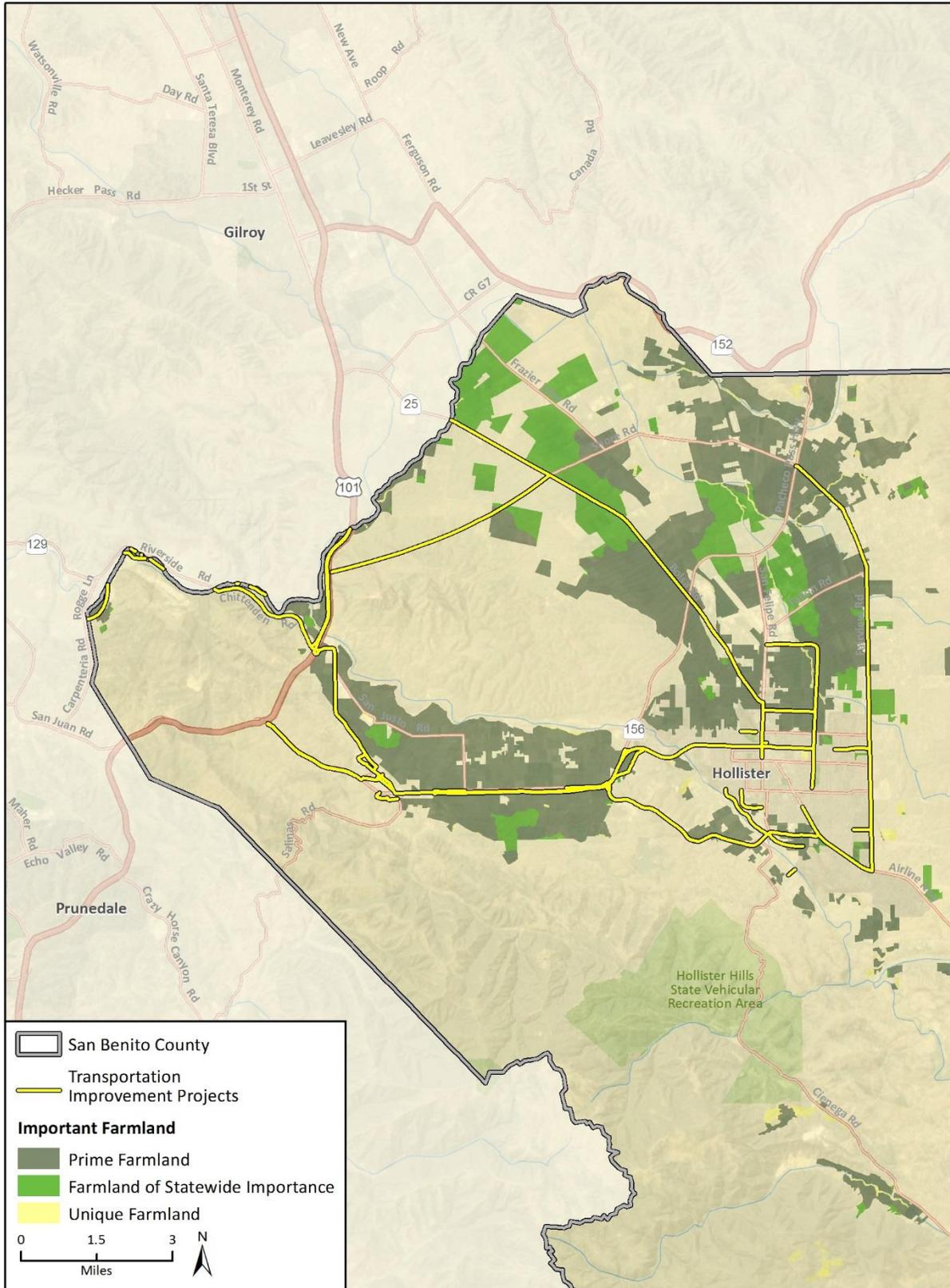
The County's gross agricultural production in 2015 totaled approximately \$360.5 million, representing a nearly 11 percent increase in value over the previous year (San Benito County 2016). The highest grossing agricultural commodity was vegetable and row crops, representing approximately 71 percent of total agricultural sales, followed by fruit and nut crops at 12 percent, field crops at 8 percent, cattle at 7 percent and miscellaneous livestock and poultry at 2 percent (San Benito County 2015a). In 2014, approximately 578,000 acres of land are under Williamson Act contract in San Benito County, while no land in the county was reported as under the Farmland Security Zone ("FSZ") (DOC 2016b). As noted previously, 36,159.9 acres in San Benito County designated under the FMMP as containing Important Farmlands. According to the FMMP, between the years 2012 and 2014, nearly 750 acres of Important Farmland were converted to Grazing Land, 70 acres were converted to Urban and Built-Up Land and almost 250 acres were converted to Other Land in the county (DOC 2015). Figure 11 compares the locations of Important Farmland to the locations of transportation projects included in the 2040 MTP/SCS in San Benito County.

Santa Cruz County

The top ten revenue crops that were produced in Santa Cruz County in 2015 included strawberries, raspberries, nursery stock, indoor cut and field grown flowers, blackberries, miscellaneous vegetables, lettuce, brussels sprouts, livestock and animal products and apples (Santa Cruz County 2016a). The most common crop types (by acreage) in Santa Cruz County include strawberries, raspberries, apples, lettuce, brussels sprouts and miscellaneous vegetables (Santa Cruz County 2016a). In 2014, over 18,000 acres were under Williamson Act contract in Santa Cruz County with approximately 280 acres under the Farmland Security Zone ("FSZ") (DOC 2016b). As noted previously, 19,646.5 acres in Santa Cruz County are designated under the FMMP as containing Important Farmlands. Figure 12 compares the locations of Important Farmland to the transportation projects included in the 2040 MTP/SCS in Santa Cruz County.

Santa Cruz County has a large concentration of organic farms. There are more than 100 organic growers in Santa Cruz County with over 6,600 acres in organic crops and pasture. These crops represent approximately 10.6 percent of total agricultural land in the county and have an estimated value of over \$90 million (Santa Cruz County 2014a).

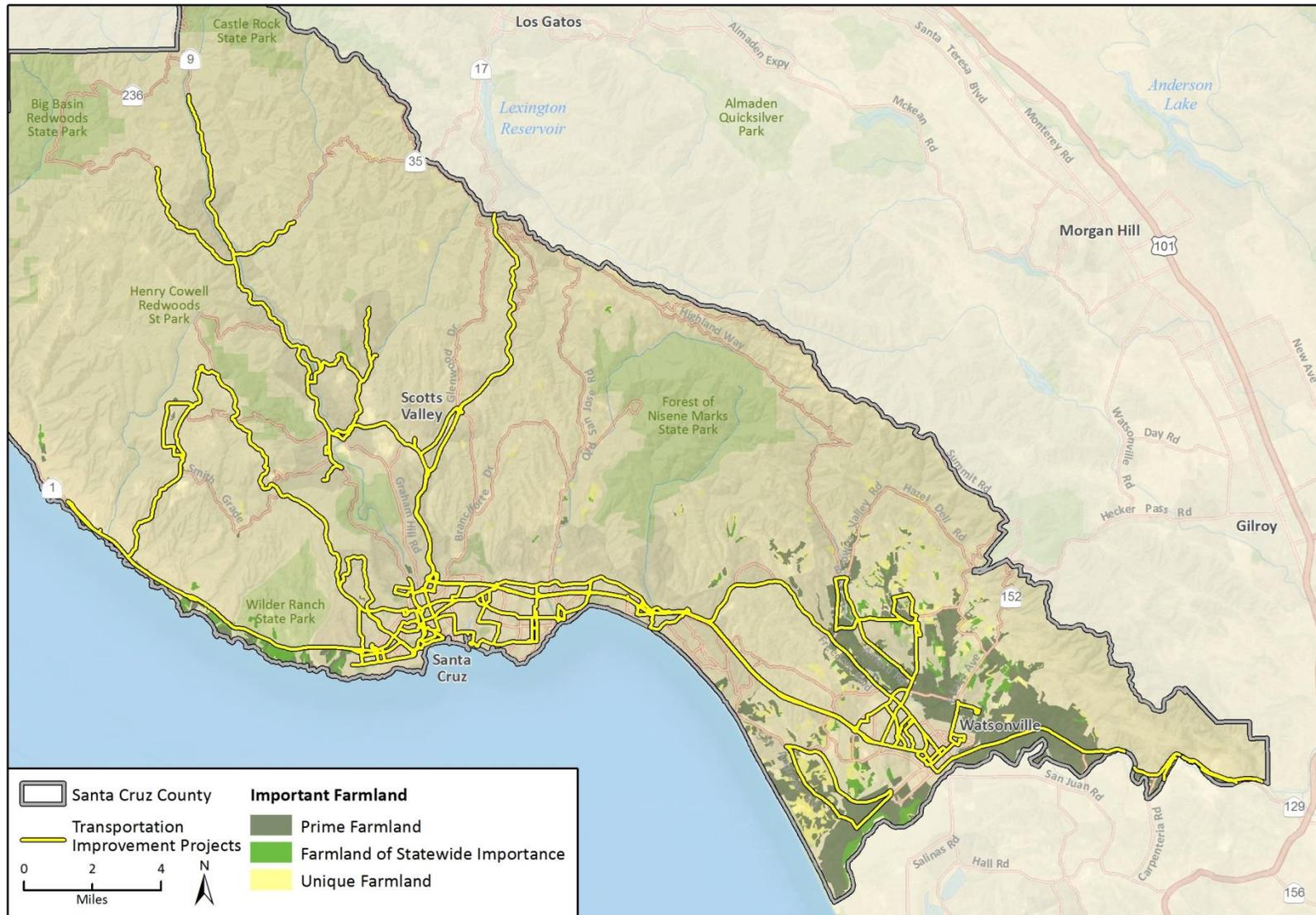
Figure 11 Important Farmland in San Benito County



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 Additional data provided by AMBAG 2017e; DOC, 2016d.

Fig 12 FMMP San Benito

Figure 12 Important Farmland in Santa Cruz County



Imagery provided by ESRI and its licensors © 2017.

Additional data provided by AMBAG 2017; Department of Conservation, Farmland Mapping and Monitoring Program, 2014.

Fig 4.2-2 FMMP Santa Cruz

c. Regulatory Setting

Federal

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 (NRCS 2017).

US Forest Service (USFS)

The United States Forest Service (USFS) is a Federal agency that manages public lands in national forests and grasslands. The Forest Service is also the largest forestry research organization in the world and provides technical and financial assistance to state and private forestry agencies. The purpose of USFS is to provide the greatest amount of good for the greatest amount of people in the long run (USFS 2017).

State

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 2016d).

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).

The Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act (Government Code Sections 56000 et seq.) establishes procedures for local government changes of organization, including city incorporations, annexations to a city or special district and city and special district consolidations. This act requires that development or use of land for other than open space will be guided away from existing prime agricultural lands in open space use toward areas containing nonprime agricultural lands, unless that action would not promote that planned, orderly, efficient development of an area.

Local

Each of the three counties' General Plans highlights the importance of protecting agricultural land. The Monterey County General Plan (Monterey County, 2010a) contains goals to promote the long-term protection, conservation and enhancement of productive and potentially productive agricultural land and ensure that the County's land use policies are consistent with ongoing agricultural activities. The Santa Cruz County's General Plan (Santa Cruz County, 1994) pays particular attention to the County's timber resources and provides policies that limit and regulate development in Timber Production Zones (TPZ). The San Benito County 2035 General Plan (San Benito County, 2015a) also contains goals and policies to protect agricultural lands, but also contains the concept "right to farm and ranch." Specifically, San Benito County aims to protect the rights of operators of productive agricultural properties and ranching properties to continue their practices even though established urban uses in the general area may foster complaints against those agricultural and ranching practices.

Several cities within the AMBAG region have adopted policies in their General Plans aimed at preserving agricultural land. Representative policies for cities within each of the three counties are discussed below.

Cities in Monterey County

The City of Greenfield's Conservation, Recreation and Open Space Element of its General Plan (City of Greenfield, 2005) contains several policies which aim to allow agriculture to continue as a viable use of land that reflects the community's origin while minimizing conflicts between agricultural and urban uses. For example, Policy 7.1.2 expresses the intent to minimize conflicts and negative impacts resulting from development that occurs in close proximity to agricultural uses. Moreover, Policy 7.1.3 encourages the promotion and marketing of locally grown agricultural products.

The Conservation and Open Space Element of the City of Soledad's General Plan (City of Soledad, 2005) also contains policies aimed at preserving existing agricultural uses. Policy C/OS-1 states that "[t]he City shall discourage 'leapfrog' development and development in peninsulas extending into agricultural lands to avoid adverse effects on agricultural operations." Furthermore, Policy C/OS-3 aims to reduce urban encroachment upon agricultural lands by ensuring that new development and public infrastructure projects do not encourage expansion of urban uses outside the General Plan area into area designated as Agriculture by the Monterey County General Plan. Lastly, Policy C/OS-5 requires a right-to-farm condition to all future subdivision maps adjacent to farmlands.

The Conservation and Open Space Element of the City of Gonzales' General Plan (City of Gonzales, 2010) contains goals, policies and implementing actions that focus on minimizing development on the agricultural edge. For example, Goal COS-4 states that the City aims for "[m]inimal disruption of agricultural operations and the loss of prime farmland and agricultural open space outside the

Gonzales 2010 General Plan growth area. Furthermore, Policy COS-4.1 aims to maintain agricultural as the core of the local economy by conserving and protecting agricultural lands and operations within the Planning Area and where agricultural land is planned for eventual urbanization, work to keep such land in production up until the time when the land is converted to urban use. The Land Use Element of the City of Salinas' General Plan (City of Salinas, 2002) contains several goals and policies aimed specifically at preserving existing agriculture land uses. For example, Goal LU-2 states that the City aims to "[m]anage future growth to minimize impacts to the existing community and surrounding agricultural lands." This is executed by the City of Salinas by maintaining a compact city form and directing urban expansion to the North and East, away from the most productive agricultural land. Moreover, the City's Conservation and Open Space Element also provides goals and policies aimed at protecting important agricultural land. Goal COS-3 in the Conservation and Open Space Element aims to "[i]dentify, preserve and protect the significant agricultural resources within and surrounding Salinas, while minimizing conflicts between agricultural and urban uses."

Cities in San Benito County

The Open Space and Agriculture Element of the City of Hollister's General Plan (City of Hollister, 2005) contains policies specifically aimed at preserving important and prime farmland. Policy OS2.1, *Premature Conversion of Prime Farmland*, aims to minimize the premature conversion of prime farmland to non-agricultural uses by directing urban growth toward portions of the Hollister Planning Area which have not been identified as prime farmland. Likewise, Policy OS2.2, *Coordination with San Benito County to Preserve Prime Farmlands*, encourages the County of San Benito to maintain existing County land use policies that discourage urban development in rural areas within the County as a way to ensure continuing agricultural operations within portions of the Hollister Planning Area. This policy also encourages the City to coordinate with the County of San Benito in efforts to maintain prime farmlands in active agricultural use whenever possible and in all efforts to maintain the continued economic viability of agriculture within the Hollister Planning Area. Finally, Policy OS2.3, *Williamson Act Contracts*, encourages the sponsors of subdivisions on agriculturally viable land to enter and maintain prime soils of the proposed subdivision in Williamson Act contracts as a means of off-setting the loss of agricultural land.

The Conservation Element of the City of San Juan Bautista 2035 General Plan (City of San Juan Bautista, 2015) outlines several policies which aim to preserve important environmental resources. For example, Policy CO 1.1.1 discourages the conversion of prime agricultural land into non-agricultural uses.

Cities in Santa Cruz County

The City of Santa Cruz 2030 General Plan (City of Santa Cruz, 2012b) includes Policy LU1.2 in its Land Use and Natural Resources and Conservation Elements, which ensures that growth and development do not lead to the loss of prime agricultural land. In addition, Policy NRC3.4 aims to conserve agricultural resources in the Planning Area.

The City of Watsonville's 2005 General Plan (City of Watsonville, 1994) Growth and Conservation Element contains Goal 3.3, *Agricultural Land Use*, which encourages the continuation of agriculture in the Pajaro Valley, and Implementation Measure 3.A.1, *Government Cooperation*, which expresses the City's intent to cooperate with Santa Cruz and Monterey Counties to establish mutually reinforcing goals of city-centered development to prevent the intrusion of rural residential uses and urban development into agricultural lands.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact on agricultural resources:

1. 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;
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract;
3. Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timber Production;
4. Result in the loss of forest land or conversion of forest land to non-forest use; and/or
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

Thresholds 3 and 4 above are discussed in Section 4.16, *Less than Significant Environmental Factors*. The remaining thresholds are discussed below.

b. Project Impacts and Mitigation Measures

This section describes generalized agricultural resources impacts associated with the projects included in the 2040 MTP/SCS. Table 7 summarizes the specific 2040 MTP/SCS transportation projects that could result in the types of agricultural resource impacts discussed below. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could result in the impacts as described in the following section.

Threshold 1:	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 2	Conflict with existing zoning for agricultural use, or a Williamson Act contract;
Threshold 5:	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 AG-1 PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE PROJECTS ENVISIONED BY THE 2040 MTP/SCS COULD RESULT IN THE CONVERSION OF IMPORTANT FARMLAND TO NONAGRICULTURAL USE, OR CONFLICT WITH EXISTING ZONING FOR AGRICULTURE, OR A WILLIAMSON ACT CONTRACT. THIS WOULD BE A SIGNIFICANT AND UNAVOIDABLE IMPACT.

As noted in Chapter 4 of the 2040 MTP/SCS, the AMBAG region contains a total of 292,088.4 acres of Important Farmland, including 236,282.0 acres in Monterey County, 36,159.9 acres in San Benito County and 19,646.5 acres in Santa Cruz County. The 2040 MTP/SCS emphasizes infill development and development near existing transportation corridors, which are generally located in urbanized areas of cities and unincorporated communities. Such land use development within urbanized areas

would not be likely to result in agricultural resource impacts since they would be located within existing urban areas. Because the 2040 MTP/SCS 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, a total of 2,099 acres of Important Farmland would be converted to non-agricultural use (refer to 2040 MTP/SCS Chapter 5 for full calculations). This represents 0.7 percent of the total Important Farmland in the AMBAG region. 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 the 2040 MTP/SCS 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 Monterey, San Benito and Santa Cruz County are fairly urbanized, many cities border agriculture, including FMMP-designated Important Farmland. These include the City of Watsonville in Santa Cruz County; the cities of Salinas, Soledad, Gonzales, Greenfield and King City in Monterey County; and the cities of San Juan Bautista and Hollister in San Benito County. 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. For example, the widening of Boronda Road in Salinas would have the potential to impact agricultural fields immediately adjacent to its western edge and the widening planned for Highway 25 between Felipe Road and Hudner Lane in Gilroy would have the potential to impact adjacent agricultural land on either side of the roadway. 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 the 2040 MTP/SCS forecasted development pattern and transportation system, AMBAG 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, the 2040 MTP/SCS 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 2040 MTP/SCS 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 the proposed 2040 MTP/SCS would potentially result in the conversion of up to 2,099 acres of Important Farmland to non-agricultural uses between 2015 and 2040. 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. Nevertheless, because implementation of the 2040 MTP/SCS would directly result in conversion of Important Farmland and conflict with agricultural zoning and Williamson Act contracts, this would be a significant impact.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that would result in impacts to Important Farmland. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

AG-1 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;
- 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 Williamson Act contracts (Government Code Section 51200 et seq.).

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Implementation of Mitigation Measure AG-1 would require avoidance or compensation for Important Farmland impacted by specific projects included in the 2040 MTP/SCS, 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 MTP/SCS Projects That May Result in Impacts

Table 7 identifies projects with the potential to cause or contribute to direct or indirect impacts to agricultural resources such as those discussed above. These projects are representative and were selected based on their potential scope and likely to disturb agricultural lands. 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.

Table 7 2040 MTP/SCS Projects That May Result in Agriculture and Forestry Impacts

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-GRN001-GR	Monterey	Greenfield	Apple Avenue Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	AG-1
MON-GRN005-GR	Monterey	Greenfield	Thorne Road Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	AG-1
MON-MYC075-UM	Monterey	Chualar	River Road Operational Improvements	Widen shoulders and improve geometrics and install class II bike lanes.	AG-1
MON-SNS078-SL	Monterey	Salinas	Natividad Creek Bike Path	Install new bike path.	AG-1
MON-CT030-SL	Monterey	Salinas	U.S. 101 – Salinas Corridor	Widen U.S. 101 to 6 lanes within the existing right of way at locations where feasible.	AG-1
MON-CT031-CT	Monterey	Chualar	U.S. 101 – South County Frontage Roads	Construct Frontage Roads from Harris Road to Chualar, then to Soledad. (EA 05-OH330)	AG-1
MON-CT0445-SL	Monterey	Salinas	U.S. 101 – Harris Road Interchange	Construct new interchange on U.S. 101 at Harris Road (PM 83.71).	AG-1
MON-GRN008-GR	Monterey	Greenfield	U.S. 101 – Walnut Avenue Interchange	Relocate and replace existing U.S. 101/Walnut Avenue Interchange and widen to six lanes. (EA 05-OP160) PM 53.4/54.3	AG-1
MON-SOL002-SO	Monterey	Soledad	U.S. 101 – North Interchange	Install new interchange north of U.S. 101 and Front Street.	AG-1
MON-SOL003-SO	Monterey	Soledad	U.S. 101 – South Interchange	Install new interchange south of U.S. 101 and Front Street.	AG-1
MON-MAR001-MA	Monterey	Marina-Salinas	Marina – Salinas Corridor	Widen Davis Road to 4 lanes from Blanco Road to Reservation Road; construct new 4-lane bridge over the Salinas River; widen Reservation Road to 4 lanes from Davis Road to existing 4-lane section adjacent to East Garrison at Intergarrison Road; widen Imjin Pkwy to 4 lanes from Reservation Road to Imjin Road, construct new Imjin Parkway interchange at SR 1. Include accommodations for bicyclists, pedestrians and transit; consider high quality transit service along corridor.	AG-1

2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-SNS012-SL	Monterey	Salinas	Boronda Road Widening	Widen to 6 lanes from San Juan Grade Road to Williams Road; install Class II bike lanes and fill sidewalk gaps.	AG-1
MON-SNS037-SL	Monterey	Salinas	Main Street (North) Widening	Widen to 6 lanes from Market to Casentini including bicycle and pedestrian improvements.	AG-1
MON-SNS044-SL	Monterey	Salinas	Natividad Road Widening	Widen from 2 to 4 lanes.	AG-1
MON-SNS050-SL	Monterey	Salinas	Russel Road Widening	Widen street from U.S. 101 to San Juan Grade Road.	AG-1
MON-SNS059-SL	Monterey	Salinas	Williams Road Widening	Widen from 2 to 4 lanes.	AG-1
MON-SNS090-SL	Monterey	Salinas	Russel Road Extension	Extend 4 lane arterial.	AG-1
MON-SNS092-SL	Monterey	Salinas	San Juan Natividad Collector	Construct an east-west 2 lane collector.	AG-1
MON-SNS093-SL	Monterey	Salinas	Independence Boulevard Extension	Extend as 2 lane collector.	AG-1
MON-SNS094-SL	Monterey	Salinas	Hemingway Drive Extension	Construct 2-lane road.	AG-1
MON-SNS095-SL	Monterey	Salinas	Constitution Boulevard Extension	Construct 4-lane street.	AG-1
MON-SNS096-SL	Monterey	Salinas	Sanborn Road Extension	Construct 4-lane arterial.	AG-1
MON-SNS097-SL	Monterey	Salinas	Williams Russel Collector	Construct new north-south connection.	AG-1
MON-SNS-098-SL	Monterey	Salinas	Alisal Street Extension	Extend as 2-lane collector street with bike lanes.	AG-1
MON-SNS099-SL	Monterey	Salinas	Moffett Street Extension	Extend as 4-lane collector.	AG-1
MON-SNS100-SL	Monterey	Salinas	Rossi Street Widening	Widen to 4 lanes.	AG-1
MON-SNS101-SL	Monterey	Salinas	Bernal Drive Extension	Extend as 4-lane arterial.	AG-1
MON-SNS102-SL	Monterey	Salinas	Constitution Boulevard Extension	Construct new 2-lane street.	AG-1
MON-SNS103-SL	Monterey	Salinas	Williams Road Widening	Widen from 3 to 4 lanes.	AG-1
MON-SNS104-SL	Monterey	Salinas	Alisal Street Widening	Widen from 2 to 4 lanes.	AG-1
MON-SNS108-SL	Monterey	Salinas	Laurel Drive Widening	Widen to 6 lanes and add left turn channelization west of Constitution.	AG-1
MON-SNS121-SL	Monterey	Salinas	McKinnon Street Extension	Extend 2-lane collector.	AG-1
MON-GON005-GO	Monterey	Gonzales	Fanoe Road	Widen from 4 to 6 lanes and install Class II bike lanes.	AG-1
MON-GON007-GO	Monterey	Gonzales	La Gloria Road Widening	Widen road approximately one-half mile.	AG-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-GRN022B-GR	Monterey	Greenfield	Pine Avenue Overcrossing at U.S. 101	Construct new bridge over U.S. 101 to improve E-W traffic flow.	AG-1
MON-MYC043147-UM	Monterey	Unknown	Jolon Road Overlay Safety Improvements	Shoulder widening & geometric improvements and installation of 39.2 miles of Class II bikeway.	AG-1
MON-MYC147-UM	Monterey	Castroville	Castroville Improvements/Blackie Road	Construct new road from Castroville Boulevard to Blackie Road.	AG-1
MON-MYC238-UM	Monterey	Moss Landing	Salinas Road Improvements	Widen to four lanes between future Hwy 1 and Salinas Road interchange and existing four-lane section. Widen existing three-lane section of Salinas Road from Werner road to Elkhorn Road to four lanes. Add Class II bike lanes on Salinas Road from SR 1 to Elkhorn Road. Install traffic signal and construct intersection improvements at Salinas Road/Werner Road. Construct traffic signal on Elkhorn Road at Salinas Road. Re-align Salinas Road and Werner Road to intersect Elkhorn Road at a single location with a traffic signal.	AG-1
MON-SNS008-SL	Monterey	Salinas	Bernal Drive East Improvements	Widen road, construct sidewalk and retaining wall on north side of road; between N. Main and Rosarita Drive.	AG-1
SB-COG-A54	San Benito	Hollister - Gilroy	State Route 25 Corridor Improvement Project	To enhance safety, improve traffic operations and provide additional capacity to reduce congestion for all transportation modes on Highway 25 between San Felipe Road and the San Benito/Santa Clara County line.	AG-1
SB-CT-A01	San Benito	San Juan Bautista	SR 156 Widening – San Juan Bautista to Union Road	Construct a four-lane expressway south of the existing State Route 156 and use the existing SR 156 as the northern frontage road.	AG-1
SB-CT-A17	San Benito	Hollister	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	Widen to 4-lane expressway with bicycle lanes.	AG-1
SB-CT-A44	San Benito	Hollister	Highway 25 4-lane Widening, Phase 1	Widen to 4-lane expressway, San Felipe Road to Hudner Lane.	AG-1
SB-VTA-A01	San Benito	Gilroy	Highway 101/25 Interchange	New interchange at Highway 101 and Highway 25 in Santa Clara County.	AG-1
SB-CT-A02	San Benito	Hollister	Highway 156/Fairview Road Intersection Improvements	Construct new turn lanes at the intersection.	AG-1

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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SB-COH-A16	San Benito	Hollister	Memorial Drive Extension: Meridian Street to Santa Ana Road	Construct 4-lane road extension with bicycle lanes.	AG-1
SB-COH-A18	San Benito	Hollister	Westside Boulevard Extension	Construct 2-lane road; Nash Road to Southside Road/San Benito Street intersection with bicycle lanes.	AG-1
SB-COH-A19	San Benito	Hollister	North Street (Buena Vista) between College Street and San Benito Street	Construct 2-lane road with bicycle lanes.	AG-1
SB-COH-A55	San Benito	Hollister	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	Construct new 4-lane road and extension with bicycle lanes.	AG-1
SB-COH-A57	San Benito	Hollister	Pacific Way (New Road): San Felipe Road to Memorial Drive	New 2-lane road from San Felipe Road to future Memorial Drive north extension with bicycle lanes.	AG-1
SB-SBC-A04	San Benito	Hollister	Union Road Widening (East): San Benito Street to Highway 25	Widen to 4-lane arterial with bicycle lanes.	AG-1
SB-SBC-A05	San Benito	Hollister	Union Road Widening (West): San Benito Street to Highway 156	Widen to 4-lane arterial with bicycle lanes.	AG-1
SB-SBC-A09	San Benito	Hollister	Fairview Road Widening: McCloskey to SR 25	Widen to 4-lane arterial; construct new bridge south of Santa Ana Valley Road with bicycle lanes.	AG-1
SB-SBC-A14	San Benito	Hollister	San Benito Regional Park Access Road	Construct new 2-lane roadway from Nash Road to San Benito Street	AG-1
SB-SBC-A67	San Benito	Dunneville	Shore Road Extension	4-lane arterial with Class II bike lanes.	AG-1
SB-SBC-A79	San Benito	Hollister	Enterprise Road Extension	Extend Enterprise Road westerly from Southside Road toward Union Road.	AG-1
SB-SBC-A81	San Benito	Hollister	Meridian Street Extension: 185 feet east of Clearview Road to Fairview Road	Construct 4-lane road. Located in the City of Hollister and County with bicycle lanes.	AG-1
SB-SBC-A82	San Benito	Hollister	Flynn Road Extension	San Felipe Road to Memorial Drive north extension. New roadway construction south of McCloskey Road with bicycle lanes.	AG-1
SB-SJB-A08	San Benito	Hollister	Lavanigno Drive Construction	Construction of Lavanigno Drive, split lanes with island in the middle; total 4 lanes.	AG-1
SB-SJB-A09	San Benito	Hollister	Connect Lang Street to The Alameda	Construct and connect Lang Street; 2 lanes.	AG-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SB-SBC-A57	San Benito	Cienega Valley	Limekiln Road Bridge	Limekiln Rd over Pescadero Creek, 0.1 Mi S Cienega Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0054.	AG-1
SB-SBC-A86	San Benito	Hollister	John Smith Realignment at Fairview Intersection	This project will realign John Smith Road to intersect Fairview Road at St. Benedict Way and add left and right turn lanes into John Smith Road.	AG-1
SB-LTA-A5348	San Benito	Hollister-Gilroy	Commuter Rail to Santa Clara County	Commuter rail from Hollister to Gilroy.	AG-1

d. Cumulative Impacts

Implementation of the proposed 2040 MTP/SCS would result in conversion of up to 2,099 acres of agriculture to non-agricultural use. While this represents total Important Farmland lost in the AMBAG region, projects approved by counties outside the AMBAG 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 the proposed 2040 MTP/SCS 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 2040 MTP/SCS contribution would be 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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4.3 Air Quality and Health Impacts/Risks

This section analyzes the impacts of the 2040 MTP/SCS 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*.

4.3.1 Setting

a. Local Climate and Topography

Air quality is affected by the rate and location of pollutant emissions and by climatic conditions that influence the movement and dispersion of pollutants. Atmospheric conditions, such as wind speed, wind direction and air temperature gradients, along with local and regional topography, mediate the relationship between air pollutant emissions and air quality.

The North Central Coast Air Basin (NCCAB) is comprised of Monterey, Santa Cruz and San Benito Counties. The Basin lies along the central coast of California and covers an area of 5,159 square miles. The Diablo Range marks the northeastern boundary and, together with the southern extent of the Santa Cruz Mountains, forms the Santa Clara Valley, which extends into the northeastern tip of the NCCAB. Further south, the Santa Clara Valley transitions into the San Benito Valley, which runs northwest-southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley, which extends from Salinas at its northwestern end to King City at its southeastern end. The western side of the Salinas Valley is formed by the Sierra de Salinas, which also forms the eastern side of the smaller Carmel Valley. The coastal Santa Lucia Range defines the western side of the Carmel Valley (MBUAPCD 2008).

The semi-permanent high pressure cell in the eastern Pacific is the basic controlling factor in the climate of the NCCAB. In the summer, the high pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific High forming a stable temperature inversion of hot air over a layer of cool coastal air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air loft acts as a lid to inhibit vertical air movement (MBUAPCD 2008).

The generally northwest-southeast orientation of mountainous ridges tends to restrict and channel the summer onshore air currents. Surface heating in the interior portion of the Salinas and San Benito Valleys creates a weak low pressure which intensifies the onshore air flow during the afternoon and evening. In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. The air flow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the Pacific High pressure cell, which allows pollutants to build up over a period of a few days. It is most often during this season that the north or east winds develop to transport pollutants from either the San Francisco Bay Area or the Central Valley into the NCCAB (MBUAPCD 2008).

During the winter, the Pacific High migrates southward and has less influence on the NCCAB. Air frequently flows in a southeasterly direction out of the Salinas and San Benito Valleys, especially during night and morning hours. Northwest winds are nevertheless still dominant in winter, but easterly flow is more frequent. The general absence of deep, persistent inversions and the

occasional storm systems usually result in good air quality for the NCAAB as a whole in winter and early spring (MBUAPCD 2008).

In Santa Cruz County, coastal mountains exert a strong influence on atmospheric circulation, which results in generally good air quality. Small inland valleys such as Scotts Valley with low mountains on two sides have poorer circulation than at Santa Cruz on the coastal plain. In addition, Scotts Valley is downwind of major pollutant generating centers, and these pollutants have time to form oxidants during transit Scotts Valley. Consequently, air pollutants tend to build up more in Scotts Valley than in Santa Cruz (MBUAPCD 2008).

Monterey Bay is a 25-mile wide inlet, which allows marine air at low levels to penetrate the interior. The Salinas Valley is a steep-sloped coastal valley which opens out on Monterey Bay and extends southeastward with mountain ranges of two to three thousand feet elevation on either side. The broad area of the valley floor near the mouth is 25 miles wide, narrowing to about six miles at Soledad, which is 40 miles inland, and to three miles wide at King City, which is about 60 miles from the coast. At Salinas, near the northern end of the Valley, west and northwest winds occur about one-half the time during the entire year. Although the summer coastal stratus rarely extends beyond Soledad, the extended sea breeze, which consists of warmer and drier air currents, frequently reaches far down the Salinas Valley. In the southern end of the Valley, which extends into the South Central Coast Air Basin to Paso Robles, winds are generally weaker most of the year except during storm periods (MBUAPCD 2008).

b. Air Pollutants of Primary Concern

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants, referred to as “criteria pollutants.” Under these laws, the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for criteria pollutants. Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere and include carbon monoxide (CO), reactive organic gasses (ROG), nitrogen oxides (NO_x), fine particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide (SO₂) and lead (Pb). Secondary criteria pollutants are created by atmospheric chemical and photochemical reactions. ROG, together with nitrogen oxides, form the building blocks for the creation of photochemical (secondary) pollutants. Secondary pollutants include oxidants, ozone (O₃) and sulfate and nitrate particulates (smog). The characteristics, sources and effects of critical air contaminants are provided in Table 8.

Table 8 Description of Selected Air Contaminants

Photochemical Oxidant (Ox)
<p>Characteristics. The term “photochemical oxidant” can include several different pollutants, but consists primarily of ozone (more than 90 percent) and a group of chemicals called organic peroxy nitrates. Photochemical oxidants are created in the atmosphere rather than emitted directly into the air. Reactive organic gases and oxides of nitrogen are the emitted contaminants, which participate in the reaction. Ozone is a pungent, colorless toxic gas, which is produced by the photochemical process. Photochemical oxidant is a characteristic of southern California-type smog, and reaches highest concentrations during the summer and early fall.</p>
<p>Sources. Ozone is caused by complex atmospheric reactions involving oxides of nitrogen and reactive organic gases with ultraviolet energy from sunlight. Motor vehicles are the major source of oxides of nitrogen and reactive organic gases in the basin.</p>
<p>Effects. The common manifestations of ozone and other photochemical oxidants are damage to vegetation and cracking of untreated rubber. Ozone in high concentrations (ranging from 0.15 ppm to 0.50 ppm) can also directly affect the lungs, causing respiratory and coronary irritation and possible changes in lung functions. These health problems are particularly acute in children and elderly people exposed to these pollutants.</p>

Carbon Monoxide (CO)

Characteristics. CO is a colorless, odorless, toxic gas produced through the incomplete combustion of fossil fuels. Concentrations are higher in winter when more fuel is burned for heating purposes and weather conditions favor the build-up of directly emitted contaminants.

Sources. The use of gasoline-powered engines is the major source of this contaminant, with automobiles being the primary contributor. CO emissions from gasoline-powered engines are higher during winter months due to poor engine efficiency in cold temperatures. Various industrial processes also produce CO emissions through incomplete combustion of fossil fuels.

Effects. CO does not irritate the respiratory tract. However, it passes through the lungs directly into the blood stream and, by interfering with the transfer of oxygen, deprives sensitive tissues of oxygen.

Nitrogen Oxides (NO_x)

Characteristics. NO_x primarily consists of nitric oxide (NO) (a colorless, odorless gas formed from atmospheric nitrogen and oxygen when petroleum combustion takes place under high temperatures and/or pressure) and nitrogen dioxide (NO₂) (a reddish-brown irritating gas formed by the combination of nitric oxide with oxygen). Due to the role they play as ozone precursors, oxides of nitrogen are one of the two criteria pollutants subject to federal ozone requirements.

Sources. High combustion temperatures cause nitrogen and oxygen to combine and form nitric oxide. Further reaction produces additional oxides of nitrogen. Combustion in motor vehicle engines, power plants, refineries and other industrial operations are the primary sources in the region. Ships, railroads and aircraft are other significant emitters.

Effects. Oxides of nitrogen are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of sunlight, to form nitrogen dioxide and ozone. Nitrogen dioxide, the most significant of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppm on days of 21 0-mile visibility. NO₂ is an important air pollutant in the region because it is a primary receptor of ultraviolet light. The latter initiates photochemical reactions, helping to form ozone and/or particulate nitrate. It will also react in the air to form nitrate particulates.

Sulfur Dioxide (SO₂)

Characteristics. SO₂ is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. In humid atmospheres, SO₂ can form sulfur trioxide and sulfuric acid mist, with some of the latter eventually reacting to produce sulfate particulates.

Sources. This contaminant is the natural combustion product of sulfur or sulfur-containing fuels. Fuel combustion is the major source, while chemical plants, sulfur recovery plants and metal processing are minor contributors.

Effects. At sufficiently high concentrations, sulfur dioxide irritates the upper respiratory tract. At lower concentrations, when in conjunction with particulates, SO₂ appears able to do still greater harm by injuring lung tissues. Sulfur oxides, in combination with moisture and oxygen, can yellow the leaves of plants, dissolve marble and eat away iron and steel. Sulfur oxides can also react to form sulfates, which reduce visibility.

Particulates (Total Suspended Particles and PM₁₀)

Characteristics. Atmospheric particulates are made up of finely divided solids or liquids, such as soot, dust, aerosols, fumes and mists. About 90 percent by weight of the emitted particles are larger than 10 microns in diameter, but about 10 percent by weight, or 90 percent of the total *number* of particulates, are less than 5 microns in diameter. The aerosols formed in the atmosphere, primarily sulfate and nitrate, are usually smaller than 1 micron. In areas close to major sources, particulate concentrations are generally higher in the winter, when more fuel is burned for heating and meteorological conditions favor the build-up of directly-emitted contaminants. However, in areas remote from major sources and subject to photochemical smog (ozone), particulate concentrations can be higher during summer months because the presence of ozone increases the potential for SO₂ and NO₂ to convert to sulfate and nitrate particulates.

Sources. Particulate matter consists of particles in the atmosphere resulting from many kinds of dust and fume-producing industrial and agricultural operations, from combustion and from atmospheric photochemical reactions. Re-entrained road dust from vehicles is a significant source of particulates. Natural activities also put particulates into the atmosphere; wind-raised dust and ocean spray are two such sources of particulates.

Effects. In the respiratory tract, very small particles of certain substances may produce injury by themselves, or may contain absorbed gases that are injurious. Suspended in the air, particulates less than 5 microns in diameter can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

Diesel Particulate Matter (DPM)

Characteristics. Diesel particulate matter is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is commonly found throughout the environment. Diesel exhaust is composed of two phases, either gas or particle, and both phases contribute to the risk. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. Diesel exhaust has a distinct odor, which is primarily a result of hydrocarbons and aldehydes contained in diesel fuel. The particle phase also has many different types of particles that can be classified by size or composition. The size of diesel particulates that are of greatest health concern are those that are in the categories of fine and ultra-fine particles. The composition of these fine and ultra-fine particles may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements.

Sources. Diesel exhaust is emitted from a broad range of diesel engines: the on-road diesel engines of trucks, buses and cars and the off-road diesel engines that include locomotives, marine vessels and heavy-duty equipment.

Effects. Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs and some neurological effects such as lightheadedness. Acute exposure may also elicit a cough or nausea as well as exacerbate asthma. Chronic exposure in experimental animal inhalation studies has shown a range of dose-dependent lung inflammation and cellular changes in the lung and there are also diesel exhaust immunological effects. Based upon human and laboratory studies, there is considerable evidence that diesel exhaust is a likely carcinogen. Human epidemiological studies demonstrate an association between diesel exhaust exposure and increased lung cancer rates in occupational settings.

Hydrocarbons and Other Organic Gases (Total Hydrocarbons, CH₄NMHC (non-methane), AHC, NHC)

Characteristics. Any of the vast family of compounds consisting of hydrogen and carbon in various combinations are known as hydrocarbons. Fossil fuels are included in this group. Many hydrocarbon compounds are major air pollutants, and those which can be classified as olefins or aromatics are highly photochemically reactive. Atmospheric hydrocarbon concentrations are generally higher in winter because the reactive hydrocarbons react more slowly in the winter and meteorological conditions are more favorable to their accumulating in the atmosphere to higher concentration before producing photochemical oxidants. Due to the role they play as ozone precursors, reactive hydrocarbons are one of the two criteria pollutants subject to federal ozone requirements.

Sources. Motor vehicles are a major source of anthropogenic hydrocarbons (AHC) in the basin. Other sources include evaporation of organic solvents and petroleum refining and marketing operations. Trees are the principal emitters of biogenic or natural hydrocarbons (NHC).

Effects. Certain hydrocarbons can damage plants by inhibiting growth and causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions which produce photochemical oxidants.

Lead (Pb)

Characteristics. Lead is an elemental heavy metal found naturally in the environment as well as in manufactured products. Lead can be released directly into the air, as suspended particles. It is soft, malleable and melts at a relatively low temperature. When freshly cut, it has a bluish-white tint; it tarnishes to a dull gray upon exposure to air. Lead has several properties that make it useful: high density, low melting point, ductility and relative inertness to oxidation. Combined with relative abundance and low cost, these factors resulted in the extensive worldwide use of lead. Lead is persistent in the environment and accumulates in soils and sediments through deposition from air sources, direct discharge of waste streams to water bodies, mining and erosion.

Sources. The major sources of lead emissions historically have been mobile and industrial sources. As a result of phasing out leaded gasoline, metal processing currently is the primary source of Pb 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.

Effects. Humans may be exposed to lead from air pollution directly, through inhalation, or through the incidental ingestion of lead that has settled out from the air onto soil or dust. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. The lead effects most commonly encountered in current populations are neurological effects in children and cardiovascular effects (e.g., high blood pressure and heart disease) in adults. Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits and lowered IQ. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals and neurological effects in vertebrates.

Source: U.S. EPA 2017, <https://www.epa.gov/criteria-air-pollutants>

Ozone is the main pollutant of concern for the NCCAB; ROGs and NO_x join in photochemical reactions that produce ozone and thus are also of concern. The region is “NO_x sensitive,” meaning that ozone formation from local emissions is limited by the availability of NO_x as opposed to the availability of ROGs (MBARD 2017). The primary sources of ROGs within the AMBAG region are on- and off-road motor vehicles, petroleum production and marketing, solvent evaporation and prescribed burning. The primary sources of NO_x are on- and off-road motor vehicles and stationary sources. In 2015, daily emissions of ROG were estimated at 59 tons per day, which consisted of 60 percent from area-wide sources, 23 percent from mobile sources and 17 percent from stationary sources (MBARD 2017). Daily emissions of NO_x were estimated at 39 tons per day, which consisted of 60 percent from mobile sources, 21 percent from stationary sources and 11 percent from area-wide sources (MBARD 2017). PM₁₀ is the other major pollutant of concern for the NCCAB. The highest particulate levels and most frequent violations occur in the coastal corridor, which experiences fugitive dust from various geological and man-made sources. Nearly three quarters of all NCCAB exceedances occurred at these coastal sites, where sea salt is often the main factor causing exceedance (MBUAPCD 2005). In 2005, daily emissions of PM₁₀ were estimated at 102 tons per day. Of this, entrained road dust represented 35 percent of all PM₁₀ emission, windblown dust 20 percent, agricultural tilling operations 15 percent, waste burning 17 percent, construction 4 percent, and mobile sources, industrial processes and other sources made up 9 percent (MBUAPCD 2008).

Diesel engine fuel combustion is an important contributor to PM emissions. Particulates in diesel emissions, referred to as diesel particulate matter (DPM), are very small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. The California Office of Environmental Health Hazard Assessment (OEHHA) completed a comprehensive health assessment of diesel exhaust in 1998, which formed the basis for CARB to formally identify the particles in diesel exhaust as a toxic air contaminant (TAC). In California, DPM has a significant impact since it is estimated that 70 percent of total known cancer risk related to air toxics is attributable to DPM. According to CARB, DPM is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over a lifetime (CARB 2016b).

DPM can also be responsible for elevated localized exposures (“hotspots”). Risk characterization scenarios conducted by CARB have determined the potential cancer risk resulting from proximity to DPM sources, such as school buses and high-volume freeways. California freeway studies show about a 70% drop off in particulate pollution levels at 500 feet from freeways and high-traffic roads (CARB 2005).

Besides DPM, several other pollutants are emitted by vehicle exhaust are a public health concern. U.S. EPA has identified five pollutants of highest priority in addition to DPM: acrolein, acetaldehyde, formaldehyde, benzene and 1,3-butadiene. The latter five pollutants are found in organic gases emitted by vehicles.

c. Regulatory Setting

The federal CAA governs air quality in the United States. At the federal level, the U.S. EPA administers the CAA. CARB administers the CAA at the State level and the local air districts such as Air Quality Management Districts (AQMD) administers the CAA at the regional and local levels. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act, which is administered by the CARB at the State level and the AQMDs at the regional and local levels. The Monterey Bay Air Resources District

(MBARD) regulates air quality in the AMBAG region, which includes Monterey, San Benito and Santa Cruz Counties. Table 9 summarizes the current federal and State air quality standards.

Table 9 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	0.100 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.

Federal

The U.S. EPA is responsible for enforcing the federal CAA, which defines nonattainment areas as geographic regions designated as not meeting one or more of the national ambient air quality standards (NAAQS) that are required under the 1977 CAA and subsequent amendments. The federal CAA requires that a State Implementation Plan (SIP) be prepared for each nonattainment area and a maintenance plan be prepared for each former nonattainment area that subsequently demonstrated compliance with the standards. A SIP is a compilation of a state’s air quality control plans and rules, approved by the U.S. EPA. Section 176(c) of the CAA provides that federal agencies cannot engage, support, or provide financial assistance for licensing, permitting, or approving any project unless the project conforms to the applicable SIP. The state and the U.S. EPA’s goals are to

eliminate or reduce the severity and number of violations of the NAAQS and to achieve expeditious attainment of these standards.

Pursuant to 176(c) of the federal CAA (42 USC §7506(c)), MPOs and the United States Department of Transportation (U.S. DOT) must make a determination that the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP) conform to the SIP for air quality. Currently, the AMBAG region is designated as in attainment for the federal air quality standards (MBARD 2017); therefore, the 2040 MTP/SCS is not required to include an Air Quality Conformity Analysis or demonstrate SIP conformity.

The U.S. EPA also regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships and certain types of locomotives. The agency has jurisdiction over emission sources outside state waters (e.g. beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by CARB.

State

In California, CARB is responsible for meeting the State requirements of the federal CAA, administering the California CAA and establishing the California ambient air quality standards (CAAQS). The California CAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. CARB regulates mobile air pollution sources, such as motor vehicles. The agency is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications, which became effective in March 1996. More recently, CARB developed a new certification fuel for 2015 and newer vehicles, which contains 10 volume percent ethanol (E10). In addition, California Legislature enacted Senate Bill 656 (SB 656) to reduce public exposure of airborne particulate matter in 2003, which required CARB to develop and adopt a list of readily available, feasible and cost-effective control measures that could be employed by CARB and local air districts. CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

The California Office of Environmental Health Hazard Assessment (OEHHA) is the lead agency for the assessment of health risks posed by environmental contaminants. OEHHA, which is an office within the California Environmental Protection Agency (CalEPA), aims to protect human health and the environment through scientific evaluation of risks posed by hazardous substances. In addition, OEHHA develops health-protective exposure levels for contaminants in air, water and soil as guidance for regulatory agencies and the public. These include public health goals for contaminants in drinking water and both cancer potency factors and non-cancer reference exposure levels for the Air Toxics Hot Spots Program. The Air Toxics "Hot Spots" Information and Assessment Act (Assembly Bill 2588) was enacted in 1987 to require stationary sources to report the types and quantities of substances identified as having a localized health risk. This act aims to ascertain health risks, notify nearby residents of significant risks and to reduce significant risks to acceptable levels.

Furthermore, 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). Specifically, ARB recommends that local

agencies avoid siting new, sensitive land uses within 500 feet of a freeway. The primary concern is the effect of diesel exhaust particulate, a TAC, on sensitive uses.

Regional

MBARD (previously the Monterey Bay Unified Air Pollution Control District [MBUAPCD]) is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in Monterey, San Benito and Santa Cruz Counties. Responsibilities of MBARD include, but are not limited to: preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions and implementing programs and regulations required by the FCAA and the CCAA. Since the passage of the 1990 Federal Clean Air Act Amendments (FCAAA), eight plan updates have been adopted by MBARD. The most recent regional plan is MBARD's 2012-2015 Air Quality Management Plan.

The 2012-2015 Air Quality Management Plan (AQMP) was prepared to ensure continued progress towards clean air and compliance with State and federal requirements. This AQMP is an update to elements included in the 2012 Triennial Plan Revision and shows how the State AAQS for ozone would be met in the NCCAB. According to the emission reduction strategy in the AQMP, MBARD's priority is to continue to pursue reduction of ozone precursor emissions from mobile sources. Although the 2008 AQMP detailed transportation control measures (TCMs), these measures have not been listed in more recent updates of AMBAG's Metropolitan Transportation Improvement Program (MTIP) because the region has come into attainment of all NAAQS (MBARD 2017). MBARD continues to foster and support programs that reduce ozone precursor emissions, implement rules when necessary, and continue to maintain robust permitting and enforcement programs. Mobile source emission reductions are primarily achieved through the MBARD's incentive programs. To support reducing on-road vehicle emissions, the MBARD's AB 2766 grant program focuses funding on direct emission reduction projects. These projects include roundabout design and construction as well as the application of adaptive traffic signal control at intersections. In 2016, MBARD implemented the Monterey Bay Clean Vehicle Program, which offered cash rebates to the public for purchasing or leasing battery electric and plug-in hybrid electric vehicles. In addition, the Plug-in Monterey Bay Electric Vehicle Charge Station Infrastructure program was implemented in January 2017 to establish DC fast charge and Level 2 charge station multi-centers. Furthermore, MBARD is also evaluating whether to implement a voluntary accelerated vehicle retirement (VAVR) and/or voluntary repair of vehicles (VRV) to reduce light-duty vehicle emissions in accordance with the Carl Moyer Program, which provides funding to encourage replacement of older heavy duty motors/engines in the tri-county region. Each of these reduction projects would reduce emissions in the region by encouraging cleaner vehicles.

MBUAPCD's *CEQA Air Quality Guidelines* (2008) establish thresholds of significance for air pollutants, which are described in Section 4.3.2, Methodology and Significance Thresholds.

In 2005 MBUAPCD adopted the 2005 Particulate Matter Plan to fulfill the requirements of Senate Bill 656, which was approved by the California Legislature in 2003 with the objective of reducing public exposure to particulate matter. In 2011, CARB approved the latest regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles (Title 13 Section 2205). The regulation requires affected vehicles to meet specific performance requirements between 2012 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or the equivalent by 2023. These requirements are phased in over the

compliance period and depend on the model year of the vehicle. With implementation of CARB's Risk Reduction Plan, DPM concentrations are expected to be reduced by 85 percent in 2020 from the estimated year-2000 level (CARB 2000).

Local

City and county general plans within the AMBAG area contain policies to protect air quality. Listed below are the policies from each county in the region. Cities in the region have generally similar policies.

Monterey County

The Monterey County General Plan (Monterey County, 2010a) contains policies in the Conservation/Open Space Element that pertain to air quality as shown below.

Policy OS-10.1. Land use policy and development decisions shall be consistent with the natural limitations of the County's air basins.

Policy OS-10.2. Mass transit, bicycles, pedestrian modes of transportation and other transportation alternatives to automobiles shall be encouraged.

Policy OS-10.3. Monterey County shall promote conservation of naturally vegetated and forested areas for their air purifying functions.

Policy OS-10.4. Monterey County shall encourage concentrating industrial and commercial development in areas that are more easily served by public transit.

Policy OS-10.5. Mixed land uses that reduce the need for vehicular travel shall be encouraged.

Policy OS-10.6. The Monterey Bay Unified Air Pollution Control District's air pollution control strategies, air quality monitoring and enforcement activities shall be supported.

Policy OS-10.7. Use of the best available technology for reducing air pollution emissions shall be encouraged.

Policy OS-10.8. Air quality shall be protected from naturally occurring asbestos by requiring mitigation measures to control dust and emissions during construction, grading, quarrying, or surface mining operations. This policy shall not apply to Routine and Ongoing Agricultural Activities except as required by state and federal law.

Policy OS-10.9. The County of Monterey shall require that future development implement applicable Monterey Bay Unified Air Pollution Control District control measures. Applicants for discretionary projects shall work with the Monterey Bay Unified Air Pollution Control District to incorporate feasible measures that assure that health-based standards for diesel particulate emissions are met. The County of Monterey will require that future construction operate and implement MBUAPCD PM₁₀ control measures to ensure that construction-related PM₁₀ emissions do not exceed the MBUAPCD's daily threshold for PM₁₀. The County shall implement MBUAPCD measures to address off-road mobile source and heavy-duty equipment emissions as conditions of approval for future development to ensure that construction-related NO_x emissions from non-typical construction equipment do not exceed the MBUAPCD's daily threshold for NO_x.

Policy OS-10.10. In the design of future development within Community Areas and Rural Centers, the following sustainable land use strategies shall be considered to reduce energy consumption, minimize greenhouse gas emissions and foster healthier environments for people:

2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

- Take an integrated approach to siting, design and operation of buildings and infrastructure
- Incorporate multiple-uses for infrastructure (e.g., recreational fields designed to capture stormwater and reduce urban runoff)
- Design development to take advantage of solar orientation
- Recycle brownfield sites
- Employ individual and systematic water conservation measures (e.g., native vegetation, bioswales, graywater reuse, high efficiency appliances)
- Promote Transit Oriented Development (TOD) to increase mobility and reduce auto dependency
- Provide preferential carpool/vanpool parking spaces
- Implement a parking surcharge for single occupant vehicles
- Provide for shuttle/mini bus service
- Provide bicycle storage/parking facilities and shower/locker facilities
- Provide onsite child care centers
- Provide transit design features within the development
- Develop park-and-ride lots
- Employ a transportation/rideshare coordinator
- Implement a rideshare program
- Provide incentives to employees to rideshare or take public transportation
- Implement compressed work schedules
- Implement telecommuting program
- Provide bicycle paths within major subdivisions that link to an external network
- Provide pedestrian facilities within major subdivisions
- Locate development of new sensitive land uses (schools, hospitals, facilities for the elderly) at least 500 feet from a freeway carrying more than 100,000 vehicles per day

Future development shall be designed to maximize energy efficiency to the extent feasible and accommodate energy infrastructure (i.e., transmission lines, power plants and pipelines and fueling stations), including the potential for distributed renewable generation.

Policy OS-10.11. Within 24 months of the adoption of the General Plan, Monterey County shall develop and adopt a Greenhouse Gas (GHG) Reduction Plan with a target to reduce emissions by 2020 to a level that is 15% less than 2005 emission levels. At a minimum, the Plan shall:

- a. Establish an inventory of 2005 GHG emissions in the County of Monterey including but not limited to residential, commercial, industrial and agricultural emissions;
- b. Forecast GHG emissions for 2020 for County operations;
- c. Forecast GHG emissions for areas within the jurisdictional control of the County for “business as usual” conditions;
- d. Identify methods to reduce GHG emissions;
- e. Quantify the reductions in GHG emissions from the identified methods;
- f. Establish requirements for monitoring and reporting of GHG emissions;
- g. Establish a schedule of actions for implementation;

- h. Identify funding sources for implementation;
- i. Identify a reduction goal for the 2030 Planning Horizon
- j. Quantify carbon sequestration in agricultural soils and crops

During preparation of the Greenhouse Gas Reduction Plan, the County shall also evaluate potential options for changes in County policies regarding land use and circulation, as necessary, to further achieve the 2020 and 2030 reduction goals and measures to promote urban forestry and public awareness concerning climate change.

Policy OS-10.12. Within 24 months of the adoption of the General Plan, the County shall adopt a Green Building Ordinance to require green building practices and materials for new civic buildings and new private residential, commercial and industrial buildings that will include, but are not limited to, the following technologies, strategies, or their functional equivalent:

- All new County government projects and major renovations shall meet, at a minimum, LEED-Silver standards or an equivalent rating system
- All new commercial buildings shall meet requirements of the LEED rating system for commercial buildings or an equivalent rating system
- All new residential projects of 6 units or more shall meet the GreenPoint Rating System for residential buildings, or an equivalent alternate rating system
- The County shall require consideration of solar building orientation, solar roofs, cool pavements and planting of shade trees in development review of new commercial and industrial projects and new residential projects of 6 units or more
- Prioritized parking within new commercial and retail areas for electric vehicles, hybrid vehicles, bicycles and alternative fuel vehicles shall be provided for new commercial and institutional developments
- New commercial and industrial projects greater than 25,000 square feet shall be required to provide an on-site renewable energy generation as part of their development proposal. This requirement can be met through a solar roof or other means.

Policy OS-10.13. The County shall use Geographic Information Systems (GIS) to map and assess local renewable resources, the electric and gas transmission and distribution system, community growth areas anticipated to require new energy services and other data useful to deployment of renewable technologies. The County shall adopt an Alternative Energy Promotion ordinance that will:

- Identify possible sites for production of energy using local renewable resources such as solar, wind, small hydro and biogas;
- Consider the potential need for exemption from other General Plan policies concerning visual resources, ridgelines protection, or biological resources;
- Evaluate potential land use, environmental, economic and other constraints affecting renewable energy development; and
- Adopt measures to protect renewable energy resources, such as utility easement, right-of-way and land set-asides, as well as visual and biological resources.

The County shall also complete the following:

- Evaluate the feasibility of Community Choice Aggregation (CCA) for the County. CCA allows cities and counties, or groups of them, to aggregate the electric loads of customers within

their jurisdictions for purposes of procuring electrical services. CCA allows the community to choose what resources will serve their loads and can significantly increase renewable energy;

- If CCA is ultimately not pursued, the County shall evaluate the feasibility of purchasing renewable energy certificates to reduce the County's contribution to GHG emissions related to County electricity use; and
- The County shall develop a ministerial permit process for approval of small-scale wind and solar energy systems for on-site home, small commercial and farm use.

Policy OS-10.14. The County of Monterey shall require that construction contracts be given to those contractors who show evidence of the use of soot traps, ultra-low sulfur fuels and other diesel engine emissions upgrades that reduce PM10 emissions to less than 50% of the statewide PM10 emissions average for comparable equipment.

Policy OS-10.15. Within 12 months of adoption of the General Plan, the County shall quantify the current and projected (2020) GHG emissions associated with County operations and adopt a GHG Reduction Plan for County Operations. The goal of the plan shall be to reduce GHG emissions associated with County Operations by at least 15% less than 2005 emission levels. Potential elements of the County Operations GHG Reduction Plan shall include, but are not limited to, the following measures:

- An energy tracking and management system;
- Energy-efficient lighting;
- Lights-out-at-night policy;
- Occupancy sensors;
- Heating, cooling and ventilation system retrofits;
- ENERGY STAR appliances;
- Green or reflective roofing;
- Improved water pumping energy efficiency;
- Central irrigation control system;
- Energy-efficient vending machines;
- Preference for recycled materials in purchasing;
- Use of low or zero-emission vehicles and equipment;
- Recycling of construction materials in new county construction;
- Solar roofs; and
- Conversion of fleets (as feasible) to: electric vehicles, ultra low-emission vehicles, methanol fleet vehicles, liquid propane gas fleet vehicles, or compressed natural gas fleet vehicles.

San Benito County

The San Benito County 2035 General Plan (San Benito County, 2015a) contains policies in the Health and Safety Element that pertain to air quality as shown below.

Policy HS-5.1 – New Development. The County shall use the CEQA process to ensure development projects incorporate feasible mitigation measures to reduce construction and operational air quality emissions and consult with the Monterey Bay Unified Air Pollution Control District early in the development review process.

Policy HS-5.2 – Sensitive Land Use Locations. The County shall ensure adequate distances between sensitive land use and facilities or operations that may produce toxic or hazardous air pollutants or substantial odors.

Policy HS-5.3 – Early Coordination with the Air Quality Control District. The County shall notify and coordinate with the Monterey Bay Unified Air Pollution Control District when industrial developments are proposed within the county to ensure applicants comply with applicable air quality regulations and incorporate design features and technologies to reduce air emissions.

Policy HS-5.4 – PM10 Emissions from Construction. The County shall require developers to reduce particulate matter emissions from construction (e.g., grading, excavation and demolition) consistent with standards established by the Monterey Bay Unified Air Pollution Control District.

Policy HS-5.5 – PM10 Emissions from Industrial Facilities. The County shall require industrial facilities to incorporate best management practices to reduce PM2.5 and PM10 emissions consistent with standards established by the Monterey Bay Unified Air Pollution Control District.

Policy HS-5.6 – New Construction Mitigation. The County shall work in coordination with the Monterey Bay Unified Air Pollution Control District to minimize air emissions from construction activities associated with proposed development.

Policy HS-5.7 – Greenhouse Gas Emission Reductions. The County shall promote greenhouse gas emission reductions by supporting carbon efficient farming methods (e.g., methane capture systems, no-till farming, crop rotation, cover cropping); supporting the installation of renewable energy technologies; and protecting grasslands, open space, oak woodlands, riparian forest and farmlands from conversion to urban uses.

Policy HS-5.8 – GHG Reduction Targets. The County acknowledges that the state endeavors to achieve 1990 greenhouse gas (GHG) emission levels and establish a long-term goal to reduce GHG emissions by 80 percent below 1990 levels by 2050. The County will encourage projects that support these goals, recognizing that these goals can be met only if the state succeeds in decarbonizing its fuel supply.

Policy HS-5.9 – GHG Reduction Monitoring. The County shall monitor its greenhouse gas emissions and encourage appropriate adjustments to its programs and standards to further efforts to make progress towards achieving the state’s GHG reduction targets.

Policy HS-5.10 – Vehicle Emissions Reductions. The County shall study alternatives for improving circulation (e.g., roundabouts, one ways, etc.), when feasible, to reduce idling motor vehicle emissions.

Policy HS-5.11 – Prepare and implement a GHG Reduction Strategy. To reduce GHG emissions, the County shall prepare and adopt a greenhouse gas reduction strategy that meets the following CEQA Guidelines § 15183.5 standards:

1. Quantifies greenhouse gas emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area,
2. Establishes a level, based on substantial evidence, below which the contribution to greenhouse gas emissions from activities covered by the plan would not be cumulatively considerable, i.e., in alignment with General Plan Policy HS-5.8,

3. Identifies and analyzes the greenhouse gas emissions resulting from specific actions or categories of actions anticipated within the geographic area,
4. Specifies measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level, and
5. Be adopted in a public process following environmental review.

Policy HS-5.12 – Air Quality Management Plans. The County shall encourage regional planning agencies to consider the County’s population projections during the preparation of future Air Quality Management Plans.

Policy HS-5.13 – Reduce Air Pollution from Wood Burning. No permanently installed wood-burning devices shall be allowed in any new development, except when necessary for food preparation in a restaurant or other commercial establishment serving food.

Policy HS-5.14 – Notify Project Applicants of Air District Requirements. The County shall work with the Air District to obtain materials to give to project applicants regarding relevant information about Air District requirements.

Santa Cruz County

The Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994) contains policies in the Conservation and Open Space Element that pertain to air quality as shown below.

Policy 5.18.1 – New Development. Ensure new development projects are consistent at a minimum with the Monterey Bay Unified Air Pollution Control District Air Quality Management Plan and review such projects for potential impact on air quality.

Policy 5.18.2 – Non-Attainment Pollutants. Prohibit any net increase in emissions of non-attainment pollutants or their precursors from new or modified stationary sources which emit 25 tons per year or more of such pollutants.

Policy 5.18.3 – Air Quality Mitigations. Require land use projects generating high levels of air pollutants (i.e., manufacturing facilities, hazardous waste handling operations) to incorporate air quality mitigations in their design.

Policy 5.18.4 – Offshore Oil Development. Prohibit development, construction, or installation of any onshore facility necessary for or intended to support offshore oil or gas exploration and development unless a General Plan and Local Coastal Program amendment is approved by the voters of the County which allows such development.

Policy 5.18.4 – Onshore Oil and Gas Development. Prohibit development, construction, installation, or use of any facility necessary for or intended to support oil or gas exploration or development from any surface location within the unincorporated area of the County of Santa Cruz, whether the subsurface portion(s) of such facility is within or outside the unincorporated area of the County of Santa Cruz, and prohibit development, construction, installation or use of any facility necessary for or intended to support oil or gas explorations or development from surface locations outside the unincorporated area of the County of Santa Cruz which may begin, pass through or terminate below the surface of land located within the unincorporated area of the County of Santa Cruz. This prohibition applies to facilities directly involved in oil and gas exploration, production and refinement such as wells, pipelines and pumps.

Policy 5.18.5 – Sensitive Land Uses. Locate air pollution sensitive land uses, including hospitals, schools and care facilities, away from major sources of air pollution such as manufacturing, extracting facilities.

Policy 5.18.6 – Plan for Transit Use. Encourage commercial development and higher density residential development to be located in designated centers or other areas that can be easily served by transit.

Policy 5.18.7 – Alternatives to the Automobile. Emphasize transit, bicycle and pedestrian modes of transportation rather than automobiles.

Policy 5.18.8 – Encouraging Landscaping. Maintain vegetated and forested areas, and encourage cultivation of street trees and yard trees for their contributions to improved air quality.

Policy 5.18.9 – Greenhouse Gas Reduction. Implement state and federal legislation promoting the national goal of 35% reduction of carbon dioxide and other greenhouse gases by 2000.

Policy 5.18.10 – Elimination of Ozone Depleting Chemicals. Support and implement local actions to achieve the most rapid possible international, national, state and local elimination of the emission of ozone-depleting chemicals.

d. Current Ambient Air Quality

MBARD is required to monitor air pollutant levels to assure that ambient air quality standards are met and, in the event they are not, to develop strategies to meet these standards. Monitoring of ambient air pollutant concentrations is conducted by the CARB, MBARD and industry. Ambient air quality is currently monitored at seven permanent stations in the NCCAB, which are shown in Figure 13. Depending on whether measured air pollutant concentrations fall within or exceed standards, the local air basin is classified as being in “attainment” or “non-attainment.” The NCCAB is currently in non-attainment of the State PM₁₀ standard and eight-hour ozone standard. The NCCAB is in attainment or unclassifiable for all other State standards and all federal standards (MBARD 2017). Basin-wide historical data on the number of 1- and 8-hour State and 8-hour federal exceedances are provided in Figure 14. Data from Pinnacles National Park Monitoring Station is shown since this is the NCCAB’s peak “hot spot” station with the highest measured ozone concentrations (MBARD 2017). Table 10 and Table 11 show the emissions inventory and forecast for ROG, NO_x and PM₁₀ within the NCCAB.

Figure 13 NCCAB Air Quality Monitoring Stations (2017)

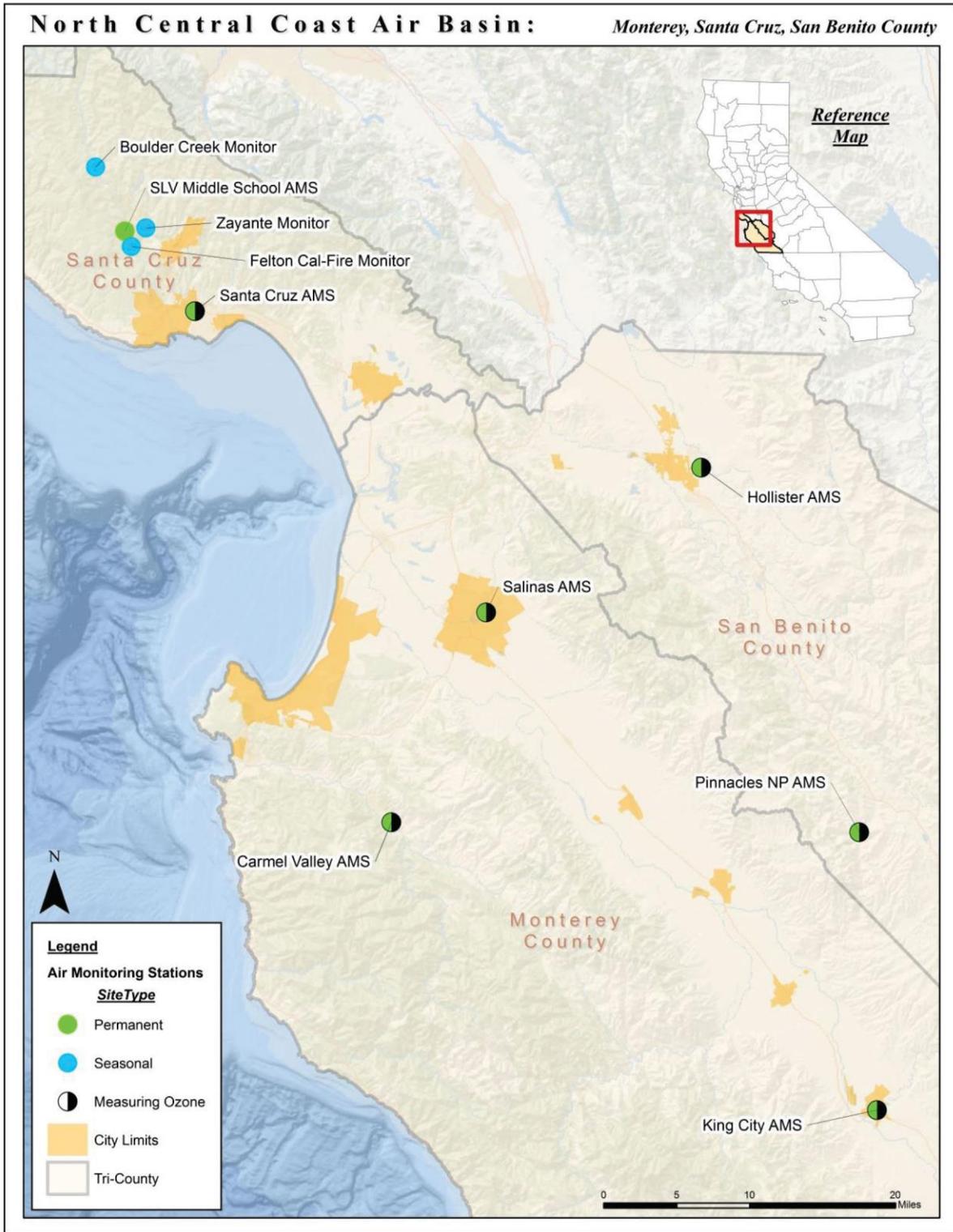


Figure 14 Historical NCCAPCD Ozone Exceedances (2016)

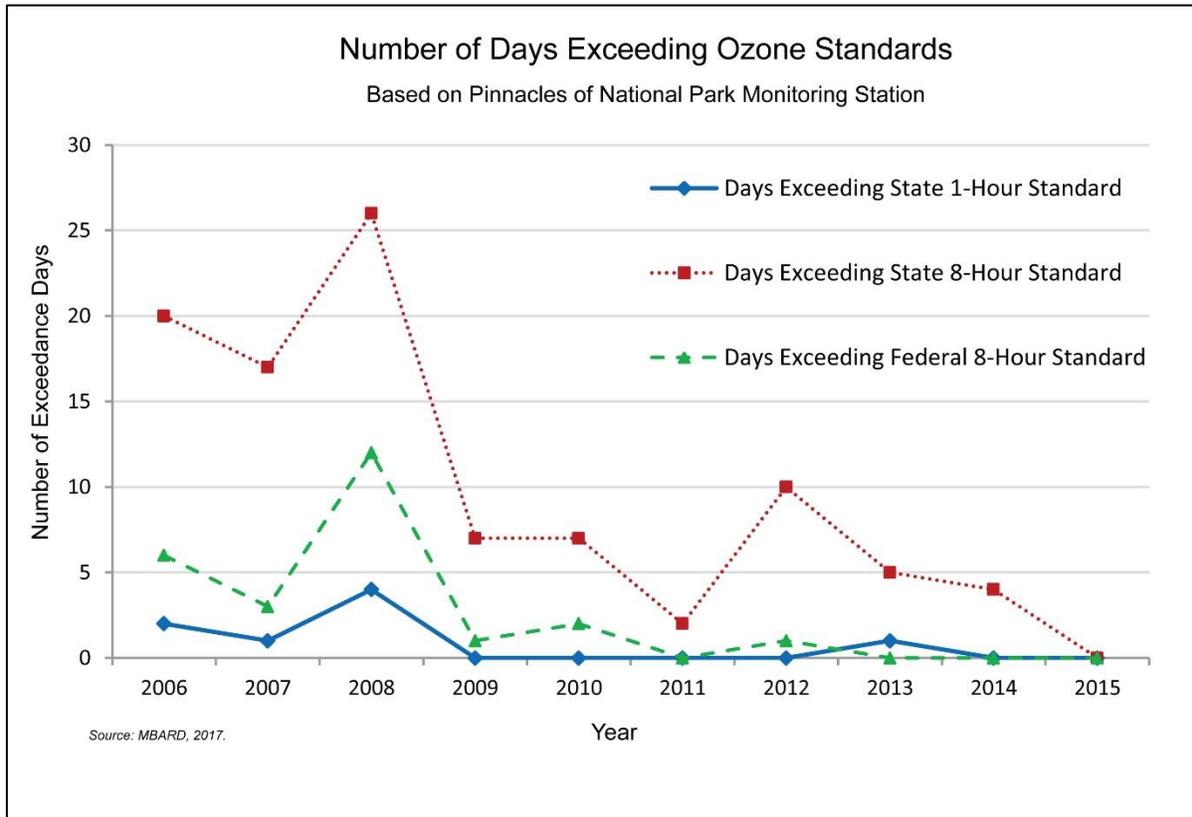


Table 10 Emissions Inventory and Forecasts for ROG and NO_x

Tons/Day	2000	2005	2010	2015	2020	2025	2030	2035
ROG	70.97	64.11	60.48	59.16	56.63	55.67	55.59	55.80
NO _x	80.49	60.53	45.58	38.81	31.61	27.18	25.62	25.34

Source: MBARD 2017.

Table 11 Emissions Inventory and Forecasts for PM₁₀

Tons/Day	2000	2005	2010	2015	2020	2025	2030	2035
PM ₁₀ (All Sources)	45.3	47.6	41.8	44.4	47.7	50.2	52.9	55.4
PM ₁₀ (Mobile Sources)	4.3	4.2	2.7	2.0	1.8	1.8	1.8	1.9

Source: CARB 2016, <https://www.arb.ca.gov/app/emsmv/2017/emssumcat.php>.

4.3.2 Impact Analysis

a. Methodology and Significance Thresholds

Significance Thresholds

This analysis follows the guidance and methodologies recommended in MBARD's *CEQA Air Quality Guidelines* and the CEQA Appendix G thresholds. The following criteria were identified for determining whether a project's impacts would have a significant impact on air quality:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
 - During construction, cause a violation of PM₁₀ AAQS at nearby or upwind of sensitive receptors, based on whether the project would:
 - Emit greater than 82 lbs/day of PM₁₀ if located nearby or upwind of sensitive receptors; or
 - Use equipment that is not "typical construction equipment" as specified in Section 5.3 of the MBARD CEQA Guidelines during operations:
 - Generate direct (area source or stationary) plus indirect (operational or mobile) emissions of either ROG or NO_x that exceed 137 lbs/day;
 - Generate on-site emissions of PM₁₀ exceeding 82 lbs/day;
 - Generate direct emissions of CO exceeding 550 lbs/day;
 - Generate direct emissions of SO_x exceeding 150 lbs/day; or
 - Cause or substantially contribute to a violation of a CO standard.
3. 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);
4. Expose sensitive receptors to substantial pollutant concentrations; and/or
5. Create objectionable odors affecting a substantial number of people.

Short-Term Emissions Methodology

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 MTP/SCS level because such emissions are dependent on the characteristics of individual development projects. However, because construction of the 2040 MTP/SCS 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 as of 2015 to the future MTP/SCS conditions in 2040, as required in CEQA Section 15126.2(a). For informational purposes, the analysis of air quality also includes a comparison

between the 2015 baseline conditions and the expected future conditions in 2040 if no MTP/SCS were adopted ('no project' scenario). With respect to long-term impacts, 2040 MTP/SCS long-term impacts to air quality will be considered significant if buildout of the plan as a whole results in mobile source emissions that significantly exceed existing levels. In this case, the pollutants of concern are ozone precursors (NO_x and ROG) and fine particulate matter (PM₁₀), as these are the primary pollutants associated with vehicle transportation.

Air emissions from on-road mobile sources were calculated using emission factors from CARB's EMFAC 2014 model and regional vehicle miles travelled (VMT) from AMBAG's Regional Travel Demand Model (RTDM). EMFAC emission factors are established by CARB and accommodate mobility assumptions (e.g., vehicle fleets, speed, delay times, average trip lengths, time of day and total travel time) provided by AMBAG's RTDM, which include socioeconomic growth projections based on AMBAG's Draft 2018 Regional Growth Forecast (refer to "Modeling Methodology" in Appendix F to the 2040 MTP/SCS). The long-term emissions analysis uses 2015 emissions as a baseline because this is the most recent year for which accurate regionwide VMT data is available (as of the publishing of the NOP on December 21, 2015). Projected vehicle emissions on the AMBAG transportation network for the year 2040 under the 2040 MTP/SCS were compared with 2015 existing conditions. Future conditions under the 'no project' scenario were provided for informational purposes.

In addition, air emissions from land use were calculated for the 2015 baseline and the 2040 horizon year. ROG and NO_x emissions were based on the emission inventory and forecast for the region from the 2012-2015 AQMP, which provided emissions from stationary, area-wide and mobile sources for the planning inventory years 2000-2035. The emissions trajectory was extended to 2040 to obtain ROG and NO_x emissions from land use. PM₁₀ emissions were based on CARB emission inventory data, which provided emissions from each source type for the years 2000-2035.

If total regionwide emissions caused by the 2040 MTP/SCS do not significantly exceed the 2015 baseline, impacts to long-term air quality would not be considered significant.

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 the 2040 MTP/SCS. Table 16 summarizes the specific projects that could result in the air quality impacts discussed in this section. For example, the extension project proposed for the Watsonville Municipal Airport (SC-AIR-P01-WAT) may generate air quality impacts during construction and operation. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could result in air quality impacts as described in the following sections.

Threshold 1: Conflict with or obstruct implementation of the applicable air quality plan

Impact AQ-1 SINCE THE 2040 MTP/SCS WOULD NOT CONFLICT WITH THE REGIONAL POPULATION FORECAST, AND WOULD REDUCE EMISSIONS OF OZONE PRECURSORS BELOW 2015 BASELINE LEVELS, IT WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE AQMP. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Conflicts or obstructions with the applicable air quality plan are typically determined by consistency with the population forecast or emissions forecast. The most recent air quality plan is MBARD's 2012-2015 AQMP, which is based on AMBAG's 2014 Regional Growth Forecast and includes socioeconomic assumptions for population, housing and employment. The 2040 MTP/SCS is based on the Draft 2018 Regional Growth Forecast, which includes new data and analysis of the current economy to provide a more accurate assessment of future growth, including updated population forecasts that are lower by 18,000-27,400 depending on the horizon year than the 2014 Regional Growth Forecast (i.e., for 2020 the Draft 2018 Regional Growth Forecast population forecast is 18,000 less than the 2014 Regional Growth Forecast, and for 2035 the Draft 2018 Regional Growth Forecast population forecast is 27,400 less than the 2014 Regional Growth Forecast). Differences in socioeconomic assumptions and forecast horizons are attributed to updated data providing more accurate assumptions for the post-recession economy and socioeconomic conditions in the region. These differences do not represent a significant impact regarding plan inconsistency, and the population forecast for the 2040 MTP/SCS is within the forecast on which the 2012-2015 AQMP is based.

Despite these differences, the policies and land use patterns facilitated by the 2040 MTP/SCS are projected to reduce emissions of ozone precursors below 2015 baseline levels, as discussed in Impact AQ-3 (see Table 12). This decrease in emissions is due to the proposed transportation improvements and land use projects envisioned by the 2040 MTP/SCS, which selectively increases residential and commercial land use capacity within high quality transit corridors. To accommodate future growth in the region while reducing emissions, the strategy of the 2040 MTP/SCS is to increase density along transit corridors to encourage active and public transportation. Shifting a greater share of future growth to these transit corridors, ultimately increasing density, would improve circulation and multimodal connections (refer to Section 4.14, *Transportation and Circulation*).

The 2040 MTP/SCS would not conflict with the population forecast in the AQMP, and would reduce emissions of ozone precursors below 2015 baseline levels. Therefore, implementation of the 2040 MTP/SCS would not conflict with or obstruct implementation of the AQMP, and this impact would be less than significant.

Mitigation Measures

None required.

Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation
Threshold 3: 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)

Impact AQ-2 CONSTRUCTION ACTIVITIES ASSOCIATED WITH TRANSPORTATION PROJECTS UNDER THE 2040 MTP/SCS, AS WELL AS THE LAND USE PROJECTS ENVISIONED BY THE 2040 MTP/SCS, 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 the 2040 MTP/SCS, as well as the land use projects envisioned by the 2040 MTP/SCS:

1. Operation of the construction vehicles (i.e., scrapers, loaders, dump trucks);
2. The creation of fugitive dust during clearing and grading; and
3. 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 ROG and NO_x emissions, generated by construction equipment utilized to build 2040 MTP/SCS transportation improvements and future development facilitated by the SCS land use scenario would depend on the type and quantity of equipment used and the hours of operation. The amount of ROG emissions generated by oil-based substances such as asphalt is dependent upon the type and amount of asphalt utilized. The significance of fugitive dust (PM_{2.5} and PM₁₀) emissions would depend upon the following factors: (1) the aerial extent of disturbed soils; (2) the length of disturbance time; (3) whether existing structures are demolished; (4) whether excavation is involved (including the potential removal of underground storage tanks); and (5) whether transport of excavated materials offsite is necessary.

Intersection improvements such as signalization, re-striping, or signal coordination are not expected to generate significant short-term emissions impacts. However, other 2040 MTP/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 SR 156 Corridor 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 MBARD'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 PM₁₀ or ozone precursor emissions. Implementation of mitigation measures for individual projects, would reduce PM10 and ozone precursor emissions. However, this impact would remain significant and unavoidable.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that result in fugitive dust and ozone precursor emissions. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

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

For all projects, the implementing agency shall incorporate the most recent MBARD feasible mitigation measures and/or technologies for reducing inhalable particles based on analysis of individual sites and project circumstances. Current MBARD feasible mitigation measures include the following. Additional and/or modified measures may be adopted by MBARD prior to implementation of individual projects under the 2040 MTP/SCS. The most current list of feasible mitigation measures at the time of project implementation shall be used.

- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil and wind exposure.
- Prohibit all grading activities during periods of high wind (over 15 mph).
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydro seed area.
- Haul trucks shall maintain at least 2'0" of freeboard.
- Cover all trucks hauling dirt, sand, or loose materials.
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- Install wheel washers at the entrance to construction sites for all exiting trucks.
- Pave all roads on construction sites.
- Sweep streets if visible soil material is carried out from the construction site.
- Limit the area under construction at any one time.
- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Air Resources District shall be visible to ensure compliance with Rule 402 (Nuisance).

Implementing Agencies

Implementing agencies for AMBAG transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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.

Implementing Agencies

Implementing agencies for AMBAG transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

AQ-2(c) Electric Construction Equipment

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

Implementing Agencies

Implementing agencies for AMBAG transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

Threshold 2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation
Threshold 3: 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)

Impact AQ-3 IMPLEMENTATION OF THE 2040 MTP/SCS WOULD REDUCE OZONE PRECURSORS COMPARED TO 2015 EXISTING CONDITIONS. HOWEVER, IMPLEMENTATION OF THE 2040 MTP/SCS WOULD INCREASE PM₁₀ EMISSIONS COMPARED TO 2015 EXISTING CONDITIONS, WHICH COULD CONTRIBUTE SUBSTANTIALLY TO A PROJECTED AIR QUALITY VIOLATION. LONG-TERM OPERATIONAL IMPACTS RELATED TO PM₁₀ EMISSIONS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Projected on-road vehicle emissions of ozone precursors and particulate matter on the AMBAG transportation network and land use emissions in the AMBAG region for the year 2040 were compared to 2015 existing conditions. Table 12 compares the existing conditions for these pollutants in 2015 and 2040 conditions with implementation of the 2040 MTP/SCS. The conditions in 2040 without implementation of the 2040 MTP/SCS are also shown for informational purposes.

Table 12 Regional Emissions Analysis

Scenario	ROG (tons/day)	NO _x (tons/day)	PM ₁₀ (tons/day) ¹
2015 AMBAG Baseline			
On-Road Motor Vehicles	6.69	15.10	1.13
Land Use Emissions	51.95	23.23	42.46
Total Regional Emissions	58.64	38.33	43.59
2040 No Project			
On-Road Motor Vehicles	1.86	2.93	1.14
Land Use Emissions	54.37	16.24	54.10
Total Regional Emissions	56.23	19.17	55.24
2040 MTP/SCS			
On-Road Motor Vehicles	1.85	2.91	1.14
Land Use Emissions	54.37	16.24	54.10
Total Regional Emissions	56.22	19.15	55.24

¹ PM₁₀ includes tire wear and brake wear emissions.

Source: On-road motor vehicle emissions were calculated by AMBAG using EMFAC. Land use emissions were estimated based on the 2012-2015 AQMP for ROG and NO_x and 2016 CARB data for PM₁₀ (refer to Table 11). Refer to 2040 MTP/SCS Chapter 5 and Appendix G for complete methodology.

For mobile source emissions, projected 2040 emissions for ROG and NO_x with implementation of the 2040 MTP/SCS would be below the 2015 AMBAG baseline, and emissions of a PM₁₀ would be slightly above the baseline. This result for ROG and NO_x is consistent with the State-wide downward trend as a result of CARB rules designed to reduce emissions from cars and trucks. ROG emissions are primarily due to gasoline vehicles and are lower due to improvements in vehicle emission rates (CARB 2013). NO_x emissions are primarily sourced from trucks and are substantially lower due to CARB rules designed to reduce NO_x emissions from diesel trucks and buses.

However, PM₁₀ emissions from all sources would increase by 11.65 tons per day compared to the 2015 AMBAG baseline. Operational emissions from development projects implementing the SCS land use scenarios would be the major cause of this increase, although many sources of this increase would be controlled by MBARD regulations. Given this increase in PM₁₀ emissions, long-term operational impacts would be significant because they could contribute substantially to a projected air quality violation.

In addition to ozone precursors and particulate matter, MBARD also regulates emissions of CO and SO_x. The primary source of CO is the use of gasoline-powered engines, with automobiles being the primary contributor. The primary source of SO_x is fuel combustion, while chemical plants, sulfur recovery plants and metal processing are minor contributors (U.S. EPA 2017). MBARD has not developed regional emissions inventories or projections for CO and SO_x. However, because both of these pollutants are primarily associated with fuel combustion and transportation, this analysis evaluates the change in CO and SO_x emissions associated with on-road motor vehicles, based on data and projections developed by AMBAG using EMFAC. The 2015 baseline emissions from on-road motor vehicles would be 56.0 tons/day of CO and 0.08 ton/day of SO_x. In 2040 without implementation of the 2040 MTP/SCS, emissions from on-road motor vehicles would be 12.90

tons/day of CO and 0.06 ton/day of SO_x. In 2040 with implementation of the 2040 MTP/SCS emissions from on-road motor vehicles would be 12.9 tons/day of CO and 0.06 ton/day of SO_x (refer to Chapter 5 and Appendix G of the 2040 MTP/SCS for complete methodology). Therefore, for mobile source emissions, projected 2040 emissions for CO and SO_x with implementation of the 2040 MTP/SCS would be below the 2015 AMBAG baseline.

Mitigation Measures

The 2040 MTP/SCS already includes policies, alternative transportation projects and transportation demand management projects which would encourage the use of transportation modes other than passenger vehicles. However, the expected growth in the AMBAG region would still result in higher regional PM₁₀ emissions compared to existing conditions. For land use projects under their jurisdiction, the cities and counties in the AMBAG region can and should implement the following measures to reduce PM₁₀ emissions, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

AQ-3 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 in the NCCAB. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce PM₁₀ emissions below MBARD 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 MBARD, 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.
- Require new development to contribute mitigation fees to the MBARD Carl Moyer grant incentive programs that provide funding for regional PM₁₀-reduction measures, including replacement of diesel engines in buses and other vehicles that reduce emissions of diesel particulate matter in the District.

Implementing Agencies

Implementing agencies for land use projects include cities and counties.

In addition, Mitigation Measure T-5, described in Section 4.14, *Transportation and Circulation*, requires implementing agencies to evaluate VMT as part of project-specific CEQA review and discretionary approval for land use projects, and to identify and implement measures that reduce VMT. Reducing VMT would further reduce PM₁₀ emissions from entrained dust and diesel and gasoline fuel combustion.

Significance After Mitigation

If implementing agencies adopt and require the mitigation described above, impacts would be reduced because PM₁₀ emissions from land use projects would be reduced. However, implementation of project-level daily PM₁₀-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 PM₁₀

emissions above existing conditions could be fully avoided in 2040, due to factors unrelated to discretionary approvals, such as population growth in the region. Therefore, this impact would remain significant and unavoidable. No additional feasible mitigation measures are available that would reduce daily emissions below the 2015 AMBAG baseline.

Threshold 4: Expose sensitive receptors to substantial pollutant concentrations

Threshold 5: Create objectionable odors affecting a substantial number of people

Impact AQ-4 IMPLEMENTATION OF THE 2040 MTP/SCS WOULD NOT RESULT IN A SIGNIFICANT REGIONAL INCREASE IN TOXIC AIR EMISSIONS OR ODOROUS COMPOUNDS WHEN COMPARED TO 2015 EXISTING CONDITIONS. HOWEVER, FUTURE GROWTH AND DEVELOPMENT FACILITATED BY THE 2040 MTP/SCS LAND USE SCENARIO COULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL HAZARDOUS AIR POLLUTANT CONCENTRATIONS AND OBJECTIONABLE ODORS. 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 level of insignificance 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 13, which compares the existing conditions in 2015 and 2040 conditions with implementation of the 2040 MTP/SCS. The conditions in 2040 without implementation of the 2040 MTP/SCS are also shown for informational purposes. Projected emissions for 2040 with implementation of the 2040 MTP/SCS would result in lower diesel PM_{2.5}, PM₁₀, NO_x, and CO emissions, and the same amount of diesel SO_x emissions when compared to the 2015 AMBAG baseline. Since on-road mobile emissions with implementation of the 2040 MTP/SCS would decrease or remain the same for all pollutants compared to existing 2015 conditions, impacts related to diesel particulate matter exposure and associated health risks and nuisance odors at the regional level would be less than significant.

Table 13 On-Road Mobile Source Diesel Toxics Comparison

Scenario	Diesel PM _{2.5} (tons/day)	Diesel PM ₁₀ ¹ (tons/day)	Diesel NO _x (tons/day)	Diesel SO _x (tons/day)	Diesel CO (tons/day)
2015 AMBAG Baseline	0.22	0.43	8.25	0.02	1.46
2040 No Project	0.09	0.22	1.89	0.02	0.62
2040 MTP/SCS	0.09	0.22	1.89	0.02	0.62

¹ PM₁₀ includes tire wear and brake wear emissions.

Source: On-road mobile source diesel toxics emissions were calculated by AMBAG using EMFAC. Refer to 2040 MTP/SCS Chapter 5 and Appendix G for complete methodology

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 of the MTP/SCS (refer to Table 13), exposure is primarily based on local parameters such as average daily traffic (ADT) on local roadway segment, 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 4.14, *Transportation and Circulation*, for a description of high volume roadways and transportation facilities, such as railways, in the AMBAG 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 AMBAG region, there are six major highway routes (Highway 1, 9, 17, 25, 68 and 101). 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 2040. As described in Section 4.14, *Transportation and Circulation*, although the 2040 MTP/SCS would reduce daily vehicle hours of delay in the region as a whole in 2040 when compared to conditions without the 2040 MTP/SCS, the 2040 MTP/SCS would nevertheless increase daily vehicle hours of delay compared to the 2015 baseline.

As discussed in Section 2.0, *Project Description*, as a result of 2040 MTP/SCS 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 2040 MTP/SCS 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 4.14, *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 declines 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, the proposed 2040 MTP/SCS 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

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. 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.

Implementing Agencies

Implementing agencies for AMBAG transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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 4: Expose sensitive receptors to substantial pollutant concentrations

Impact AQ-5 RE-ENTRAINED DUST HAS THE POTENTIAL TO INCREASE AIRBORNE PM₁₀ AND PM_{2.5} LEVELS IN MONTEREY, SAN BENITO AND SANTA CRUZ COUNTIES. THE INCREASE IN GROWTH EXPECTED THROUGH THE 2040 MTP/SCS PLANNING HORIZON 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 THE 2040 MTP/SCS THAN 2015 EXISTING CONDITIONS. IMPLEMENTATION OF MBARD CONTROL MEASURES WOULD FURTHER REDUCE SUCH EMISSIONS. THEREFORE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

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 14 compares total particulate emissions for the existing conditions in 2015 and 2040 conditions with implementation of the 2040 MTP/SCS. The conditions in 2040 without implementation of the 2040 MTP/SCS are also shown for informational purposes. As shown in Table 14, total particulate emissions would be lower with implementation of the 2040 MTP/SCS compared to existing conditions.

Table 14 Mobile Source Particulate (PM₁₀ + PM_{2.5}) Emissions

Scenario	PM ₁₀ Emissions (tons/day)	PM _{2.5} Emissions (tons/day)	Total PM (PM ₁₀ + PM _{2.5}) Emissions (tons/day)
2015 AMBAG Baseline	1.13	0.56	1.69
2040 No Project	1.14	0.47	1.61
2040 MTP/SCS	1.14	0.47	1.61

Source: Regional emissions were calculated by AMBAG using EMFAC. Total PM includes both PM₁₀ and PM_{2.5}. Mobile source emissions were calculated by AMBAG using EMFAC. Refer to 2040 MTP/SCS Chapter 5 and Appendix G for complete methodology.

MBARD fugitive dust control measures described in Table 15 would further reduce re-entrained dust from unpaved roads within the region. 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., MBARD) to reduce PM₁₀ and PM_{2.5}. In

response to SB 656, MBARD identified several control measures aimed at reducing PM₁₀ and PM_{2.5} emissions. The most applicable measures to mobile emissions listed in Table 15, specifically to re-entrained road dust, are D-1 and D-2. D-1 encourages 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. D-2 is an extension or enhancement of D-1 and evaluates the impact of vehicle speed on unpaved roads in creating fugitive dust, visibility impairment, nuisance and dust deposition in areas along the roadway corridor. All projects would be required to comply with the fugitive dust control measures listed in Table 12. Therefore, compliance with MBARD Fugitive Dust Control Measures 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.

Table 15 MBARD Fugitive Dust Control Measures

No.	Measure Description	Target Pollutant	Measure Type	Implementation Date
D-1	Unpaved Roads – Best Management Practices (BMPs)	Fugitive Dust	Educational and Grants	December 2006
D-2	Unpaved Roads – Speed Limit	Fugitive Dust	Educational or Regulatory	December 2006
D-3	Agricultural Tilling/Land Planning	Fugitive Dust	Policy	December 2006
D-4	Sea Salt Exemption	None	Regulatory	March 2006
D-5a	Mineral Processing	Fugitive Dust	Contingency Measure	June 2007
D-5b	Cement Manufacturing	Fugitive Dust	Regulatory	Implemented with Mineral Processing measure
D-6a	Integrate Air Quality Management Plan for Ozone	Secondary PM	Regulatory	June 2007
D-6b	Integrate Smoke Management Program	Smoke	Regulatory	June 2007
D-6c	Integrate Environmental Review Under CEQA	Fugitive Dust	Regulatory	October 2006
D-6d	Integrate Air Toxic Control Measure for Naturally Occurring Asbestos	Fugitive Dust	Regulatory	June 2007
D-6e	Integrate Expanding Moyer Program (AB 923)	Diesel Exhaust	Grants	June 2006
D-6f	Integrate Department of Motor Vehicles Renewal Fees (AB 2766)	PM ₁₀	Educational and Grants	June 2006
D-7	Air Toxic Control Measure for Agricultural Irrigation Pumps	Fugitive Dust	Grants	June 2007

*All control measures adopted on December 14, 2005.

Source: MBARD 2005.

Mitigation Measures

None required.

c. Specific MTP Projects That May Result in Impacts

The proposed projects listed in Appendix B and summarized in Section 2.0, *Project Description*, would have the potential to result in air quality impacts. All projects that include a construction component would contribute to Impact AQ-2. Projects that include roadway, rail and transit features and/or expansions would contribute to Impacts AQ-3 through AQ-5. Moreover, any project that would expose sensitive receptors to hazardous air pollutants would contribute to Impact AQ-4. Additional specific analysis would be conducted as the individual projects are designed and implemented in order to determine the actual magnitude of impact. Mitigation measures discussed above could apply to these specific projects. Table 16 highlights 2040 MTP/SCS transportation projects that may result in air quality impacts as discussed above. Listed projects are representative of the types of air quality impacts and the types of transportation projects that may be affected in different localities.

Table 16 2040 MTP/SCS Projects that May Result in Air Quality Impacts

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-CT044-SL	U.S. 101 – Harris Road Interchange	Monterey County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions
MON-CT031-CT	U.S. 101 – South County Frontage Roads	Monterey County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions
MON-CT030-SL	U.S. 101 – Salinas Corridor	Monterey County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions
SC-AIR-P01-WAT	Lump Sum Watsonville Municipal Airport Capital Projects	Santa Cruz County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions
SC-RTC-24e-RTC	<u>3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street</u> Highway 1 – Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	Santa Cruz County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions
SC-SC-P81-SCR	Highway 1/Mission Street at Chestnut/King/Union Intersection Modification	Santa Cruz County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions

d. Cumulative Analysis

As discussed in Section 3.4.3, the cumulative impact analysis area includes the AMBAG planning region as well as seven adjoining counties: San Mateo, Santa Clara, Merced, Fresno, Kings, Kern and San Luis Obispo. The AMBAG planning region falls within the jurisdiction of MBARD, while the adjoining counties fall within the jurisdiction of the Bay Area Air Quality Management District, San

Joaquin Valley Air Pollution Control District, or San Luis Obispo Air Pollution Control District. Each of these four 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 four air districts currently exceed at least one federal and/or state air quality standard. Construction activities associated with transportation projects under the 2040 MTP/SCS, as well as the land use projects envisioned by the 2040 MTP/SCS, 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 the 2040 MTP/SCS compared to existing 2015 conditions, regional PM₁₀ emissions would increase beyond existing conditions leading to a significant cumulative impact. Therefore, the 2040 MTP/SCS would have a cumulatively considerable contribution to regional air quality impacts. The 2040 MTP/SCS 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.

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4.4 Biological Resources

4.4.1 Setting

a. Terrestrial Vegetation Communities

Monterey, San Benito and Santa Cruz Counties contain a wide diversity of tree (hardwood and coniferous forests, oak woodlands, riparian woodlands), shrub (chaparrals, coastal scrubs) and herbaceous (grasslands, certain wetlands) habitat types. Some habitat types, such as coast live oak woodland, tend to have similar species composition and structure in most areas; however, other habitats, such as other forest types, grasslands and coastal scrubs, will exhibit differences in species composition and structure depending upon proximity to the coast, soil type, elevation and aspect. Thirty-seven habitats are mapped using the California Department of Fish and Wildlife (CDFW) California Wildlife Habitat Relationships (CWHR) habitat classification system within Monterey, San Benito and Santa Cruz Counties (CDFW, 2008). Of those, 16 habitat types occur within three miles of construction projects outlined in the 2040 MTP/SCS (Figure 15, Figure 16 and Figure 17). A description of each of the habitats adapted from *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988) within three miles of projects outlined in the 2040 MTP/SCS 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 present. Also note that the CWHR classification system maps habitats from a broad perspective, and in many areas, it is expected that two or more habitats may blend with one another. As such, due to the large scale at which habitats are mapped using the CWHR classification system, vernal pools, wetlands and drainages are discussed separately in Section 4.4.1.b utilizing sources of information that better capture aquatic and wetland habitats that are of smaller scale in the landscape. 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.

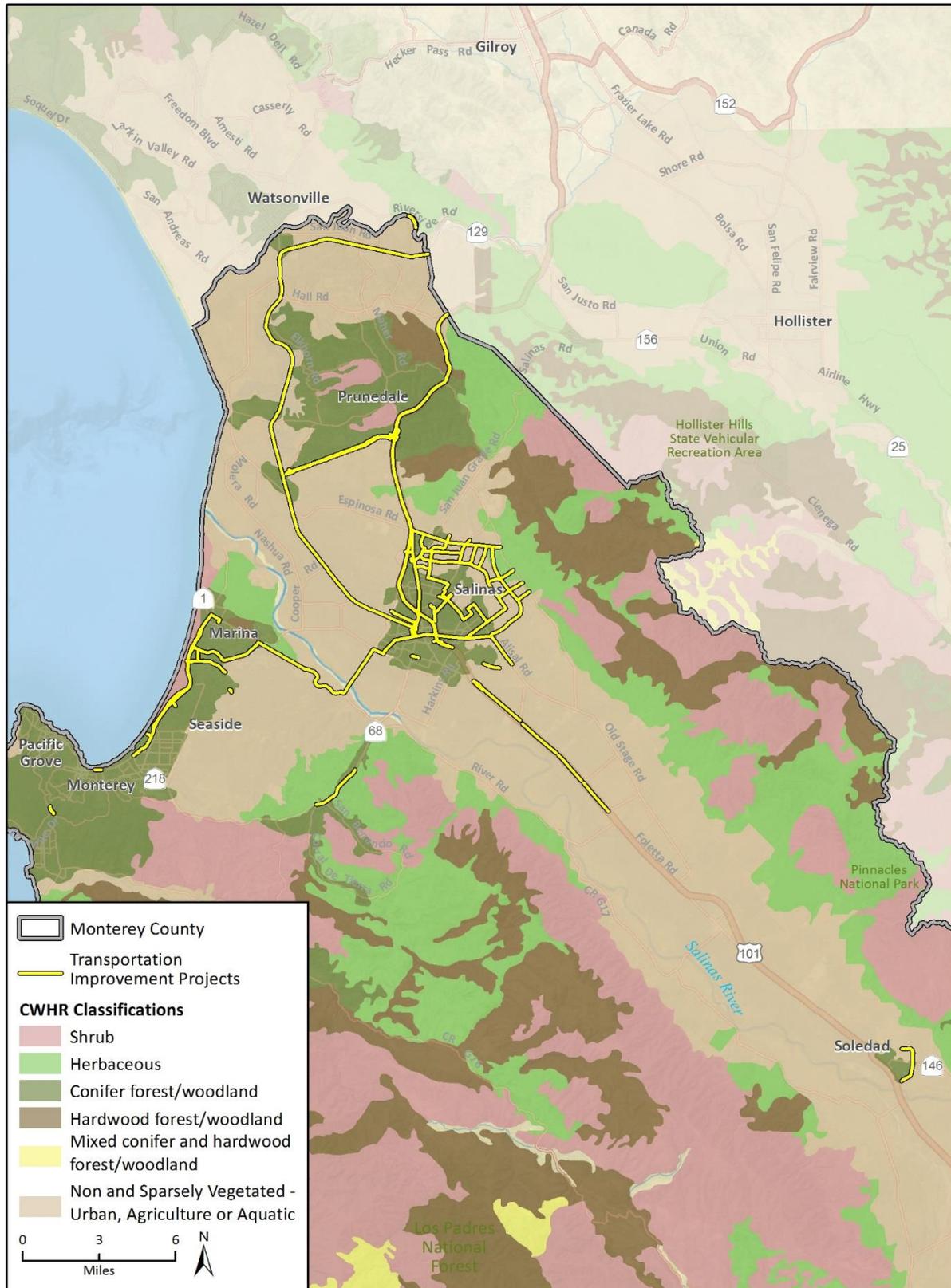
Tree-Dominated Habitats

Monterey, San Benito and Santa Cruz Counties are home to a variety of hardwood, coniferous and mixed woodlands and forests (Figure 15, Figure 16 and Figure 17). These tree-dominated habitats can support diverse wildlife populations. Riparian habitats are generally the terrestrial areas adjacent to fresh water bodies forming a vegetated corridor from stream edge to floodplain edge. Riparian habitats occur in and along the major rivers (e.g. Salinas, Pajaro and San Benito Rivers), as well as along the many creeks, streams, arroyos and ravines found in these counties. 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 the 2040 MTP/SCS.

Closed-Cone Pine-Cypress Forest

Closed-cone pine-cypress forests are typically dominated by a single species, either closed-cone pines (*Pinus* spp.) or western cypresses (*Hesperocyparis* spp.). The height and canopy closure of this habitat type is variable depending upon site characteristics including soil type, the age of the stand and the floristic composition. Closed-cone pine-cypress forests are considered fire climax or fire-dependent vegetation types. This habitat type is typically found within rocky and infertile soils along

Figure 15 Habitat Classifications in Monterey County



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 Additional data provided by AMBAG 2017e.

Fig 17.CWHR Monterey

Figure 16 Habitat Classifications in San Benito County

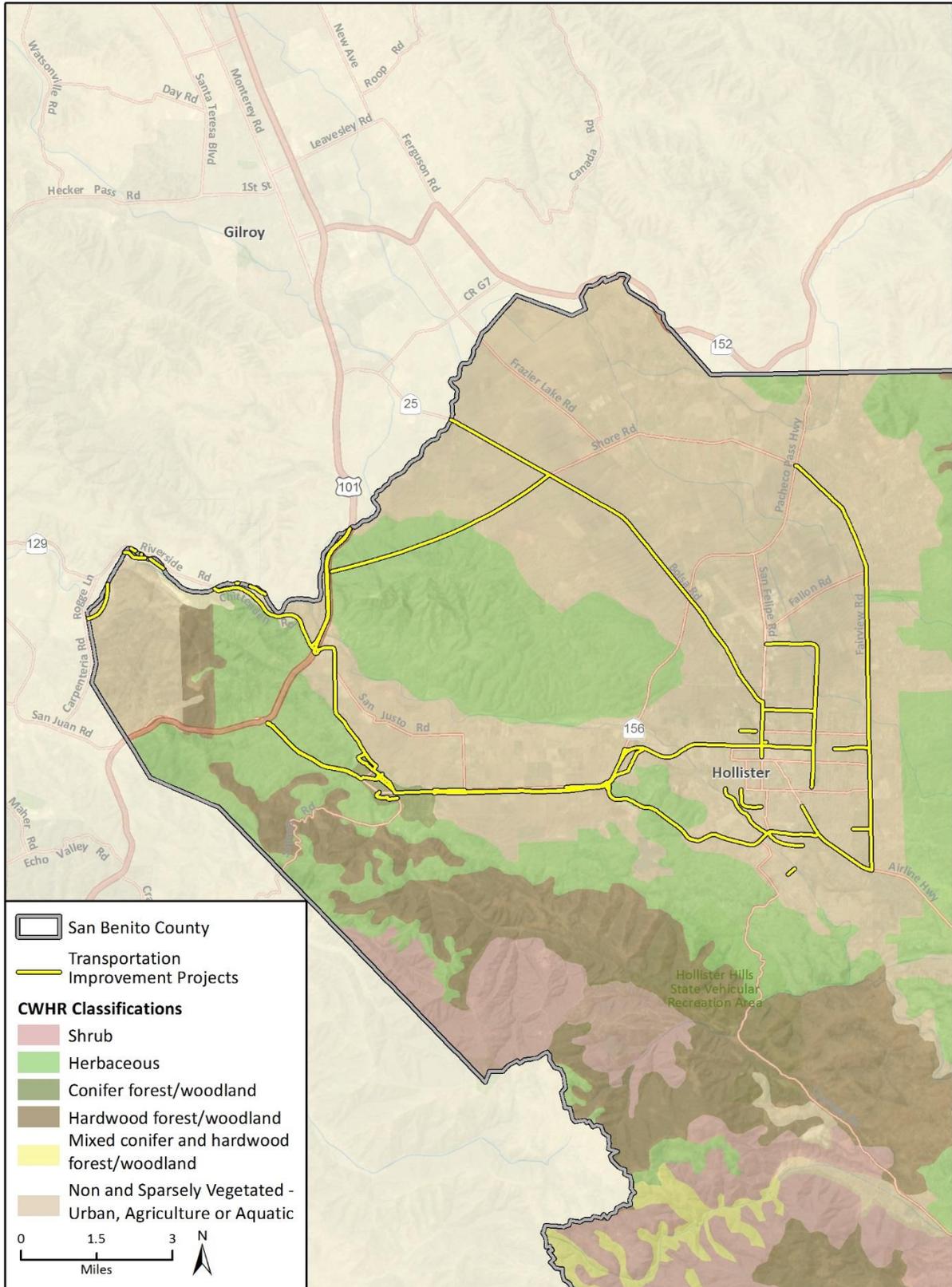
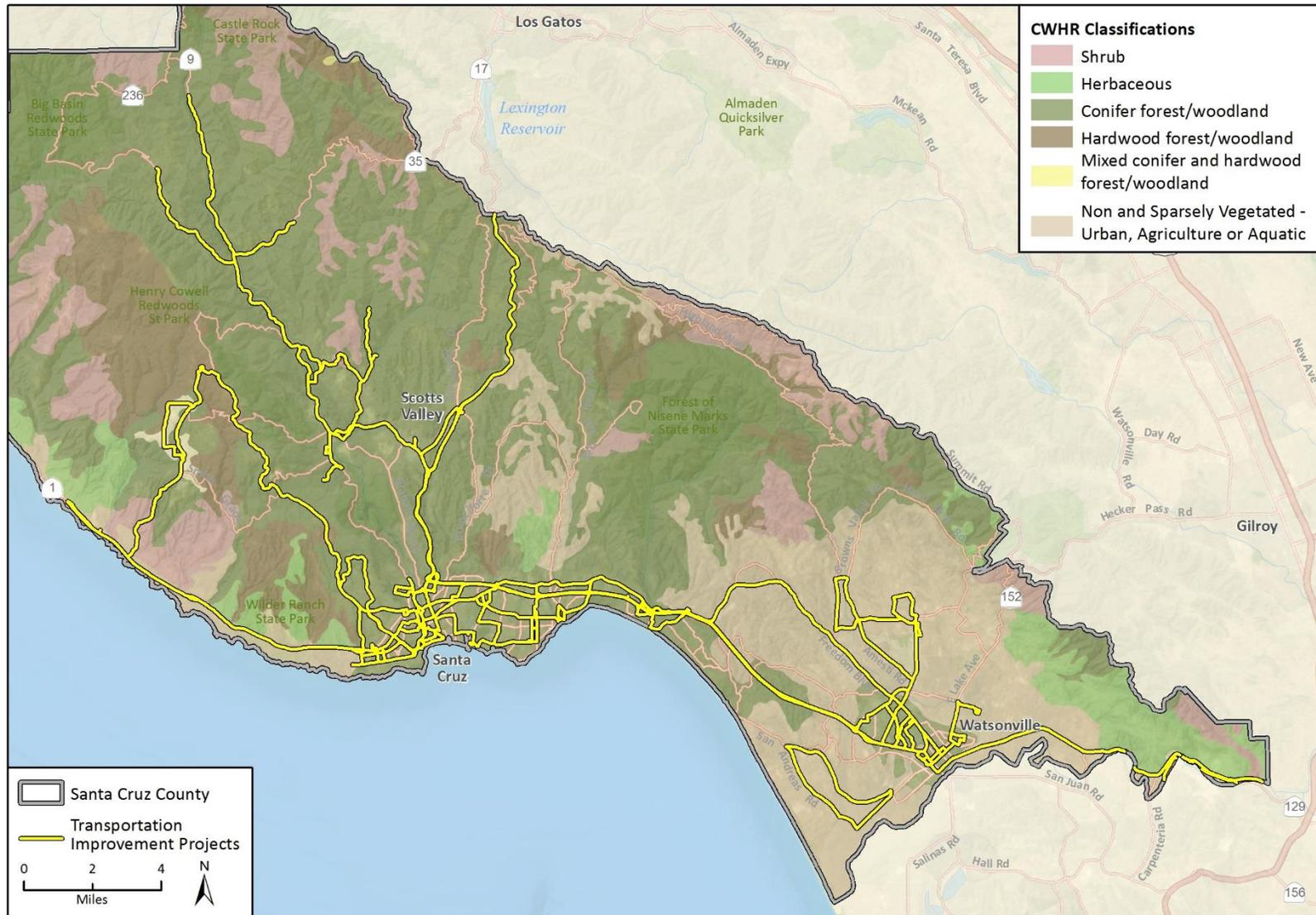


Figure 17 Habitat Classifications in Santa Cruz County



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 Additional data provided by AMBAG 2017e.

Fig 19 CWHR Santa Cruz

the extreme coast or on very shallow infertile soils contain stunted, wind-pruned individuals. Closed-cone pine-cypress forest types that occur in the Counties include but are not limited to the *Pinus radiata* Forest Alliance and the *Hesperocyparis macrocarpa* Woodland Special Stands as described by Sawyer et al. (2009).

Redwood

Redwood forests in the counties include some areas of old-growth forest, with larger areas of second growth. Second growth redwood habitats are characterized by an even-aged structure with an open park-like appearance. Coast redwood (*Sequoia sempervirens*) is the dominant tree species. Understory vegetation in old-growth redwood is usually very dense and composed of tall shrubs. Redwoods are very vigorous sprouters with sprouts eventually forming the dominant canopy. Redwood and associated conifers also reproduce well by seed. Redwood forest typically corresponds to the *Sequoia sempervirens* Forest Alliance as described by Sawyer et al. (2009).

Blue Oak-foothill Pine

This habitat is typically diverse in structure both vertically and horizontally and is composed primarily of a mix of hardwoods, conifers and shrubs. Shrub distributions tend to be clumped, with interspersed patches of annual grassland. Woodlands of this type generally tend to only have small accumulations of dead and downed woody material, compared with other tree habitats in California. Blue oak (*Quercus douglasii*) and foothill pine (*Pinus sabiniana*) typically comprise the overstory of this habitat, with blue oak usually most abundant. In the Coast Range, associated tree species include coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*) and California buckeye (*Aesculus californica*). In rocky areas, interior live oak sometimes dominates the overstory especially on north-facing slopes at higher elevations. At lower elevations, where blue oaks make up most of the canopy, the understory tends to be primarily annual grasses and forbs. At higher elevations where foothill pines and even interior live oaks sometimes comprise the canopy, the understory usually includes patches of shrubs in addition to the annual grasses and forbs. Shrub species that can be associated with this habitat type include various buckbrush (*Ceanothus* spp.) species and manzanita (*Arctostaphylos* spp.). Other species found in this habitat type can include California coffeeberry (*Frangula californica*), poison-oak (*Toxicodendron diversilobum*) and silver lupine (*Lupinus albifrons*). This habitat is generally located in the foothills of the Central Valley, between 500 and 3,000 feet in elevation. Blue oak-foothill pine habitat typically corresponds to the *Quercus douglasii* Woodland Alliance or *Pinus sabiniana* Woodland Alliance as described by Sawyer et al. (2009).

Montane Hardwood

A typical montane hardwood habitat is composed of a pronounced hardwood tree layer, with an infrequent and poorly developed shrub stratum and a sparse herbaceous layer. In the Coast Range, canyon live oak (*Quercus chrysolepis*) often forms pure stands on steep canyon slopes and rocky ridge tops. It is replaced at higher elevations by scattered huckleberry oak (*Quercus vacciniifolia*) amongst an overstory of various conifers including ponderosa pine (*Pinus ponderosa*), Coulter pine (*Pinus coulteri*), California white fir (*Abies concolor*) and Jeffrey pine (*Pinus jeffreyi*). At mid-elevations, typical associates include Douglas-fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), Pacific madrone (*Arbutus menziesii*), California black oak (*Quercus kelloggii*) and bristlecone fir (*Abies bracteata*). At lower elevations, knobcone pine (*Pinus attenuata*), foothill pine, Oregon white oak (*Quercus garryana*) and coast live oak are abundant. Understory vegetation is

mostly scattered woody shrubs and a few forbs. Elevations range from 300 feet near the Pacific Ocean up to 9,000 feet. Montane hardwood typically corresponds to the *Quercus chrysolepis* Forest 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. 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, toyon (*Heteromeles arbutifolia*) and California coffeeberry. Ground cover consists of a well-developed carpet of annual grasses and forbs such as wild oat (*Avena* spp.), bromes (*Bromus* spp.) and ryegrass (*Festuca perennis*). Valley oak woodland typically corresponds to the *Quercus lobata* Woodland Alliance as described by Sawyer et al. (2009).

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 canopy tree layer dominated by cottonwoods (*Populus* spp.), 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* Woodland Alliance and the various *Populus* alliances depending upon dominant species present.

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. In Monterey, San Benito and Santa Cruz Counties these woodlands are commonly dominated by coast live oak. At drier sites, other species such as blue oak and foothill pine 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*), poison oak, miner's lettuce (*Claytonia perfoliata*) and toyon. In areas with more open canopies the understory may be more dominated by grassland species such as bromes and oats. 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 groves form a dense stand with a closed canopy. Blue gum eucalyptus (*Eucalyptus globulus*) and red gum eucalyptus (*Eucalyptus camaldulensis*) are the most common eucalyptus species found in these stands. The understory of these areas tends to have extensive patches of leaf litter with limited vegetation, but may include species such as poison oak and toyon.

Shrub Dominated Habitats

Shrub-dominated habitats, such as chaparral and coastal scrub, are comprised primarily of woody, evergreen shrubs and occur primarily along the coastal bluffs as well as areas associated with the Coast Range within Monterey, San Benito and Santa Cruz Counties (Figure 15, Figure 16 and Figure 17). The following are descriptions of shrub-dominated habitats that occur within three miles of construction projects outlined in the 2040 MTP/SCS.

Chamise-Redshank Chaparral

Regionally this chaparral habitat type is dominated by pure or nearly pure stands of chamise (*Adenostoma fasciculatum*). 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. Fire occurs regularly in chamise-redshank chaparral and influences habitat structure. Within the AMBAG region, chamise-redshank chaparral typically corresponds to the *Adenostoma fasciculatum* Shrubland 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 south to Santa Barbara County, black sage (*Salvia mellifera*) and California buckwheat (*Eriogonum fasciculatum*) become more abundant in mesic areas. 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* Shrubland Alliance, *Baccharis pilularis* Shrubland Alliance and the *Salvia mellifera* Shrubland Alliance.

Mixed Chaparral

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. 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, *Ceanothus cuneatus* Shrubland Alliance and the *Arctostaphylos* sp. Shrubland Alliances.

Herbaceous Habitats

These habitats are generally comprised of areas dominated by grasses and other non-woody species. The majority of this habitat in Monterey, San Benito and Santa Cruz Counties is comprised of non-native grasslands (Figure 15, Figure 16 and Figure 17). Native perennial grasslands, which are dominated by perennial bunch grasses, such as purple needlegrass (~~*Nassella pulchra*~~ *Stipa pulchra*), were historically abundant within Monterey, San Benito and Santa Cruz Counties but are now currently patchy in distribution statewide. The following are descriptions of the grass and herb-dominated habitats that occur within three miles of construction projects outlined in the 2040 MTP/SCS.

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, soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*) and red brome (*Bromus madritensis*). Common forb species can include species of filaree (*Erodium* spp.) and bur clover (*Medicago polymorpha*). 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, hordeaceus) – Brachypodium distachyon* semi-natural stands.

Developed, Sparsely/Non-Vegetated and Cropland Habitats

Developed and sparsely to non-vegetated habitats and croplands are abundant in the AMBAG region (Figure 15, Figure 16 and Figure 17). 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 and cliffs. The following are descriptions of developed and sparsely/non-vegetated habitats that occur within three miles of construction projects outlined in the 2040 MTP/SCS.

Cropland

This habitat type is characterized by areas in active agriculture used to grow annual or perennial herbaceous crops, 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 and can also include hay and grain. Subcategories of cropland habitat classifications include, but are not limited to, dryland grain crop, irrigated hayfield crop and irrigated row and field crop. Orchards and vineyards are classified separately.

Orchard/Vineyard

This habitat type is characterized by typically open, single-species tree- or woody vine-dominated habitats. Depending on the tree or vine type and pruning methods, they are usually low, bushy plants with an open understory to facilitate harvest. Trees such as citrus, avocados and olives are evergreen and other common tree crops such as walnuts and stonefruits are deciduous. The understory is usually composed of low growing grasses and other herbaceous plants, but may be managed to prevent understory growth totally or partially, such as along tree rows. Vineyards, comprised of grape vines, also share similar characteristics. Subcategories of orchard/vineyard habitat classifications include, but are not limited to, deciduous orchard and evergreen orchard.

Urban

This habitat type is also a completely man-made habitat comprising residential, commercial and industrial developed areas. Plant species within urban habitats are typically comprised of ornamental plants and 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 two percent total herbaceous vegetation cover and less than 10 percent relative cover by tree or shrub species is defined as barren (Mayer and Laudenslayer, 1988). Structure and composition of the substrate is largely determined by the region of the state as well as surrounding environment. Examples of barren habitats include areas of exposed parent rock or talus.

b. Drainages and Wetlands

Drainages

The Monterey Bay area contains two primary watersheds: the Salinas River Valley, which is the third-longest river in California and traverses the length of Monterey County; and the Pajaro River Valley, the primary tributary of which begins in San Benito County and runs through southeastern Santa Cruz County. The Salinas River originates at the Santa Margarita Reservoir in San Luis Obispo County and extends northward to the Monterey Bay. The headwaters of the Salinas River are generally undeveloped, while the remainder of the valley is predominantly agricultural with several urban areas, the largest being the City of Salinas. The majority of the Pajaro River watershed consists of undeveloped grassland and shrubland in San Benito County, although a large portion of the lower watershed from Hollister west to the Pacific Ocean is under agricultural cultivation.

Other major rivers and their associated watersheds within the AMBAG region include San Lorenzo River, Carmel River, Big Sur River, Little Sur River, Nacimiento River, San Antonio River and San Benito River. Several creeks and tributaries are associated with each of these watersheds (Figure 18, Figure 19 and Figure 20). 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 (*Oncorhynchus mykiss*), coho salmon (*Oncorhynchus kisutch*) and California red-legged frog (*Rana draytonii*). Many of these rivers and their tributaries are also federally designated critical habitat for salmonid species.

Wetlands and Aquatic Habitats

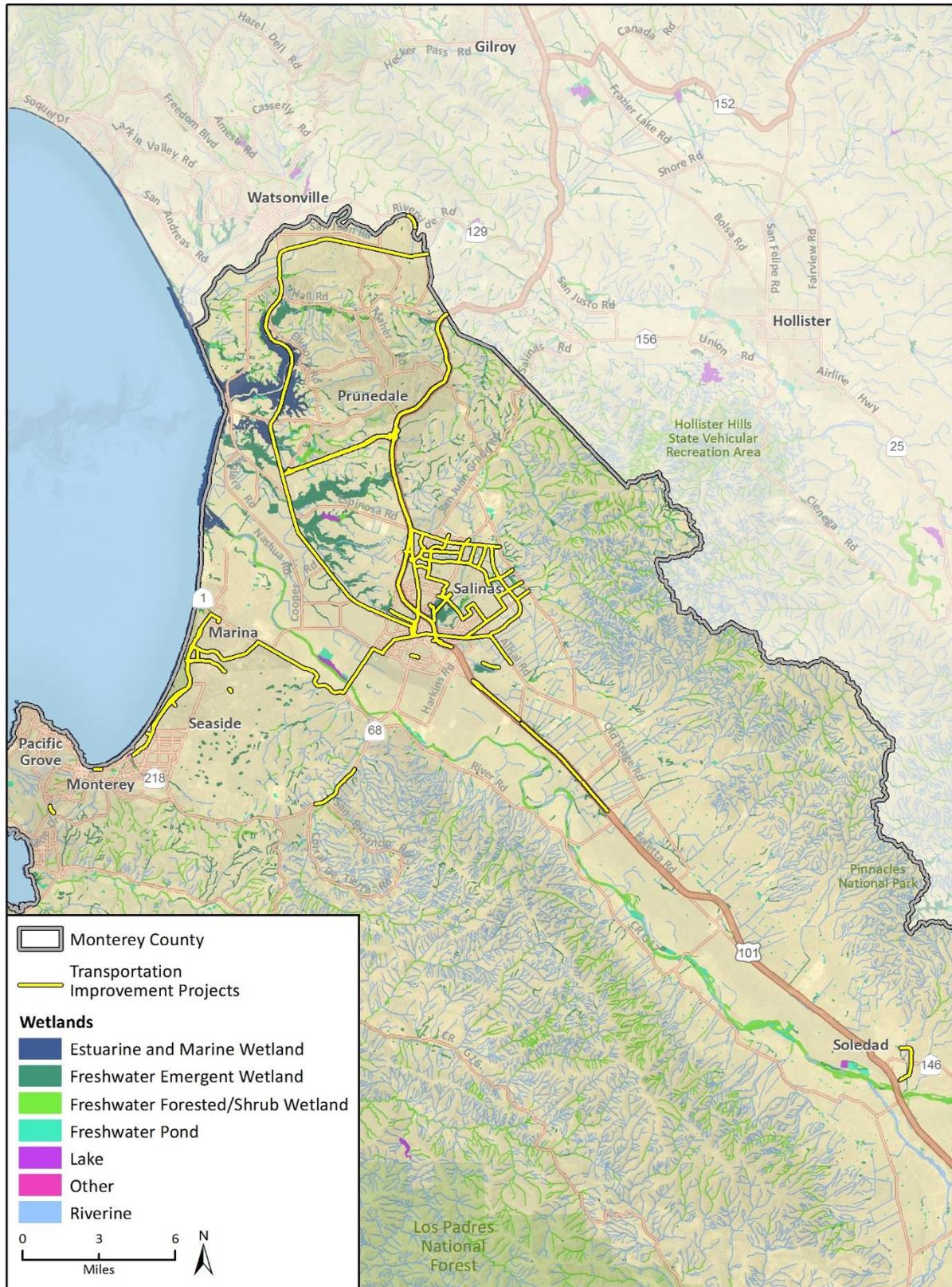
Wetlands are regarded as important biological resources both because of their rarity and because they provide a variety of ecosystem services. Several types of wetlands exist in the subject Counties, including freshwater marshes and vernal pools.

In addition to vernal pools, several areas within three miles of 2040 MTP/SCS construction projects contain wetlands mapped by the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS, 2017c). A general description of each of the classifications used in the NWI is provided below. Of those wetland types mapped by the NWI, estuarine habitats are also mapped by the CWHR. It should be noted that estuarine and marine type wetlands do not occur in San Benito County.

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 adapted to the cycle of brief inundation followed by seasonal drying. Vernal pools are characterized by herbaceous plants that may begin their growth as aquatic or semi-aquatic plants and transition to a dry land

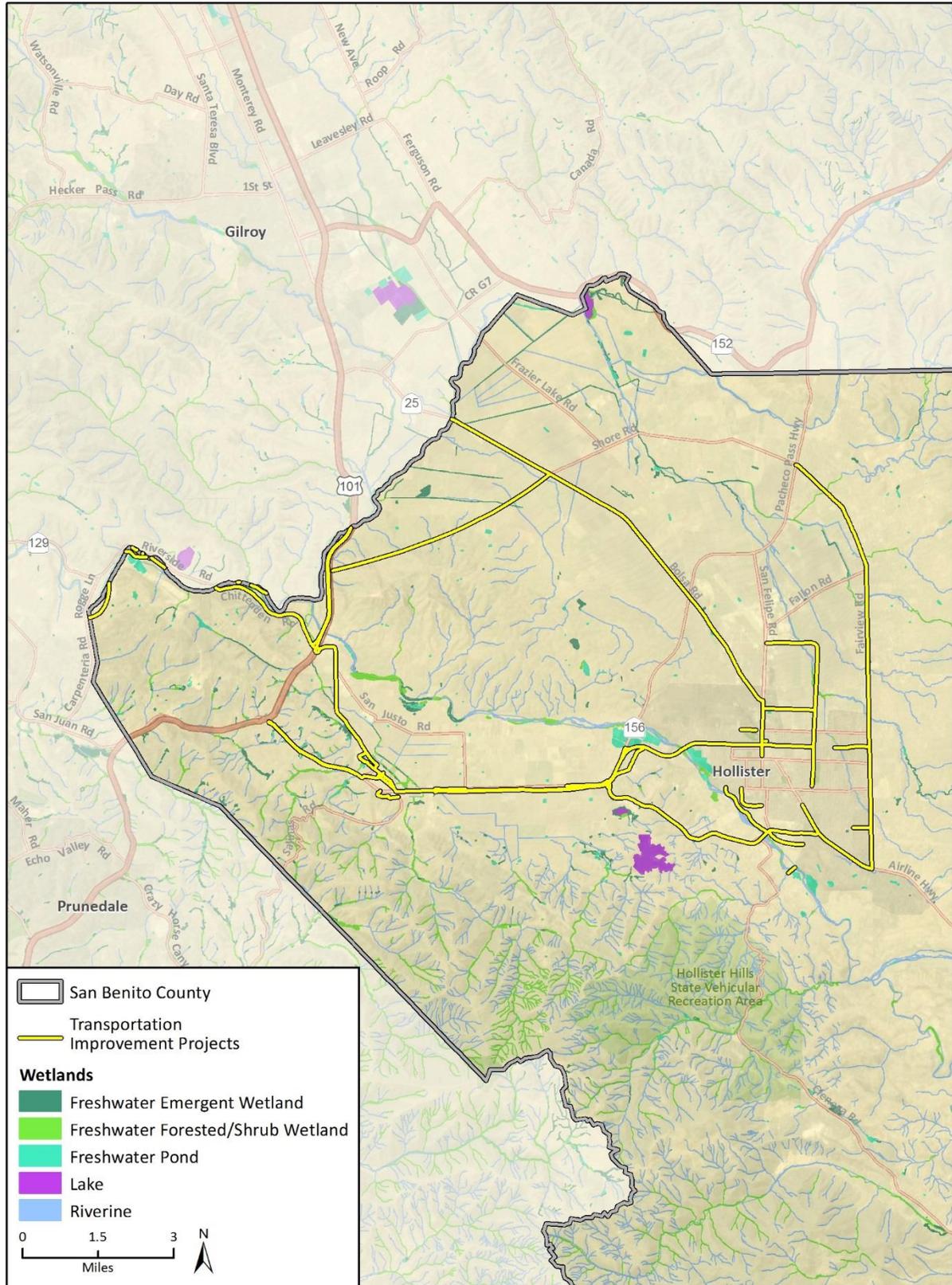
Figure 18 National Wetlands Inventory: Monterey County



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 Additional data provided by AMBAG, 2017e; USFWS, 2017c.

Fig 20 NWI Monterey

Figure 19 National Wetlands Inventory: San Benito County



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 Additional data provided by AMBAG, 2017e; USFWS, 2017c.

Fig. 21 NWI San Benito

environment as the pool dries, while other species germinate in the mud as the pool begins to dry. Most vernal pool plants are annual herbs, many of which are endemic to vernal pools. Wildlife species supported by vernal pools include California tiger salamander (*Ambystoma californiense*) and vernal pool fairy shrimp (*Branchinecta lynchi*).

Estuarine and Marine Deep-Water Wetlands

These deep-water wetlands are composed of the deep water portion 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.

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. The NWI also includes in this category wetlands that lack vegetation if they are less than 20 acres in size, do not have an active wave-formed or bedrock shoreline feature, have a low water depth less than 6.6 feet. Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots. All emergent wetlands are inundated or saturated frequently enough that the roots of the vegetation prosper in an anaerobic environment. The wetlands may vary in size from small clumps to vast areas covering several kilometers. The acreage of Freshwater 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 that are dominated by trees and shrubs, with emergent herbaceous plants, mosses and/or lichens. The NWI also includes within this category wetlands that lack vegetation can be included in this class if they also exhibit the same criteria as described for freshwater emergent wetlands. Freshwater forested/shrub wetlands are generally dominated by woody vegetation such as shrubs and trees. This wetland category also can include riparian habitats.

Freshwater Ponds

Freshwater ponds include non-tidal waters, typically less than 20 acres in size and typically 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; however, we have recognized vernal pools as unique features and thus provided a separate description that was previously presented.

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.

Riverine

Riverine habitats are stream systems that include 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. Features mapped as riverine wetlands in the NWI include drainages as previously described.

c. Sensitive Natural Communities.

Several natural communities considered sensitive by the CDFW occur within the AMBAG region. The California Natural Diversity Database (CNDDDB) lists twenty-one natural communities that occur with these counties (CDFW, 2017b). These sensitive communities are also listed in Table 17 below. The Sensitive Natural Communities List in the CNDDDB is not currently maintained and no new information has been added in several years. As such, the CDFW maintains a List of Vegetation Alliances and Associations (CDFW, 2010). According to the CDFW's Vegetation Program, Alliances with State ranks of S1-S3 are considered to be imperiled and thus, potentially of special concern.

Because this analysis is at the tri-county level and programmatic, vegetation mapping and analysis at the alliance and association level is not available, and would need to be conducted at the project level. That said, some sensitive vegetation alliances and associations are already known to occur within Monterey, San Benito and Santa Cruz Counties as a subset of the habitats described in Sections 4.4.1.a and 4.4.1.b. For instance, some oak woodland alliances within these counties, notably *Quercus lobata* Woodland Alliance, which most resembles the valley oak woodland described in Section 4.4.1.a, are considered sensitive.

Table 17 Sensitive Communities Documented within Monterey, San Benito and Santa Cruz Counties

Communities Considered Sensitive by the CDFW	County
Alkali Seep	Monterey
Central Dune Scrub	Monterey, Santa Cruz
Central Maritime Chaparral	Monterey
Coastal and Valley Freshwater Marsh	Monterey, Santa Cruz
Coastal Brackish Marsh	Monterey, Santa Cruz
Maritime Coast Range Ponderosa Pine Forest	Santa Cruz
Monterey Cypress Forest	Monterey
Monterey Pine Forest	Monterey, Santa Cruz
Monterey Pygmy Cypress Forest	Monterey
N. Central Coast Calif. Roach/Stickleback/Steelhead Stream	Santa Cruz
North Central Coast Drainage Sacramento Sucker/Roach River	Santa Benito
North Central Coast Fall-Run Steelhead Stream	Monterey
North Central Coast Short-Run Coho Stream	Santa Cruz
Northern Bishop Pine Forest	Monterey
Northern Coastal Salt Marsh	Monterey, Santa Cruz
Northern Interior Cypress Forest	Santa Cruz
Northern Maritime Chaparral	Santa Cruz
Sycamore Alluvial Woodland	Monterey
Valley Needlegrass Grassland	Monterey
Valley Oak Woodland	Monterey
Valley Sink Scrub	Monterey

Sources: CNDDDB (CDFW, 2017b)

d. Special Status Plants and Animals

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 U.S. Fish and Wildlife Service (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. The CNDDDB also provides records of other special animals that CDFW is tracking, but are not currently designated a special status. Because of the programmatic nature of the analysis and the duration in which the 2040 MTP/SCS will be implemented, these species were also included as “special status” considering the CDFW is currently collecting data and tracking these species and therefore there is potential for their status to be elevated in the future. Additionally, special status plants with California Rare Plant Rank (CRPR) of 1 through 4 were included. CDFW standards state that plants with a CRPR 1A, 1B, 2A and 2B may meet definitions of rare or endangered under CEQA Sections 15380 (b) and (d) (CDFW 2017c). By CNPS standards, the plants of CRPR Ranks 1A, 1B, 2A and 2B meet the definitions of Sections 2062 and 2067 (CESA) of the California Fish and Game Code, and are eligible for state listing, thus should be considered under CEQA §15380. According to CDFW, “In general, CNPS Rank 3 plants (plants about which more information is needed) and Rank 4 plants

(plants of limited distribution) may not warrant consideration under CEQA §15380. These plants may be included on special status plant lists such as those developed by counties where they would be addressed under CEQA §15380. Factors such as regional rarity vs. statewide rarity should be considered in determining whether cumulative impacts to a Rank 4 plant are significant even if individual project impacts are not.” Due to the programmatic nature of this analysis and the duration in which the 2040 MTP/SCS will be implemented, the evaluation of Rank 3 and 4 species in context of type localities, unique vegetation types and local designation of special status would need to be completed on a case by case basis and requires site-specific knowledge of the vegetation type in which the plant occurs on a given site. Thus, for this analysis, all plants with a CRPR rank are included.

Plants with a CRPR of 1, 2, 3 and 4, which are defined as:

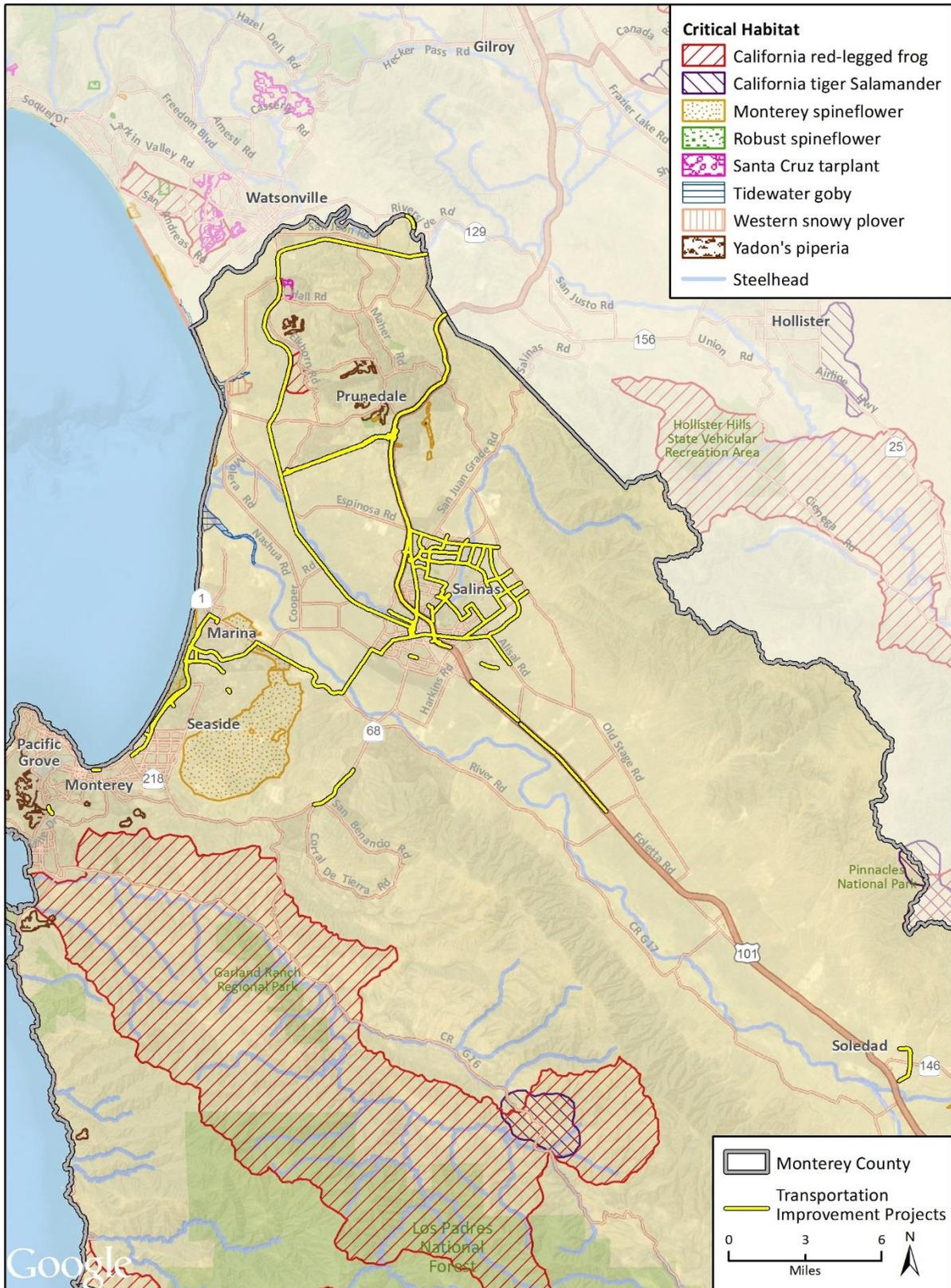
- CRPR 1A = Plants presumed extinct in California;
- CRPR 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);
- CRPR 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened);
- CRPR 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened or no current threats known);
- CRPR 2 = Rare, threatened or endangered in California, but more common elsewhere;
- CRPR 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);
- CRPR 4.1 = Plants of limited distribution (watch list), seriously endangered in California;
- CRPR 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80 percent occurrences threatened); and
- CRPR 4.3 = Plants of limited distribution (watch list), not very endangered in California.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered 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. 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 questions.

Queries of the USFWS Information, Planning and Conservation (IPaC) (USFWS, 2017b), CNDDDB (CDFW, 2017b) and California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants of California (CNPS, 2017) were conducted to obtain comprehensive information regarding state and federally listed species considered to have potential to occur within Santa Cruz, San Benito and Monterey Counties.

Federally designated critical habitat for 17 species also occurs in the AMBAG region (Figure 21, Figure 22 and Figure 23). Note that final designated critical habitat for the Coho Salmon – Central California coast ESU (*Oncorhynchus kisutch*) (not graphically depicted) includes all river/stream reaches (listed in Table 5 of the *Designated Critical Habitat: Central California Coast and southern Oregon/Northern California Coasts Coho Salmon; Final Rule* [1999]) and their tributaries that are

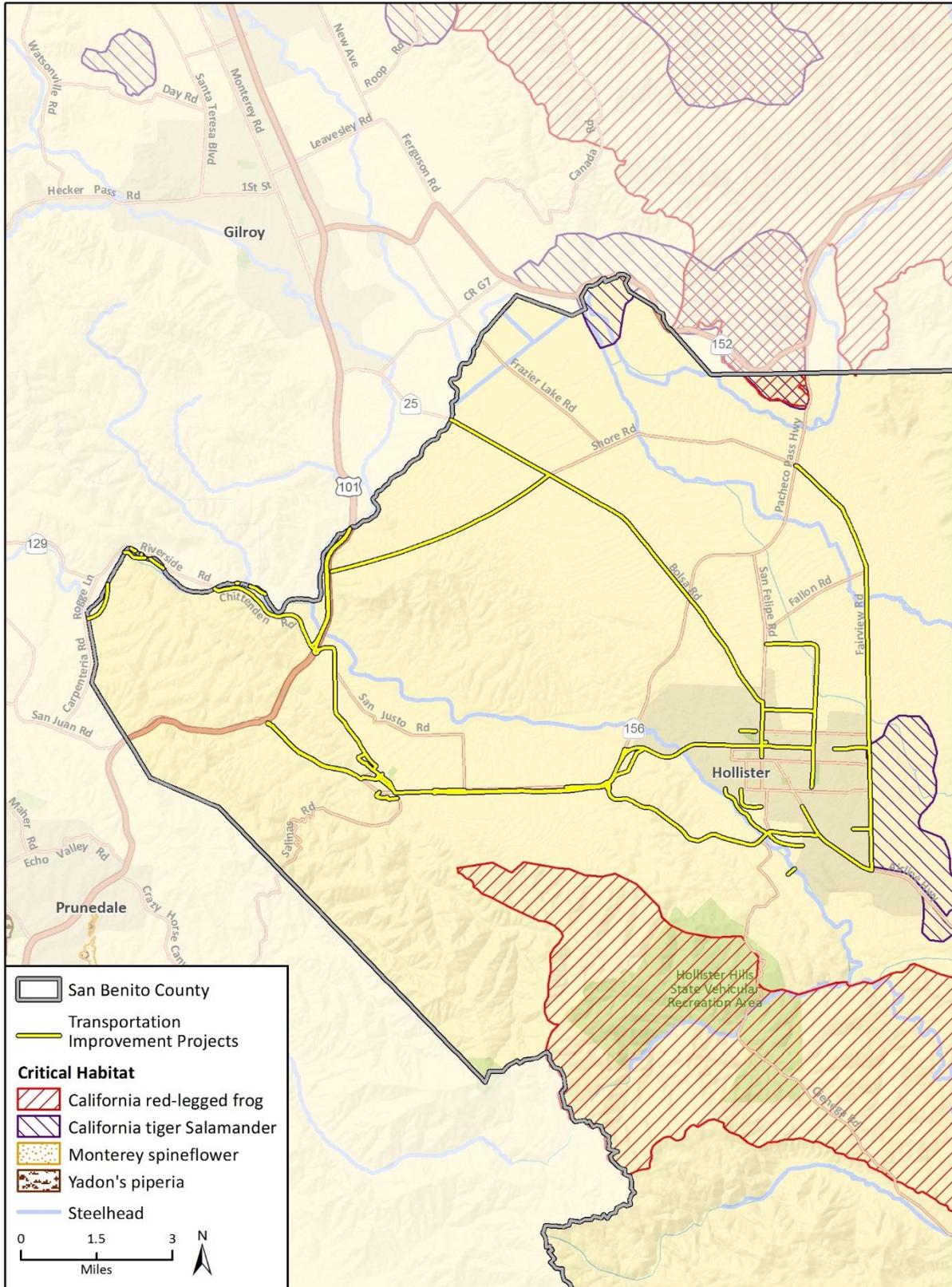
Figure 21 Federally Designated Critical Habitat: Monterey County



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 Additional data provided by AMBAG, 2017e; USFWS, 2017a.

Fig 23.CriticalHabitat Monterey

Figure 22 Federally Designated Critical Habitat: San Benito County



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 Additional data provided by AMBAG, 2017e; USFWS, 2017a.

Fig 24 CriticalHabitat San Benito

Figure 23 Federally Designated Critical Habitat: Santa Cruz County

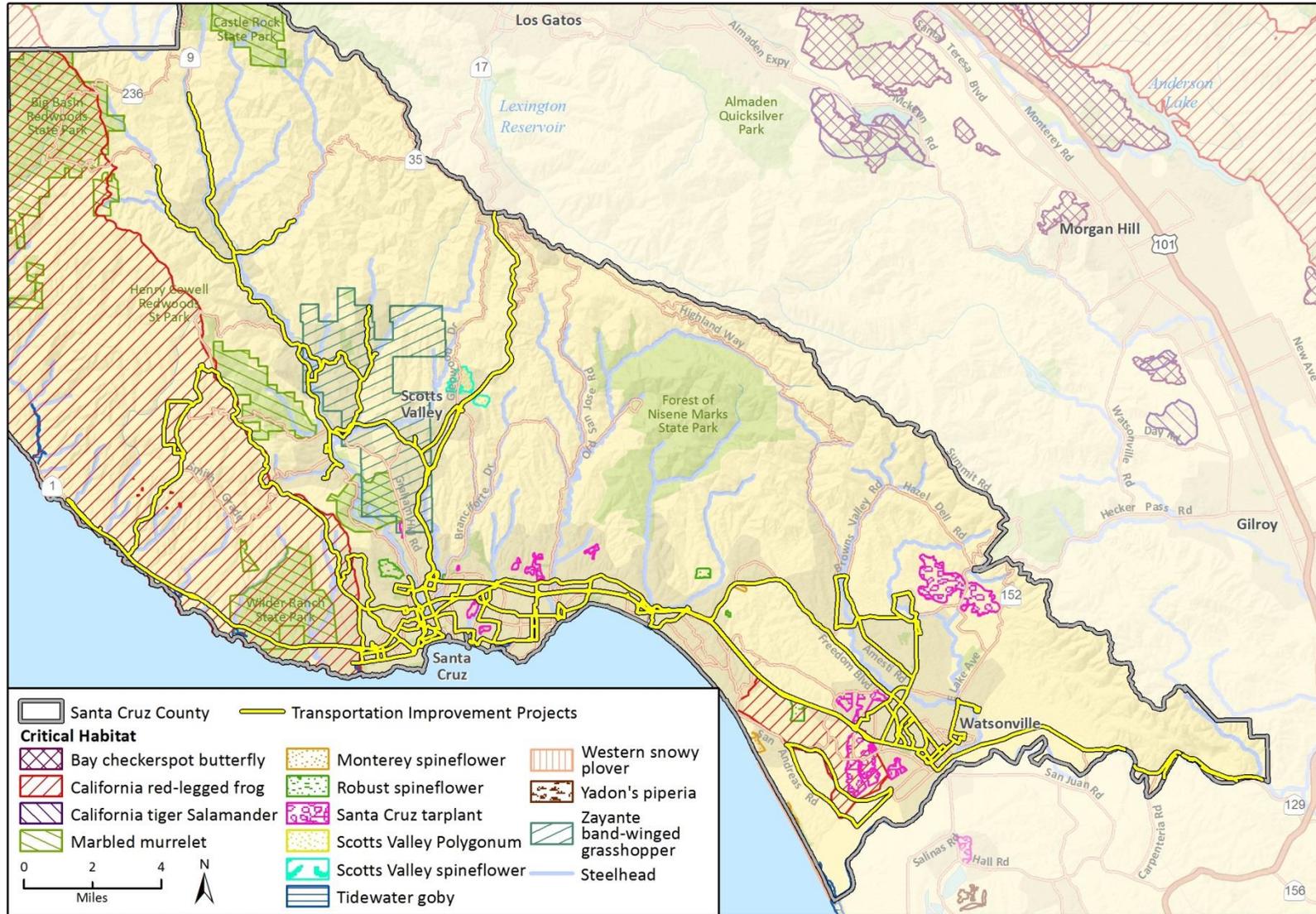


Fig 25 CriticalHabitat Santa Cruz

accessible to listed coho salmon from Punta Gorda in Northern California south to the San Lorenzo River in central California. 2040 MTP/SCS construction projects occur in federally designated critical habitats (USFWS, 2017a and USFWS 2017b) for seven species. These critical habitats are also listed in Table 18.

The AMBAG region is home to several species protected by federal and state agencies. Special status animal species can be found in a variety of habitats these counties host. The CNDDDB (CDFW, 2017b), CNPS (2017) and USFWS IPaC (USFWS, 2017b) together list 383 special status plant (268 species [including CRPR 3 and 4]) and animal (115 species [inclusive of special animals]) species that occur within Monterey, San Benito and Santa Cruz Counties. The status and habitat requirements of those species are presented in Appendix D.

Table 18 Federal Designated Critical Habitat within Monterey, San Benito and Santa Cruz Counties

Critical Habitat	County
California red-legged frog (<i>Rana draytonii</i>) ¹	Monterey, San Benito, Santa Cruz
California tiger salamander (<i>Ambystoma californiense</i>) ¹	Monterey, San Benito
Coho Salmon – Central California coast ESU (<i>Oncorhynchus kisutch</i>)	Santa Cruz
Marbled murrelet (<i>Brachyramphus marmoratus</i>) ¹	Santa Cruz
Monterey spineflower (<i>Chorizanthe pungens</i> var. <i>pungens</i>)	Monterey, Santa Cruz
Purple amole (<i>Chlorogalum purpureum</i>)	Monterey
Robust Spineflower (<i>Chorizanthe robusta</i> var. <i>robusta</i>)	Santa Cruz
Santa Cruz tarplant (<i>Holocarpha macradenia</i>) ¹	Monterey, Santa Cruz
Scott’s Valley polygonum (<i>Polygonum hickmanii</i>)	Santa Cruz
Scotts Valley Spineflower (<i>Chorizanthe robusta</i> var. <i>hartwegii</i>)	Santa Cruz
Steelhead – Central California Coast DPS (<i>Oncorhynchus mykiss irideus</i>) ¹	Santa Cruz
Steelhead – South-Central California Coast DPS (<i>Oncorhynchus mykiss irideus</i>) ¹	Monterey, San Benito, Santa Cruz
Tidewater goby (<i>Eucyclogobius newberryi</i>)	Monterey, Santa Cruz
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	Monterey, San Benito
Western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	Monterey, Santa Cruz
Yadon’s Piperia (<i>Piperia yadonii</i>)	Monterey
Zayante band-winged grasshopper (<i>Trimerotropis infantilis</i>) ¹	Santa Cruz

¹Species with Critical Habitat where MTP/SCS transportation projects are located.

Sources: USFWS IPaC (2017b)

e. 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 Monterey, San Benito and Santa Cruz Counties may support wildlife movement on a regional scale while riparian corridors and waterways, may provide more local scale opportunities for wildlife movement throughout each County. The CDFW BIOS (CDFW, 2017a) mapped three essential connectivity areas within Monterey, San Benito and Santa Cruz Counties. One is located throughout the inland mountainous region of Santa Cruz county. Another is located along the coastal mountainous region of Monterey County with a portion extending across the Salinas Valley and into the Diablo Range along the Monterey - San Benito County line. The last is located in the southeast portion of San Benito County and crossing into Fresno County. Fourteen important movement corridors are also identified from the report, *Missing Linkages: Restoring Connectivity to the California Landscape* (Penrod et al., 2001). These movement corridors are generally associated with rivers and watercourses including the Pajaro Salinas Rivers and areas within the Santa Lucia Range, Santa Cruz Mountains and Diablo Range. These areas are identified as important movement corridors for species such as San Joaquin kit fox, steelhead, riparian birds and other small carnivores.

f. 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 are the counties of Monterey, San Benito and Santa Cruz, as well as other local jurisdictions including cities within these counties. The CDFW is a trustee agency for biological resources throughout the State as defined in 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). In addition, the Regional Water Quality Control Board is responsible agency for waters of the state.

Federal

Endangered Species Act

Under FESA, authorization is required to “take” a listed species. Take is defined under FESA Section 3 as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Under federal regulation (50 CFR Sections 17.3, 222.102); “harm” is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Critical habitat is a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but

that will be needed for its recovery. FESA Section 7 outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat.

Section 7(a)(2) of FESA and its implementing regulations require federal agencies to consult with USFWS or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under FESA Section 10(a). Section 10(a) allows USFWS to permit the incidental take of listed species if such take is accompanied by an HCP that includes components to minimize and mitigate impacts associated with the take.

The USFWS and National Marine Fisheries Service (NMFS) share responsibility and regulatory authority for implementing the Federal Endangered Species Act (FESA) (7 USC Section 136, 16 USC Section 1531 et seq.).

Migratory Bird Treaty Act

The MBTA authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is unlawful, except as permitted by regulations, “to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, [...] any migratory bird, or any part, nest, or egg of any such bird” (16 USC Section 703(a)). The Bald and Golden Eagle Protection Act (BGEPA) is the primary law protecting eagles, including individuals and their nests and eggs. 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). Under the Act’s Eagle Permit Rule (50 CFR 22.26), USFWS may issue permits to authorize limited, non-purposeful take of bald eagles and golden eagles.

Marine Mammal Protection Act

Under the Marine Mammal Protection Act, established in 1972, all marine mammals are protected under federal law. This act prohibits hunting, harassment, capture or killing of all marine mammals. This law protects cetaceans (whales, dolphins and porpoises), pinnipeds (seals and sea lions), sirenians (manatees and dugongs), sea otters and polar bears within the waters of the United States.

Marine Protection, Research and Sanctuaries Act

The Marine Protection, Research and Sanctuaries Act (16 USC § 1431 et seq. and 33 USC §1401 et seq. [1988]) which is also known as the “Ocean Dumping Act” prohibits (1) transportation of material from the United States for the purpose of ocean dumping; (2) transportation of material from anywhere for the purpose of ocean dumping by U.S. agencies or U.S.-flagged vessels; (3) dumping of material transported from outside the United States into the U.S. territorial sea. A permit issued by the Environmental Protection Agency (EPA) is required to deviate from these prohibitions and issuance is dependent upon whether the dumping will “unreasonably degrade or endanger” human health, welfare, or the marine environment.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) regulates marine fisheries in U.S. federal waters. The act was first passed in 1976 and revised in

1996 and 2007. The purpose of the act is to provide long-term biological and economic sustainability of U.S. marine fisheries.

The NMFS has regulatory authority for implementing the Magnuson-Stevens Act. The NMFS requires regional fishery management councils develop Fisheries Management Plans (FMP) specific to their regions, fisheries and fish stocks. For waters off the U.S. West Coast, the Pacific Fishery Management Council has developed four FMPs, which are implemented through our fisheries regulations for coastal pelagic species, groundfish species, highly migratory species and salmon species. These FMPs also identify Essential Fish Habitat (EFH) which is broadly defined as those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.

Section 10 of the River and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the U. S. Army Corps of Engineers, for the construction of any structure in or over any navigable water of the United States. Regulated activities include dredging or disposal of dredged materials, excavation, filling, rechannelization and construction of any structure or any other modification of a navigable water of the United States.

Clean Water Act

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE), with EPA oversight, 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. 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 of dredged or fill material into jurisdictional wetlands or other jurisdictional “waters of the United States” would require a Section 404 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 by compensatory mitigation; in general, the type and location options for compensatory mitigation should comply with the hierarchy established by the USACE Corp/EPA 2008 Mitigation Rule (in descending order): (1) mitigation banks; (2) in-lieu fee programs; and (3) permittee-responsible compensatory mitigation. Also, in accordance with Section 401 of the Clean Water Act, applicants for a Section 404 permit must obtain water quality certification from the appropriate RWQCB.

State

Endangered Species Act

CESA (Fish and Game Code Section 2050 et. seq.) prohibits take of State-listed threatened and endangered species without a CDFW incidental take permit. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification.

Protection of fully protected species is described in Fish and Game Code Sections 3511, 4700, 5050 and 5515. These statutes prohibit take or possession of fully protected species. Incidental take of fully protected species may be authorized under an approved NCCP.

California Fish and Game Code sections 3503, 3503.5 and 3511

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 (CFG Code 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.

Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (CFG Code 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).

Section 1600 et seq. of the California Fish and Game Code

Section 1600 et seq. of the CFG Code prohibits, without prior notification to CDFW, the substantial diversion or obstruction of the natural flow of, or substantial change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. In order for these activities to occur, the CDFW must receive written notification regarding the activity in the manner prescribed by the department, and may require a lake or streambed alteration agreement. Lakes, ponds, perennial and intermittent streams and associated riparian vegetation, when present, are subject to this regulation.

Natural Community Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) Act was established by the California Legislature, is directed by the CDFW, and is implemented by the state, as well as public and private partnerships as a means to protect habitat in California. The NCCP Act takes a regional approach to preserving habitat. An NCCP identifies and provides for the regional protection of plants, animals and their habitats, while allowing compatible and appropriate economic activity. Once an NCCP has been approved, CDFW may provide take authorization for all covered species, including fully protected species, Section 2835 of the CFG Code.

Porter-Cologne Water Quality Control Act

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 (the Central Coast RWQCB for the AMBAG region) implements 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 Act

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. New projects must be constructed so that they do not present a barrier to fish passage.

Local

General Plans typically contain elements which address protection of biological resources. Typically, these elements consist of goals, policies and actions that protect natural resources, such as environmentally sensitive habitats, special status species, native trees, creeks, wetland and riparian habitats. Local jurisdictions approve development as long as it is consistent with those elements of the General Plan.

Some resources are afforded protection via local ordinances such as those that protect trees, riparian corridors and environmentally sensitive habitats. Each county and many cities in the AMBAG region have municipal codes which protect natural resources and addresses compliance with environmental regulations. For example, local ordinances and policies may be in place that protect native and nonnative trees in urban landscapes, as well as in unincorporated county lands. These ordinances and policies vary in their definitions of protected trees (e.g., certain species, minimum diameter at breast height [dbh], trees that form riparian corridors or a combination thereof) and in the requirements for ordinance or policy compliance. In addition, counties and cities may have local ordinances or policies that are intended to protect other biological resources such as wetlands and drainages, riparian habitat and other sensitive habitat areas.

Monterey County

The Conservation/Open Space Element of the Monterey County General Plan (Monterey County, 2010a) includes goals to protect the biological resources found within the county. The goals and policies of the Monterey County General Plan are aimed at protecting and conserving listed species and their habitat, critical habitat, as well as coastal, marine and river environments. In addition, the Monterey County General Plan includes a policy requiring all discretionary project as well as roadway and public infrastructure projects provide movement opportunities for wildlife.

San Benito County

The Natural and Cultural Resources Element of the San Benito County 2035 General Plan (San Benito County, 2015a) includes goals to protect the biological resources found within the county. The goals

and policies are aimed at protecting and preserving wildlife habitat as well as other important habitat areas such as wetlands, as well as includes a goal to protect water quantity and quality in natural water bodies within the county. In addition, the San Benito County 2035 General Plan includes policies aimed at protecting and promoting regeneration of oak woodlands and requires applicants to prepare a mitigation plan where oak impacts cannot be avoided, as well as a policy that indicates that the County shall protect and enhance wildlife migration and movement corridors and requires road and development sites to be designed to maintain habitat connectivity.

Santa Cruz County

The Conservation and Open Space Element of the Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994) includes objectives to protect the biological resources found within the county. The objectives and policies are aimed at maintaining biological diversity, preserving, protecting and restoring riparian corridors and wetlands, as well as other aquatic and marine habitats. The Santa Cruz General Plan and Local Coastal Program also includes policies aimed at protecting Environmentally Sensitive Habitat Areas.

Fort Ord Habitat Management Plan

The existing Fort Ord Habitat Management Plan which, in 1997, was created after the closure of the former Fort Ord to conserve nearly two-thirds of the former army base as open space is anticipated to eventually become a Habitat Conservation Plan (HCP) (Fort Ord Reuse Authority [FORA], 2017). When adopted, the HCP will provide incidental take coverage of federally listed species for a period of 50 years to allow restoration of sensitive habitats and a regional framework for habitat protection and base reuse. The HCP would also provide additional habitat management resources through collection of FORA Development Fees or Community Facilities District Special Tax payments from reuse of the former Fort Ord. If adopted, projects within the HCP Area would be legally required to be consistent with the HCP, and therefore project design, approval and permitting would be required to comply with HCP requirements.

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds.

Data used for this analysis include aerial photographs, topographic maps and data on special status species and sensitive habitat information obtained from the CDFW BIOS (2017a) the CNDDB (CDFW, 2017b), the CNPS Online Inventory of Rare and Endangered Plants (CNPS, 2017), the USFWS IPaC (2017a) and accepted scientific texts to identify species. The USFWS Critical Habitat Mapper (2017b) and USFWS National Wetlands Inventory (NWI; 2017c) were also queried. Potential areas of disturbance associated with the 2040 MTP/SCS were compared to the identified biological resource occurrences to determine whether an impact may occur.

Evaluation Criteria

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact on biological resources:

1. 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;

2. 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;
3. 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;
4. 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;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

b. Project Impacts and Mitigation Measures

The following section presents a programmatic-level discussion of impacts to sensitive biological resources from implementation of the 2040 MTP/SCS. Impacts and associated mitigation measures would apply in Monterey, San Benito and Santa Cruz Counties. Section 4.4.2.c summarizes the impacts associated with capital improvement projects proposed in the MTP/SCS. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could result in the impacts as described in the following section.

Threshold 1: 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

Impact B-1 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS MAY HAVE SUBSTANTIAL ADVERSE IMPACTS ON SPECIAL STATUS PLANT AND ANIMAL SPECIES, EITHER DIRECTLY OR THROUGH HABITAT MODIFICATIONS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

For the purposes of this analysis, special status plant and animal species include those designations described under Section 4.4.1.d above. Most of the transportation improvements proposed under the 2040 MTP/SCS consist of expansions of existing facilities. However, these projects could impact areas occupied by special status plant and animal species. As mentioned above, there are 383 special status species known to occur or with potential to occur within the AMBAG region. Sixty 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 designation of Fully Protected status (animals only). The remaining species shown in Appendix D are protected through CEQA and/or through local ordinances. Most special-status species have very limited ranges within the subject counties and have specific habitat requirements. Many special status species may also tend to be associated with sensitive habitats, such as riparian habitats and drainages.

Because of the programmatic nature of the 2040 MTP/SCS, a precise, project-level analysis of the specific impacts of individual transportation projects on special-status species is not possible. As noted in Section 2.5.2, as future transportation system improvement projects and land use projects envisioned in the 2040 MTP/SCS are planned and designed, site-specific environmental review will be conducted by the agencies responsible for implementing such projects. Nevertheless, some special-status species would experience substantial adverse effects affected at the locations where projects under the 2040 MTP/SCS would occur, significant impacts would therefore occur.

For example, 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), steelhead – South-Central California Coast DPS (Distinct Population Segment), steelhead – Central California Coast DPS (both DPS are federally threatened and state SSC) and Coho Salmon – Central California Coast ESU (Evolutionary Significant Unit) (federally endangered and state endangered). Many of the creeks and rivers found within coastal watersheds, such as those in Monterey and Santa Cruz Counties, are considered accessible by steelhead and currently support or have historically supported steelhead and Coho salmon populations (Santa Cruz County 2015b).

In addition to the rivers and creeks that may be impacted, future transportation projects under the 2040 MTP/SCS could impact upland habitats and the sensitive species that may occupy them. For example, coast horned lizards (*Phrynosoma blainvillii*), a State SSC, may be present in scrub, grassland and some woodland habitats near roads where projects could occur. The federally threatened and state threatened California tiger salamander can also occupy annual grassland habitats containing small mammal burrows if such habitat is within 1.24 miles (the dispersal distance of the species) of known or potentially suitable breeding habitat. 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 the 2040 MTS/SCS area can support many species of nesting birds, including sensitive species such as the state Fully Protected white-tailed kite (*Elanus leucurus*) and the state SSC 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 and/or operation of projects under the 2040 MTP/SCS. Direct impacts also include habitat modification and loss such that it results in mortality or otherwise alters foraging and breeding behaviors substantially enough to cause injury. Indirect impacts could be caused by 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 reducing the availability of suitable forage and breeding sites for special status animal species. Indirect impacts could also result from increased access by humans and domestic animals, particularly in areas where trails may be planned. Increased human and domestic animal (especially dog and cat) presence disrupt the normal behaviors of native animal species and foster the spread of non-native invasive plant species.

In addition to direct and indirect impacts that may result from transportation improvement projects, the 2040 MTP/SCS also contains a future land use scenario that emphasizes infill development and transit oriented development (TOD). This land use scenario focuses future development concentrated in existing urbanized areas. As a result, encroachment into undisturbed habitat would be reduced when compared to a land use scenario that does not focus future development within

existing urbanized areas. This would limit impacts to sensitive plant and animal species as well as their habitat. However, it is possible that sensitive plant and animal species could be located on future infill and TOD sites, as well as more undeveloped project sites. As a result, future development projects could impact plant and animal species that may be present on or in proximity to undeveloped areas. Many special status animal species are associated with creeks even in the most densely developed urban areas. 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 of land use projects would be significant because substantial adverse effects on special status species could occur.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation measures for applicable transportation projects identified in Appendix B. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

B-1(a) Biological Resources Screening and Assessment

On a project-by-project basis, a preliminary biological resource screening shall be performed as part of the environmental review process 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 to document the existing biological resources within the project footprint plus a buffer and to determine the potential impacts to those resources. The biological resources assessment shall evaluate the potential for impacts to all biological resources including, but not limited to: special status species, nesting birds, wildlife movement, sensitive plant communities, critical habitat, Essential Fish Habitat, and other resources judged to be sensitive by local, state and/or federal agencies. Depending on the results of the biological resources assessment, 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 [B-1(b) through B-1(j)] shall be incorporated only as applicable into the biological resources assessment for projects where specific resources are present or may be present and impacted by the project. Note that specific surveys described in the mitigation measures below may be completed as part of the biological resources assessment where suitable habitat is present. The results of the biological resources screening and assessment shall be provided to the implementing agency for review and approval.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-1(b) Special Status Plant Species Surveys

If completion of the project-specific biological resources assessment determines that special status plant species have potential to occur on-site, surveys for special status plants shall be completed prior to any vegetation removal, grubbing, or other construction activity of each project (including

staging and mobilization). The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the target species identified in the project-specific biological resources assessment. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency no more than one year prior to project implementation (annual grassland habitats may require yearly surveys). All special status plant species identified on-site shall be mapped onto a site-specific aerial photograph or 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 for review. If special status plant species are identified, mitigation measure B-1(c) shall apply.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-1(c) Special Status Plant Species Avoidance, Minimization and Mitigation

If state- or federally listed and/or CRPR 1 and 2 species are found during special status plant surveys [pursuant to mitigation measure B-1(b)], then the project shall be re-designed to avoid impacting these plant species to the maximum extent feasible. If CRPR 3 and 4 species are found, the biologist shall evaluate to determine if they meet criteria to be considered special status, and if so, the same process as identified for CRPR 1 and 2 species shall apply.

If special status plants species cannot be avoided and would be impacted by a project implemented under the 2040 MTP/SCS, all impacts shall be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for each species as a component of habitat restoration. A restoration plan shall be prepared and submitted to implementing agency overseeing the project for approval.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-1(d) Endangered/Threatened Animal Species Habitat Assessment and Protocol Surveys

Specific habitat assessment and survey protocol surveys are established for several federally and/or state endangered or threatened animal species. If the results of the biological resources assessment determine that suitable habitat may be present for any such species, protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or USFWS/NMFS protocols prior to issuance of any construction permits/project approvals.

Alternatively, in lieu of conducting protocol surveys, the implementing agency may choose to assume presence within the project footprint and proceed with development of appropriate avoidance measures, consultation and permitting, as applicable.

If the target species is detected during protocol surveys, or protocol surveys are not conducted and presence assumed based on suitable habitat, mitigation measure B-1(e) shall apply.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-1(e) Endangered/Threatened Animal Species Avoidance and Compensatory Mitigation

If habitat is occupied or presumed occupied by federal and/or state listed species and would be impacted by the project, the implementing agency shall re-design the project in coordination with a qualified biologist to avoid impacting occupied/presumed occupied habitat to the maximum extent feasible. If occupied or presumed occupied habitat cannot be avoided, the implementing agency shall provide the total acreages for habitat that would be impacted prior to the issuance of construction permits/approvals. The implementing agency shall purchase credits at a USFWS, NMFS and/or CDFW approved conservation bank if available for the affected species and/or establish conservation easements or funds for acquisition of conservation easements as compensatory mitigation to offset impacts to federal and/or state listed species habitat.

Compensatory mitigation shall be provided at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for permanent impacts. Compensatory mitigation may be combined/nested with special status plant species and sensitive community restoration where applicable. Temporary impact areas shall be restored to pre-project conditions.

If on and/or off site mitigation sites are identified the implementing agency shall retain a qualified biologist to prepare a Habitat Mitigation and Monitoring Plan (HMMP) to ensure the success of compensatory mitigation sites that are to be conserved for compensation of permanent impacts to federal and/or state listed species. The HMMP shall identify long term site management needs, routine monitoring techniques, techniques and success criteria, and shall determine if the conservation site has restoration needs to function as a suitable mitigation site. The HMMP shall be submitted to the agency overseeing the project for approval.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-1(f) Endangered/Threatened Species Avoidance and Minimization During Construction

The following measures shall be applied to aquatic and terrestrial species, where appropriate. Implementing agencies shall select from these measures as appropriate depending on site conditions, the species with potential for occurrence and the results of the biological resources screening and assessment (measure B-1[a]).

- Pre-construction surveys for federal and/or state listed species with potential to occur shall be conducted where suitable habitat is present by a qualified biologist not more than 48 hours prior to the start of construction activities. The survey area shall include the proposed disturbance area and all proposed ingress/egress routes, plus a 100-foot buffer. If any life stage of federal and/or state listed species is found within the survey area, the appropriate measures in the BO or Habitat Conservation Plan (HCP)/Incidental Take Permit (ITP) issued by the USFWS/NMFS (relevant to federal listed species) and/or the ITP issued by the CDFW (relevant to state listed species) shall be implemented; or if such guidance is not in place for the activity, the qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. The results of the pre-construction surveys shall be submitted to the implementing agency for review and approval prior to start of construction.
- 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~~ Environmental Sensitive Area 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 during the dry season, typically between April 1 and October 31, 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 qualified 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 of the CDFW and/or USFWS/NMFS or as outlined in project permits, 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 authorization from the CDFW and/or USFWS/NMFS.
- If pumps are used for dewatering activities, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system.
- 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. At that point, a qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. Alternatively, the appropriate measures shall be implemented in accordance with the BO or HCP/ITP issued by the USFWS (relevant to federal listed species) and/or the ITP issued by the CDFW (relevant to state listed species) and work can then continue as guided by those documents and the agencies as appropriate.
- All vehicle maintenance/fueling/staging shall occur not less than 100 feet 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 other than equipment necessary to conduct approved dewatering activities required for project construction.
- All equipment operating within streambeds (restricted to conditions in which water is not present) 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.
- At the end of each work day, excavations shall be secured with cover or a ramp shall be provided to prevent wildlife entrapment.
- All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-1(g) Non-Listed Special Status Animal Species Avoidance and Minimization

Depending on the species identified in the BRA, the following measures shall be selected from among the following to reduce the potential for impacts to non-listed special status animal species:

- 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 100-foot buffer 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 the implementing agency 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, within 30 days of the start of construction a qualified biologist shall conduct presence/absence surveys for special status bats, in consultation with the CDFW, where suitable roosting habitat is present. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices and other areas where bats may roost. If active bat roosts or colonies are present, the biologist shall evaluate the type of roost to determine the next step.
 - If a maternity colony is present, all construction activities shall be postponed within a 250-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed or as recommended by CDFW through consultation. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately.
 - If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), alternative roosts, such as bat boxes if appropriate for the species, shall be designed and installed near the project site. The number and size of alternative roosts installed will depend on the size of the hibernaculum and shall be determined through consultations with the CDFW.
 - If other active roosts are located, exclusion devices such as valves, sheeting or flap-style one-way devices that allow bats to exit but not re-enter roosts discourage bats from occupying the site.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-1(h) Preconstruction Surveys for Nesting Birds

For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the CFGC, the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act shall be conducted by a qualified biologist no more than 30 days prior to vegetation removal activities.

A qualified biologist shall conduct preconstruction surveys for raptors. The survey for the presence of bald and golden eagles, shall cover all areas within of the disturbance footprint plus a one-mile buffer where access can be secured. The survey area for all other nesting bird and raptor species shall include the disturbance footprint plus a 300-foot and 500-foot buffer, respectively.

If active nests (nests with eggs or chicks) are located, the qualified biologist shall establish an appropriate avoidance buffer ranging from 50 to 300 feet based on the species biology and the current and anticipated disturbance levels occurring in vicinity of the nest. The objective of the buffer shall be to reduce disturbance of nesting birds. All buffers shall be marked using high-visibility flagging or fencing, and, unless approved by the qualified biologist, no construction activities shall be allowed within the buffers until the young have fledged from the nest or the nest fails.

For bald or golden eagle nests identified during the preconstruction surveys, an avoidance buffer of up to one mile shall be established on a case-by-case basis in consultation with the USFWS and CDFW. The size of the buffer may be influenced by the existing conditions and disturbance regime, relevant landscape characteristics, and the nature, timing and duration of the expected disturbance. The buffer shall be established between February 1 and August 31; however, buffers may be relaxed earlier than August 31 if a qualified ornithologist determines that a given nest has failed or that all surviving chicks have fledged and the nest is no longer in use.

A report of these preconstruction nesting bird surveys and nest monitoring (if applicable) shall be submitted to the implementing agency for review and approval prior to the start of construction.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-1 (i) 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Compliance with the above mitigation measures would reduce impacts to special status species and their habitat to less than significant levels because the mitigation measures require pre-project surveys and biological monitoring, focused biological surveys, avoidance or minimization of project-related disturbance or loss of special-status species, compensation for disturbed or loss of special status species habitat and coordination with permitting agencies, as required prior to project implementation. In addition, federal and state listed species, state rare plants and fully protected

species have federal and/or state statutes that prohibit the take of these protected species. Therefore, it is expected that compliance with these statutes would be sufficient to prevent significant impacts to these resources. However, there are no state or federal statutes that provide protection to other sensitive plant and wildlife species such as candidate species, plant species determined to be rare by the CNPS or wildlife species classified as California Species of Special Concern. No additional feasible mitigation measures are available to reduce impacts on other sensitive species. Therefore, it cannot be guaranteed that all future project-level impacts to special status species can be mitigated to a less than significant level for all species and impacts would remain significant.

Threshold 2:	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
Threshold 3:	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

Impact B-2 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS MAY RESULT IN SUBSTANTIAL ADVERSE IMPACTS ON SENSITIVE HABITATS, INCLUDING FEDERALLY PROTECTED WETLANDS. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Transportation improvement projects and land use development that may be implemented under the 2040 MTP/SCS have the potential to impact sensitive habitats, including riparian areas and wetlands, as mapped on Figure 18, Figure 19 and Figure 20. Due to the programmatic nature of this analysis, the extent and severity of the impacts is currently unknown. Some examples of potential impacts include, but are not limited to: construction and reconstruction/widening of bridges over rivers and creeks, including the Salinas River, San Benito River, Branciforte Creek and Soquel Creek. These types of projects would have potential to impact riparian areas, as well as water bodies. In addition, projects such as multiuse trails and bike paths may also involve development along riparian corridors or construction of bridges across rivers and creeks. 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 associated with the disturbance of riparian flora and fauna and indirect impacts caused by increased erosion and sedimentation, which can adversely affect downstream water quality.

In addition, other sensitive habitats, including oak woodlands, could occur at locations of transportation improvement projects and land use development sites. As noted in Section 4.4.1.c, vegetation Alliances with State ranks of S1-S3 are considered to be imperiled and thus, potentially of special concern and sensitive (CDFW, 2010). Impacts to these sensitive communities, including oak woodlands, could be significant.

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

The future land use scenario envisioned by the 2040 MTP/SCS would emphasize development within existing urbanized areas, although some development would occur in more undisturbed areas. As a result, future infill and TOD projects are likely to result in only limited impacts riparian habitat or sensitive habitat, though areas that have been relatively free of ground disturbance may contain sensitive native habitats such as Central Dune Scrub, oak woodlands, or Northern Maritime Chaparral or other vegetation alliances and associations that are deemed sensitive by the CDFW. 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 significant.

In conclusion, implementation of the 2040 MTP/SCS would have substantial adverse impacts on sensitive habitats, including federally-protected wetlands and this impact is therefore significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation measures for applicable transportation projects identified in Appendix B. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

B-2(a) Jurisdictional Delineation and Impact Avoidance

If the results of measure B-1(a) indicates projects implemented under the 2040 MTP/SCS 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 jurisdictional delineation report that shall be submitted to the implementing agency, USACE, RWQCB, CDFW and/or CCC, as appropriate, for review and approval, and the project shall be designed to minimize impacts to jurisdictional areas to the maximum extent feasible. The delineation shall serve as the basis to identify jurisdictional areas to be protected during construction, through implementation of the avoidance and minimization identified in measure B-2(f).

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-2(b) Wetlands, Drainages and Riparian Habitat Restoration

Impacts to jurisdictional drainages, wetlands and riparian habitat shall be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist, 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 and submittal to the agency overseeing the project for approval. Alternatively, mitigation shall be accomplished through purchase of credits from an approved wetlands mitigation bank.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-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 Inventory shall not be permitted. Species selected for planting shall be regionally appropriate native species that are known to occur in the adjacent native habitat types.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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

If the results of measure B-1(a) indicates projects implemented under the 2040 MTP/SCS 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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

Prior to start of construction for each project that occurs within or adjacent to native habitats, 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. The plan shall be submitted to the implementing agency for review and approval. A list of target species shall be included, along with measures for early detection and eradication.

The plan, which shall be implemented by the implementing agency, shall also include, but not be limited to, the following measures to prevent the introduction of invasive weed species:

- During construction, the project shall make all reasonable efforts to limit the use of imported soils for fill. Soils currently existing on-site should be used for fill material. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species.
- To minimize colonization of disturbed areas and the spread of invasive species, the contractor shall: stockpile topsoil and redeposit the stockpiled soil after construction, or transport the topsoil to a permitted landfill for disposal.

- The erosion control/ restoration plans for the project must emphasize the use of sensitive species that are expected to occur in the area and that are considered suitable for use at the project site.
- All erosion control materials, including straw bales, straw wattles, or mulch used on-site must be free of invasive species seed.
- Exotic and invasive plant species shall be excluded from any erosion control seed mixes and/or landscaping plant palettes associated with the proposed project.
- 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 shall occur where no construction activities have occurred within six (6) 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Compliance with the above mitigation measures would reduce impacts to sensitive communities and wetlands to less than significant levels because the mitigation measures require focused biological surveys, best management practices to avoidance or minimization impacts, compensation for disturbed or loss of sensitive communities and wetlands and coordination with permitting agencies, as required prior to project implementation. In addition, Section 1600 of the CFGC requires that a Streambed Alteration Agreement (SAA) be obtained prior to the alteration of any State Jurisdictional areas. An SAA requires that “no net loss” of habitat values or acreage occur. Section 404 of the Federal Clean Water Act requires that authorization pursuant to a Nationwide or Individual permit be obtained prior to any alteration of Waters of the United States. Conditions of Section 404 of the Clean Water Act also require that “no net loss” of federal wetlands and waterways take place as a condition of permit issuance. However, there are no state or federal statutes that provide protection to other sensitive plant communities (CDFW, 2010) outside of state jurisdiction. No additional feasible mitigation measures are available to reduce impacts on other sensitive habitats. Therefore, it cannot be guaranteed that all future project-level impacts can be mitigated to a less than significant level for all sensitive habitats and impacts would remain significant.

Threshold 4: 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 B-3 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS MAY SUBSTANTIALLY INTERFERE WITH WILDLIFE MOVEMENT, INCLUDING FISH MIGRATION AND/OR IMPEDE THE USE OF A NATIVE WILDLIFE NURSERY. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Transportation infrastructure projects in the 2040 MTP/SCS primarily involve expansion of existing facilities in urbanized or already developed areas, rather than the construction of new or extension of existing infrastructure into undeveloped portions of each county. However, expansion of existing roadways can decrease connectivity as widening of roads creates a larger barrier and make movement more difficult, especially if roadways prior to widening and expansion were narrow enough and traffic volumes low enough that movement was still possible. Construction of new roadways and crossings (across rivers and drainages) would introduce new potential barriers to movement. In addition to the roadways themselves, transportation improvement projects could include new segments of fencing or walls that that could hinder wildlife movement. Temporary disruption of wildlife movement could also occur during construction if temporary water diversions are required for projects located within creeks and rivers. In addition, construction activity and noise could also temporarily alter the behavior wildlife in the area and therefore temporarily disrupt wildlife movement patterns.

New roadways, bike paths and trails would also increase human activity in areas where sensitive biological resources could occur and have the potential to indirectly disrupt behavior of animals which could in turn disrupt wildlife movement patterns. In particular, proposed bridge, trail and

bikeway and new road construction projects could increase human activity (and domestic animals) in the vicinity of riparian areas, wildlife nurseries or corridors and potentially sensitive habitats. 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.

The future land use scenario envisioned by the 2040 MTP/SCS would encourage infill and TOD within existing urbanized areas. The majority of the future infill and TOD projects would likely be in areas that provide limited or no wildlife movement, although some development would occur in more undisturbed areas. However, even the elimination of limited wildlife movement opportunities could further isolate areas of native habitat occupied by both sensitive and common native wildlife species.

As noted in Section 4.4.1.f, the County of Monterey and County of San Benito general plans include policies that require projects within the region to be designed to maintain wildlife movement and habitat connectivity. Nevertheless, based on the above analysis, impacts related to transportation projects and impacts related to the future land use scenario envisioned by the 2040 MTP/SCS would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation measures for applicable transportation projects identified in Appendix B. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

B-3(a) Project Design for Wildlife Connectivity

All projects including long segments of fencing and lighting shall be designed to minimize impacts to wildlife. Fencing or other project components shall not block wildlife movement through riparian or other natural habitat. Where fencing or other project components that may disrupt wildlife movement is required for public safety concerns, they 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; and
- 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, or the fence may be installed with the bottom at least 16 inches above the ground level.
- If fencing or other project components 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.
- Lighting installed as part of any project shall be designed to be minimally disruptive to wildlife (see mitigation measure AES-3(a) Roadway Lighting for lighting requirements).

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-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 AMBAG, RTPA 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

B-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.
- Whenever feasible, ~~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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Compliance with the above mitigation measures would reduce impacts to wildlife movement by requiring projects to be designed in a way that maintains connectivity. In addition, projects located within habitat for fish species (including federal and state listed fish species) would be required to design and ensure projects do not impede passage by these species as part of conditions of issuance of a SAA or take authorization. However, it cannot be guaranteed that movement of terrestrial species will not be impeded at the regional scale due to the large scale of the 2040 MTP/SCS. No additional feasible mitigation measures are available to reduce impacts on wildlife movement. Therefore, impacts would remain significant.

Threshold 5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

Impact B-4 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS 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 the 2040 MTP/SCS would occur and therefore there is potential for conflict with local ordinances and/or policies. Most of the transportation projects in the 2040 MTP/SCS 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, the 2040 MTP/SCS 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 the 2040 MTP/SCS 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

Mitigation measures are not required.

Threshold 6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan

Impact B-5 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS WOULD NOT CONFLICT WITH THE PROVISIONS OF AN ADOPTED HABITAT CONSERVATION PLAN, NATURAL COMMUNITY CONSERVATION PLAN, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN. THERE WOULD BE NO IMPACT.

No adopted regional Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan occurs within Monterey, San Benito and

Santa Cruz Counties at the time of Draft EIR preparation and therefore no conflict with the 2040 MTP/SCS would occur. Therefore, no conflicts would occur as they relate to conflicts with existing local, regional, or state conservation plans.

Mitigation Measures

No mitigation measures are required as no conflict would occur.

c. Specific MTP/SCS Projects That May Result in Impacts

All 2040 MTP/SCS projects are listed in Appendix B and have potential to create significant biological impacts. All 2040 MTP/SCS transportation projects that require new construction or landscaping as well as any project that have project components or disturbance limits that are not entirely located within existing paved surfaces may result in impacts as discussed in impacts B-1 through B-3. Land use projects envisioned in the 2040 MTP/SCS may also result in such impacts. 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.

d. Cumulative Analysis

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 the 2040 MTP/SCS 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 as a result of the 2040 MTP/SCS, the proposed 2040 MTP/SCS would contribute considerably to this impact, and cumulatively is significant.

The mitigation measures presented in Section 4.4.2.b set requirements for surveys and actions to be taken if biological resources have potential to be impacted by 2040 MTP/SCS transportation and land use projects. However, as discussed above, impacts to special status species and their habitat; sensitive habitats; and wildlife movement would be significant and unavoidable. The contribution of the proposed 2040 MTP/SCS to cumulative impacts would therefore remain cumulatively considerable post-mitigation.

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4.5 Cultural and Historic Resources

This section analyzes impacts to historical, archaeological and paleontological resources within the AMBAG region. Tribal cultural resources are addressed in Section 4.15.

4.5.1 Setting

a. Prehistoric Background

The prehistoric populations of the Monterey Bay Area included the Esselen, Costanoan, Salinan and Northern Valley Yokuts. Monterey County was occupied by the Esselen in the west, the Costanoan in the north and the Salinan to the south. The northwestern portion of San Benito County was occupied by the Costanoan, the southeastern by the Northern Valley Yokuts and the southwestern by the Salinan. Santa Cruz County was occupied by the Costanoan.

The Esselen inhabited the upper Carmel Valley in the Santa Lucia Mountains between Point Sur and Lopez Point, with the inland boundary just east of the Salinas River. The Esselen occupied seasonal villages depending on resource availability (Breschini and Haversat 2001).

Costanoan territory extends from the point where the San Joaquin and Sacramento Rivers issue into the San Francisco Bay to Point Sur, with the inland boundary most likely constituted by the interior Coast Ranges (Kroeber 1925). The Costanoan were semi-sedentary with a settlement system characterized by base camps of tule reed houses and seasonal specialized camps (Skowronek 1998). Subsistence was based on hunting, gathering and fishing. Mussels and acorns were particularly important food resources (Kroeber 1925; Skowronek 1998).

Salinan territory ranged from Carmel Valley south to Morro Bay. They occupied permanent villages. Salinan subsistence was centered on the gathering of acorns and other edible plants and the hunting of animals such as dove, quail, rabbit and deer (Taylor 2013).

Northern Valley Yokuts populations were concentrated along waterways in the San Joaquin River. Settlements were typically composed of single-family dwellings, sweathouses and ceremonial structures. Subsistence revolved around water resources in the San Joaquin Valley, with a focus on salmon and acorns (Wallace 1978).

b. Historic Background

The Monterey Coast was first visited by Europeans in 1602 by Sebastian Vizcaíno (Bean 1968). The Spanish presidio and mission, which was later moved to Carmel, were established by Captain Gaspar de Portolá in Monterey in 1770, and served as the capital of the California missions until 1803 (Bean 1968: 40; Johnson 1979:83). Mission San Antonio de Padua, in southern Monterey County, was founded in 1791. Missions Santa Cruz, located in the current city of Santa Cruz and Nuestra Señora de la Soledad, in central Monterey County, were founded in 1791. Mission San Juan Bautista, in northwestern San Benito County, was founded in 1797 (Bean 1968: 45).

The Mission Period was characterized by the acculturation of Native American populations into the Mission system of sedentary lifestyles and cultivation (rather than hunting and gathering).

In 1791, Comandante General Pedro de Nava authorized the establishment of presidial pueblos (civilian lands around military forts) with detailed regulations for their organization (Crane 1991). The Pueblo of Monterey grew in population as Spanish soldiers married and raised families, or

retired to this location. In 1796, Marques de Branciforte and Governor Diego de Borica created the Villa de Branciforte adjacent to Mission Santa Cruz lands, a pueblo to be colonized by retired soldiers and their families. However, no soldiers could be convinced to move to the Villa de Branciforte and the settlement failed (Bean 1968).

In 1822, California received word of Mexico's independence from Spain. Hallmarks of the Mexican Period in California are the secularization of mission lands, which was fully accomplished by 1836, and the issuance of large and numerous land grants to soldiers and prominent citizens.

The Treaty of Guadalupe Hidalgo was signed in 1848, ending the Mexican-American War and officially making California a territory of the United States. U.S. jurisdiction over California had really begun two years earlier, when on July 7, 1846, Commodore John D. Sloat raised the U.S. flag after the "Battle of Monterey," after 50 U.S. Marines and 100 Navy sailors landed unopposed and captured the city without firing a shot (Crane 1991). The Gold Rush brought a multitude of new settlers to California in 1848 and the construction of the transcontinental railroad in 1869 contributed further to California's population boom.

Monterey and Santa Cruz Counties were created in 1850 as two of the original counties of California. San Benito County was separated from Monterey County in 1874. Early American settlements in the area were focused around the residences of earlier Hispanic settlers and on new colony settlements.

c. Paleontological Resources Background

Paleontological resources, also known as fossils, are the remains, traces or imprints of once-living organisms preserved in rocks or sediment. Paleontological resources are commonly found in sedimentary rock units. Paleontological sites are normally discovered in cliffs, ledges, steep gullies, or along wave-cut terraces where vertical rock sections are exposed. Fossil material may be exposed by a trench, ditch, or channel caused by construction.

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 (formations) 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. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey.

Invertebrate fossils in microscopic form such as diatoms, foraminifera and radiolarians can be so prolific as to constitute major rock material in some areas. Invertebrate fossils normally are marine in origin, widespread, abundant, fairly well preserved, and predictable as to fossil sites. Therefore, the same or similar fossils can be located at any number of sites throughout central California. Vertebrate fossil sites are usually found in non-marine or continental deposits. Vertebrate fossils of continental material are usually rare, sporadic and localized. 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 throughout the AMBAG region. Therefore, the AMBAG region contains areas of high paleontological sensitivity.

d. Cultural Resources Inventory

To compile a listing of recognized significant historic and prehistoric resources within Monterey, San Benito and Santa Cruz Counties, information was obtained from the State Office of Historic Preservation. The statewide Historical Resources Inventory (HRI) is not available for public review

according to the *California Historical Information System Information Center Rules of Operation Manual* (Section III.A). The HRI would be consulted after the determination of an Area of Potential Effect under project-level analysis of MTP/SCS transportation projects.

Table 19, Table 20 and Table 21 present identified cultural resources within Monterey, San Benito and Santa Cruz Counties. Included in each table are sites listed on the National Register of Historic Places (National Register; NRHP), sites designated as a California State Landmark, sites listed in the California Register of Historical Resources (California Register, CRHR) and those that are considered California Points of Historical Interest. The NRHP, authorized by the National Historic Preservation Act (NHPA), lists the Nation’s significant cultural resources. Resources listed in the NRHP are protected under the NHPA. The CRHR is maintained by the State Office of Historic Preservation and lists cultural resources important to the history of California, which are protected under CEQA. California Points of Historical Interest are resources that are of local significance.

Table 19 presents identified cultural resources in Monterey County. Within Monterey County, there are 54 National Register listings, 24 California State Landmarks, one California Register Listing and three Points of Historical Interest.

Table 19 Monterey County Historical Resources

City or Community	Resource Name	National Register	State Landmark	California Register	Point of Historical Interest
Pacific Grove	Asilomar Conference Grounds	X			
Carmel Valley	Berwick Manor and Orchard	X			
Monterey	Black, Mary C. W., Studio House	X			
Salinas	Black, Samuel M., House	X			
Salinas	Bontadelli, Peter J., House	X			
Salinas	Boronda, Jose Eusebio, Adobe	X			
Monterey	Bromfield/Berne House			X	
Pacific Grove	Buck, Frank Laverne House	X			
Carmel	Carmel Mission	X			
Monterey County	Carmel Valley Road-Boronda Road Eucalyptus Trees	X			
Monterey	Casa De Oro		X		
Castroville	Castroville Japanese Language School	X			
Pacific Grove	Centrella Hotel	X			
Pacific Grove	Chautauqua Hall		X		
Monterey	Colton Hall		X		
Gonzales	Community Church of Gonzales	X			
King City	Cueva Pintada	X			
Monterey	Custom House	X	X		
Big Sur	Deetjen’s Big Sur Inn	X			
Jolon	Dutton Hotel, Stagecoach Station	X			
Monterey	El Castillo	X			
Monterey	Finch, James W., House	X			

2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

City or Community	Resource Name	National Register	State Landmark	California Register	Point of Historical Interest
Salinas	First and Second Filipino Regiments Monument				X
Monterey	First Theater in California		X		
Gonzales	Gabilan Lodge No. 372- Independent Order of Odd Fellows	X			
Jolon	Gil, Jose Mario, Adobe	X			
Watsonville	Glass House, Casa Materna of the Vallejos		X		
Pacific Grove	Gosby House Inn	X			
Monterey	Gutierrez Adobe		X		
Salinas	Hill Town Ferry		X		
Monterey	House of Four Winds		X		
Monterey	House of Governor Alvarado		X		
Carmel	Jeffers, Robinson, House	X			
Salinas	José Eusebio Boronda Adobe Casa		X		
King City	King City Joint Union High School Auditorium	X			
Lucia	Kirk Creek Campground	X			
Salinas	Krough House	X			
Monterey	Landing Place of Sebastian Vizcaino and Fray Junípero Serra		X		
Monterey	Larkin House		X		
Monterey	Larkin House	X			
Soledad	Los Coches Rancho	X			
Monterey	Marsh, G.T. and Sons	X			
Monterey	Merritt, Josiah, Adobe	X			
King City	Milpitas Ranch House	X			
Soledad	Mission Nuestra Señora de la Soledad		X		
King City	Mission San Antonio de Padua		X		
Carmel	Mission San Carlos Borroméo de Carmelo	X	X		
Salinas	Monterey County Jail	X			
Monterey	Monterey Old Town Historic District	X			
Salinas	Nesbitt, Sheriff William Joseph, House	X			
Monterey	Old Pacific House		X		
Pebble Beach	Olvida Penas	X			
Carmel By-the-Sea	Outlands in the Eighty Acrea	X			
Monterey	Pacific Biological Laboratories	X			
Aromas	Pajaro River				X
Monterey	Parmelee, Lou Ellen House	X			
Pacific Grove	Point Pinos Lighthouse	X			
Big Sur	Point Sur Light Station	X			

City or Community	Resource Name	National Register	State Landmark	California Register	Point of Historical Interest
Pajaro	Porter-Vallejo Mansion				
Big Sur	Post, Joseph W., House	X			
Salinas	Rancho Las Palmas	X			
San Lucas	Rancho San Lucas	X			
Soledad	Richardson Adobe		X		
Monterey	Robert Louis Stevenson House	X	X		
Monterey	Royal Presidio Chapel	X			
Figueroa	Royal Presidio Chapel of San Carlos Borroméo		X		
Jolon	San Antonio De Padua Mission	X			
Salinas	Sargent, B. V., House	X			
Greenfield	Site Number 4 MNT 85	X			
Salinas	Site of the Battle of Natividad		X		
Monterey	Soberanes Adobe		X		
Salinas	Steinbeck, John House	X			
Monterey	Stevenson House	X			
Carmel-by-the-Sea	Sunset Center	X			
Salinas	Temporary Detention Camps for Japanese Americans-Salinas Assembly Center		X		
Jolon	Tidball Store	X			
Pacific Grove	Trimmer Hill	X			X
Monterey	Vásquez House		X		
Monterey County	Whaler's Cabin	X			

Source: California Office of Historic Preservation, website: <http://ohp.parks.ca.gov/ListedResources/>. Accessed September 2017

Table 20 presents identified cultural resources in San Benito County. Within San Benito County there are 12 National Register listings, five California State Landmarks, two Points of Historical Interest and no California Register listings.

Table 20 San Benito County Historical Resources

City or Community	Resource Name	National Register	State Landmark	Point of Historical Interest
San Juan Bautista	Anza House	X		
San Juan Bautista	Castro House		X	
Soledad	Chalone Creek Archaeological Sites	X		
Hollister	Downtown Hollister Historic District	X		
San Juan Bautista	Fremont Peak		X	
Hollister	Hawkins, Joel and Rena, House	X		
Hollister	Hollister Carnegie Library	X		
San Juan Bautista	Marentis House	X		
Hollister	McCallum, Roy D. House	X		
San Juan Bautista	Mission San Juan Bautista and Plaza		X	
Hollister	Monterey Street Historic District	X		
San Benito County	New Idria Mine		X	
San Juan Bautista	The Pear Tree			X
San Juan Bautista	Plaza Hotel	X	X	
San Juan Bautista	Rozas House	X		
San Juan Bautista	San Juan Bautista Congregational Church, Glad Tidings Chu			X
San Juan Bautista	San Juan Bautista Plaza Historic District	X		
San Juan Bautista	Wilcox, Benjamin, House	X		

Source: California Office of Historic Preservation, website: <http://ohp.parks.ca.gov/ListedResources/>. Accessed September 2017

Table 21 presents identified cultural resources in Santa Cruz County. Within Santa Cruz County there are 43 National Register listings, seven California State Landmarks, seven Points of Historical Interest and no California Register listings.

Table 21 Santa Cruz County Historical Resources

City or Community	Resource Name	National Register	State Landmark	Point of Historical Interest
Santa Cruz	Bank of Santa Cruz County	X		
Aptos	Bayview Hotel	X		
Big Basin	Big Basin Redwoods State Park		X	
Watsonville	Bockius, Godfrey M., House	X		
Santa Cruz	Branciforte Adobe	X		
Santa Cruz	Brown, Allan, Site	X		
Santa Cruz	Carmelita Court	X		
Watsonville	Castro, Jose Joaquin, Adobe	X		
Santa Cruz	Cope Row Houses	X		
Santa Cruz	Cowell Lime Works Historic District	X		

City or Community	Resource Name	National Register	State Landmark	Point of Historical Interest
Davenport	Davenport Jail	X		
Freedom	Discovery of California Redwoods			X
Santa Cruz	Evergreen Cemetery			X
Felton	Felton Covered Bridge	X	X	
Felton	Felton Presbyterian Church	X		
Santa Cruz	Garfield Park Branch Library	X		
Santa Cruz	Glen Canyon Covered Bridge	X		
Scotts Valley	Glenwood		X	
Santa Cruz	Golden Gate Villa	X		
Santa Cruz County	Grace Episcopal Church	X		
Capitola	Hihn Building	X		
Capitola	Hihn Building, Superintendent's Office			X
Santa Cruz	Hinds, A. J., House	X		
Santa Cruz	Hotel Metropole	X		
Watsonville	Judge Lee House	X		
Watsonville	Lettunich Building	X		
Santa Cruz	Live Oak Ranch	X		
Santa Cruz	Looff Carousel and Roller Coaster on the Santa Cruz Beach Boardwalk	X		
Watsonville	Madison House	X		
Watsonville	Mansion House Hotel	X		
Santa Cruz	Mission Hill Area Historic District	X		
Scotts Valley	Mountain Charlie Big Tree			X
Santa Cruz	Neary-Rodriguez Adobe	X		
Santa Cruz	Octagon Building	X		
Capitola	Old Riverview Historic District	X		
Ben Lomond	Phillpshurst-Riverwood	X		
Santa Cruz	Rancho San Andrés Castro Adobe		X	
Watsonville	Redman House	X		
Capitola	Rispin Mansion	X		
Santa Cruz	Robinson, Elias H., House	X		
Santa Cruz County	Sand Hill Bluff Site			X
Santa Cruz	Santa Cruz Beach Boardwalk		X	
Santa Cruz	Santa Cruz County Hall of Records- Octagon Building			X
Santa Cruz	Santa Cruz Downtown Historic District	X		
Scotts Valley	Scott, Hiram D., House	X		
Santa Cruz	Site of Center of Villa de Branciforte		X	
Capitola	Six Sisters-Lawn Way Historic District	X		
Watsonville	Stoesser Block and Annex	X		

City or Community	Resource Name	National Register	State Landmark	Point of Historical Interest
Capitola	Superintendent’s Office		X	
Felton	Toll House, Toll House Resort Motel			X
Santa Cruz	US Post Office- Santa Cruz Main	X		
Aptos	Valencia Hall	X		
Capitola	Venetian Court Apartments	X		
Santa Cruz	Veterans Memorial Building	X		
Watsonville	Watsonville City Plaza	X		
Watsonville	Watsonville-Lee Road Site	X		

Source: California Office of Historic Preservation, website: <http://ohp.parks.ca.gov/ListedResources/>. Accessed September 2017

e. Regulatory Setting

Federal

National Historic Preservation Act of 1966

The National Historic Preservation Act of 1966 (NHPA), as amended, is the primary mandate governing projects under federal jurisdiction that may affect cultural resources. Section 106 of the NHPA requires federal agencies, or those they fund or permit, to consider the effects of their actions on the properties that may be eligible for listing or that are listed in the NRHP. The regulations implementing Section 106 are codified in 36 CFR Part 800. To determine whether an undertaking could affect NRHP-eligible properties, cultural resources must be inventoried and evaluated for listing in the NRHP. The criteria applied to evaluate the significance of cultural resources are defined as follows.

The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that

- (a) are associated with events that have made a significant contribution to the broad patterns of our history; or
- (b) that are associated with the lives of persons significant in our past; or
- (c) embody the distinctive characteristics of a type, period, or method of construction, 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; or
- (d) have yielded, or may be likely to yield, information important in prehistory or history.

The Department of Transportation Act

Passed in 1966, the Department of Transportation Act (49 USC 303, formerly 49 USC 1651(b)(2) and 49 USC 1653f) includes Section 4(f), which states that the Federal Highway Administration (FHWA) and other US Department of Transportation (USDOT) agencies cannot approve the use of land from public and private historical sites unless certain conditions apply. These conditions are the following: If there is no feasible and prudent avoidance alternative to the use of land, and if the action includes

all possible planning to minimize harm to the property resulting from such use; or if FHWA ~~The Administration~~ determines that the use of the property will have a de minimis impact.

State

California Register of Historical Resources (CRHR)

The CRHR program was designed for use by state and local agencies, private groups and citizens to identify, evaluate, register and protect California's historical resources. A historical resource can include any object, building, structure, site, area, or place that is determined to be historically or archaeologically significant. The CRHR is an authoritative guide to the state's significant archaeological and historic architectural resources. The list of these resources can be used for state and local planning purposes, the eligibility determinations can be used for state historic preservation grant funding and listing in the CRHR provides a certain measure of protection under CEQA.

California Historical Landmarks Program

The Historical Landmarks Program was instated to register buildings or landmarks of historical interest. Historical Landmarks are defined as sites, buildings, or features that have a statewide historical, cultural, anthropological, or other significance. To be designated as a Historical Landmark by the Director of California State Parks, the resource must meet set criteria, be recommended for designation by the State Historical Resources Commission, and be approved by the property owners. The goals of the program include the preservation and maintenance of registered landmarks, most of which include missions, early settlements, battles and gold rush sites (PRC Sections 5020.4, 5021, 5022, 5022.5, 5031 and 5032).

California Environmental Quality Act

IMPACTS TO HISTORICAL RESOURCES

Section 15064.5 of the Guidelines states that "a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment." The CEQA Guidelines (Section 15064.5(a)) define a "historical resource" as including the following:

- A resource listed in, or eligible for listing in, the California Register of Historical Resources;
- A resource listed in a local register of historical resources (as defined at PRC Section 5020.1(k);
- A resource identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g); or
- Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. (Generally, a resource is considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR.

The CEQA Guidelines (Section 15064.5(b)[1]) define "substantial adverse change" as "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." Generally, the

significance of a historical resource is “materially impaired” when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in or eligibility for the CRHR, or its inclusion in a local register of historical resources (CEQA Guidelines Section 15064.5(b)(2)).

Mitigation Measures

Mitigation measures for historical resources impacts are discussed in CEQA Guidelines Section 15126.4. Generally, by following the Secretary of the Interior’s Standards for the Treatment of Historic Properties or the Secretary of the Interior’s Standards for Rehabilitation, impacts can be considered as mitigated to a level less than significant. For historical resources that are archaeological sites, according to the CEQA Guidelines § 15126.4(b)(3), public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature. The following factors shall be considered for a project involving such an archaeological site:

- a. Preservation in place (avoidance) is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
- b. Preservation in place may be accomplished by, but is not limited to, the following:
 - Planning construction to avoid archaeological sites;
 - Incorporation of sites within parks, greenspace, or other open space;
 - Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site;
 - Deeding the site into a permanent conservation easement.
- c. When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. Such studies shall be deposited with the California Historical Resources Regional Information Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 Health and Safety Code.
- d. Data recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource, provided that the determination is documented and that the studies are deposited with the California Historical Resources Regional Information Center.

Unique Archaeological Resources

A cultural resource is also significant if it is an unique archaeological resource, which is defined in § 21083.2(g) as an archaeological 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 meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological resource qualifies as a “historical resource,” potential adverse impacts must be considered in the same manner as a historical resource (CEQA Guidelines Section 15064.5(c)(2)). If the archaeological site does not qualify as a historical resource but does qualify as a unique archaeological resource, then the archaeological site is treated in accordance with PRC Section 21083.2 (CEQA Guidelines Section 15064.5(c)(3)).

Human Burials

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in Section 5097 of the California Public Resources Code. The California Health and Safety Code (Sections 7050.5, 7051 and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protects them from disturbance, vandalism, or destruction and established procedures to be implemented if Native American skeletal remains are discovered. Public Resources Code §5097.98 also addresses the disposition of Native American burials, protects such remains and established the Native American Heritage Commission (NAHC) to resolve any related disputes.

Local

Monterey County

The Monterey County General Plan (Monterey County, 2010) contains policies that pertain to cultural and paleontological resources as show below.

Policy OS-6.1. Important representative and unique archaeological sites and features shall be identified and protected for all parcels with undisturbed natural conditions (i.e., ungraded properties), consistent with State Office of Historic Preservation guidelines and definitions employed on a statewide basis, including Phase I, II and III studies.

Policy OS-6.3. New development proposed within moderate or high sensitivity zones, or within 150 feet of a known recorded archaeological and/or cultural site, shall complete a Phase I survey including use of the regional State Office of Historic Preservation or the California Native American Heritage Commission’s list of sacred and traditional sites. Routine and Ongoing Agricultural Activities shall be exempted from this policy in so far as allowed by state or federal law.

Policy OS-6.4. Development proposed in low sensitivity zones are not required to have an archaeological survey unless there is specific additional information that suggests archaeological resources are present.

Policy OS-6.6. Efforts by historical, educational, or other organizations to improve the public’s recognition of the County’s cultural heritage and the citizen’s responsibilities for archaeological or cultural resource preservation shall be encouraged. The County shall adopt a uniform set of guidelines to define Phase I, II and III significance assessment and data recovery programs. Similar guidelines shall be created to set standards for requirements for consultation with Native Californian descendants to establish procedures for determining the presence or absence

of sacred or traditional sites. These guidelines shall address monitoring requirements and participation in cultural resource data recovery programs.

Policy OS-7.3. Development proposed within high and moderate sensitivity zones and known fossil bearing formations shall require a paleontological field inspection prior to approval. Routine and Ongoing Agricultural Activities are exempted from this policy in so far as allowed by state or federal law.

Policy OS-7.4. Development proposed in low sensitivity zones are not required to have a paleontological survey unless there is specific additional information that suggests paleontological resources are present.

Policy OS-7.5. Policies and procedures shall be established that encourage development to avoid impacts to sensitive paleontological sites including: a. designing or clustering development to avoid paleontological deposits; b. requiring dedication of permanent conservation easements where subdivisions and other developments can be planned to provide for such protective easements.

In addition, Chapter 18.25 of the Monterey County Code of Ordinances (Preservation of Historic Resources) contains the policies and procedures for administering historic resources in Monterey County.

San Benito County

The Land Use Element and Natural and Cultural Resources Element of the San Benito County 2035 General Plan (San Benito County, 2015a) includes goals and policies to protect Native American, archaeological, paleontological and historical resources. Cultural resources goals and policies are listed below.

Policy LU-1.10 Development Site Suitability. The County shall encourage specific development sites to avoid natural and manmade hazards, including, but not limited to, active seismic faults, landslides, slopes greater than 30 percent and floodplains. Development sites shall also be on soil suitable for building and maintaining well and septic systems (i.e., avoid impervious soils, high percolation or high groundwater areas and provide setbacks from creeks). The County shall require adequate mitigation for any development located on environmentally sensitive lands (e.g., wetlands, erodible soil, archaeological resources, important plant and animal communities).

Goal NCR-7. To protect, preserve and enhance the unique cultural and historic resources in the county.

Policy NCR-7.9 Tribal Consultation. The County shall consult with Native American tribes regarding proposed development projects and land use policy changes consistent with the State's Local and Tribal Intergovernmental Consultation requirements.

Policy NCR-7.11 Prohibit Unauthorized Grading. The County shall prohibit unauthorized grading, collection, or degradation of Native American, archaeological, or paleontological resources.

Policy NCR-7.12 Archaeological Artifacts. The County shall require an archaeological report prior to the issuance of any project permit or approval in areas determined to contain significant historic or prehistoric archaeological artifacts and when the development of the project may result in the disturbance of the site. The report shall be written by a qualified cultural resource

specialist and shall include information as set forth in the county's archaeological report guidelines available at the County Planning Department.

In addition, San Benito County Code, Title 19 (Land Use and Environmental Regulations), Chapter 19.05 (Architectural Site Review Ordinance) protects and preserves cultural resources in areas where cultural resources are known or not yet to be discovered by providing regulations for the protection, enhancement and perpetuation of archaeological sites.

Santa Cruz County

The Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994) Conservation and Open Space Element includes policies to protect archaeological and historical resources. Applicable policies are listed below.

Policy 5.19.1 Evaluation of Native American Sites. Protect all archaeological resources until they can be evaluated. Prohibit any disturbance of Native American Cultural Sites without an appropriate permit. Maintain the Native American Cultural Sites ordinance.

Policy 5.19.2 Site Surveys. Require an archaeological site survey (surface reconnaissance) as part of the environmental review process for all projects with very high site potential as determined by the inventory of archaeological sites, within the Archaeological Sensitive Areas, as designated on General Plan and LCP Resources and Constraints Maps filed in the Planning Department.

Policy 5.19.3 Development Around Archaeological Resources. Protect archaeological resources from development by restricting improvements and grading activities to portions of the property not containing these resources, where feasible, or by preservation of the site through project design and/or use restrictions, such as covering the site with earthfill to a depth that ensures the site will not be disturbed by development, as determined by a professional archaeologist.

Policy 5.19.4 Archaeological Evaluations. Require the applicant for development proposals on any archaeological site to provide an evaluation, by a certified archaeologist, of the significance of the resource and what protective measures are necessary to achieve General Plan and LCP Land Use Plan objectives and policies.

Policy 5.19.5 Native American Cultural Sites. Prohibit any disturbance of Native American Cultural Sites without an archaeological permit which requires, but is not limited to, the following:

- (a) A statement of the goals, methods and techniques to be employed in the excavation and analysis of the data and the reasons why the excavation will be of value.
- (b) A plan to ensure that artifacts and records will be properly preserved for scholarly research and public education.
- (c) A plan for disposing of human remains in a manner satisfactory to local Native American Indian groups.

Policy 5.20.3 Development Activities. For development activities on property containing historic resources, require protection, enhancement and/or preservation of the historic, cultural, architectural, engineering or aesthetic values of the resources as determined by the

Historic Resources Commission. Immediate or substantial hardship to a project applicant shall be considered in establishing project requirements.

Policy 5.20.4 Historic Resources Commission Review. Require that applicants for development proposals on property containing a designated Historic Resource submit plans for the protection and preservation of the historic resource values to the Historic Resources Commission for their review and approval; require an evaluation and report by a professional historian or a cultural resources consultant when required by the Commission.

Policy 5.20.5. Encourage Protection of Historic Structures. Encourage and support public and private efforts to protect and restore historic structures and continue their use as an integral part of the community.

Policy 5.20.6. Maintain Designation as a Certified Local Government. Support existing and further develop local historic resource programs in order to maintain the California State Department of Parks and Recreation's designation of Santa Cruz County as a Certified Local Government (CLG).

In addition, the Santa Cruz County Municipal Code Title 16 (Environmental and Resource Protection) outlines criteria for Native American cultural studies (chapter 14.60), historic preservation (Chapter 16.42) and paleontological resource protection (Chapter 16.44). Chapter 16.40 defines when archaeological surveys and reports are required, as well as required actions when Native American cultural sites or human remains are discovered during the review of a proposed project or during excavation or other ground disturbing activities. Chapter 16.42 defines the significance and designation of protected historic resources on the Santa Cruz County Inventory of Historic Resources and development procedures for designated historic resources. Chapter 16.44 describes requirements for paleontological assessments and reports, permitting requirements for projects on the site of paleontological resources and required actions when paleontological resources are discovered during excavation or other groundbreaking activities.

Many cities within the AMBAG region have similar cultural resources goals and policies in their respective general plans.

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds

For the purpose of this discussion, the term cultural resource broadly includes historical, archaeological and paleontological. 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 the impact evaluation in this EIR. Listings of historical resources in Monterey, San Benito and Santa Cruz Counties were obtained from the State Office of Historic Preservation. Potential areas of disturbance associated with the 2040 MTP/SCS projects were compared to the identified historical sites listed on Table 19, Table 20 and Table 21 to determine whether an impact may occur.

Appendix G of the State CEQA Guidelines identifies the following criteria for determining whether a project's impacts would have a significant impact on cultural and historic resources:

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

2. Cause a substantial adverse change in the significant of an archaeological resource pursuant to §15064.5;
3. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and/or
4. Disturb any human remains, including those interred outside of formal cemeteries.

b. Project Impacts and Mitigation Measures

This section describes generalized cultural resources impacts associated with the projects anticipated under the 2040 MTP/SCS. Table 22 summarizes the specific 2040 MTP/SCS projects that could result in the types of impacts discussed below. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could result in the impacts as described in the following section.

Threshold 1: Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5

Impact CR-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS COULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN OR DISTURB KNOWN AND UNKNOWN HISTORICAL RESOURCES AS DEFINED IN CEQA GUIDELINES SECTION 15064.5. IMPACTS TO HISTORICAL RESOURCES WOULD BE SIGNIFICANT AND UNAVOIDABLE.

With regard to known significant historic resources, the location and nature of the proposed 2040 MTP/SCS projects were evaluated relative to the location of the historic properties listed in Table 19, Table 20 and Table 21. At least one proposed improvement project in San Benito County (SB-SJB-A01) may impact the San Juan Bautista historic district and other projects may be located in proximity to historical resources or include repair or replacement of historical structures (e.g. bridges). Such improvements may alter the integrity of historical resources.

In addition, the 2040 MTP/SCS also contains a future land use scenario that emphasizes infill development near transit. This land use scenario focuses future development within existing urbanized areas. There are no specific development projects pursuant to the land use scenario envisioned by the 2040 MTP/SCS identified currently, so a site-specific evaluation is not possible. However, because future infill near transit could be located near or adjacent to existing historic structures, the integrity of such structures could be indirectly or directly impacted as a result. Moreover, if future infill near transit 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 AMBAG 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

To minimize impacts to cultural resources, for transportation projects under their jurisdiction, TAMC SBtCOG and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation developed for the 2040 MTP/SCS program where applicable for transportation projects that result in impacts to historic resources. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. 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 2040 MTP/SCS project involving earth disturbance or construction of permanent above ground structures or roadways shall prepare a map defining the Area of Potential Effects (APE). 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 APE, 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Redevelopment or demolition that may be required to implement transportation improvements and/or infill 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 2: Cause a substantial adverse change in the significant of an archaeological resource pursuant to §15064.5
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Impact CR-2 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS COULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN OR DISTURB KNOWN AND UNKNOWN SIGNIFICANT ARCHAEOLOGICAL RESOURCES AS DEFINED IN CEQA GUIDELINES SECTION 15064.5. IMPACTS TO ARCHAEOLOGICAL RESOURCES WOULD BE SIGNIFICANT AND UNAVOIDABLE.

It is known that archaeological resources are present throughout the AMBAG region. Therefore, it is possible to encounter known and unknown archaeological resources as a result of implementation of transportation improvement projects pursuant to the 2040 MTP/SCS. Many of the improvements proposed under the 2040 MTP/SCS 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. Representative projects that may impact previously undisturbed areas are listed in Table 22. The projects listed were identified based on the likelihood that development of new infrastructure would impact previously undisturbed areas. It is possible that construction activities associated with some of the proposed roadway or bridge widening or extension projects in addition to those listed in Table 22 could adversely impact archaeological 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, the 2040 MTP/SCS 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 or paleontological 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 therefore 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

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation developed for the 2040 MTP/SCS program where applicable for transportation projects that result in impacts to archaeological resources. Cities and counties in the AMBAG region can and should implement this measure where relevant to land use projects implementing the 2040 MTP/SCS. 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 Northwest 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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 3: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Impact CR-3 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS 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 paleontological resources are present throughout the AMBAG region. Therefore, it is possible to encounter known and unknown paleontological resources as a result of implementation of transportation improvement projects pursuant to the 2040 MTP/SCS. Many of the improvements proposed under the 2040 MTP/SCS 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. Representative projects that may impact previously undisturbed areas are listed in Table 22. The projects listed were identified based on the likelihood that development of new infrastructure would impact previously undisturbed areas; it should be noted, however, 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 in addition to those listed in Table 22 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, the 2040 MTP/SCS also 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 paleontological resources in undisturbed areas. However, it is possible that paleontological resources could be located on or near future site infill sites, as well as undisturbed sites that are developed. Project grading and excavation for development sites may disturb these undiscovered resources. Impacts to paleontological resources would therefore be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation developed for the 2040 MTP/SCS program where applicable for transportation projects that result in impacts to paleontological resources. Cities and counties in the AMBAG region can and should implement this mitigation measure where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

CR-3 *Paleontological Resources Impact Minimization*

The implementing agency of a 2040 MTP/SCS project involving ground disturbing activities (including grading, trenching, foundation work and other excavations) 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 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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 the 2040 MTP/SCS 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.

Threshold 4: Disturb any human remains, including those interred outside of formal cemeteries
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Impact CR-4 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS COULD RESULT IN DAMAGE TO OR DESTRUCTION OF HUMAN BURIALS. IMPACTS TO HUMAN BURIALS WOULD BE LESS THAN SIGNIFICANT.

Human burials outside of formal cemeteries often occur in prehistoric archaeological contexts. Therefore, it is possible to encounter unknown human burials as a result of implementation of transportation improvement projects under the 2040 MTP/SCS. Excavation during construction activities in the AMBAG region would have the potential to disturb these resources, including Native American burials.

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in Section 5097 of the California Public Resources Code. The California Health and Safety Code (Sections 7050.5, 7051 and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protects them from disturbance, vandalism, or destruction, and established procedures to be implemented if Native American skeletal remains are discovered. Public Resources Code §5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes. Implementation of these regulations would ensure that 2040 MTP/SCS impacts to disturbance of human remains, including those interred outside of formal cemeteries would be less than significant.

Mitigation Measures

None required.

c. Specific MTP/SCS Projects That May Result in Impacts

Table 22 identifies projects with the potential to cause or contribute to direct or indirect impacts to cultural resources such as those discussed above. These projects are representative and were selected based on their potential scope and likelihood to require disturbances within previously undisturbed areas. While many projects have the potential to impact cultural resources, those requiring substantial ground disturbance in undisturbed areas have greater potential to impact prehistoric archaeological and paleontological resources. Projects located in urban infill near transit or within previously disturbed areas, such as an existing road right-of-way, have a greater potential to impact historic built environment resources, as well as historic archaeological resources in older

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developed areas. Additional specific analysis will be required as individual projects are implemented to determine the project-specific magnitude of impact. Mitigation measures discussed above would apply to these specific projects.

Table 22 MTP Projects that May Result in Cultural Resource Impacts

AMBAG Project No.	Project	Location	Impact
MON-CT022-CT	SR 156 – Corridor Widening Project	Monterey County	CR-2, C-3
MON-GRN005-GR	Thorne Road Bridge over U.S. 101	Monterey County	CR-2, C-3
MON-MAR157-MA	Reservation Road/Beach Road Improvements	Marina	CR-2
MON-SOL044-SO	Pinnacles Bike Route	Soledad	CR-2
MON-CT011-CT	SR 68 – Commuter Improvements	Monterey	CR-2
MON-CT017-CT	SR 68 – Holman Highway to access to Community Hospital	Monterey	CR-2, C-3
MON-CT030-SL	U.S. 101 – Salinas Corridor	Salinas	CR-2, C-3
MON-CT031-CT	U.S. 101 – South County Frontage Roads	Monterey County	CR-2, C-3
MON-CT045-MA	SR – Monterey Road Interchange	Marina	CR-2, C-3
MON-GRN008-GR	U.S. 101 – Walnut Avenue Interchange	Greenfield	CR-2, C-3
MON-MAR136-MA	SR 1 and Imjin Bridge	Marina	CR-2, C-3
MON-MAR155-MA	Imjin Parkway at SR 1	Marina	CR-2, C-3
MON-SOL014-SO	SR 146 Bypass	Soledad	CR-2, C-3
MON-MAR001-MA	Marina – Salinas Corridor	Marina	CR-2, C-3
MON-SNS012-SL	Boronda Road Widening	Salinas	CR-2, C-3
MON-SNS029-SL	John Street – U.S. 101	Salinas	CR-2, C-3
MON-SNS035-SL	Lincoln Avenue Widening	Salinas	CR-2, C-3
MON-SNS048-SL	Romie Lane Widening	Salinas	CR-2, C-3
MON-SNS090-SL	Russell Road Extension	Salinas	CR-2, C-3
MON-SNS096-SL	Sanborn Road Extension	Salinas	CR-2, C-3
MON-SNS102-SL	Constitution Boulevard Extension	Salinas	CR-2, C-3
MON-GON011-GO	Park and Ride Lot	Gonzales	CR-2, C-3
MON-MYC163-UM	CVMP – Laureles Grade Climbing Lane	Monterey County	CR-2, C-3
MON-MYC238-UM	Salinas Road Improvements	Monterey County	CR-2, C-3
MON-SOL031-SO	Intersection Improvements	Soledad	CR-2, C-3
MON-FRA020-MST	Fort Ord Intermodal Centers	Monterey County	CR-2
MON-KCY035-CK	Multimodal Transportation Center	Monterey County	CR-2, C-3
MON-SNS077-SL	North Main/Espinosa Road Class II Bike Lane	Salinas	CR-1
MON-MYC149-UM	Central Avenue	Salinas	CR-1
SB-COH-A30	Meridian Street Bike Lane	Hollister	CR-2
SB-SBC-A65	San Benito River Recreational Trail Phase I (Reach 1-3)	San Benito County	CR-2, C-3
SB-COG-A54	SR 25 Corridor Improvements Project	San Benito County	CR-2, C-3
SB-CT-A01	SR 156 Widening – San Juan Bautista to Union Road	San Benito County	CR-2, C-3
SB-CT-A17	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	San Benito County	CR-2, C-3
SB-CT-A44	Highway 101/25 4-Lane Widening Phase I	San Benito County	CR-2, C-3

AMBAG Project No.	Project	Location	Impact
SB-CT-A02	SR 156/Fairview Road Intersection Improvements	San Benito County	CR-2, C-3
SB-SJB-A01	Roundabout at the Alameda and Fourth Street	San Juan Batista	CR-1
SB-COH-A11	Union Road (formerly Crestview Drive) Construction	Hollister	CR-2, C-3
SB-COH-A18	Westside Boulevard Extension	Hollister	CR-2, C-3
SC-SBC-A67	Shore Road Extension	San Benito County	CR-2, C-3
SB-SJB-A07	Third Street Extension	San Juan Batista	CR-2, C-3
SB-SJB-A09	Connect Lang Street to the Alameda	San Juan Batista	CR-2, C-3
SC-RTC 27a-RTC	Monterey Bay Sanctuary Scenic Trail Network (Coastal Rail Trail) – Design, Environmental Clearance and Construction	Santa Cruz County	CR-2, C-3
RTC 30SC	Highway 1 Bicycle/Pedestrian Overcrossing at Mar Vista	Santa Cruz County	CR-2, C-3
SC-SC-P30-SCR	Murry Street to Harbor Path Connection	Santa Cruz	CR-2, C-3
SC-SB-P39-SCV	Glenwood Drive Bike Lanes	Scotts Valley	CR-2
SC-SV-P40-SCVB	Lockwoode Lane Sidewalk and Bike Lanes	Scotts Valley	CR-2
SC-RTC-24e-RTC	3 – Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street 3 – Highway 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	Santa Cruz	CR-2, C-3
SC-RTC-24f-RTC	2 – Highway 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Pedestrian Bridge	Santa Cruz	CR-2, C-3
SC-CAP-P07p-CAP	Stockton Avenue Bridge Rehab	Capitola	CR-2
SC-SC-P91-SCR	Shaffer Road Widening and Railroad Crossing	Santa Cruz	CR-2
SC-WAT-O1A-WAT	Highway 1/Harkins Slough Road Interchange: Bicycle/Pedestrian Bridge	Watsonville	CR-2, C-3
WAT 38SC	Airport Boulevard Improvements	Watsonville	CR-2, C-3
SC-VAR-P45-VAR	West Side Transit Hub	Santa Cruz	CR-2, C-3

d. Cumulative Analysis

Development in the AMBAG region would increase under buildout of the 2040 MTP/SCS. The increase in growth in previously undisturbed areas contributes to regional impacts on existing and previously undisturbed and undiscovered historical, archaeological and paleontological 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 the 2040 MTP/SCS to them, would be significant, and the 2040 MTP/SCS contribution to them would be cumulatively considerable. Mitigation measures outlined in this section would reduce impacts associated with 2040 MTP/SCS projects. However, the 2040 MTP/SCS 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.

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4.6 Energy

Appendix F of the CEQA Guidelines, which require that EIRs include a discussion of the potential energy impacts of projects, with particular emphasis on considering if the proposed Plan would result in inefficient, wasteful and unnecessary consumption of energy.

This section discusses the energy impacts of implementing transportation projects in the proposed Plan, as well as the energy-related consequences of land use projects that are consistent with the proposed Plan. For an analysis of greenhouse gas (GHG) production and proposed Plan impacts on climate change, please see Section 4.8, *Greenhouse Gas Emissions/Climate Change*.

4.6.1 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 usage of natural gas and electricity.

a. Energy Supply

California's major sources of energy production in 2015 comprised approximately 48.9 percent crude oil, 31.6 percent renewable sources, 11.3 percent natural gas and 8.2 percent nuclear (U.S. Energy Information Administration [EIA] 2017e). Other sources of energy produced in California include nuclear electric power, natural gas and biofuel (EIA 2015). Natural gas production in 2015 was approximately 1,022,578 thousand cubic feet (Mcf) in Monterey County (California Department of Conservation, Division of Oil, Gas and Geothermal Resources [DOGGR] 2017a) and 18,791 Mcf in San Benito County (DOGGR 2017b). There is no natural gas production in Santa Cruz County. 2015 is used as the year to cross examine energy production and consumption across the AMBAG region and the state of California as it is the most recent year for available information for all areas and resources and 2015 represents the baseline year for this EIR.

Monterey County contains 1,511 active oil wells (DOGGR 2017c), which produced 8,092,348 barrels (bbl) of oil in 2015 (DOGGR 2017a), while San Benito County contains 53 active oil wells (DOGGR 2017d), which produced 14,813 bbl of oil in 2015 (DOGGR 2017b). Santa Cruz County contains no active oil wells. Table 23 illustrates the oil and natural gas produced in the Plan Area Counties in 2015 compared to statewide statistics.

Table 23 2015 Oil and Natural Gas Production by County

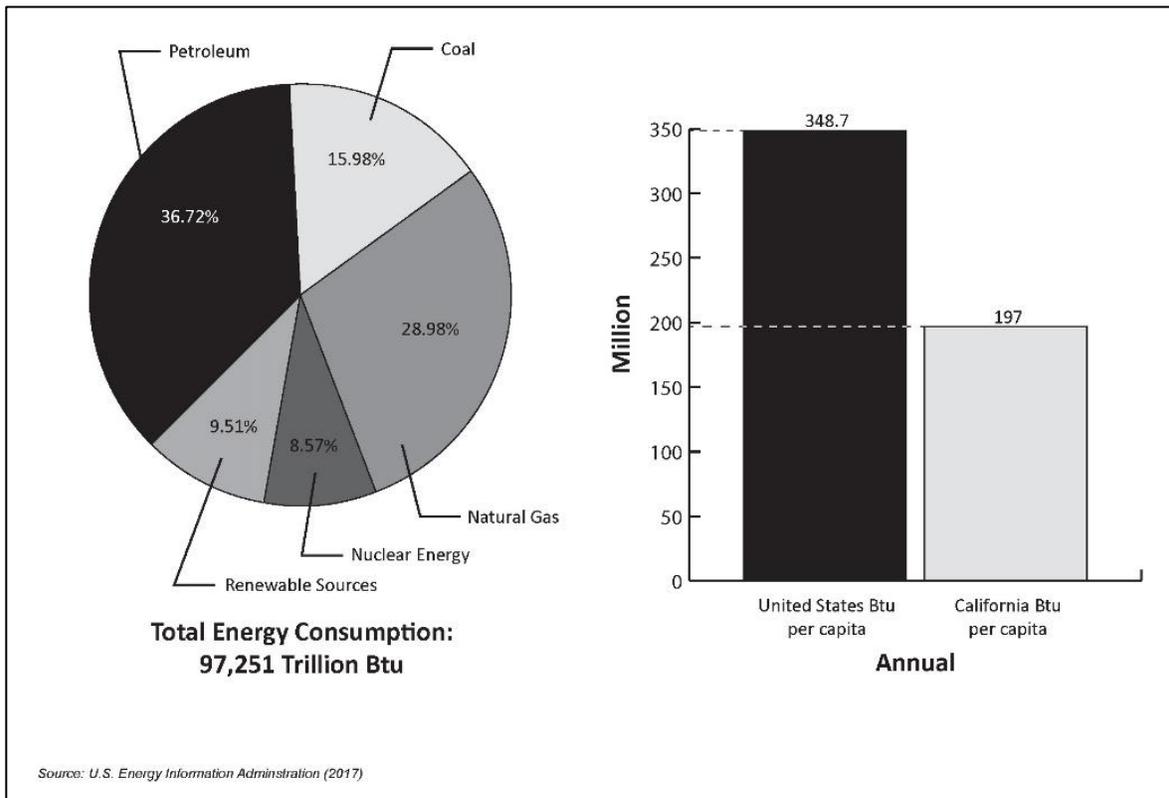
Natural Resource	California	Monterey County	San Benito County	Santa Cruz County	AMBAG Total	AMBAG Proportion of Statewide Production
Crude Oil (bbl)	201,284,000	8,092,348	14,813	0	8,107,161	4.02%
Natural Gas (Mcf)	200,000,000	1,022,578	18,791	0	1,041,369	0.52%

Sources: California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) Well Search. 2017; United States Energy Information Administration (EIA). 2017. Petroleum & Other Liquids: Crude Oil Production; United States Energy Information Administration (EIA). 2017. Table C1. Energy Consumption Overview: Estimated by Energy Source and End-Use Sector, 2015.

b. Energy Consumption and Sources

Total energy consumption in the U.S. in 2015 was estimated at approximately 97,251 trillion Btu (EIA 2017c). As shown in Figure 24, petroleum provided approximately 36.72 percent of the energy used in 2015 in the U.S. (EIA 2017c). In the same year, coal provided approximately 15.98 percent of energy consumed, natural gas provided approximately 28.98 percent, nuclear energy provided approximately 8.57 percent and total renewable sources supplied the rest at approximately 9.51 percent (EIA 2017c). On a per capita basis, California is ranked third lowest of the states in terms of energy use (197 million Btu per person), or about 43.5 percent less than the U.S.’s average per capita consumption of 348.7 million Btu per person (EIA 2017d).

Figure 24 2015 U.S. Energy Consumption by Resource



Electricity and Natural Gas

In 2015, California produced 69 percent of the electricity it used in 2015. The remainder was imported from outside the state. In 2015, California used 282,896.3 gigawatt hours (GWh) of electricity (California Energy Commission [CEC] 2017a) and produced a total of 196,194 GWh in-state (CEC 2017b). Table 24 illustrates the electricity and natural gas consumption by county and that county’s respective proportion of statewide consumption in 2015.

Table 24 2015 Electricity and Natural Gas Consumption by County

County	Electricity Consumption			Natural Gas Consumption		
	2015 Consumption (GWh) ¹	Per Capita Consumption (kWh)	Statewide Proportion	2015 Consumption (MMthm) ²	Per Capita Consumption (thm)	Statewide Proportion
Monterey	2,660.2	6,112.00	0.9%	102.5	235.4	0.4%
Santa Cruz	1,221.0	4,445.40	0.4%	50.3	183.1	0.2%
San Benito	368.0	6,194.50	0.1%	12.9	217.3	<0.1%
AMBAG Total	4,249.2	5,523.4	1.5%	165.7	215.3	0.7%

¹ Electricity consumption is quantified in Millions of Kilowatt-Hours (GWh), while per capita electricity is quantified in Kilowatt-Hours (kWh).

² Natural Gas consumption is quantified in Millions of Therms (MMthm), while per capita natural gas consumption is quantified in Therms (thm).

Note: The per capita consumption for natural gas and electricity are determined by using 2015 data from the CEC for overall countywide consumption and divided by the 2016 county population retrieved from the United States Census Bureau database. Individual entries may not add up to exact total amounts as a result of rounding to a single decimal point.

Sources: CEC 2017c; CEC 2017d; U.S. Census Bureau 2017

As shown in Table 24, the AMBAG region accounted for approximately 1.5 percent of the State’s electricity consumption and 0.7 percent of the State’s natural gas consumption in 2015 (EIA 2017f; CEC 2017c; CEC 2017d). The three counties within AMBAG are served by one electricity and natural gas provider: Pacific Gas and Electric (PG&E).

Petroleum

Energy consumed by the transportation sector accounts for roughly 39.3 percent of California’s energy demand, amounting to approximately 3,017 trillion Btu in 2015 (EIA 2017g). California’s transportation sector, including on-road and rail transportation, consumed roughly 558,115,000 bbl of petroleum fuels in 2015 (EIA 2017h). Furthermore, petroleum-based fuels are used for approximately 98.5 percent of the State’s transportation activity (EIA 2017h). Most gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet state-specific formulations required by the California Air Resources Board (CARB). Major petroleum refineries in California are concentrated in three counties: Contra Costa, Kern and Los Angeles (CEC 2016).

Daily vehicle miles travelled (VMT) within the AMBAG region were estimated at approximately 15.8 million in 2015 (refer to Table 28 below). Based on this daily VMT and estimated diesel sales in the region for 2015, approximately 152 billion Btu were consumed per day in 2015 as shown in Table 25.

Table 25 Fuel Consumption by County

Fuel	2015 Annual Fuel Use (million gallons)	2015 Annual Fuel Use (billion Btu)	2015 Daily Energy Use (billion Btu)	2015 Daily Per Capita Energy Use (thousand Btu)
Monterey County				
Gasoline	345.92	39,434.88	108.34	248.92
Diesel	52.64	7,301.16	20.06	46.08
San Benito County				
Gasoline	28.20	3,214.80	8.83	148.65
Diesel	0.75	104.02	0.28	4.81
Santa Cruz County				
Gasoline	180.48	3,713.32	10.20	37.14
Diesel	11.28	1,564.53	4.29	15.62
AMBAG Total	619.27	55,332.71	152.01	197.59

Note: The per capita consumption for fuel was determined by using 2015 data from correspondence with CEC staff (Gordon Schremp Senior Fuel Specialist [CEC, 2017e]) to estimate overall countywide consumption and divided by the 2015 county population retrieved from the United States Census Bureau database.

Note: Totals may not add up due to rounding.

Sources: CEC, 2017e; United States Census Bureau, 2016

As stated in Section 4.14, *Transportation and Circulation*, nearly 15,836,000 vehicle miles were traveled each day within the AMBAG region in 2015. Table 26 illustrates the daily and VMT for the AMBAG region in 2015.

Table 26 Daily VMT for the AMBAG Region

County/Area	Daily VMT (2015)
Light Truck and Cars Only	
Monterey County	8,778,578
San Benito County	1,234,352
Santa Cruz County	4,438,125
AMBAG Total	14,451,910
Full Fleet	
AMBAG Total	15,835,910

Note: individual numbers may not add up to totals due to rounding.

Source: AMBAG, 2017. EMFAC Summary Outputs.

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 (e.g. Low Carbon Fuel Standard). Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle, with many transportation fuels including the following:

Hydrogen is being explored for use in combustion engines and fuel cell electric vehicles. There is 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 (two to

three times more efficient than gasoline vehicles). Currently, 34 hydrogen refueling stations are located in California; however, none are located in the AMBAG region (U.S. Department of Energy [DOE] 2017).

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, but fueling stations have been slow to make it available. There are currently 10 biodiesel refueling stations in California, one of which is located in Santa Cruz County at 433 Ocean Street in Santa Cruz (DOE 2017).

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 on board the vehicle to power electric motors. There are approximately 55 electrical charging stations in Monterey County, four in San Benito County and 31 in Santa Cruz County (DOE 2017).

c. Regulatory Setting

Programs and policies at the State and national levels have emerged to bolster the previous trend towards energy efficiency, as discussed below.

Federal

Energy Policy Conservation Act (EPCA) and CAFE Standards

The EPCA of 1975 established nationwide fuel economy standards in order to conserve oil. Pursuant to this Act, the National Highway Traffic and Safety Administration, part of the U.S. Department of Transportation, is responsible for revising existing fuel economy standards and establishing new vehicle fuel economy standards.

The Corporate Average Fuel Economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States.

National Energy Policy Act of 1992 (EPACT92)

EPACT92 calls for programs that promote efficiency and the use of alternative fuels. EPACT92 requires certain federal, state and local government and private fleets to purchase a percentage of light duty alternative fuel vehicles (AFVs) capable of running on alternative fuels each year. In addition, EPACT92 has financial incentives. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007 (EISA)

EISA is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It expands the production of renewable fuels, reducing dependence on oil and confronting global climate change. Specifically, it:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly five-fold increase over current levels; and
- 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.

American Recovery and Reinvestment Act of 2009

The American Recovery and Reinvestment Act (ARRA) of 2009 appropriates funds toward infrastructure modernization, investments in energy independence and renewable energy technologies among other things. ARRA supports a variety of alternative fuel and advanced vehicle technologies.

State

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as CEC. The Act established a State policy to reduce wasteful, uneconomical and unnecessary uses of energy by employing a range of measures. The CPUC regulates privately-owned utilities in the energy, rail, telecommunications and water fields.

Integrated Energy Policy Report (IEPR)

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand and prices. The CEC shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy and protect public health and safety.

CEC adopts an IEPR every two years and an update every other year. The 2017 IEPR provides a summary of priority energy issues currently facing the State, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable and environmentally responsible energy sources. Energy 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; southern California energy reliability; distributed energy resources; strategic transmission investment plans; and existing power plan reliability issues (CEC 2017f).

Senate Bill 1078: California Renewables Portfolio Standard Program.

SB 1078 (Chapter 516, Statutes of 2002), as expanded under SB 2, establishes a renewable portfolio standard (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. The outcomes of this legislation will impact regional transportation powered by electricity.

Senate Bill X1-2: California Renewable Energy Portfolio Standard

In 2011, Governor Brown signed SB X1-2, which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 33 percent of their electricity supply (portfolio) from renewable sources by 2020. CPUC and CEC jointly implement the Statewide RPS program through rulemakings and monitoring the activities of electric energy utilities in the state.

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by December 31, 2030. This act also requires doubling of the energy efficiency savings in electricity and natural gas for retail customers, through energy efficiency and conservation by December 31, 2030.

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 EPA initially denied the waiver in 2008, EPA 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 (CARB 2017a).

Energy Action Plan

The first Energy Action Plan (EAP) emerged in 2003 from a crisis atmosphere in California’s energy markets. The state’s three major energy policy agencies (CPUC, CEC and the Consumer Power and Conservation Financing Authority [established under deregulation and now defunct]) came together to develop one high-level, coherent approach to meeting California’s electricity and natural gas demand. With the adoption of the first EAP in 2003, the CEC, CPUC and California Power Authority articulated a unified approach to meeting California’s electricity and natural gas needs. A key element was the loading factor, which specified California’s policy to invest first in energy efficiency and demand response and then renewables and distributed generation before convention generation. Combined heat and power, as a form of distributed generation, is given preferred resource status in the loading order.

In the October 2005 *Energy Action Plan II*, CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP. The CEC

adopted an update to the EAP II in February 2008 that supplemented the earlier EAPs and examined 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 CEC to prepare a State plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with the ARB and in consultation with other State, federal and local agencies. The SAF 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 SAF 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 (CARB & CEC 2007).

Executive Order S-01-07 (Low Carbon Fuel Standard)

Executive Order S-01-07 (17 CCR 95480 et seq.) requires the state to achieve a 10 percent or greater reduction by 2020 in the average fuel carbon intensity for transportation fuels in California regulated by ARB. ARB identified the Low Carbon Fuel Standard (LCFS) as a discrete early action item under AB 32.

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 within 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 (CEC 2011). The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals (CEC 2012):

- 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; and
- 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. Title 24 was established by CEC 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, 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 5 percent more efficient for non-residential buildings (CEC 2015). 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 that these standards exceed those provided in Title 24.

California Green Building Standards Code (2016), 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 within the State. Having taken effect in January 2016, the most recent version of the Code lays out the minimum requirements for newly constructed residential and nonresidential buildings to reduce GHG emissions through improved 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.

Regional

Electric Vehicle Infrastructure for the Monterey Bay Area Plan

In 2013, AMBAG published the Electric Vehicle Infrastructure for the Monterey Bay Area Plan. The Electric Vehicle Infrastructure for the Monterey Bay Area Plan includes a siting plan to identify potential charging locations and presents a framework for establishing an electric vehicle charging network in the Monterey Bay Area (AMBAG 2013a). The three major goals of the siting plan are to:

- Provide charging opportunities for plug-in electric vehicle owners that lack access to home charging
- Extend the range of plug-in electric vehicle for intra- and interregional travel along various corridors
- Maximize all electric miles by providing ample opportunities for charging while minimizing the risk of stranded plug-in electric vehicles

Monterey Bay Plug-In Electric Vehicle Readiness Plan

The Electric Vehicle Infrastructure plan was the precursor to the Monterey Bay Plug-In Electric Vehicle Readiness Plan, a comprehensive regional plan to promote plug-in electric vehicle adoption throughout the region completed in July 2013. The goal of the Readiness Plan is to encourage the mass adoption of plug-in electric vehicles in the region and reduce greenhouse gas emissions by providing a toolbox of recommended approaches for public, private and non-profit organizations (AMBAG 2013b). The Readiness Plan identifies specific regional targets for significantly expanding plug-in electric vehicle adoption in the Monterey Bay Area by 2020 and 2025.

AMBAG Energy Watch Program

AMBAG works closely with PG&E to promote reduced energy use and energy savings to these counties through the AMBAG Energy Watch Program. AMBAG Energy Watch reduces energy use by providing the following resources to eligible PG&E customers:

- Developing Energy Action Strategies for jurisdictions;
- Compiling greenhouse gas inventories for jurisdictions;
- Energy assessments and audits;
- Direct installation of energy efficient equipment;
- Technical assistance and financial incentives for energy efficient retrofits in municipal buildings;
- Energy efficiency seminars and training courses in the region;
- Information on other PG&E energy efficiency programs and services; and
- Assistance accessing financing for energy efficiency projects.

In addition, AMBAG Energy Watch has developed programs that would help reduce greenhouse gas (GHG) emissions including preparing local GHG inventories, climate action planning support services and Energy Action Strategies (AMBAG 2017a).

The California Public Utilities Commission (CPUC) regulates privately owned electric and natural gas companies. The CPUC has developed energy efficiency programs such as smart meters, low income programs, distribution generation programs, self-generation incentive programs and a California solar initiative (CPUC 2017).

Local

General Plans

The Monterey County General Plan (Monterey County, 2010a) and Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994) address energy efficiency in their Conservation and Open Space Elements. The goals and policies of their Conservation and Open Space Elements promote energy efficiency by encouraging all energy sectors (i.e. agricultural, residential, commercial, industrial, and public building applications) to employ renewable energy sources to the maximum extent feasible. The San Benito County 2035 General Plan (San Benito County, 2015a) addresses energy efficiency in the Land Use, Public Facilities and Services and Natural and Cultural Resources Elements. The goals and policies of the Land Use Element encourage the County to use energy conservation and efficiency techniques in new building design, orientation and construction (San Benito County 2015b), while policies found in the Natural and Cultural Resources and Public Facilities and Services Elements encourage greater utilization and accessibility to renewable energy sources (San Benito County 2015c; San Benito County 2015d).

The General Plans for local jurisdictions in the AMBAG region contain initiatives to reduce overall energy consumption and improve energy efficiency. Many of the cities' General Plans also contain goals that guide their intent to reduce energy consumption. For example, the Conservation Element of the City of Monterey General Plan (City of Monterey, 2005) contains Goal e, *Encourage the effective use of energy in all its critical forms by public and private users alike*. This goal is then actualized through programs such as Program e.1.1, *Consider aesthetically compatible independent energy sources in new public and private buildings*, and Program e.1.2, *Encourage energy retrofitting in existing residential and commercial structures*. Building and transportation energy conservation

has been improvement significant over time through statewide policies; however, the Circulation, Conservation and Land Use elements of local jurisdiction General Plans help facilitate the implementation of state and local energy efficiency initiatives.

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds

Appendix F of the CEQA Guidelines provides a list of six environmental impacts related to use of energy in Section II (c). Unless otherwise noted, the significance criteria developed for this EIR are based on that list of environmental impacts provided in Appendix F. AMBAG has consolidated the list and edited the wording in an effort to develop significance criteria that reflect the programmatic level of analysis in this EIR and the unique nature of the proposed Plan.

Specifically, CEQA Appendix F criterion (C)(1) addresses a project's energy use requirements and energy use efficiency by amount and fuel type and criterion (C)(2) addresses a project's effects on local and regional energy supplies. These criteria have been combined and modified in the first threshold. Criteria (C)(3) and (C)(4) related to energy demand and standards, respectively, are aligned with the second threshold. The third threshold addresses the effects of the project on energy resources consistent with criterion (C)(5). For the purposes of this EIR, implementation of the proposed Plan would have a significant impact if it would:

1. Result in an increase in overall per capita energy consumption relative to baseline conditions, or otherwise use energy in an inefficient, wasteful, or unnecessary manner;
2. Result in an increased reliance on fossil fuels and decreased reliance on renewable energy sources; and/or
3. Require or result in the construction of new energy facilities or the expansion of such facilities to adequately meet projected demands, the construction of which could cause a significant environmental effect.

Direct and Indirect Energy Consumption

For this analysis, the calculation of total energy consumption follows the Input-Output methodology suggested by Caltrans (Caltrans Division of Engineering Services, Office of Transportation Laboratory, Energy and Transportation Systems, July 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 2040 MTP/SCS projects, it also includes energy consumption that is not due to the 2040 MTP/SCS, but rather is due to changes in VMT caused by socioeconomic growth (e.g., population and employment), land use policies and the existing transportation infrastructure.

Energy consumption from transportation projects is categorized in terms of "direct" and "indirect" energy. Direct energy is the fuel that propels vehicles – it is consumed directly by the automobile, bus, or transit vehicle. Indirect energy is the energy needed to construct, operate and maintain the roadway and rail system and manufacture and maintain the vehicles using the roadway and rail system (Caltrans 1983). Indirect energy accounts for construction-related energy (e.g., the energy required to construct transportation improvements), which would 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 (2015), 2020 and 2040 VMT with and without the 2040 MTP/SCS (as analyzed in Section 4.14, *Transportation and Circulation*).

The 2015 gasoline and diesel fuel consumption data for Monterey County, San Benito County and Santa Cruz County was converted to Btu (refer to Table 11) and divided by regionwide daily VMT (refer to Table 12) to derive a regional Btu/VMT conversion factor of 9,599 Btu per VMT.

It should be noted that the Btu/VMT factor is forecast to continue to decrease into the future as a result of improved fuel economy, particularly if the fleet-wide goal of 35 mpg by year 2020 proposed under the Energy Independence and Security Act is met. Applying the 2015-based factor to future year (2040) VMT therefore provides a conservative evaluation of energy consumption as the energy efficiency of vehicles in 2040 is likely to be higher than current fuel efficiency of vehicles.

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 the 2040 MTP/SCS 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 27 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 27 Indirect Energy Consumption Factors

Mode	Factor (Btu/VMT)
Manufacturing	
Passenger Vehicles	1,410
Transit Buses	3,470
Roadway (Construction)	27,300
Rail (Construction)	2,108
Maintenance	
Passenger Vehicles	1,400
Transit Buses	13,142
Rail	7,060

Note: 2017 dollars converted to 1977 dollars as a reasonable worst-case inflation assumption using United States Department of Labor and Statistics inflation converter. Note that transportation projects with construction costs planned further in the future would result in lower energy use relative to construction cost, due to anticipated additional future inflation.

Source: Caltrans Transportation Laboratory. July 1983. *Energy and Transportation Systems*. Available at: http://www.dot.ca.gov/hq/env/air/documents/energytranssystems_ocr.pdf. Accessed October 22, 2017.

b. Project Impacts and Mitigation Measures

This section describes impacts associated with the 2040 MTP/SCS. Due to the programmatic nature of the 2040 MTP/SCS, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible. In general, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the 2040 MTP/SCS could result in impacts as described in the following sections.

<p>Threshold 1: Result in an increase in overall per capita energy consumption relative to baseline conditions, or otherwise use energy in an inefficient, wasteful, or unnecessary manner</p> <p>Threshold 2: Result in an increased reliance on fossil fuels and decreased reliance on renewable energy sources</p>

Impact E-1 **FUTURE TRANSPORTATION IMPROVEMENT PROJECTS AND IMPLEMENTATION OF THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS WOULD INCREASE DEMAND FOR ENERGY BEYOND EXISTING CONDITIONS. HOWEVER, THE 2040 MTP/SCS WOULD NOT RESULT IN INEFFICIENT, UNNECESSARY, OR WASTEFUL DIRECT OR INDIRECT CONSUMPTION OF ENERGY AND WOULD BE CONSISTENT WITH APPLICABLE FEDERAL, STATE AND LOCAL ENERGY CONSERVATION POLICIES. AS SUCH, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.**

Daily operation of the regional 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 the 2040 MTP/SCS would increase vehicle capacity, allowing a greater number of vehicles to use facilities in the region. Increases in motor vehicle trips are primarily a combined function of population and employment growth. It should be noted that population growth and growth in VMT would occur within the region regardless of whether the 2040 MTP/SCS is implemented. As a result, energy consumption as it relates to vehicles would increase beyond the 2015 baseline in any scenario. However, many 2040 MTP/SCS projects (e.g., bikeway and pedestrian projects, rail projects, transit projects, Transportation System Management [TSM] and Transportation Demand Management [TDM] projects, etc.) would improve the availability of alternative transportation modes, and help reduce congestion and resultant air pollutants in the AMBAG region.

Construction and maintenance of the proposed 2040 MTP/SCS projects would result in short-term consumption of energy resulting from the use of construction equipment and processes. 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, as well as construction of future infill and transit oriented development (TOD) projects/developments envisioned by the 2040 MTP/SCS. The California Green Building Standards Code (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, as well as future infill and TOD envisioned by the 2040 MTP/SCS and would help to minimize waste and energy consumption. All construction and maintenance conducted pursuant to the 2040 MTP/SCS, or as a result of improvements made by the 2040 MTP/SCS, would be required to comply with relevant provisions of the CALGreen Code.

Table 28 shows daily VMT and estimated fuel consumption translated into energy use (Btu) in the AMBAG region under existing (2015) conditions and the 2040 MTP/SCS.

Table 28 Direct and Indirect Transportation Energy Use

Year	Daily VMT	Direct Energy Use (Daily Billion Btu)	Indirect Energy Use (Daily Billion Btu)	Total Energy Use (Daily Billion Btu)	Per Capita Energy Use (Daily Thousand Btu)
2015 Baseline	15,835,910	152.0	44.3	196.3	255.9
2040 MTP/SCS	19,687,508	160.8	50.4	211.2	242.2

Notes: Daily VMT, drawn from Table 26, was used on information from Table 27 to identify direct and indirect daily Btu consumption. 2015 U.S. Census Bureau population records (U.S. Census Bureau 2017) were then consulted to identify daily per capita Btu consumption.

As shown in Table 28, regionwide daily VMT and total daily energy use would increase over time as the result of regional socioeconomic (population and employment) growth. However, the 2040 MTP/SCS would result in an approximately five percent decrease in per capita energy usage when compared to 2015 baseline conditions.

Transportation Improvement Projects

The transportation improvements proposed under the 2040 MTP/SCS would result in a more efficient transit system. The 2040 MTP/SCS would result in greater availability of public transit and other alternative modes of transportation, such as Complete Streets and active transportation, as well as a more energy efficient land use scenario. The reduction in overall congestion resulting from these service level improvements would reduce fuel consumption and promote fuel efficiency beyond what can be quantified in the above analysis. In addition, 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 the Electric Vehicle Infrastructure for the Monterey Bay Area Plan.

New transportation facilities that require energy for operation, such as signal lighting, roadway or parking lot lighting and electronic equipment will increase energy demand. New landscaping irrigation also increases 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.

Land Use Changes

The 2040 MTP/SCS emphasizes a regional land use scenario that promotes mixed use and infill 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) and resulting in fewer vehicle trips. Operation of future infill 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 and infill projects would to 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.

Consistency with Energy Conservation and Renewable Energy Policies

As discussed above, the 2040 MTP/SCS would result in an approximately five percent decrease in per capita energy use in the region and would not result in energy used in an unnecessary or wasteful manner. Although implementation of the 2040 MTP/SCS would result in greater net energy consumption than 2015 baseline conditions, the 2040 MTP/SCS would not result in the inefficient, wasteful, or unnecessary consumption of energy if it is consistent with existing relevant energy conservation policies. Accordingly, inconsistencies between the 2040 MTP/SCS 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.

AMBAG monitors regulations related to fuel efficiency standards and alternative fuel vehicles. The 2040 MTP/SCS would not conflict with such regulations (e.g., *Energy Policy and Conservation Act* and *CAFE Standards, EPAct, 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, the 2040 MTP/SCS would not result in wasteful, inefficient, or unnecessary use of energy. Therefore, the 2040 MTP/SCS 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. The proposed 2040 MTP/SCS 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 2040 MTP/SCS.

In addition, many 2040 MTP/SCS projects promote energy efficiency as they support implementation of the 2010 Clean Air 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 and Health Impacts/Risks*).

Locally, the proposed 2040 MTP/SCS would be consistent with the 2010 Monterey County General Plan, the 1994 Santa Cruz County General Plan and Local Coastal Program and the 2015 San Benito County 2035 General Plan. These plans encourage the use of renewable energy, energy conservation and energy efficiency techniques in all new building design, orientation and construction and support of alternative transportation and fuels. As described above, the 2040 MTP/SCS includes TDM and TSM intended to improve the efficiency and effectiveness of the transportation system, reducing fuel consumption, transit and other alternative modes of

transportation, such as new pedestrian and bicycle facilities and promotes mixed use and infill development.

In summary, the 2040 MTP/SCS would not result in wasteful or inefficient energy consumption within the region, and is generally consistent with applicable policies regarding energy conservation and renewable energy. Therefore, the 2040 MTP/SCS would not have a significant impact on energy. Impacts would be less than significant.

Mitigation Measures

None required.

Threshold 3: Require or result in the construction of new energy facilities or the expansion of such facilities to adequately meet projected demands, the construction of which could cause a significant environmental effect

Impact E-2 IMPLEMENTATION OF THE 2040 MTP/SCS WOULD GENERATE ENERGY DEMAND THAT MAY REQUIRE CONSTRUCTION OF NEW ENERGY FACILITIES OR THE EXPANSION OF SUCH FACILITIES. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As shown in Table 28, implementation of the 2040 MTP/SCS would result in an approximately 7.5 percent increase in energy consumption compared to 2015 baseline conditions. Additional increases in energy consumption would be caused by land use projects that implement the 2040 MTP/SCS. As a result, new or expanded energy facilities would likely be needed to meet future energy needs within the AMBAG region, including power plants, distributed generation, electrical transmission and distribution infrastructure and natural gas facilities (e.g., storage, pipelines).

PG&E utilizes a long-term planning process to plan for increased energy demand in the future with its publication of ten-year Transmission Plans. The most recent, *PG&E's 2010 Electric Transmission Grid Expansion Plan*, details planned projects between 2010 and 2020 that aim to ensure compliance with North American Electric Reliability Corporation (NERC) standards, improve transmission system access for renewable generation to meet Renewable Portfolio Standard (RPS) goals and targets, improve service reliability for end users and coordinate long-term plans for PG&E's transmission system (PG&E 2010). Some projects encompassed within this Transmission Plan are within the AMBAG region, including the replacement of transformers in Soledad, the construction of a new distribution substation in Natividad and the rebuilding of the Green Valley-Rob Roy line into a double-circuit line, among others (PG&E 2010). Each Transmission Plan published by PG&E is a ten-year planning document, thus, PG&E will continue to assess the reliability and capacity of its energy facilities every ten years based on critical system conditions, growth assumptions and study years agreed upon by the California Independent System Operator Corporation (CAISO) and participating stakeholders. In addition, Monterey Bay Community Power (MBCP) is a regional project among local government agencies in the AMBAG region that aims to provide electricity to residents and businesses throughout Monterey, San Benito and Santa Cruz counties through the new Community Choice Energy (CCE) model (MBCP 2017). CCE enables communities to choose clean-source power at a cost equivalent to PG&E, while retaining PG&E's role in maintaining power lines and providing customer service.

The provision of new or expansion of existing energy facilities would result in short-term construction-related impacts and long-term operational impacts, such as air quality, noise, traffic and other resource areas. Construction-related and long-term operational impacts are typically

controllable and avoided or substantially lessened by mitigation measures adopted by the implementing agency, including adherence to existing regulations and best management practices. Because details are not known about timing, location and other project-specific information for new or expanded energy facilities, it cannot be guaranteed that impacts from the construction and operation of new or physically altered energy facilities would be less than significant for all projects. Therefore, impacts related to new or expanded energy facilities needed to accommodate energy demand from the MTP/SCS would be significant.

Mitigation Measures

To minimize impacts associated with the construction of new energy facilities or the expansion of such facilities, PG&E and local jurisdictions involved in Monterey Bay Community Power with responsibility for the construction or approval of new energy facilities or the expansion of existing facilities to adequately meet projected capacity needs can and should implement Mitigation Measure E-2(a). In addition, cities and counties should implement Mitigation Measure E-2(b). Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

E-2(a) Mitigate Impacts of New or Expanded Energy Facilities

During the planning, design and project-level CEQA review process, apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion shall be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions shall include those necessary to avoid or reduce environmental impacts associated with, but not limited to: air quality, noise, traffic, biological resources, cultural resources, GHG emissions, hydrology and water quality and others that apply to specific construction or expansion of natural gas and electric facilities projects.

E-2(b) Develop Energy Demand Calculations and Reduce Energy Demand

During the planning, design and project-level CEQA review process for individual development projects, develop electricity and natural gas demand calculations for any project anticipated to require substantial energy consumption. Implementing agencies shall implement design and mitigation measures that reduce energy consumption and promote the use of on-site renewable energy. This may include, but would not be limited to: installing energy-reducing shading mechanisms for windows, porches, patios, etc.; installing energy-reducing day lighting systems (e.g., skylights); use of low-energy interior and street lighting; and/or installation of solar photovoltaic (PV) panels or other on-site renewable energy that generates a minimum of 30 percent of the project's total energy demand.

Implementing Agencies

Implementing agencies for energy projects include PG&E and local jurisdictions involved in Monterey Bay Community Power with responsibility for the construction or approval of new energy facilities or the expansion of existing facilities. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Implementation of Mitigation Measures E-2(a) and E-2(b) would reduce impacts associated with the construction of natural gas and electricity facilities. However, it cannot be guaranteed that all future project-level impacts can be mitigated to a less than significant level. 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 MTP/SCS Projects that May Result in Impacts

As discussed above, the 2040 MTP/SCS would result in less than significant impacts related to energy consumption. No specific projects have been identified that would result in significant consumption of energy.

d. Cumulative Impact Analysis

The 2040 MTP/SCS would increase demand for energy resources such as natural gas, electricity and transportation fuels by approximately 7.5 percent over the 25-year planning horizon. However, many of the transportation improvement projects under the 2040 MTP/SCS would conserve transportation energy by relieving congestion and contributing towards other transportation efficiencies, resulting in lower per capita transportation energy consumption in 2040 than in the 2015 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, the 2040 MTP/SCS 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 the 2040 MTP/SCS as compared to existing 2015 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 the 2040 MTP/SCS. As such, the 2040 MTP/SCS would not contribute to a cumulative impact to the wasteful, unnecessary, or inefficient use of energy. Based on the analysis provided above, the 2040 MTP/SCS's contribution to cumulative impacts related to energy consumption would not result in the inefficient use of energy resources. As such, the 2040 MTP/SCS'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.

New or expanded facilities for generation, transmission, storage and distribution of electricity, natural gas, diesel and alternative transportation fuels would be needed to meet the increased demand associated with the 2040 MTP/SCS, the construction of which would cause potentially significant environmental effects. Growth and transportation projects in adjoining counties would add to these effects, thereby causing significant cumulative effects. Combined with impacts from projected growth and development located throughout the region causing increased demand for electricity, natural gas and diesel, the 2040 MTP/SCS's contribution to impacts resulting from the construction of new or expanded energy facilities would be cumulatively considerable. The 2040 MTP/SCS 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.

4.7 Geology and Soils

4.7.1 Setting

All three counties in the AMBAG region are part of the Coast Ranges geomorphic province, a region dominated by active tectonics at the margin of the Pacific and North American tectonic plates (Monterey County 2008). Existing geologic, soils and flooding conditions for each county are briefly summarized below. Figure 25, Figure 26 and Figure 27 show known active faults in each county.

a. Monterey County

At the southwestern portion of AMBAG's planning area, Monterey County has approximately 100 miles of coastline, two coastal ranges (the Santa Lucia and Gabilan Mountain Ranges) and two valleys (the Salinas and Carmel Valleys).

Geologic Formations

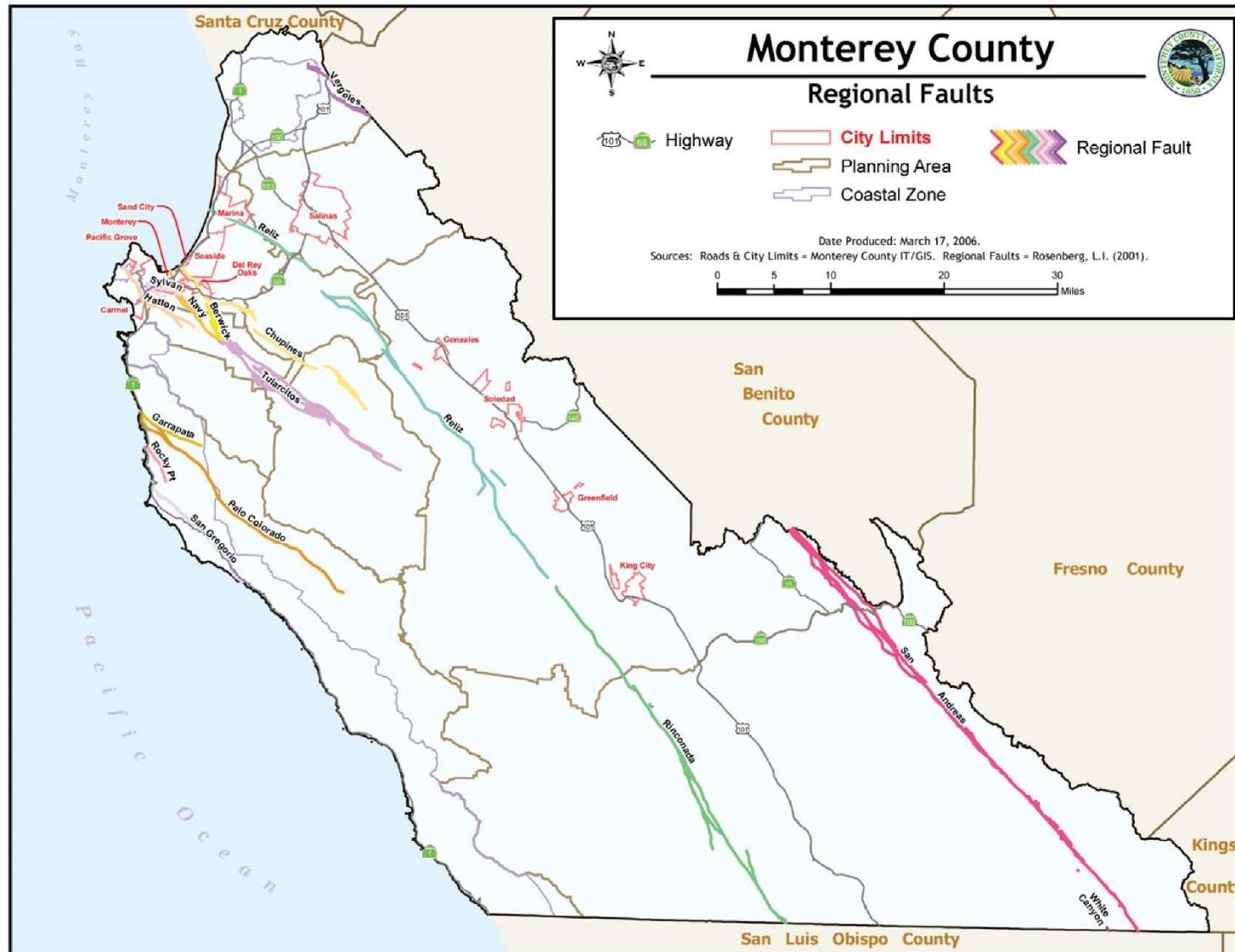
The interaction between Pacific and North American tectonic plates has created the primary geologic formations in Monterey County, as uplift along faults is largely responsible for the formation of the Coast Ranges, including the Santa Lucia and Gabilan Ranges. These granitic and metamorphic mountain ranges trend in a northwest-southeast direction, with the Santa Lucia Range along the coast and the Gabilan Range along Monterey County's eastern border (RWMG 2013). Located between the Santa Lucia and Gabilan mountain ranges is the Salinas Valley, a broad basin filled with several thousand feet of sediment. This valley is 130 miles long and generally 10 to 20 miles wide. The northern part of Monterey County, between the Salinas River mouth and the Pajaro Valley, has a more undulating topography and wide sandy beaches at the coastline.

Earthquake Ground-shaking and Fault Rupture

According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan, several active faults run through the County (Monterey County 2014). These faults include but are not limited to the San Andreas, Reliz, Chupines, Tularcitos, Berwick, Navy, Sylvan, Hatton and Vergeles Faults (see Figure 25). Historically, most of the earthquakes that have occurred in Monterey County originated from movement along the San Andreas Fault system, which runs through the southeastern portion of the county for approximately 30 miles. This fault system is the most active in California and, in its entirety, runs 800 miles along the California coastline. 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.

Monterey County also is susceptible to high levels of ground-shaking due to the numerous active faults which pass through or border the county. The portions of Monterey County with the highest susceptibility to ground-shaking are the lower Salinas Valley (northward from the City of Gonzales), the peninsular area from Carmel to the Santa Cruz County line and in the southeast around Parkfield.

Figure 25 Monterey County Fault Zones



Source: Monterey County General Plan Draft EIR, Exhibit 4.4.1, 2008.

Figure 26 San Benito County Fault Zones

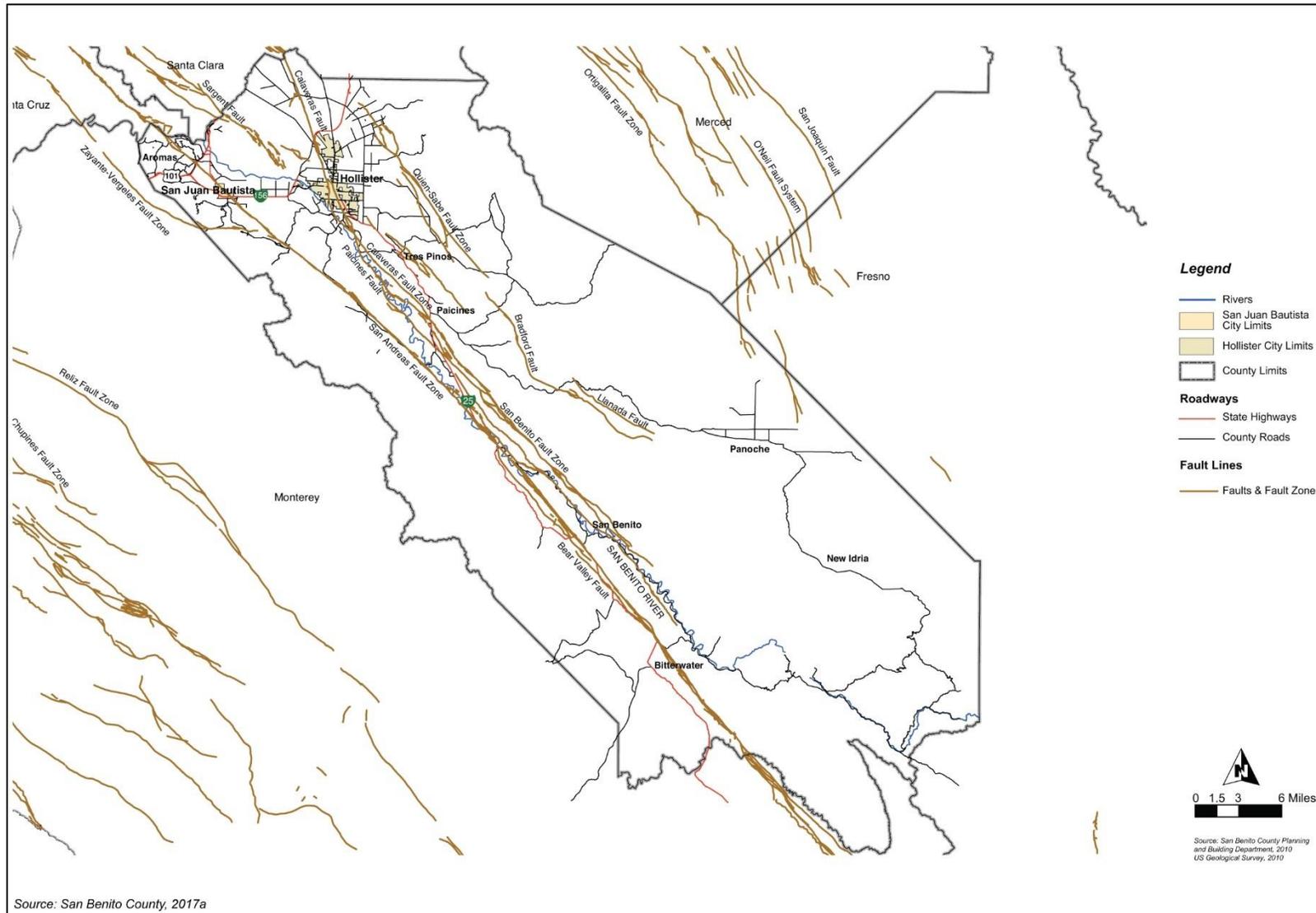
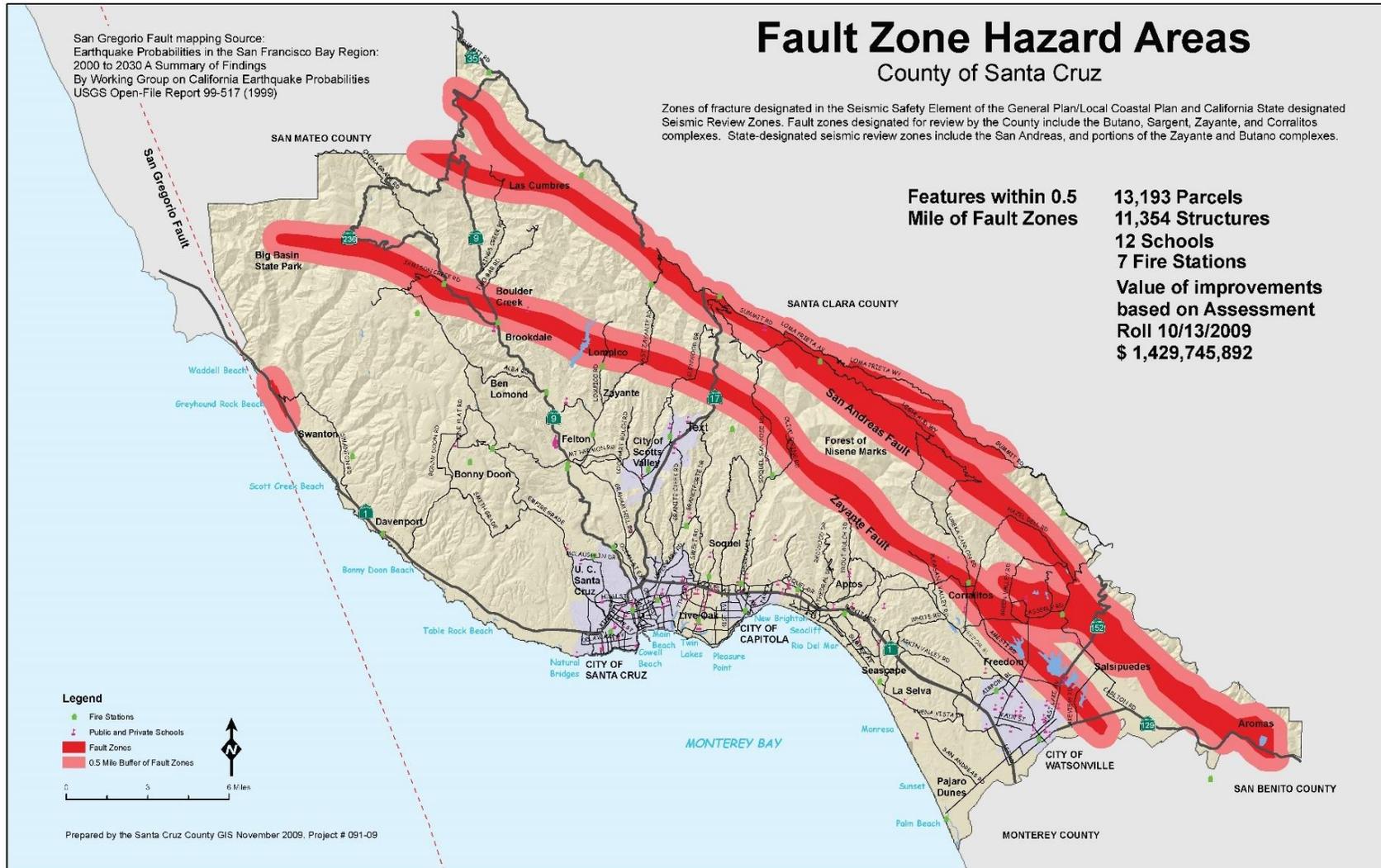


Figure 27 Santa Cruz County Fault Zones



Source: Santa Cruz County GISWeb, 2012

Liquefaction and Lateral Spreading

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 Monterey County, this condition occurs mainly along the Salinas River and floodplain, the Moss Landing and Elkhorn Slough areas, the Carmel River and floodplain, the San Antonio and Lockwood Valleys and the Peachtree and Cholame Valleys (Monterey County 2008). 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. Monterey County is vulnerable to slope instability in the Santa Lucia Mountain Range and fault zones, especially after prolonged rainfall. 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. High susceptibility to earthquake-induced landslides does not generally occur in the urbanized areas of Monterey County, including cities in the Salinas Valley or along the Monterey Peninsula (Monterey County 2008).

Expansive 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. However, the Monterey County Multi-Jurisdictional Hazard Mitigation Plan does not identify substantial risks from expansive soils and states that no historic events related to this hazard have occurred in the County (Monterey County 2014).

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). Monterey 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 in Monterey County. The Carmel Valley includes soils that are comprised of Holocene deposits, which could be susceptible to subsidence as a result of groundwater extraction in the underlying aquifer (Monterey County 2015).

b. San Benito County

Located in the eastern portion of AMBAG's planning area, San Benito County topography is dominated by the Diablo and Gabilan Mountain ranges and the valleys between these ranges.

Geologic Formations

In the north-central portion of San Benito County lie the relatively flat San Juan, Hollister and Santa Ana valleys, which are composed of alluvium. The Diablo and Gabilan Ranges are located to the east and west of these valleys, respectively. According to the San Benito County General Plan EIR (San Benito County, 2015b), the Diablo and Gabilan Ranges consist of highly deformed and metamorphosed sedimentary and igneous rocks. These rock formations have been intensely deformed during the collision of the North American Plate and the Pacific Plate, and have undergone low grades of metamorphism. The low grade metamorphism has resulted in the alteration of ultramafic rocks to asbestos-containing formations.

Earthquake Ground-shaking and Fault Rupture

Several well-known geologic features traverse San Benito County. The most substantial is the San Andreas Fault, which runs the length of the county stretching 60 miles from the Santa Cruz County line in the north to the Monterey County line in the south (San Benito County, 2015b). Other notable faults in San Benito County include the Calaveras (principal active fault), Sargent, Paicines, Bear Valley, Zayante-Vergeles and Quien-Sabe Faults. In San Benito County, the highest ground-shaking potential occurs in the north-central valley region, including the Cities of Hollister and San Juan Bautista (see Figure 26).

Liquefaction and Lateral Spreading

Although San Benito County is not subject to any recognized hazard areas for liquefaction, the risk of liquefaction and lateral spreading is considered highest near Quaternary alluvial deposits where soil saturation is close to the land surface. 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.). The potential for liquefaction and thus lateral spreading is recognized throughout the Santa Clara Valley in San Benito County and in most areas where unconsolidated sediments and a high water table coincide. Liquefaction has been reported from historical earthquakes near San Juan Bautista and Hollister (San Benito County, 2015b).

Slope Stability

Slope instability occurs in areas with steep topography, as well as near Hollister, Tres Pinos and Paicines, and along faults (see Figure 26). Landslides can occur due to specific events, such as loss of vegetation after fires or earthquakes adding loads to barely stable slopes.

Subsidence

Areas susceptible to subsidence in San Benito County are typically composed to open textured soils that become saturated or extensive withdraw of groundwater or oil. Subsidence as a result of ground water mining has been well documented in the Santa Clara Valley to the north. Cases of subsidence within the County have not been well documented. Subsidence in the Santa Clara Valley is mainly due to hydrocompaction from groundwater withdrawal. The valley deposits within the

County are also at risk for subsidence if groundwater overdraft conditions exist (San Benito County, 2015b).

c. Santa Cruz County

Santa Cruz County is bounded to the north by San Mateo County, to the east by the crest of the Santa Cruz Mountains, to the south by the Pajaro River and to the west by the Pacific Ocean. The County is characterized by steep coastal bluffs and deep mountain canyons.

Geologic Formations

The Santa Cruz Mountains consist of predominantly marine sedimentary rocks of Paleocene to Pliocene age and non-marine sediments of Pleistocene and Holocene age, which overlay a granitic and metamorphic basement from the Cretaceous period or older (SCCRTC 2013).

Earthquake Ground-shaking and Fault Rupture

The major faults in Santa Cruz County are the San Andres Fault, the Zayante-Vergeles Fault, San Gregorio Fault, and the Monterey Bay – Tularcitos Fault Zone. These faults are associated with Holocene activity (movement in the last 11,000 years) and are considered to be active (SCCRTC 2013) (Figure 27). Southwest of the San Andreas Fault, the older sedimentary rocks in the Coast Ranges are moderately to strongly deformed, with steep-limbed folds and several generations of faults associated with uplift of the Santa Cruz Mountains. Along the coast, the ongoing tectonic activity is most evident in the gradual uplift of the coastline, as indicated by the series of uplifted marine terraces that sculpt the coastline (City of Santa Cruz 2011).

Although a map of ground-shaking hazards is not available for Santa Cruz County, the County of Santa Cruz Local Hazard Mitigation Plan 2015-2020 states that, based on historical evidence, the entire County is vulnerable to ground-shaking from earthquakes (Santa Cruz County 2015). The epicenter of the Loma Prieta earthquake in October 1989, which was the most intense to strike California since 1906, was located on the San Andreas Fault, approximately 10 miles east-northeast of the City of Santa Cruz.

Liquefaction and Lateral Spreading

Liquefaction and lateral spreading potential in Santa Cruz County is high in lowland areas of the City of Santa Cruz, the Soquel Valley and the Pajaro River Valley (Santa Cruz County 2015a). 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.).

Slope Stability

Areas subject to landslide hazards are widely dispersed across inland portions of Santa Cruz County (Santa Cruz County 2015a).

Expansive Soils

Expansive soils occur in southeastern Santa Cruz County and along the coast, especially in the City of Santa Cruz and in Capitola (Santa Cruz County 2015a).

Subsidence

Santa Cruz County does not have any areas that have a high susceptibility to subsidence. Estimated potential for areas within the county that are at a low susceptibility to subsidence include the coastal areas of the County as well as inland toward the middle of the County (California Department of Water Resources 2014).

d. 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, analysis 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.

Local

Monterey County

The Safety Element of the Monterey County General Plan (Monterey County, 2010a) contains and goals and policies related to seismic hazards. Goal S-1 of the General Plan is to "Minimize the potential for loss of life and property resulting from geologic and seismic hazards." The policies listed under Goal S-1 would ensure that land uses contain measures to reduce loss from earthquakes (Policy S-1.1), site specific geologic studies for new development (Policy S-1.3) and require development review (Policy S-1.7) (Monterey County 2010b). Monterey County Code Chapter 16.12 is designed to eliminate and prevent conditions of accelerated erosion. The chapter requires control of all existing and potential conditions of accelerated erosion and sets forth required provisions for project planning, preparation of erosion control plans, runoff control and land clearing.

San Benito County

The Health and Safety Element of the San Benito County 2035 General Plan (San Benito County, 2015a) contains and goals and policies related to seismic and geological hazards. Goal HS-3 is to "protect lives and property from seismic and geologic hazards." Policies listed under this goal include earthquake resistant design (Policy HS-3.1), abatement of unsafe structures (Policy HS-3.4), liquefaction studies (Policy HS-3.8) and seismic safety evaluations (Policy HS-3.9) (San Benito County, 2015a). Chapter 19.17 of the San Benito County Code of Ordinances requires erosion control as part of project plans that include the proposed methods for control of runoff, erosion and sediment control.

Santa Cruz County

The Health, Safety and Noise Element of the Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994) contains objectives and policies related to seismic hazards. Goal 6.1 is to "reduce the potential for loss of life, injury and property damage resulting from earthquakes by regulating the siting and design of development in seismic hazard areas; encouraging open space; agricultural or low density land use in the fault zones; and increasing

public information and awareness of seismic hazards” (Santa Cruz County, 1994). Policies in the General Plan to implement this objective include geological review for development in designated fault zones (Policy 6.1.1), site investigation regarding liquefaction hazard (Policy 6.1.4) and location of new development away from potentially hazardous areas (Policy 6.1.5). Similar to the Monterey County Code, the Santa Cruz County Code Chapter 16.22 is designed to prevent accelerated erosion. Under Section 16.22.040 of the Santa Cruz County Code no person shall allow for the continued existence of accelerated erosion. Chapter 16.22 requires projects to have an erosion control plan, runoff control and land clearing approval.

Many cities within the AMBAG region have similar geology and soils and seismic hazard goals and policies in their respective general plans.

4.7.2 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project’s impacts would have a significant impact related to geology and soils:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground-shaking, seismic-related ground failure, including liquefaction, or landslides;
2. Result in substantial soil erosion or the loss of topsoil;
3. 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;
4. Be located on expansive soil, creating substantial risks to life or property; and/or
5. 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.

Projects under the 2040 MTP/SCS would not require the use of septic tanks and land use projects would likely to connect to existing facilities. Therefore, Threshold 5 is discussed in Section 4.16, *Less Than Significant Environmental Factors*.

b. Project Impacts and Mitigation Measures

This section describes generalized impacts associated with the 2040 MTP/SCS. Table 29 summarizes the specific projects that could result in the impacts discussed in this section. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could be exposed to impacts caused by geology/soil conditions as described in the following sections.

Threshold 1: Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground-shaking, seismic-related ground failure, including liquefaction, or landslides.

Impact GEO-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN LAND USE SCENARIO ENVISIONED IN THE 2040 MTP/SCS COULD BE SUBJECT TO SEISMIC HAZARDS, INCLUDING FAULT RUPTURE, GROUND-SHAKING, LIQUEFACTION AND LANDSLIDING, THAT COULD EXPOSE PEOPLE OR STRUCTURES TO SUBSTANTIAL ADVERSE EFFECTS. IMPACTS WOULD BE SIGNIFICANT BUT MITIGABLE.

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.

As indicated by Table 29, transportation projects across the AMBAG region may be vulnerable to fault rupture. Roadway projects near faults in Monterey County include roadway widening at SR-1 and Imjin Bridge as well as interchange improvements on SR 1 from Seaside to Sand City. In San Benito County, the proposed widening of SR 156 from San Juan Bautista to Union Road may be vulnerable to fault rupture associated with the San Andreas Fault.

Regional trail projects, due to their length, could be affected by faults. The proposed San Benito River Recreational Trail would cross the Calaveras fault zone. In addition, the Monterey Bay Sanctuary Scenic Trail Network, which would traverse coastal Santa Cruz County, would be vulnerable to the San Gregorio Fault in its northern reach.

Whereas vulnerability to fault rupture is site-specific, the entire planning area – and thus all projects under the 2040 MTP/SCS – would be vulnerable to ground-shaking. Transportation projects in the urbanized areas of northern Monterey County and southern Santa Cruz County (near the epicenter of the Loma Prieta earthquake) would be particularly susceptible to ground-shaking (Monterey County Multi-Jurisdictional Hazard Mitigation Plan 2014). Bridge structures are most susceptible to earthquake ground-shaking and fault rupture, although residential and commercial structures, as well as roadways, may also be damaged by either phenomenon.

Seismic related ground failure such as liquefaction or landslides may result from an earthquake in the AMBAG region. Projects in the Salinas River valley in Monterey County; greater Hollister area in San Benito County; and the Soquel Valley and Pajaro River Valley in Santa Cruz County are particularly susceptible to liquefaction. Roadway projects in mountainous areas or along steeply sloped streambanks are most susceptible to landslide or mudflows which may be triggered during an earthquake. Therefore, 2040 MTP/SCS projects such as the Union Road Construction (SB-COH-A11) may be impacted by seismic related ground failure.

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 strong ground-shaking and liquefaction. These requirements would partially reduce seismic impacts. However, compliance with the California Building Code would not completely reduce the potential of seismic hazards and seismic damage may still occur as a result of implementation of 2040 MTP/SCS projects. Seismic impacts would be significant because seismic hazards, including fault rupture, ground-shaking, liquefaction and landsliding, could expose people or structures to substantial adverse effects.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for applicable transportation projects that could expose people or structures to substantial adverse effects due to seismic hazards. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

GEO-1 Geotechnical Design

If a 2040 MTP/SCS project is located in a zone of high potential ground-shaking intensity, implementing agencies can and should complete a site specific geotechnical report conducted by a qualified geotechnical expert. Any investigations shall comply with the California Geological Survey's Guidelines for Evaluating and Mitigating Seismic Hazards in California and projects shall comply with the recommendations stated in the geotechnical analysis (California Geological Survey 2008). Recommendations may include, but are not limited to, the following: fill placement and compaction, isolated and continuous footing, site specific pipe bedding and site specific seismic design criteria.

Implementing Agencies

Implementing agencies for AMBAG transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Implementation of the above measure would reduce impacts to a less than significant level because site-specific geotechnical engineering would be required consistent with existing regulations to ensure that proposed facilities and structures would be designed in such a way that ground shaking and seismic-related ground failure would not expose people or structures to substantial adverse effects.

Threshold 2: 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 THE 2040 MTP/SCS COULD CAUSE SOIL EROSION AND LOSS OF TOP SOIL. HOWEVER, COMPLIANCE WITH APPLICABLE REGULATIONS WOULD ENSURE THAT IMPACTS WOULD REMAIN LESS THAN SIGNIFICANT.

Typically, erosion and loss of top soil 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 the 2040 MTP/SCS would occur in conformance with the Monterey County Code, Chapter 16.12 Erosion Control; San Benito County Code of Ordinances, Chapter 19.17 Grading, Drainage and Erosion Control; and Santa Cruz County Code, Chapter 16.22 Erosion Control, as discussed in the Regulatory Setting. These ordinances would require the appropriate measures to prevent erosion as a result of implementation of transportation and land use projects under the 2040 MTP/SCS, 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 top soil as a result of construction or grading.

Adherence to the applicable ordinance codes and other local, State and local 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

None required.

Threshold 3: 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 4: Be located on expansive soil, creating substantial risks to life or property

Impact GEO-3 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2040 MTP/SCS COULD BE LOCATED ON POTENTIALLY UNSTABLE SOILS OR IN AREAS OF LATERAL SPREADING, SUBSIDENCE, OR HIGH LIQUEFACTION POTENTIAL. IMPACTS WOULD BE SIGNIFICANT BUT MITIGABLE.

Implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the 2040 MTP/SCS could be prone to slope instability, liquefaction and other soil-related hazards. Representative projects that could be subject to these hazards are listed in Table 29.

As discussed above, Monterey County is vulnerable to slope instability in the Santa Lucia Mountain Range and fault zones; San Benito County is vulnerable to slope instability near Hollister, Tres Pinos and Paicines; and Santa Cruz County is vulnerable to slope instability across inland portions of Santa Cruz. 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. Due to areas susceptible to slope instability in the Monterey Bay region, 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, 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 the 2040 MTP/SCS 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.

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 southern Santa Cruz County and in the Pajaro River valley. Transportation improvement projects in the 2040 MTP/SCS which may be affected include the Branciforte Creek Bike and Pedestrian Crossing. However, expansive soils can be remediated or structures and foundations can be engineered to withstand the forces of expansive soil. Impacts related to soil expansion would be significant for 2040 MTP/SCS projects in these areas.

Transportation improvements and new development constructed under the 2040 MTP/SCS may be vulnerable to subsidence in areas with saturation. Within the AMBAG region, these areas include the Carmel Valley and Salinas Valley in Monterey County and valley areas under conditions of overdraft in San Benito County. Santa Cruz County has low potential for subsidence. Where it can occur, subsidence may result in unstable soils and affect the stability of structures constructed by the 2040 MTP/SCS. Therefore, projects under the 2040 MTP/SCS may be located on unstable soils with potential for subsidence and impacts would be significant.

Transportation improvements and development projects emphasized in the 2040 MTP/SCS may be vulnerable to liquefaction and lateral spreading in areas with younger soils and with high groundwater tables. In the AMBAG region, these areas include the Salinas River Valley in Monterey County; greater Hollister area in San Benito County; and the City of Santa Cruz, the Soquel Valley and the Pajaro River Valley in Santa Cruz County. Liquefaction and resulting lateral spreading may result in the loss of the soils ability to support structures constructed by the 2040 MTP/SCS in any of these areas. Liquefaction and lateral spreading impacts would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that could be located on unstable soils or in areas of high liquefaction potential. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

GEO-3(a) Geotechnical Analysis

If a 2040 MTP/SCS 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 RTPAs shall ensure and sponsor agencies can and should 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

GEO-3(b) Hillside Stability Evaluation

If a 2040 MTP/SCS 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. In addition, to sustain a functional long-term transportation system along the coast, the strategies identified in Caltrans' 2004 Big Sur Coast Highway Management Plan shall be implemented where appropriate and when feasible. Applicable Big Sur Coast Highway Management Plan measures may include, but are not limited to: adaptation to the fluid landform; separation of the highway from the moving landform; and, temporary or permanent rockfall catchments.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

GEO-3(c) Site Specific Geotechnical Evaluation

If a 2040 MTP/SCS project is located in an area of highly expansive soils, the RTPAs shall and sponsors agencies can and should 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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.

c. Specific 2040 MTP/SCS Projects that May Result in Impacts

Table 29 identifies projects that may result in geology and soils-related impacts as discussed above. Given the large number of projects proposed across the AMBAG region in the 2040 MTP/SCS, the table shows a representative rather than comprehensive list of project that would generate these impacts. Listed projects are representative of the types of geologic impacts and the types of transportation projects that could be affected in different localities.

The individual projects listed 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 2040 MTP/SCS projects that would result geology and soils-related impacts.

Table 29 2040 MTP/SCS Projects that May Result in Geologic Impacts

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-CT011-CT	SR 68 Commuter Improvements	Monterey	G-1	Potential impacts from ground-shaking
MON-CT030-SL	U.S. 101 Salinas Corridor	Salinas	G-1	Potential impacts from ground-shaking
MON-CT015-CT	SR 1 Seaside to Sand City	Monterey	G-1	Potential impacts from ground-shaking
MON-MAR001-MA	Marina – Salinas Corridor	Marina	G-1	Potential impacts from ground-shaking
MON-SNMS090-SL	Russel Road Extension	Salinas	G-1	Potential impacts from ground-shaking
MON-FRAN018-SE	Giggling Road	Seaside	G-1	Potential impacts from ground-shaking
MON-KCY035-CK	Multimodal Transportation Center	King City	G-1	Potential impacts from ground-shaking
SB-CT-A01	SR 156 Widening – San Juan Bautista to Union Road	San Juan Bautista	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SB-SBC-A65	San Benito River Recreational Trail Phase I (<u>Reach 1-3</u>)	San Benito County	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SB-COG-A54	SR 25 Corridor Improvements Project	San Benito County	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SB-COH-A11	Union Road (formally Crestview Drive) Construction	Hollister	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SB-SJB-A08	Lavanigno Drive Construction	San Juan Bautista	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SC-RTC-24e-RTC	<u>3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street</u> 3 - Highway 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	Capitola	G-1, G-3	Potential impacts from ground-shaking, expansive soil
SC-RTC-27a-RTC	Monterey Bay Sanctuary Scenic Trail Network – Design, Environmental Clearance and Construction	Santa Cruz County	G-1, G-3	Potential impacts from fault rupture, ground-shaking, liquefaction, expansive soils
SC-46SC	Branciforte Creek Bike/Pedestrian Crossing	Santa Cruz	G-1, G-3	Potential impacts from ground-shaking, liquefaction
SC-SV-27-SCV	Mount Hermon Road/Scotts Valley Drive/Whispering Pines Drive Intersection Operations Improvement Project	Scotts Valley	G-1	Potential impacts from ground-shaking

d. Cumulative Analysis

Geology, soils and seismicity impacts may be related to: increased exposure to seismic hazards, increased erosion and/or loss of topsoil, the presence of unstable/expansive soils and alternative waste disposal or septic systems. 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 2040 MTP/SCS would not make a cumulatively considerable contribution to significant cumulative impacts related to geology, soils and seismicity.

4.8 Greenhouse Gas Emissions/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 and Health Impacts/Risks*.

4.8.1 Setting

a. Climate Change and Greenhouse Gases

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The GHGs that are 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 its atmospheric concentrations are primarily determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO₂, CH₄ and N₂O are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing associated with agricultural practices and landfills. N₂O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion and other chemical processes.

Man-made GHGs, many of which have greater heat-absorption potential than CO₂, include fluorinated gases and SF₆ (California Environmental Protection Agency [CalEPA] 2006). Different types of GHGs have varying global warming potentials (GWPs). 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 emissions, referred to as “carbon dioxide equivalent” (CO₂e) and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule-per-molecule basis (Intergovernmental Panel on Climate Change [IPCC] 2007).

b. Greenhouse Gas Emissions Inventories

Federal Emissions Inventory

Total U.S. GHG emissions were 6,586.7 million metric tons (MMT or gigatonne) CO₂e in 2015 (U.S. EPA 2017). Total U.S. emissions have increased by 3.5 percent since 1990. However, emissions decreased by 2.3 percent from 2014 to 2015 (U.S. EPA 2017). The decrease from 2014 to 2015 was a result of multiple factors, including: (1) substitution from coal to natural gas consumption in the electric power sector, (2) warmer winter conditions in 2015 resulting in a decreased demand for heating fuel in the residential and commercial sectors and (3) a slight decrease in electricity demand (U.S. EPA 2017). Since 1990, U.S. emissions have increased at an average annual rate of 0.2 percent. In 2015, the industrial and transportation end-use sectors accounted for 29 percent and 27 percent of CO₂ emissions (with electricity-related emissions distributed), respectively. Meanwhile, the residential and commercial end-use sectors accounted for 16 percent and 17 percent of CO₂ emissions, respectively (U.S. EPA 2017).

California Emissions Inventory

Based on the California Air Resources Board (CARB) California Greenhouse Gas Inventory for 2000-2014, California produced 440.4 MMT CO₂e in 2015 (CARB 2017a). The largest single source of GHG in California is transportation, contributing 39 percent of the State's total GHG emissions. Industrial sources are the second-largest source of the state's GHG emissions, contributing 23 percent of the State's GHG emissions (CARB 2017a). California emissions are due in part to its large size and large population compared to other states. However, the state's mild climate reduces California's per capita fuel use and GHG emissions as compared to other states. CARB has projected statewide unregulated GHG emissions for the year 2020 will be 509.4 MMT CO₂e (CARB 2017b). These projections represent the emissions that would be expected to occur in the absence of any GHG reduction actions.

c. Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through 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. Long-term trends have found that 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 global combined land and ocean temperature data show an increase of about 0.89°C (0.69°C to 1.08°C) over the period 1901 to 2012, and about 0.72°C (0.49°C to 0.89°C) over the period 1951 to 2012 when described by a linear trend. Several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations are in agreement that LSAT as well as sea surface temperatures have increased. 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 2014).

Potential impacts of climate change in California may include loss in snow pack, sea level rise, more extreme heat days per year, more high-ozone days, more large forest fires and more drought years (CalEPA 2010). Below is a summary of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality

Higher temperatures, which are conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would further worsen air quality. However, if higher temperatures are accompanied by wetter rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thereby ameliorating the pollution associated with wildfires. Additionally, 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 (CEC 2009).

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 water supplies in California. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose eight inches along California's coast. California's temperature has risen 1°F, mostly at night and during the winter, with higher elevations experiencing the highest increase. California's warmest year on record was in 2014 and the third warmest year on record was in 2016 (DWR 2017).

This uncertainty 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 Sierra snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. Based on historical data and modeling, the DWR projects that the Sierra snowpack will experience a 25 to 40 percent reduction from its historic average by 2050. Climate change is also anticipated to bring warmer storms that result in less snowfall at lower elevations, reducing the total snowpack (DWR 2013). As described in Section 4.10, *Hydrology and Water Quality*, the primary source of water for most users in the AMBAG region is groundwater. Climate change may reduce groundwater recharge, putting further strain on an already limited water supply in the region.

Hydrology and Sea Level Rise

Climate change could potentially affect the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion. According to *Rising Seas in California: An Update on Sea-Level Rise Science* (Griggs, et al. 2017), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels over the 2001 to 2010 decade, as observed by satellites, ocean buoys and land gauges, was approximately 3.2 mm per year, which is double the observed 20th century trend of 1.6 mm per year (World Meteorological Organization [WMO] 2013). As a result, sea levels averaged over the last decade were about eight inches higher than those of 1880 (WMO 2013). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust GHG emission control measures. The most recent IPCC report (2013) predicts a mean sea level rise of 11 to 38 inches by 2100. This prediction is more than 50 percent higher than earlier projections of 7 to 23 inches when comparing the same emissions scenarios and time periods. A rise in sea levels could result in coastal flooding and erosion, and could jeopardize California's water supply due to saltwater intrusion. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events. Over the past century (1900-2005), sea level rose approximately seven inches along most of the California coast. In particular, the Monterey Bay has experienced sea level rise of approximately two to three millimeters per year. Sea level is projected to rise approximately 14 inches by 2050 and 55 inches by 2100 (Center for Ocean Solutions 2011). There is a 50 percent probability that sea level rise in San Francisco between 2030 and 2050 would be at least 3.8 mm per year (Griggs, et al. 2017).

Ocean Acidification

The ocean covers over 70 percent of the earth's surface and acts as a major carbon sink in the global carbon cycle. As the concentration of CO₂ in the atmosphere increases, so does the concentration of carbon in the ocean. The reaction of dissolved CO₂ with seawater results in the creation of carbonic acid (H₂CO₃), carbonate, bicarbonate and hydrogen ions, which lowers pH causing higher seawater acidity. Higher acidity in seawater affects many aquatic animals' ability to fix calcium for body structure, which could have significant negative effects across the entire food chain. The effects of ocean acidification may impact the success of California's \$318 million per year fishing industry and \$17 billion per year tourism/recreation industry (National Ocean Economics Program [NOEP], Center for the Blue Economy, Market database. www.oceaneconomics.org, 2014). Ocean acidification in the Monterey Bay National Marine Sanctuary would impact key species such as kelp, which provide important structural features and ecosystem function (NOAA 2017).

Agriculture

California has a \$30 billion annual agricultural industry that produces approximately half of the country's fruits and vegetables. Higher CO₂ levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase, crop-yield could be threatened by a less reliable water supply and greater air pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen and thereby affect their quality (CCCC 2006). As described in Section 4.2, *Agriculture and Forestry*, AMBAG's planning area includes expansive agricultural lands. Agriculture may face challenges due to extreme heat and water stress associated with climate change.

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on a global, regional and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the average global surface temperature could rise by 1.0 to 4.5°F (0.6 to 2.5°C) in the next 50 years, and 2.2 to 10°F (1.4 to 5.8°C) in the next century, with substantial regional variation. Soil moisture is likely to decline in many regions, 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 range;
- Species' composition within communities; and
- Ecosystem processes, such as carbon cycling and storage (Parmesan 2006).

d. Regulatory Setting

Federal

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) held that the U.S. EPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. U.S. EPA began regulating GHGs under the Clean Air Act in 2011 following its endangerment finding. U.S. EPA's GHG regulations include regulations governing transportation and mobile sources, renewable fuels, carbon pollution standards for existing power

plants, the GHG tailoring rule governing new and existing industrial facilities, and GHG reporting requirements. Standards for mobile sources have been established pursuant to Section 202 of the CAA, and GHGs from stationary sources are currently controlled under the authority of Part C of Title I of the 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 establishes 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 2014, the U.S. Supreme Court in *Utility Air Regulatory Group v. EPA* (134 S. Ct. 2427 [2014]) held that U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source is a major source required to obtain a PSD or Title V permit. The Court also held that PSD permits that are 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 (BACT).

State

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has a numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

Executive Order S-3-05

Executive Order S-3-05, among other things, established the following GHG emission reduction goals for California: reduction to 2000 levels by 2010; to 1990 levels by 2020; and to 80 percent below 1990 levels by 2050.

Assembly Bill 1493: Reduction of Greenhouse Gas Emissions

Assembly Bill (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 EPA initially denied the waiver in 2008, EPA 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 (CARB 2017a).

Assembly Bill 32

California's major initiative for reducing GHG emissions is outlined in Assembly Bill 32, the "California Global Warming Solutions Act of 2006," signed into law in 2006 (Chapter 488, Statutes of 2006). 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 developed a Scoping Plan, which was adopted on December 11, 2009, approving a 1990 statewide GHG level and 2020 limit of 427 MMT CO₂e (CARB 2008). The Scoping Plan included measures to address GHG emission reduction strategies related to energy efficiency, water use and recycling and solid waste, among other measures. 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 approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan, which included an adjusted 2020 limit of 431 MMT CO₂e (CARB 2014). The 2013 Scoping Plan update defines CARB's climate change priorities for the next five years and sets the groundwork to reach post-2020 statewide goals. The update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State's longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation and land use (CARB 2014). CARB updated the Scoping Plan again in late 2017 (see Senate Bill 32, below).

Executive Order B-16-12

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

- Infrastructure to support up to one million zero emission vehicles by 2020,
- Widespread use of zero emission vehicles for public transportation and freight transport by 2020,
- Over 1.5 million zero emission vehicles on California roads by 2025,
- Annual displacement of at least 1.5 billion gallons of petroleum fuels by 2025, and
- A reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050.

Executive Order B-30-15

Executive Order (EO) B-30-15 established a Statewide mid-term GHG reduction target of 40 percent below 1990 levels by 2030.

Senate Bill 375

Senate Bill 375, signed in August 2008 (Chapter 728, Statutes of 2008), enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles for 2020 and 2035. In addition, SB 375 directs each of the state's 18 major Metropolitan Planning Organizations (MPO) to prepare a "sustainable communities strategy" (SCS) that contains a growth strategy to meet these emission targets for inclusion in the Regional Transportation Plan (RTP). This EIR analyzes both the SCS and RTP for the AMBAG region. AMBAG prepared its first SB 365-compliant MTP/SCS in 2014 (AMBAG 2014). This EIR analyzes the proposed 2040 MTP/SCS, which updates the MTP/SCS adopted in 2014.

At the time of 2040 MTP/SCS preparation, the AMBAG region's GHG reduction targets from CARB, analyzed in this EIR, were a zero percent per capita change from 2005 levels by 2020 and a five percent per capita reduction from 2005 levels by 2035. These targets apply to the entire AMBAG region for all on-road light duty trucks and passenger vehicles emissions, and not to individual cities or sub-regions. Therefore, AMBAG, through the 2040 MTP/SCS, must maintain a zero percent per capita change from 2005 levels by 2020 and reduce per capita emissions by five percent from 2005 levels by 2035.

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill 32 into law (Chapter 429, Statutes of 2016), extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). SB 32 became effective on January 1, 2017 and now codifies the 2030 goal set in EO B-30-15. This requires CARB to develop technologically feasible and cost-effective regulations to achieve the targeted 40 percent GHG emission reduction.

CARB prepared an update to its AB 32 Scoping Plan to reflect the 2030 target codified in SB 32. The update, titled *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target (2017 Scoping Plan)* was adopted on December 14, 2017 (CARB, 2017e). The 2017 Scoping Plan identifies how the State can reach its 2030 climate target to reduce GHG emissions by 40 percent from 1990 levels and substantially advance toward its 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels. The 2017 Scoping Plan recommends statewide targets of no more than six metric tons CO₂e per capita by 2030 and no more than two metric tons CO₂e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer term State emissions reduction goal of 80 percent below 1990 levels by 2050 under EO-S-3-05. The 2017 Scoping Plan recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) relative to the State's 1990 emissions limit established under AB 32. CARB released a draft version of the updated Scoping Plan on October 27, 2017, but the updated Scoping Plan has not yet been adopted. Adoption of a final version of the updated Scoping Plan is expected by CARB in late 2017 (CARB 2017d). The draft version of the updated Scoping Plan (CARB 2017e) calls for emissions reductions at the State level that meet or exceed the Statewide GHG target, and notes that additional effort will be needed to maintain and continue GHG reductions to meet the mid (2030) and long term (2050) targets.

AB 197

AB 197 of 2016 (Chapter 250, Statutes of 2016) expands CARB membership to include two nonvoting members from the Legislature; creates a Joint Legislative Committee on Climate Change Policies to make recommendations to the Legislature concerning climate change policies; provides for annual reporting of GHG emissions from sectors covered by the AB 32 Scoping Plan as well as evaluations of regulatory requirements and other programs that may affect GHG emissions trends; and specifies that the adoption of GHG emissions reduction rules and regulations shall consider the social costs. In addition, Scoping Plan updates are required to identify the range of potential GHG emissions reductions and the cost-effectiveness for each emissions reduction measure, compliance mechanism and incentive.

SB 1383

SB 1383 of 2016 (Chapter 395, Statutes of 2016) sets forth specific legislative direction for control of short-lived climate pollutants (SLCPs). It requires CARB to approve and begin implementing its SLCP strategy to achieve the following reductions in emissions by 2030 compared to 2013 levels: methane by 40 percent, hydrofluorocarbons by 40 percent, and black carbon (non-forest) by 50 percent. The bill also specifies targets for reducing organic waste in landfills. SB 1383 also requires CARB to adopt regulations to be implemented on or after January 1, 2024 specific to the dairy and livestock industry, requiring a 40 percent reduction in methane emissions below 2013 levels by 2030, if certain conditions are met. Lastly, the bill requires CalRecycle to adopt regulations to take effect on or after January or after January 1, 2022 to achieve specified targets for reducing organic waste in landfills.

For more information on the Senate and Assembly Bills, Executive Orders, and reports discussed above, and to view reports and research referenced above, please refer to the following websites: www.climatechange.ca.gov and www.arb.ca.gov/cc/cc.htm.

Regional

AMBAG

AMBAG's Energy & Climate Action Planning Program includes the AMBAG Energy Watch, which supports local climate change efforts by completing GHG inventories for local government operations in 2005 as well as community-wide emissions in 2005 and 2009. In addition, the AMBAG Energy Watch standardizes GHG inventories for regional comparability, provides periodic updates to community-wide GHG inventories for all 21 AMBAG member jurisdictions, performs ongoing GHG inventory technical support and supports community engagement on climate change mitigation. Furthermore, the AMBAG Energy Watch program works closely with each member jurisdiction to develop Energy Action Strategies, which are standalone plans that quantify and reduce residential and non-residential energy consumption and related GHG emissions (AMBAG 2017b).

Monterey Bay Air Resources District

The Monterey Bay Air Resources District (MBARD) does not have an adopted GHG emissions threshold. MBARD is currently in the process of developing GHG emissions thresholds for evaluating projects under CEQA. According to an MBARD staff report to the District Board of Directors (MBARD 2014), MBARD is currently considering adoption of a threshold of 10,000 MT CO₂e per year. Since MBARD has no adopted thresholds, MBARD encourages lead agencies to consider a variety of metrics for evaluating GHG emissions and related mitigation measures as they best apply to the specific project (MBARD 2014). See Section 4.8.2a for a discussion of the significance criteria used to evaluate the MTP/SCS.

Local

Local Climate Action Plans

Seven of AMBAG's member jurisdictions have adopted climate action plans that set goals and outline policies to achieve GHG reduction targets. These cities are Capitola, Gonzales, Monterey, Santa Cruz and Watsonville, as well as Monterey County and Santa Cruz County. All of AMBAG's jurisdictions have conducted baseline emissions inventories, which establish a reference point for

GHG emissions reduction. Baseline and projected 2020 GHG emissions from jurisdictions with Climate Action Plans are shown in Table 30.

Table 30 Existing and Projected Emissions Reported in Climate Action Plan in the AMBAG Region

Jurisdiction	Type	Annual Baseline Emissions (MT CO ₂ e)	2020 Target Annual Emissions (MT CO ₂ e)	Status
Monterey County ¹	Municipal Climate Action Plan	2005: 20,230	17,195	Completed June 2013
City of Monterey ²	Climate Action Plan	2005: 327,422	250,211	Completed March 2011; Updated March 2016
City of Capitola ³	Climate Action Plan	2010: 88,091	77,789	Completed October 2015
Santa Cruz County ⁴	Climate Action Strategy	2005: 1,907,037	827,076	Completed February 2013
City of Santa Cruz ⁵	Climate Action Plan	1990: 427,280	271,335	Completed October 2012
City of Gonzales ⁶	Climate Action Plan	2005: 26,847	15,920	Adopted February 2013
City of Watsonville ⁷	Climate Action Plan	2005: 219,773	45,622	Completed April 2015
City of Scotts Valley	Climate Action Plan	N/A	N/A	Currently under development

¹ Monterey County Municipal Climate Action Plan (April 2013), http://www.co.monterey.ca.us/planning/major/REF120044_DRAFT_MONTEREY_MCAP_APRIL_2013_COMPLETE.pdf

² City Monterey Climate Action Plan (March 2016), https://monterey.org/Portals/0/Reports/ForPublicReview/Draft_Climate_Action_Plan.pdf

³ City of Capitola Climate Action Plan (October 2015), http://www.cityofcapitola.org/sites/default/files/fileattachments/community_development/page/3953/capitola_climate_action_plan.pdf

⁴ Santa Cruz County Climate Action Strategy (January 2013), <http://www.sccoplanning.com/Portals/2/County/Planning/policy/Final%20Climate%20Action%20Strategy%20as%20of%201-10-13.pdf?ver=2013-01-15-133918-343>

⁵ City of Santa Cruz Climate Action Plan (June 2012), <http://www.cityofsantacruz.com/home/showdocument?id=27824>

⁶ City of Gonzales Climate Action Plan (February 2013), <http://www.ci.gonzales.ca.us/cms-assets/documents/160466-522662.adopted-gonzales-cap.pdf>

⁷ City of Watsonville Climate Action Plan (April 2015), <https://www.cityofwatsonville.org/DocumentCenter/View/194>

The completed climate action planning documents in the AMBAG region address similar issues related to emissions produced by transportation, energy usage and other operational emissions such as water supply and conveyance, wastewater treatment and solid waste disposal. The types and quantity of emissions produced in the AMBAG region vary among jurisdictions.

However, for most jurisdictions, transportation and energy usage produce a majority of GHG emissions. Climate action planning policies 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, including bicycling, walking and transit use. In addition, many of the documents include policies to promote transit oriented development (TOD) and land use policies that encourage a greater diversity of land use in closer proximity to one another. 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.

4.8.2 Impact Analysis

a. Methodology and Significance Thresholds

Significance Thresholds

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). To date, Monterey County, San Benito County and Santa Cruz County have not developed or adopted official GHG significance thresholds. MBARD is in the process of developing GHG emissions thresholds; however, none have been adopted to date. In the absence of MBARD-adopted thresholds, this section uses the project-specific thresholds of significance for each GHG impact criterion in Appendix G.

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:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. An increase that exceeds the following threshold would be considered a significant impact:
 - a. A net increase in transportation-related GHG emissions by 2040 compared to existing 2015 conditions.
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Any conflict with the following thresholds would be considered a significant impact:
 - a. Conflict with regional SB 375 per capita passenger vehicle CO₂ emission reduction targets of zero percent by 2020 and five percent by 2035 from 2005 levels;
 - b. Conflict with State's ability to achieve AB 32 and SB 32 GHG reduction targets, which respectively aim to reduce statewide emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030;
 - c. Conflict with applicable local GHG reduction plans; and/or
3. Result in a net increase in transportation or land use projects within areas likely to be affected by sea level rise midcentury.

For GHG emissions resulting from the 2040 MTP/SCS, this analysis compares forecasted 2040 emissions with existing 2015 baseline conditions. Land use and mobile emissions were quantified to determine whether regionwide GHG emissions exceed the 2015 baseline. Although construction activity is addressed in this analysis, construction-related emissions are speculative at the 2040 MTP/SCS level because such emissions are dependent on the characteristics of individual projects as well as the types of construction equipment that will be operating. A qualitative, program-level analysis is provided along with best management practices.

For operational emissions, CARB's EMFAC 2014 model was used to calculate mobile source emissions. In the absence of regionwide data, land use emissions were estimated based on available emissions inventory data from the city and county CAPs listed in Table 30. For the purpose of this analysis, for those jurisdictions without CAPs, per capita land use emissions from nearby cities and

counties are representative of land use emissions in the AMBAG region because these counties have generally similar climate and demographic conditions that affect electricity and natural gas consumption, which are the primary drivers of land use GHG emissions. If total regionwide GHG emissions associated with the 2040 MTP/SCS do not exceed the 2015 baseline, impacts related to GHG emissions would not be considered significant.

The SB 375-based threshold is also included as it demonstrates AMBAG's achievement of CARB-specified targets and consistency toward achieving the goals of AB 32. As discussed in the Regulatory Setting, the targets from CARB are identified as a zero percent per capita change from 2005 levels by 2020 and a five percent per capita reduction from 2005 levels by 2035. In 2005, GHG emissions from passenger vehicles in the AMBAG region were approximately 15.4 pounds of CO₂ per capita. Therefore, AMBAG must reduce these levels in order to meet the 2035 target. If regionwide GHG emissions associated with the 2040 MTP/SCS from passenger vehicles do not exceed 15.4 pounds of CO₂ per capita in 2020 and 14.6 pounds of CO₂ per capita in 2035, the MTP/SCS would meet the mandate of SB 375.

However, meeting the goals of SB 375 does not guarantee consistency with AB 32, which is based on regional emissions in 2020. Furthermore, any conflict with AB 32 would likely result in a conflict with SB 32, which extends AB 32 by setting a target of reducing statewide GHG emissions by 40 percent below 1990 levels by 2030. ~~On October 27, 2017, CARB released a draft version of an updated AB 32 Scoping Plan with a framework for achieving the 2030 target set forth by SB 32 (CARB 2017e). On December 14, 2017, CARB adopted the 2017 Scoping Plan (CARB, 2017e). However, the updated Scoping Plan is currently in draft form and has yet to be adopted by CARB.~~ To determine that a project would not conflict with the State's ability to achieve the SB 32 target, the 2040 MTP/SCS would need to achieve substantial progress toward the long-term reduction target. Mobile source emissions were calculated to determine regionwide GHG emissions with implementation of the 2040 MTP/SCS. If implementation of the 2040 MTP/SCS would achieve substantial progress toward the state achieving the emissions reduction targets established by SB 32, then impacts related to SB 32 would not be considered significant.

Executive Order S-3-05, which sets a goal of reducing GHG emissions to 80 percent below 1990 levels by 2050, is not adopted state policy. Although 2050 is beyond the horizon year of the 2040 MTP/SCS plan, this analysis addresses whether the 2040 MTP/SCS GHG emission would conflict with the state's ability to achieving the 2040 GHG reduction goal set forth by Executive Order S-3-05. Table 31 summarizes the scenarios analyzed along with the applicable regulations and, for mobile source emissions, vehicle types.

Table 31 Summary of GHG Scenarios

Scenario	Vehicle Type	Applicable Laws
1990 Baseline	All Vehicles	AB 32, SB 32
2005 Baseline	Passenger Vehicles Only	SB 375, AB 32
2015 AMBAG Baseline	All Vehicles	AB 32, SB 32
2020 MTP/SCS	All Vehicles Passenger Vehicles Only	AB 32, SB 32 SB 375, AB 32
2030 MTP/SCS	All Vehicles	SB 32
2035 MTP/SCS	Passenger Vehicles Only	SB 375, AB 32
2040 No Project	All Vehicles	AB 32, SB 32
2040 MTP/SCS	All Vehicles	AB 32, SB 32

For sea level rise impacts, potential midcentury (e.g., 2050) conditions were selected for this analysis, rather than 2040 conditions. This is because most sea level rise projections are associated with midcentury and end-of-century conditions.

Methodology for Estimating GHG Emissions

GHG emissions from mobile sources were calculated using emission factors from CARB’s EMFAC 2014 model and regional VMT from AMBAG’s Regional Travel Demand Model (RTDM) (refer to the “Modeling Methodology” section in Appendix F to the 2040 MTP/SCS). EMFAC emission factors are established by CARB and accommodate mobility assumptions (e.g., vehicle miles traveled, fleet, speed, time of day) provided by AMBAG’s RTDM, which include socioeconomic growth projections based on AMBAG’s Draft 2018 Regional Growth Forecast. EMFAC also reflects the emissions benefits of recent CARB rules, including on-road diesel fleet rules, Advanced Clean Car Standards and the Smartway/Phase I Heavy Duty Vehicle Greenhouse Gas Regulation (CARB 2014).

EMFAC models CO₂ emissions, which were used as the overall indicator of mobile source GHG emissions. Per capita CO₂ emissions were calculated by multiplying the emission factors from EMFAC by the VMT from all vehicle classes and dividing by the region’s population. To assess whether the 2040 MTP/SCS would result in a significant increase in mobile source GHG emissions, total CO₂ emissions for the 2040 MTP/SCS were calculated and compared to 2015 baseline conditions.

In the absence of regionwide data, land use emissions were estimated based on available emissions inventory data from the city and county CAPs listed in Table 30. If countywide emissions were available (i.e., Santa Cruz County), the per capita land use emissions were applied to cities without CAPs. In the absence of countywide CAP emissions but some city CAP data (i.e., Monterey County), average available city per capita emissions were used for the remainder of the county. In the absence of any CAPs (i.e., San Benito County), average per capita emissions from available cities and counties in the AMBAG region were used. For the purpose of this analysis, per capita land use emissions from nearby cities and counties are representative of land use emissions in the AMBAG region because these counties have generally similar climate and demographic conditions that affect electricity and natural gas consumption, which are the primary drivers of land use GHG emissions. Therefore, using the per capita emissions and AMBAG planning region population, projected land use emissions for the AMBAG region were estimated.

If total GHG emissions (mobile and land use emissions) in 2040 do not exceed the 2015 baseline, the project's impacts would not be considered significant. In addition, total GHG emissions were compared to a future 'no project' scenario for informational purposes.

To assess whether the 2040 MTP/SCS would conflict with the State's ability to achieve AB 32 or SB 32 GHG reduction targets, total CO₂ emissions for 2020 and 2030 were compared to 1990 levels. AB 32 aims to reduce statewide emissions to 1990 levels by 2020, while SB 32 aims to reduce statewide emissions to 40 percent below 1990 levels by 2030. The 2040 MTP/SCS would not conflict with the state's ability to achieve AB 32 or SB 32 targets if total emissions are reduced on trajectories similar to the statewide trajectories. Similarly, the 2040 MTP/SCS would not conflict with the state's ability to achieve EO-S-3-05 targets if total emissions are reduced on a trajectory similar to the statewide trajectories.

To determine whether the 2040 MTP/SCS would allow AMBAG 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 this analysis, emission factors were generated using the SB 375 template in EMFAC, which deactivates Advanced Clean Cars (Pavley) and Low Carbon Fuel Standards. In addition, the following three off-model adjustments were made to adjust the VMT from passenger vehicles based on the projects included in the 2040 MTP/SCS:

- Removal of through travel and half of Internal-External and External-Internal travel.
- Adjustments for "off-model" projects and programs included in AMBAG's 2040 MTP/SCS (i.e., Transportation Demand Management [TDM] and Transportation System Management [TSM] Strategies, increase in work at home employees, additional efforts for zero emission vehicle (ZEV) infrastructure and active transportation).
- Accounting for transit service enhancements.

The above off-model techniques were based on academic literature reviews, collaboration with other MPOs, and consultation with CARB's Policies and Practices Guidelines. Off-model adjustments were computed for 2020 and 2035 since these factors are cannot be modeled and have significant effects on VMT reduction and used to assess whether the 2040 MTP/SCS would allow the region to meet AMBAG's SB 375 reduction targets. Refer to the "Methodology to Estimate Performance Measures" section in Appendix G to the 2040 MTP/SCS, which describes the methodology used to calculate the regional performance measures.

b. Project Impacts and Mitigation Measures

This section describes generalized GHG and climate change impacts associated with the 2040 MTP/SCS. Section 4.8.2(b) describes the transportation projects that could generate GHG emissions that could result in GHG and climate change impacts discussed in this section. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could result in greenhouse gas and climate change impacts as described in the following sections.

Threshold 1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. An increase that exceeds the following threshold would be considered a significant impact:

- a. A net increase in GHG emissions by 2040 compared to existing 2015 conditions

Impact GHG-1 CONSTRUCTION OF THE TRANSPORTATION IMPROVEMENT PROJECTS AND DEVELOPMENT WITHIN FUTURE LAND USE PROJECTS ENVISIONED BY THE 2040 MTP/SCS WOULD GENERATE TEMPORARY SHORT-TERM GHG EMISSIONS THAT MAY HAVE A SIGNIFICANT EFFECT. IMPACTS WOULD BE SIGNIFICANT BUT MITIGABLE.

Construction activities associated with transportation improvement projects and future land use projects envisioned by the 2040 MTP/SCS would generate temporary short-term GHG emissions primarily due to the operation of construction equipment and truck trips. Construction-related GHG emissions are generally associated with construction equipment. GHG emissions from operation of construction equipment 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, this analysis includes a qualitative analysis of potential GHG emissions from construction activity associated with projected land use development and proposed transportation projects. At the program level of analysis, it is not possible to quantify the amount of emissions expected from implementation of the 2040 MTP/SCS because of variability in the extent of construction based on site conditions throughout the AMBAG region, and that the lack of project details needed to conduct such an analysis are.

Construction activity tends to be temporary in nature and would be expected to occur throughout the buildout period of the 2040 MTP/SCS. During construction activities, GHG emissions would be emitted from travel to and from the worksite 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 use of grading equipment and soil hauling. The level of GHG emissions from the construction of any one project or all projects combined would be primarily dependent on the particular type, quantity, age and fuel type of the equipment and the duration of their operation at the construction site or in the region. Construction activities generally result in annual GHGs that represent a small proportion of total annual GHGs from operational sources such as transportation and land use emissions. For example, the Southern California Association of Governments (SCAG) found in their 2012 RTP/SCS PEIR, that total construction-related emissions account for less than 0.3 percent of total GHG emissions for the entire SCAG region.

Nonetheless, construction activities would result in GHG emissions, and this impact would be significant. Therefore, this analysis identifies the measures, or best management practices (BMPs), that should be implemented for an individual construction project to have less than significant impacts. Thus, should implementing agencies adopt feasible mitigation measures for each construction project resulting from the 2040 MTP/SCS, impacts associated with construction activity on GHG emissions would be less than significant.

Mitigation Measures

For all transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects generating construction GHG emissions. Cities and counties in the AMBAG region can and should

implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. 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 ~~24~~ certified engines wherever feasible for or cleaner 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 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; and Use of materials sources from local suppliers; and
- Recycling of at least 50 percent of construction waste materials.

Implementing Agencies

Implementing agencies for AMBAG transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

With the 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 GHGs that represent a small proportion of total annual GHGs, and implementation of the 2040 MTP/SCS would result in a net reduction in GHG emissions in 2040 when compared to as compared to the 2015 AMBAG baseline (refer to Impact GHG-2), impacts associated with construction activity on local and regional air quality would be less than significant.

Threshold 1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. An increase that exceeds the following threshold would be considered a significant impact:

- a. A net increase in GHG emissions by 2040 compared to existing 2015 conditions

Impact GHG-2 IMPLEMENTATION OF THE 2040 MTP/SCS WOULD NOT RESULT IN A SIGNIFICANT INCREASE IN TOTAL GHG EMISSIONS FROM MOBILE AND LAND USE SOURCES COMPARED TO 2015 BASELINE CONDITIONS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

GHG emissions associated with on-road motor vehicles for the proposed 2040 MTP/SCS were calculated using the CARB’s EMFAC 2014 model based on the VMT that would be generated as a result of the proposed plan (refer to Section 4.14, *Transportation and Circulation*). As discussed in Section 1.2.2(a), land use emissions were estimated based on extrapolation of the emissions inventories from the cities and counties with CAPs. Table 32 compares the total transportation-related emissions from all vehicles classes for existing conditions as well as land use emissions in 2015 and 2040 conditions with implementation of the 2040 MTP/SCS. The conditions in 2040 without implementation of the 2040 MTP/SCS are also shown for informational purposes.

Table 32 Regional GHG Emissions

Scenario	Emissions (MT CO ₂ e/year)
2015 AMBAG Baseline	
On-Road Motor Vehicles	2,692,239
Land Use Emissions	2,150,457
Total Regional Emissions	4,842,695
2040 No Project	
On-Road Motor Vehicles	2,090,480
Land Use Emissions	2,509,717
Total Regional Emissions	4,600,197
2040 MTP/SCS	
On-Road Motor Vehicles	2,083,693
Land Use Emissions	2,509,717
Total Regional Emissions	4,593,410

Source: On-road motor vehicle GHG emissions were calculated by AMBAG using EMFAC. Land use emissions were based on the emissions inventories for available data in city and county CAPs listed in Table 30.

As shown in Table 32, total future (2040) emissions with implementation of the 2040 MTP/SCS would result in fewer GHG emissions as compared to the 2015 AMBAG baseline. As previously discussed, the 2017 Scoping Plan ~~AB 32 Scoping Plan~~ outlines the main State strategies for reducing GHGs to meet the 2030 ~~2020~~ target. Many of these strategies contribute to reductions from transportation-related emissions at the regional and local levels. In addition, EMFAC 2014 also reflects the emissions benefits of recent CARB rules, including on-road diesel fleet rules, Advanced Clean Car Standards and the Smartway/Phase I Heavy Duty Vehicle Greenhouse Gas Regulation (CARB 2014). Since total regional emissions with implementation of the 2040 MTP/SCS would result in fewer GHG emissions than compared to 2015 conditions, this impact would be less than significant.

Mitigation Measures

None required.

Threshold 2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Any conflict with the following thresholds would be considered a significant impact:

- a. Conflict with regional SB 375 per capita passenger vehicle CO₂ emission reduction targets of zero percent by 2020 and five percent by 2035 from 2005 levels.

Impact GHG-3 IMPLEMENTATION OF THE 2040 MTP/SCS WOULD NOT CONFLICT WITH REGIONAL SB 375 PER CAPITA PASSENGER VEHICLE CO₂ EMISSION REDUCTION TARGETS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

One of the goals of SB 375 is to reach the 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 the proposed 2040 MTP/SCS. The targets from CARB, analyzed in this EIR, are identified as a zero percent per capita change from 2005 levels by 2020 and a five percent per capita reduction from 2005 levels by 2035. To assess whether the 2040 MTP/SCS would reach SB 375's targets, EMFAC2014 was used to model CO₂ emissions for passenger vehicles. Emissions for 2020 and 2035 were compared to a 2005 baseline for assessing the compliance with SB 375, as shown in Table 31. Table 33 summarizes the per capita transportation-related emissions from passenger vehicles along with the off-model adjustments that were included to represent a reasonable level effect of the transportation programs included in the 2040 MTP/SCS.

Table 33 Per Capita Carbon Dioxide Emission Comparison: Passenger Vehicles

	2005 Baseline (per SB 375)	2020 MTP/SCS	2035 MTP/SCS
Modeled Per Capita CO ₂ Emissions ¹	15.39	14.30	14.29
Modeled Reduction from 2005		-7.08% -7.06%	-7.14%
EMFACT 2011- EMFAC 2014 Adjustments		-2.80% -3.0%	-5.5%
Adjusted per capita GHG reduction from 2005		-4.3%	-1.6%
Transportation System Management Strategies		N/A	-0.9%
Transportation Demand Management		N/A	-0.5%
Increase Work at Home Workers		N/A	-0.5%
Active Transportation		N/A	-1.6%
Transit System Enhancement Strategies		N/A	-0.5%
Zero Emission Vehicles and Electric Charging Infrastructure Development		N/A	-1.00%
Total % Reduction from 2005		-4.3%	-6.6%

¹ Emissions include external reductions, which remove through travel and half of Internal-External and External-Internal travel.
Source: AMBAG Technical Documentation for Off-Model Adjustments (2017)

As shown in the table, implementation of the 2040 MTP/SCS in the year 2020 would result in a decrease of per capita CO₂ emissions by 4.3 percent compared to 2005. In addition, implementation of the 2040 MTP/SCS in the year 2035 would result in a decrease of per capita CO₂ emissions by 6.6

percent compared to 2005. In both cases, implementation of the 2040 MTP/SCS would be consistent with the AMBAG's SB 375 GHG reduction targets of zero percent in 2020 and five percent in 2035.

As discussed above, these projections do not account for any additional measures from the current Scoping Plan to further reduce passenger vehicle GHG emissions and are, therefore, conservative. As such, the 2040 MTP/SCS would contribute to an overall reduction in per capita passenger vehicle-related GHG emissions. Therefore, this impact would be less than significant.

Mitigation Measures

None required.

Threshold 2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Any conflict with the following thresholds would be considered a significant impact:

- b. Conflict with State's ability to achieve AB 32 and SB 32 GHG reduction targets, which respectively aim to reduce statewide emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030; and/or
- c. Conflict with applicable local GHG reduction plans

Impact GHG-4 IMPLEMENTATION OF THE 2040 MTP/SCS WOULD NOT INTERFERE WITH CLIMATE ACTION PLANS FOR THE CITIES OF MONTEREY, CAPITOLA, SANTA CRUZ, GONZALES AND WATSONVILLE, AS WELL AS MONTEREY COUNTY AND SANTA CRUZ COUNTY. HOWEVER, THE 2040 MTP/SCS WOULD CONFLICT WITH THE STATE'S ABILITY TO ACHIEVE THE AB 32, SB 32 AND EO-S-3-05 GHG REDUCTION GOALS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The cities of Monterey, Capitola, Santa Cruz, Gonzales and Watsonville, as well as Monterey County and Santa Cruz County, have adopted climate action plans. These plans set goals and targets for the reduction of GHG emissions and outlines policies to help achieve those goals. These local climate action plans have been adopted in an effort to comply with the GHG emissions reduction goals recommended for local governments in the AB 32 Scoping Plan. The 2040 MTP/SCS would not conflict with these local climate action plans.

Although the projects, policies and land use scenarios identified in the 2040 MTP/SCS are designed to align transportation and land use planning to reduce transportation-related GHG emissions, the 2040 MTP/SCS would conflict with the State's ability to achieve the AB 32 GHG emissions reduction goal. Implementation of the 2040 MTP/SCS would help the region achieve its SB 375 GHG emissions reduction target, thereby contributing to the State's overall GHG emissions reduction goals identified in AB 32. However, as shown in Table 34, total regional GHG emissions in 2020 would increase by 14.1 percent above 1990 levels. Therefore, the 2040 MTP/SCS would conflict with the State's ability to achieve the AB 32 GHG emissions reduction goal.

SB 32 has codified the 2030 GHG emissions reduction goals set forth in ~~EO-B-30-15~~ EO-30-15. On December 14, 2017, CARB adopted the 2017 Scoping Plan, which identifies how the State can reach its 2030 climate target to reduce GHG emissions codified by SB 32 (CARB, 2017e). The 2017 Scoping Plan recommends statewide targets of no more than six metric tons CO₂e per capita by 2030 and no more than two metric tons CO₂e per capita by 2050. The 2017 Scoping Plan recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with

the statewide per capita targets and the State’s sustainable development objectives and develop plans to achieve the local goals.

CARB is currently working to update the Scoping Plan to provide a framework for achieving these 2030 targets, which would assign targets by sector to achieve the GHG emissions reduction goal of 40 percent below 1990 levels by 2030. CARB released a draft version of the updated Scoping Plan on October 27, 2017, but a final updated Scoping Plan has not yet been adopted by CARB (CARB 2017e). Adoption is expected in late 2017 (CARB 2017d), and the adopted final updated Scoping Plan will apply to SCSs adopted beginning in 2018. In the absence of an adopted Scoping Plan, this analysis hypothetically assumes that the 2040 MTP/SCS would be required to achieve the same proportional GHG reductions as the state by the year 2030. Since data for 2030 was not available, the 2030 emissions trajectory was estimated using linear regression based on available data for the years 2015 and 2040. As shown in Table 34, implementation of the 2040 MTP/SCS would increase total regional GHG emissions to 13.9 percent above 1990 baseline levels by 2030. Thus, the 2040 MTP/SCS would conflict with the State’s ability to achieve the SB 32 GHG emissions reduction goal.

This analysis does not quantify the GHG emissions for 2050. However, because the 2040 MTP/SCS would conflict with the 2030 goals of SB 32, it is reasonable to expect that Furthermore, the 2040 MTP/SCS would not be on track to be consistent with the state’s ability to achieve the Executive Order S-3-05 goal of 80 percent below 1990s levels by 2050. Therefore, since the 2040 MTP/SCS would conflict with the state’s ability to achieve AB, 32, SB 32 and EO S-3-05 GHG reduction goals, this impact would be significant.

It should be noted that beginning in Fiscal Year 2018, AMBAG will receive SB 1 Sustainable Communities planning funds. With this funding, AMBAG will conduct local and regional multimodal sustainable transportation and land use planning to further the AMBAG's MTP/SCS goals, contribute to the State’s GHG reduction goals, targets and other sustainability goals. AMBAG will work with local jurisdictions, transportation partner agencies, Caltrans and key stakeholders to develop and implement key components and strategies of the 2040 MTP/SCS. AMBAG will collaborate with local jurisdictions to provide various plans, strategies and data that will be used in the AMBAG 2040 MTP/SCS. As part of this work, AMBAG hopes to establish a framework for conducting local sustainability planning, including but not limited to active transportation plans, housing studies, transit-oriented development and other planning activities that will implement the AMBAG SCS. The SB 1 funding may result in further reductions of the GHG emissions shown in Table 34, as these projections do not incorporate the funding or associated sustainable communities planning.

Table 34 GHG Emissions Compared to 1990 Levels

Scenario	Regional Emissions (MT CO ₂ e/year)	% Reduction in Emissions Compared to 1990 Baseline
1990 Baseline ¹	4,442,218	-
2020 MTP/SCS	4,772,758	+7.4%
2030 MTP/SCS	4,652,012	+4.7%
2040 MTP/SCS	4,593,410	+3.4%

¹ Actual 1990 emissions are unknown but are generally assumed to be 15% below 2005 levels (CARB 2008). The population figure for 1990 is from AMBAG’s 2014 Regional Growth Forecast (AMBAG 2014a).

Source: The emissions include both on-road motor vehicle and land use emissions. On-road motor vehicle GHG emissions were calculated by AMBAG using EMFAC. Land use emissions were based on the emissions inventories for available data in city and county CAPs listed in Table 30

Mitigation Measures

The 2040 MTP/SCS would facilitate TDM, TSM and other off model strategies discussed above, which would improve the transportation network in the AMBAG planning region and encourage the use of transportation modes other than passenger vehicles. However, the expected growth in the AMBAG region would still result in an increase in GHG emissions compared to 1990 baseline conditions, which would conflict with the state’s ability to achieve AB, 32, SB 32 and EO S-3-05 GHG reduction goals. For land use projects under their jurisdiction, the cities and counties in the AMBAG region can and should implement measures to reduce energy consumption, water use, solid waste generation, and VMT, all of which contribute to GHG emissions. As shown in Table 30, several cities and counties in the AMBAG region have adopted Climate Action Plans to reduce land use related GHG emissions. Cities and counties in the AMBAG region can and should implement the following measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

GHG-4 Project-Level Energy Consumption and Water Use Reduction

Implementing agencies shall evaluate energy consumption and water use as part of project-specific CEQA review and discretionary approval decisions for land use projects. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce energy consumption and water use below local standards, or, in the absence of local standards, below MBARD-recommended standards. Examples of energy- and water-saving measures include:

- Require new residential and commercial construction to install solar energy systems or be solar-ready
- Require new residential and commercial development to install low-flow water fixtures
- Require new residential and commercial development to install water-efficient drought-tolerant landscaping, including the use of compost and mulch
- Require new development to exceed the applicable Title 24 energy-efficiency requirements

Implementing Agencies

Implementing agencies for land use projects include cities and counties.

In addition, Mitigation Measure T-5, described in Section 4.14, *Transportation and Circulation*, requires implementing agencies to evaluate VMT as part of project-specific CEQA review and discretionary approval for land use projects, and to identify and implement measures that reduce VMT. Reducing VMT would further reduce GHG emissions. Mitigation Measures W-2(a) through W-2(b) described in Section 4.10, *Hydrology and Water Quality*, require implementing agencies to include water use reduction measures for transportation projects under their jurisdiction.

Significance After Mitigation

If implementing agencies adopt and require the mitigation described above, impacts would be reduced because 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 unlikely that an increase in annual GHG emissions above existing conditions could be fully avoided in 2040, due to factors unrelated to discretionary approvals, such as population growth in the region. Therefore, this impact would

remain significant and unavoidable. No additional feasible mitigation measures are available that would reduce emissions to trajectories consistent with AB, 32, SB 32 and EO S-3-05 GHG reduction goals.

Threshold 2: d. Result in a net increase in transportation or land use projects within areas likely to be affected by sea level rise by midcentury

Impact GHG-5 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS FACILITATED BY THE LAND USE SCENARIO ENVISIONED IN THE 2040 MTP/SCS COULD BE SUBJECT TO COASTAL FLOODING AND SEA LEVEL RISE. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Proposed transportation improvements and future land use projects located near the coastline in Monterey and Santa Cruz counties could be subject to increased risk of sea level rise. San Benito County is inland and would not be affected by sea level rise. As discussed in the Setting, substantial sea level rise is expected in the coming century, which would increase the likelihood and risk of coastal flooding and erosion. There is a 50 percent probability that sea level rise in San Francisco between 2030 and 2050 would be at least 3.8 mm per year (Griggs, et al. 2017). This rate would be expected to be similar in the AMBAG region. Any coastal transportation or infill project in Monterey or Santa Cruz counties would be potentially affected, especially projects within a sea level rise inundation zone, flood zone, or tsunami hazard area. As discussed in Section 4.10, *Hydrology and Water Quality*, the portions of Monterey County most susceptible to flooding are the coastal areas of Salinas Valley, the City of Seaside, the City of Monterey and the Elkhorn Slough area. The portions of Santa Cruz County most susceptible to flooding are the Pajaro and San Lorenzo River Valleys. Sea level rise leading to coastal flooding would pose a significant vulnerability to public transportation in the region, as it would exacerbate flooding in these and other coastal areas. The *2016 City of Monterey Final Sea Level Rise and Vulnerability Analyses, Existing Conditions and Issues Report* found that the Recreational Trail (Projects MON-PGV008-PG and MON-PGV017-PG) and Del Monte Avenue bus routes (Project MON-MRY005-MY) would be the most vulnerable to coastal flooding (City of Monterey 2016). Other projects within Monterey and Santa Cruz counties may also be vulnerable, depending on the final design and location of specific projects, as well as the extent of sea level rise in the future.

The City of Santa Cruz General Plan and Local Coastal Program (Santa Cruz County, 1994) includes policies to adapt to climate change. For example, Policy NRC 4.5 is to minimize impacts of future sea level rise. However, any transportation or infill projects along the coast throughout Monterey and Santa Cruz counties that would be within the sea level rise inundation zone (i.e., in an area subject to flooding as a result of an estimated 14-inch rise in sea level by 2050) would be potentially affected by sea level rise. This is a significant impact.

Mitigation Measures

~~Mitigation Measures W-4(a) and W-4(b) from~~ As described in Section 4.10, *Hydrology and Water Quality*, existing federal, state, and local programs and ordinances would require flood prevention measures in new development, including requiring structures to be elevated above the 100-year flood zone and tsunami inundation zones. ~~would partially reduce impacts, as they would require structures to be elevated one foot above the 100-year flood zone and 10 feet above the ground elevation in areas subject to tsunami.~~ Because sea level rise inundation areas are geographically similar to coastal flood and tsunami hazard areas, these regulations ~~measures~~ would serve to minimize impacts to some extent.

In addition, for all transportation projects under their jurisdiction, TAMC and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects located within a potential sea level rise inundation area. Coastal cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

GHG-5 Sea Level Rise Adaptation

For projects located within a potential sea level rise inundation area, the implementing agency shall incorporate appropriate adaptation strategies to minimize hazards associated with sea level rise, such that project structures and other critical facilities would be located outside of an identified sea level rise inundation area. Appropriate adaptation strategies will depend on project- and site-specific considerations, including proximity to the coastline, elevation and type of structure or facility proposed. Adaptation strategies may include, but would not be limited to:

- Project redesign to place structures and critical facilities outside of the potential sea level rise inundation area;
- Structural measures including drainage improvements, raising road surfaces or first floor elevations above the expected sea level rise inundation level, or strengthening structures to improve resiliency;
- Designing facilities to withstand periodic inundation and continue to function (i.e., waterproofing);
- Building a new levee or raising the elevation of an existing levee to protect the proposed building or structure, or construct engineered shoreline protection structures such as revetment and bulkheads; and/or
- Replenishment of sand from off-site locations to preserve beaches that are subject to erosion and land loss from rising sea levels (beach nourishment).

Implementing Agencies

Implementing agencies for AMBAG transportation projects include TAMC, SCCRTC and transportation project sponsor agencies. Implementing agencies for land use projects include coastal cities and counties.

Significance After Mitigation

Although the above mitigation may reduce the impact associated with sea level rise, these measures may not be feasible for all projects. No additional feasible mitigation measures have been identified that would further reduce this impact without fundamentally altering the project. This impact would remain significant and unavoidable.

c. Specific MTP Projects That May Result in Impacts

The proposed projects listed in Appendix B and summarized in Section 2.0, *Project Description*, would have the potential to generate GHG emissions. However, the 2040 MTP/SCS as a whole is designed to reduce per capita transportation-related GHG emissions in accordance with SB 375, AB 32 and SB 32.

d. Cumulative Analysis

GHG emissions are, by definition, cumulative impacts, as they add to the global accumulation of greenhouse gases in the atmosphere. As discussed in Section 4.8.2, construction activities associated with transportation improvement projects and future land use projects envisioned by the 2040 MTP/SCS may generate temporary GHG emissions. However, compliance with GHG mitigation measures during construction would reduce this impact. Implementation of the 2040 MTP/SCS would reduce total region wide mobile and land use emissions compared to existing conditions as well as per capita CO₂ vehicle emissions beyond the SB 375 reduction targets of a zero percent per capita change from 2005 levels by 2020 and a five percent per capita reduction from 2005 levels by 2035. However, the 2040 MTP/SCS would conflict with the state's ability to achieve the AB 32, SB 32 and EO S-3-05 GHG reduction targets. Therefore, the project's contribution to cumulative GHG and climate change impacts, including sea level rise, would be cumulatively considerable, and thus significant and unavoidable.

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4.9 Hazards and Hazardous Materials

This section analyzes impacts related to hazardous materials, airports, emergency planning and wildland fires in the AMBAG region. This section also describes the existing conditions for hazardous materials, airports, emergency planning and wildland fires in the AMBAG region, as well as the regulatory framework.

4.9.1 Setting

a. Physical Setting

Hazardous Materials and Waste

The term “hazardous material” is defined in the State of California’s Health and Safety Code (HSC), Chapter 6.95, Section 25501(o) as:

Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. “Hazardous materials” include, but are not limited to, hazardous substances, hazardous waste and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

Hazardous waste is hazardous material generated, intentionally or unintentionally, as a byproduct of some process or condition. Hazardous wastes are defined in California HSC Section 25141(b) as wastes that:

...because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

According to the U.S. Environmental Protection Agency (U.S. EPA) (2017a), waste may be considered hazardous if it is specifically listed as known hazardous waste or if it meets the one or more of the following characteristics of a hazardous waste:

- **Toxicity.** Poisonous, harmful when ingested or absorbed.
- **Ignitability.** Capable of being ignited by open flame, liquids with flash points⁷ below 60 degrees Celsius.
- **Corrosivity.** Capable of corroding other materials, aqueous wastes with a pH of 2 or less or greater than or equal to 12.5.
- **Reactivity.** May be unstable under normal conditions, may react with water, may give off toxic gases or may be capable of detonation or explosion under normal conditions or when heated.

⁷ Flash point is the lowest temperature at which the vapors of a volatile combustible substance ignite in the air when exposed to flame.

Generation and Disposal of Hazardous Materials and Waste

Many chemicals used in household cleaning, construction, light and heavy industry, dry cleaning, film processing, landscaping and automotive maintenance and repair are considered to generate hazardous materials and waste. Additionally, in some cases, past industrial or commercial uses on a site may have resulted in spills or leaks of hazardous materials and petroleum that have caused contamination of the underlying soil and groundwater. Federal and state laws require that soils and groundwater having concentrations of contaminants that are higher than certain acceptable levels are handled and disposed as hazardous waste during excavation, transportation and disposal. The California Code of Regulations (CCR), Title 22, Sections 66261.20-24 contains technical descriptions of characteristics that would cause a soil to be classified as a hazardous waste. Hazardous materials require special methods of disposal, storage and treatment, and the release of hazardous materials requires an immediate response to protect human health and safety and the environment. Improper disposal can harm the environment and people who work in the waste management industry.

Businesses that handle or generate hazardous materials within the AMBAG region are monitored by U.S. EPA; the Central Coast Regional Water Quality Control Board (RWQCB); the Monterey County Hazardous Materials Management Services (HMMS); the Santa Cruz County Environmental Health Department; the San Benito County Environmental Health Department; Local Enforcement Agency (LEA) programs; and the Monterey Bay Air Resources District (MBARD). Generators of hazardous waste fall into two categories: large-quantity generators (LQG) and small-quantity generators (SQG). An LQG is defined as a person or facility generating more than 2,200 pounds of hazardous waste per month. An SQG is defined as generating greater than 100 kilograms (kg) and less than 1,000 kg (2,200 pounds) of hazardous waste per month. LQGs include industrial and commercial facilities, such as manufacturing companies, petroleum refining facilities and other heavy industrial businesses.

LQGs must comply with federal and state requirements for managing hazardous waste. LQGs need an U.S. EPA identification number that is used to monitor and track hazardous waste activities. SQGs include facilities such as service stations, automotive repair, dry cleaners and medical offices. The regulatory requirements for SQGs are less stringent than the requirements for LQGs; however, SQGs must also obtain an U.S. EPA identification number, which must be used for traceability on all hazardous waste documentation. Pursuant to federal law (40 CFR 262.41-43), all such generators must register with U.S. EPA for record-keeping and reporting.

Transportation of Hazardous Materials and Waste

Hazardous materials, hazardous wastes, medical waste and petroleum products are a subset of the goods routinely shipped along the transportation corridors in the AMBAG region. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by the Department of Toxic Substances Control (DTSC). The DTSC maintains a list of active registered hazardous waste transporters throughout California and the California Department of Public Health regulates the haulers of hazardous waste. There are three registered hazardous waste transporters in Monterey County, two in San Benito County and two in Santa Cruz County (DTSC, 2017a).

Transportation of hazardous materials and wastes in the AMBAG region occurs through a variety of modes: truck, rail and pipeline. Transportation of hazardous materials by truck is regulated by the DOT. The DOT, Federal Motor Carrier Safety Administration, identifies several highways and county

roads in the AMBAG region as a Hazardous Materials Route in its National Hazardous Materials Route Registry (2016). These highways and roads include sections of:

- Highway 1
- Highway 17
- Highway 25
- Highway 68
- Highway 101
- Highway 152
- Highway 156
- Highway 183
- Highway 198 and
- Monterey County Road G14

On a tonnage basis, transport by truck accounted for approximately 94.6 percent of the hazardous materials transported in the nation in 2007 (FHWA, 2013). Considering the abundance of roads compared to rail and pipelines in the AMBAG region, trucks are likely responsible for transporting the majority of hazardous materials within the AMBAG region. According to the DOT (2017), truck transport consistently accounts for the largest share of reportable incidents each year in California. For example, in 2016, truck transport accounted for approximately 90 percent of the reportable incidents in the State, while rail and air transport accounted for the other 10 percent. Reportable incidents in 2017, through and October 23, 2017, have shown a similar trend, with truck transport accounting for approximately 90 percent of the reportable incidents in the state (DOT, 2017). While hazardous waste incidents account for a small percentage of overall highway incidents, the impact of these incidents can be more severe due to the nature of the material(s) involved.

The transport of hazardous materials by rail is also regulated by DOT. Freight railroads have employee safety training requirements and operating procedures that govern the handling and movement of hazardous goods, including crude oil. Federal regulations and self-imposed safety practices dictate train speeds, equipment and infrastructure inspections and procedures for how to handle and secure trains carrying hazardous materials. The freight rail industry provides instruction to local public safety officials at the Transportation Technology Center's Security and Emergency Response Training Center and individual railroads conduct additional local training for first responders (Association of American Railroads, 2015). Freight railroads also work with State emergency planning committees and local first responders to develop emergency response plans. In accordance with a February 2014 agreement between the DOT and Association of American Railroads, railroads have developed an inventory of emergency response resources and provided the DOT with information on the deployment of those resources. This information is available upon request to appropriate emergency responders (Association of American Railroads, 2015). A list of the rail facilities in the AMBAG region is provided in Section 4.14, *Transportation and Circulation*.

Pipelines, primarily underground, are used to transport a variety of potentially hazardous substances throughout the AMBAG region. For example, Pacific Gas & Electric maintains and operates a natural gas pipeline that is roughly parallel to Highway 1 in parts of Monterey and Santa Cruz Counties, and a pipeline through Hollister in San Benito County (Pacific Gas & Electric, 2017). The American Petroleum Institute recommends setbacks of 50 feet from petroleum and hazardous liquids lines for new homes, businesses and places of public assembly. It also recommends 25 feet for garden sheds, septic tanks and water wells; and 10 feet for mailboxes and yard lights (American

Petroleum Institute, 2004). The Transportation Research Board (1988) encourages the use of zoning regulations to minimize casualties in the event of a catastrophic pipeline rupture. Possible land use techniques include, for example, establishing setbacks; regulating or prohibiting certain types of structures and uses near transmission pipelines; and encouraging, through site and community planning, other types of activities and facilities, such as mini-storage businesses, linear parks and recreational paths, within or in the vicinity of pipeline rights-of-way.

There are no major shipping ports or marine oil terminals in the AMBAG region, and transport by ship on the open sea or rivers is generally not a mode of hazardous materials or waste transport in the region. However, the AMBAG region does contain coastal marinas, boat storage facilities and other similar boat-based service businesses where petroleum products, paints, cleaning solvents and other substances used in the daily operation and maintenance of boats may be stored and handled.

Potential for Hazardous Materials and Hazardous Materials Sites

Many activities in the AMBAG region involve the use of hazardous materials. The use of hazardous materials is commonplace in commercial, industrial and manufacturing activities, and many businesses within the AMBAG region are permitted to handle and transport hazardous materials. There are historic and existing land uses that have generated hazardous waste as part of daily business operations. LQGs and SQGs include such commercial uses as painters, dry cleaners and photographers, and industrial uses such as automotive service stations, sheet metal works, metal scrap yards, truck yards, cement and lime warehouses, coal yards, battery manufacture and Pacific Gas & Electric substations. In addition, older structures may contain building materials that are considered hazardous, such as asbestos and lead-based paint. In general, these historic and current uses and building materials are located throughout the AMBAG region.

California Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to prepare an annual Hazardous Waste and Substances List, commonly referred to as the Cortese List. The addition or inclusion of a site on the Cortese List has bearing on the local permitting process and compliance with CEQA. For example, projects proposed at a site on the Cortese List are not eligible for categorical exemptions to CEQA per Section 15300.2(e) of the State CEQA Guidelines. The Cortese List is not maintained as a centralized list, however, and a variety of governmental data sources identify sites where hazardous substances may have been released or may have created a hazardous condition on-site. These include:

- DTSC Active Transporter County Search Report (2017a);
- DTSC EnviroStor database (DTSC, 2017b) (Cortese List) for tracking hazardous waste facilities and site with known contamination or sites where there may be reasons to investigate further;
- State Water Resources Control Board's (SWRCB) GeoTracker database (SWRCB, 2017) of records for sites that require cleanup, such as leaking underground storage tank (UST) sites, Department of Defense sites, landfill sites and Cleanup Program sites;
- California Office of Emergency Services (OES) Hazardous Materials Spill Notification database (2017) that includes information on reported hazardous material accidental releases or spills;
- The DOT's Hazardous Materials Incident Report System database (DOT, 2017), which is maintained by the U.S. EPA and contains data on hazardous material spill incidents;
- California Department of Resources Recycling and Recovery's (CalRecycle) Solid Waste Inventory System database (CalRecycle, 2017) of active and closed solid waste sites;

- The U.S. EPA Envirofacts database (2017b) of Resource Conservation and Recovery Act (RCRA) sites, as well as other hazardous sites, such as superfund and brownfield sites; and
- The USACE list of Formerly Used Defense Sites for California (2015).

All of the databases listed above have identified sites within the AMBAG region. As described above, the DTSC Active Transporter County Search Report identifies three registered hazardous waste transporters in Monterey County, two in San Benito County and two in Santa Cruz County. The DOT's Hazardous Materials Incident Report System database identified five hazardous materials spill incidents in the AMBAG region between January 1, 2017 and October 23, 2017. Three of these incidents were in Salinas, one was in Watsonville, and the other was in the City of Santa Cruz. The spills in Watsonville were minor and cleaned on location without the need for emergency response. The spill in Watsonville was less than one gallon of a flammable substance and was cleaned on location with the need for emergency response. The spill in Santa Cruz was approximately one pound of corrosive substance and was remediated on-location without the need for emergency response. Seven sites in the AMBAG region are identified on the USACE list of Formerly Used Defense Sites for California. According to CalRecycle's Solid Waste Inventory System database, there are 48 active landfill sites in the AMBAG region and an additional 39 landfill sites that have been closed.

For some databases, such as the DTSC's EnviroStor database and the U.S. EPA Envirofacts database, the list of identified sites is too exhaustive to provide in its entirety for purposes of this EIR because it is not necessary for programmatic impact analysis. For example, the EnviroStor identifies 267 sites in the AMBAG region, including closed sites that have been fully remediated; sites where contamination is contained but land use restrictions are in place; and sites under evaluation, active remediation and monitoring. Among these sites are superfund sites, state response hazardous sites, contaminated soil sites, and school cleanup sites and leaking UST sites. The U.S. EPA Envirofacts database also identifies hundreds of RCRA sites in the region, including some that are also listed in the EnviroStor database. Examples of some of the RCRA sites identified in the region include gas stations, dry cleaners, automotive repair shops, pharmacies, automobile dealerships, paint stores, trucking companies, University of California Santa Cruz and the Monterey Bay Aquarium. The SWRCB GeoTracker database also identifies many leaking UST sites, some have been which remediated and cleaned, and some of which have yet to be cleaned. For purposes of this EIR, it is more important to note that many sites on the Cortese list exist throughout the AMBAG region, typically within proximity to the transportation network and more densely populated areas in the region.

To address the potential for documented and undocumented hazards on a site, the American Society for Testing and Materials has developed widely accepted practice standards for the preliminary evaluation of site hazards (E-1527-05). Phase I Environmental Site Assessments (ESAs) include an on-site visit to determine current conditions; an evaluation of possible risks posed by neighboring properties; interviews with persons knowledgeable about the site's history; an examination of local planning files to check prior land uses and permits granted; file searches with appropriate agencies having oversight authority relative to water quality and/or soil contamination; examination of historic aerial photography of the site and adjacent properties; a review of current topographic maps to determine drainage patterns; and an examination of chain-of-title for environmental lines and/or activity and land use limitations. If a Phase I ESA indicates the presence, or potential presence of contamination, a site-specific Phase II ESA is generally conducted to test soil and/or groundwater. Based on the outcome of a Phase II ESA, remediation of contaminated sites under federal and state regulations may be required prior to development. Phase I ESAs can also be

used to identify the potential for presence of hazardous building materials in situations where older structures intended for demolition could contain lead-based paint, asbestos containing materials, mercury, or polychlorinated biphenyls.

Schools

Children are particularly susceptible to long-term effects from emissions of hazardous materials. Therefore, locations where children spend extended periods of time, such as schools, are particularly sensitive to hazardous air emissions and accidental release associated with the handling of extremely hazardous materials, substances, or wastes. According to the California Department of Education (DOE) (2017b), there are 264 public schools in the AMBAG region. There are an additional 59 private schools in the region (DOE, 2017a). Student enrollment in the region is currently almost 130,000 students (Ed-Data, 2017)

Airports

The AMBAG region has six publicly-owned civil aviation airports, which include the following:

- Monterey Regional
- Salinas Municipal
- King City Municipal (Mesa Del Rey)
- Marina Municipal
- Watsonville Municipal
- Hollister Municipal

Of these airports, only the Monterey Regional Airport provides scheduled air carrier service. There are also several private airports in the region that are used primarily for agricultural or business purposes, but one of these, the Frazier Lake Airport, also allows public use. Currently, there are two operational military airfields in the region: Camp Roberts Army Airfield and Heliport and the Hunter-Liggett Army Airfield.

Cities and communities in the AMBAG region must consider housing and economic development along with airport interests in making decisions concerning the amount and type of new development to allow in and near airport flight corridors. Potential hazards in relationship to airport operations are generally regulated by the Federal Aviation Administration (FAA), with local planning and evaluation of proposed projects (in terms of a proposed project's compatibility in relationship to air and ground operations and the safety of the public) under the authority of the applicable airport land use commission (ALUC) through an airport land use compatibility plan (ALUCP). The ALUCs with authority in the AMBAG region include the Monterey County Airport Land Use Commission, San Benito County Airport Land Use Commission and the Santa Cruz County Community Development Department. Applicable ALUCPs to the AMBAG region are discussed in the Regulatory Setting, below.

Wildland Fires

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. The State of 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 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 wildland fire 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 wildland fires. 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 AMBAG 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 Monterey County Fire Hazard Severity Zones in SRA (CAL FIRE, 2007a), nearly the entire county within CAL FIRE responsibility is mapped as either high or very high fire hazard. Mapping for San Benito County (CAL FIRE, 2007b) indicates that the majority of the western part of the county within CAL FIRE responsibility is very high fire hazard, while other parts of the county within CAL FIRE responsibility is mostly high fire hazard with dispersed areas of moderate fire hazard. The majority of Santa Cruz County is within CAL FIRE responsibility and is mapped as either moderate fire hazard or high fire hazard (CAL FIRE, 2007c).

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. This area where wildlands meet urban development is referred to as the wildland-urban interface and is subject to urban wildfire. An example of a wildland-urban interface in the AMBAG region is the Big Sur community in Monterey County (U.S. Forest Service, 2016). The 2016 Soberanes Fire along the Big Sur coast burned 57 homes (Alexander, 2016) and is an example of the major losses of property that can result from a fire within the wildlife-urban interface.

b. Regulatory Setting

Federal

The U.S. EPA is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include the RCRA of 1976 and the Hazardous and Solid Waste Amendments enacted in 1984; the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Act and Reauthorization Act of 1986 (SARA). Federal statutes pertaining to hazardous materials and wastes are contained in the CFR Title 40 - Protection of the Environment.

Resource Conservation and Recovery Act

RCRA Subtitle C regulates the generation, transportation, treatment, storage and disposal of hazardous waste by LQGs (1,000 kilograms per month or more) through comprehensive life cycle or "cradle to grave" tracking requirements. The requirements include maintaining inspection logs of hazardous waste storage locations, records of quantities being generated and stored, and manifests of pick-ups and deliveries to licensed treatment/storage/disposal facilities. RCRA also identifies standards for treatment, storage and disposal, which is codified in 40 CFR 260.

Comprehensive Environmental Response Compensation and Liability Act

Congress enacted CERCLA, setting up what has become known as the Superfund program, in 1980 to establish prohibitions and requirements concerning closed and abandoned hazardous waste sites; provide for liability of persons responsible for releases of hazardous waste at these sites; and establish a trust fund to provide for cleanup when no responsible party can be identified. Generally, CERCLA authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response.
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening.

Superfund Amendments and Reauthorization Act

SARA amended the CERCLA in 1986, emphasizing the importance of permanent remedies and innovative treatment technologies to clean up hazardous waste sites; requiring Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; providing new enforcement authorities and settlement tools; increasing involvement of the states in every phase of the Superfund program; increasing the focus on human health problems posed by hazardous waste sites; encouraging greater citizen participation in making decisions on how sites should be cleaned up; and increasing the size of the trust fund to \$8.5 billion.

Hazardous Materials Transportation Act

The transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act (49 CFR § 101 et seq.), which is administered by the Research and Special Programs Administration of U.S. DOT. The Hazardous Materials Transportation Act governs the safe transportation of hazardous materials by all modes. The DOT regulations that govern the transportation of hazardous materials are applicable to any person who transports, ships, causes to be transported or shipped, or who is involved in any way with the manufacture or testing of hazardous materials packaging or containers. The DOT regulations govern every aspect of the movement, including packaging, handling, labeling, marking, placarding, operational standards and highway routing.

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.

Code of Federal Regulations, Title 14, Part 77

The primary role of the FAA is to promote aviation safety and control the use of airspace. Public use airports that are subject to the FAA’s grant assurances must comply with specific FAA design criteria, standards and regulations. Land use safety compatibility guidance from the FAA is limited to the

immediate vicinity of the runway, the runway protection zones at each end of the runway, and the protection of navigable airspace.

14 CFR 77, *Safe Efficient Use and Preservation of the Navigable Airspace*, establishes the federal review process for determining whether proposed development activities in the vicinity of an airport have the potential to result in a hazard to air navigation. 14 CFR Part 77 identifies standards for determining whether a proposed project would represent an obstruction “that may affect safe and efficient use of navigable airspace and the operation of planned or existing air navigation and communication facilities.” Objects that are identified as obstructions based on these standards are presumed to be hazards until an aeronautical study conducted by the FAA determines otherwise.

State

California Fire Code

The California Fire Code is Chapter 9 of CCR Title 24. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The California Fire Code regulates the use, handling and storage requirements for hazardous materials at fixed facilities. The California Fire Code and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines and specialized equipment. To ensure that these safety measures are met, the California Fire Code employs a permit system based on hazard classification.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program addresses facilities that contain specified hazardous materials, known as “regulated substances,” that, if involved in an accidental release, could result in adverse off-site consequences. The CalARP Program defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

California Unified Program Administration

The Unified Program consolidates, coordinates and makes consistent the administrative requirements, permits, inspections and enforcement activities of six environmental and emergency response programs, as listed below:

- Hazardous Materials Release Response Plans and Inventories (Business Plans);
- CalARP Program;
- Underground Storage Tank Program;
- Aboveground Petroleum Storage Act Program;
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs; and
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements.

The state agency partners involved in the Unified Program have the responsibility of setting program element standards, working with CalEPA on ensuring program consistency and providing

technical assistance to the Certified Unified Program Agencies (CUPA). The following state agencies are involved with the Unified Program:

- CalEPA is directly responsible for coordinating the administration of the Unified Program. The Secretary of the CalEPA certifies CUPAs.
- DTSC provides technical assistance and evaluation for the hazardous waste generator program including onsite treatment (tiered permitting).
- OES is responsible for providing technical assistance and evaluation of the Hazardous Material Release Response Plan (Business Plan) Program and the CalARP Programs.
- The Office of the State Fire Marshal is responsible for ensuring the implementation of the Hazardous Material Management Plans and the Hazardous Material Inventory Statement Programs. These programs tie in closely with the Business Plan Program.
- SWRCB provides technical assistance and evaluation for the UST program in addition to handling the oversight and enforcement for the aboveground storage tank program.

The AMBAG region includes three CUPAs: the Monterey County HMMS, the San Benito County Environmental Health Department and the Santa Cruz County Environmental Health Department. These three agencies are responsible for implementing the federal and state laws and regulations for all jurisdictions within Monterey, San Benito and Santa Cruz Counties, respectively.

California Land Environmental Restoration and Reuse Act of 2001

The California Land Environmental Restoration and Reuse Act of 2001 established California Human Health Screening Levels (CHHSLs) as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment, an agency under the umbrella of CalEPA. The thresholds of concern used to develop the CHHSLs are an excess lifetime cancer risk of one in 1 million and a hazard quotient of 1.0 for non-cancer health effects. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by EPA and CalEPA. The CHHSLs can be used to screen sites for potential human health concerns where releases of hazardous chemicals to soils have occurred. Under most circumstances, the presence of a chemical in soil, soil gas, or indoor air at concentrations below the corresponding CHHSLs can be assumed to not pose a significant health risk to people who may live (residential CHHSLs) or work (commercial/ industrial CHHSLs) at the site.

California Public Resources Code 21151.4

Pursuant to Public Resources Code Section 21151.4, projects that can be reasonably anticipated to produce hazardous air emissions or handle extremely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school must consult with the potentially affected school district and provide written notification not less than 30 days prior to the proposed certification or adoption of an environmental document. Where a school district proposes property acquisition or the construction of a school, the environmental document must address existing environmental hazards, and written findings must be prepared regarding existing pollutant sources.

California Education Code

Sections 17071.13, 17072.13, 17210, 17210.1, 17213.1-3 and 17268 of the California Education Code became effective January 1, 2000. Together, they establish requirements for assessments and

approvals regarding toxic and hazardous materials that school districts must follow before receiving final site approval from the DOE and funds under the School Facilities Program. These requirements are consistent with those described above for certification or adoption of an environmental document under Public Resources Code Section 21151.4.

Carpenter-Presley-Tanner Hazardous Substances Account Act

The Carpenter-Presley-Tanner Hazardous Substance Account Act imposes liability for hazardous substances removal or remedial actions and requires the State Attorney General to recover from the liable person, as defined, certain costs incurred by the DTSC or any of the state's nine RWCQB, upon the request of the DTSC or RWQCB. The act authorizes, except as specified, a party found liable for any costs or expenditures recoverable under the act for those actions to establish, as specified, that only a portion of those costs or expenditures are attributable to the party, and requires the party to pay only for that portion. If each party does not establish its liability, the act requires a court to apportion those costs or expenditures, as specified, among the defendants and the remaining portion of the judgment is required to be paid from the Toxic Substances Control Account. Existing law authorizes the money deposited in the Toxic Substances Control Account in the General Fund to be appropriated to the DTSC for specified purposes, including the payment of the costs incurred by the state for those actions.

Lempert-Keene-Seastrand Oil Spill Prevention and Response Act

The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 granted the Office of Spill Prevention and Response the authority to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in marine waters of California. The Office of Spill Prevention and Response implements the California Oil Spill Contingency Plan, consistent with the National Contingency Plan, which pays special attention to marine oil spills and impacts to environmentally- and ecologically-sensitive areas. In 2014, the Office of Spill Prevention and Response program was expanded to cover all statewide surface waters at risk of oil spills from any source, including pipelines and the increasing shipments of oil transported by railroads.

Local Community Rail Security Act

The Local Community Rail Security Act of 2006 (Public Utilities Code Sections 7665-7667) requires all rail operators to provide security risk assessments to California Public Utilities Commission, the Director of Homeland Security and the Catastrophic Event Memorandum Account that describe the following:

- Location and function of each rail facility;
- Types of cargo stored at or typically moved through the facility;
- Hazardous cargo stored at or moved through the facility;
- Frequency of hazardous movements or storage;
- Description of sabotage-terrorism countermeasures;
- Employee training programs;
- Emergency response procedures; and
- Emergency response communication protocols.

Regional and Local

City and County General Plans

Local planning policies related to hazards and hazardous materials are established in each jurisdiction's general plan, generally in the Safety Element or equivalent chapter. Safety Elements are required to address geologic hazards, fire hazards, dam failure, evacuation routes, flooding and emergency response among other issues. For emergency services, some of the relevant policies may include coordinating with other agencies that are responsible for planning medical facilities to meet the health care needs of residents in the region, retaining hospitals, evaluating medical facility proposals, providing emergency response services and participating in mutual-aid agreements.

As of January 1, 2014, Senate Bill 1241 (SB 1241) requires that, upon the next revision of the housing element, jurisdictions review and update the Safety Element as necessary to address the risk of fire in SRAs and very-high fire hazard severity zones. These revisions must take into account specified considerations, including the provisions outlined in "Fire Hazard Planning" by the Governor's Office of Planning and Research.

Local Hazard Mitigation Plans

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. Applicable hazard mitigation plans for the AMBAG region include *Monterey County Multi-Jurisdictional Hazard Mitigation Plan* (Monterey County, 2014), *County of Santa Cruz Local Hazard Mitigation Plan* (Santa Cruz County, 2007) and *County of San Benito Operational Area Multi-Jurisdiction Local Hazard Mitigation Plan* (2015a). These plans serve to reduce or eliminate long-term risk to people and property from natural hazards and their effects in the AMBAG region.

Emergency Response and Evacuation Plans

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid and public information. Emergency response plans are maintained at the federal, state and local levels for all types of disasters, human-made and natural. Local governments have the primary responsibility for preparedness and response activities.

The Monterey County OES alerts and notifies appropriate agencies when disaster strikes, coordinates all responding agencies, ensures resources are available and mobilized, develops plans and procedures for response and recovery, and develops and provides preparedness materials for the public.

The County of San Benito adopted its emergency operations plan in October 2015 (San Benito County, 2015b). The emergency operations plan addresses the County's response to extraordinary emergency situations associated with natural disasters or human-caused emergencies. The emergency operations plan describes the methods for carrying out emergency operations, the process for rendering mutual aid, the emergency services of governmental agencies, how resources are mobilized, how the public will be informed, and the process to ensure continuity of government during an emergency or disaster.

The County of Santa Cruz currently has a draft version of an emergency management plan (Santa Cruz County, 2015). The plan establishes a comprehensive, all-hazards approach to incident management across a spectrum of activities including prevention, preparedness, response and

recovery. It addresses the planned response to extraordinary situations associated with large-scale emergency incidents in or affecting Santa Cruz County.

Airport Land Use Compatibility Plans

The four public airports within Monterey County are: Monterey Regional Airport, Marina Municipal Airport, Mesa Del Rey Airport and Salinas Municipal Airport. The Monterey County ALUC is in the process of updating the ALUCPs for Monterey Regional Airport and Marina Municipal Airport. The ALUC published the Draft ALUCPs for these two airports in January 2017 (Monterey County Airport Land Use Commission, 2017a; 2017b). The ALUC published the plan for Salinas Municipal Airport in 1982 (Monterey County Airport Land Use Commission, 1982) and the plan for Mesa Del Rey Airport in 1978 (Monterey County Airport Land Use Commission, 1978). The goals of the ALUCPs are to protect residents from the negative environmental noise, safety and traffic impacts that can potentially be induced by airports.

The San Benito County ALUC reviews development proposed within the Airport Influence Area of the Hollister Municipal Airport and Frazier Lake Airpark. The ALUC reviews applications in compliance with the policies in the Hollister Municipal Airport Land Use Compatibility Plan and the Comprehensive Land Use Plan - Frazier Lake Airpark (San Benito County, 2001; 2012).

As described above, the Santa Cruz County Community Development Department is the ALUC with authority in Santa Cruz County. According to the Caltrans (2014), *1994 General Plan and Local Coastal Program for the County of Santa Cruz* (Santa Cruz County, 1994) and *Watsonville 2005 General Plan* (City of Watsonville, 1994) serve as the ALUCP for the Watsonville Municipal Airport, which is the only public airport in the County of Santa Cruz. Additionally, in July 2017, the City of Watsonville published *Watsonville Municipal Airport Regulations* to augment the existing ordinances of the City of Watsonville Municipal Code that regulate land use activities within and near the Watsonville Municipal Airport.

4.9.2 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact to hazards and hazardous materials:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
2. 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;
3. Emit hazardous emissions or handles hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school;
4. Be located on a site which is included on a list of hazardous materials compiled by the Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;

6. For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
7. Impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or
8. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

The methodology used for the following evaluation is based on a review of documents and publicly available information about hazardous and potentially hazardous conditions in the AMBAG region to determine the potential for implementation of the 2040 MTP/SCS to result in an increased health or safety hazard to people or the environment. This includes city and county planning documents, and hazardous materials database information maintained by various state and federal agencies, such as DTSC and SWRCB. Due to the large area of the AMBAG region and the programmatic nature of impact analyses, known sites of current or former contamination were not evaluated in detail, and physical surveys were not conducted. Rather, this program-level analysis is based on hazards typically associated with certain land uses and an overall understanding of the key safety concerns that could result from implementation of the 2040 MTP/SCS.

The evaluation of hazards and hazardous materials impacts reasonably assumes that the construction and development under the 2040 MTP/SCS 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

This section describes generalized impacts associated with the 2040 MTP/SCS. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS would result in hazards and hazardous materials impacts as described in the following sections.

Threshold 1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials

Threshold 2: 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

IMPACT HAZ-4 IMPACT HAZ-1 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS INCLUDED IN THE 2040 MTP/SCS WOULD FACILITATE THE ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIAL, AND MAY RESULT IN REASONABLY FORESEEABLE UPSET AND ACCIDENT CONDITIONS. MANDATORY COMPLIANCE WITH EXISTING REGULATIONS AND PROGRAMS WOULD MINIMIZE THE RISK ASSOCIATED WITH THESE ACTIVITIES OR ACCIDENT CONDITIONS. THUS, HAZARDS TO THE PUBLIC OR ENVIRONMENT WOULD BE LESS THAN SIGNIFICANT.

Land use and transportation projects associated with implementation of the 2040 MTP/SCS would temporarily increase the regional transport, use, storage and disposal of hazardous materials and petroleum products commonly used at construction sites, such as diesel fuel, lubricants, paints and

solvents and asphalt and cement products containing strong basic or acidic chemicals. Hazardous waste generated during construction may consist of welding materials, fuel and lubricant containers, paint and solvent containers and discarded asphalt and cement products.

As described above, the DOT has identified several highways and a county road within the AMBAG region as hazardous material routes (DOT, 2016). Additionally, trucks transporting hazardous material would also have to use local collector and arterial streets to access individual project sites in the AMBAG region. Transportation projects would also require the temporary storage and use of hazardous materials at locations along project roads. Thus, trucks transporting hazardous materials for project construction would use many of the same freeways, arterials and local streets as other traffic. This would create a risk of accidents and associated release of hazardous materials for other drivers and for people along these routes, as well as truck drivers. Although the transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion, the DOT prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the CFR and the Hazardous Materials Transportation Act. These standard accident and hazardous materials recovery training and procedures are enforced by the state and followed by private state-licensed, certified and bonded transportation companies and contractors.

Construction associated with implementation of the 2040 MTP/SCS could result in impacts related to use of hazardous materials and disturbance of potentially hazardous materials, including asbestos. However, the most likely incidents involving construction-related hazardous materials are generally associated with minor spills or drips. Small fuel or oil spills are possible, but would have a negligible impact on public health. All hazardous materials would be stored, handled and disposed of according to the manufacturers' recommendations and spills would be cleaned up in accordance with applicable regulations. Hazardous materials spills or releases, including petroleum products such as gasoline, diesel and hydraulic fluid, regardless of quantity spilled, must be immediately reported if the spill has entered or threatens to enter a water of the State, including a stream, lake, wetland, or storm drain, or has caused injury to a person or threatens injury to public health. Immediate notification must be made to the local emergency response agency, or 911, and the OES Warning Center. For non-petroleum products, additional reporting may be required if the release exceeds federal reportable quantity thresholds over a release period of 24 hours as detailed in HSC Section 25359.4 and in 40 CFR 302.4.

The construction of land use and transportation projects included in the 2040 MTP/SCS that require demolition of existing structures, particularly older structures, would have the potential to expose workers and the public to asbestos containing materials or dust containing asbestos. HSC Section 19827.5 requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos. Mandatory compliance with asbestos abatement and disposal regulations and requirements would minimize the risk of exposure.

Land use projects included in the 2040 MTP/SCS would increase population, jobs and households and a variety of land uses including residential, commercial and industrial. Specific uses such as dry cleaners, gas stations and certain industrial uses, would involve routine transport, use and disposal of hazardous materials such as household hazardous wastes (e.g., paints, cleaning supplies, solvents and petroleum products) and commercial and industrial hazardous waste. The operation of businesses facilitated by land use projects included in the 2040 MTP/SCS that use, create, or dispose of hazardous materials would be regulated and monitored by federal, state and local regulations that provide a high level of protection to the public and the environment from the hazardous materials manufactured within, transported to, and disposed within the AMBAG region. Use of

hazardous materials at these businesses would also require permits and monitoring to avoid hazardous waste release through the local CUPA. During operation, businesses that store hazardous materials could potentially experience accidents or upset conditions that result from their routine use. These businesses would be required to prepare spill prevention, containment and countermeasures plans (pursuant to 40 CFR 112) or, for smaller quantities, a spill prevention and response plan. These plans identify best management practices for spill and release prevention and provide procedures and responsibilities for rapidly, effectively and safely cleaning up and disposing of any spills or releases. Oversight is provided by the CUPA. Pursuant to the requirements and liabilities of applicable regulations, the routine use or accidental spill of hazardous materials at business and industrial uses facilitated by the land use projects included in the 2040 MTP/SCS would not pose a substantial hazard to the public or the environment. Disposal of hazardous waste generated by these businesses would be subject to compliance with DTSC and CalEPA regulations.

Transportation projects included in the 2040 MTP/SCS include a variety of transportation modifications such as new travel lanes, auxiliary lanes, roadway widening, increased transit service and expansion, and other maintenance and rehabilitation projects. The projects may increase the capacity of roadways to transport hazardous materials. Roadway projects in the 2040 MTP/SCS would also improve road safety, as well as pedestrian and bicycle safety, thereby potentially reducing transportation-related hazardous materials risks because fewer accidents would occur on safer roads. Based on the requirements of Title 49 CFR 171–180, construction and operation of transportation projects would provide for the safe transport and disposal of hazardous waste.

The 2040 MTP/SCS encourages infill development and increased population and employment density near public transit stops, including rail. There could also be increased urbanization along transportation corridors. Thus, the number of people potentially exposed to hazardous conditions could increase as a result of land use projects included in the 2040 MTP/SCS. To be declared a sustainable communities project under Public Resources Code Section 21155.1, projects in transit priority areas must demonstrate that there would not be an “unusually high” risk of fire or explosion from materials stored or used on or near the property and the project would not result in a risk of exposure to a potentially hazardous material at levels that exceed state and federal standards. This would occur on a project-specific basis, and does not affect the other streamlining strategies and statutes under the Sustainable Communities Act.

As described above in the Regulatory Setting discussion, the DOT regulates the transport of hazardous materials by all modes, including rail and highway under the regulations of the Hazardous Materials Transportation Act. The Local Community Rail Security Act of 2006 requires all rail operators to provide security risk assessments to California Public Utilities Commission, which includes emergency response procedures and communication protocols. Mandatory implementation of additional federal, state and local requirements such as CalARP Program and the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act would minimize potential exposure to the public and the environment from accidental releases. Therefore, although population density would increase in proximity to major transportation corridors that are used to transport hazardous and flammable materials, the increased risk of hazard from routine transport or accidental upsets during transport would be minimal.

In conclusion, both planned land use projects and transportation projects could increase the routine transport, use, storage and disposal of hazardous wastes in the AMBAG region. The planned land use projects and transportation projects could also increase the potential for unintentional upset and accident conditions. Because of the existing federal, state and local regulations and oversight in place that would effectively reduce the inherent hazard associated with routine transport, use,

storage and disposal activities, and regulations that effectively reduce the potential for individual projects to create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions, impacts would be less than significant.

Mitigation Measures

Mitigation measures are not required.

Threshold 3: Emit hazardous emissions or handles hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school

IMPACT HAZ-5 IMPACT HAZ-2 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS INCLUDED IN THE 2040 MTP/SCS WOULD FACILITATE HAZARDOUS EMISSIONS OR HANDLING OF ACUTELY HAZARDOUS MATERIALS, SUBSTANCES OR WASTE WITHIN ONE-QUARTER MILE OF AN EXISTING OR PROPOSED SCHOOL. EXISTING REGULATIONS AND PROGRAMS WOULD REDUCE THE RISK TO SCHOOLS TO ACCEPTABLE LEVELS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Land use projects included in the 2040 would increase population, jobs and households and a variety of land uses including residential, commercial and industrial. Specific uses such as dry cleaners, gas stations and certain industrial uses, would involve routine handling of hazardous materials such as household hazardous substances (e.g., paints, cleaning supplies, solvents and petroleum products) and commercial and industrial hazardous waste. Thus, the 2040 MTP/SCS could increase the amount of hazardous materials handled within 0.25 mile of schools, depending on the specific location of land uses relative to schools in the region. Certain industrial uses, such as chemical plants, may also generate hazardous emissions as byproducts, typically in the form of air emissions.

Any new commercial or industrial operations in proximity to existing schools would be required to comply with regulations related to the routine use, storage and transport of hazardous materials. Land uses that would generate emissions or involve the handling of extremely hazardous materials, substances, or waste within 0.25 mile of an existing school must notify the affected school district pursuant to Public Resources Code Section 21151.4. As discussed in detail above, compliance with existing regulations would reduce the exposure to potential hazards associated with these land uses.

For new schools that may be developed to address the population distribution changes resulting from land use projects included in the 2040 MTP/SCS, the California Education Code, including Education Code Section 17213(b), establishes requirements for assessments and approvals that address the potential for existing contamination on the site, and whether nearby land uses might reasonably be anticipated to emit hazardous air emissions or handle hazardous materials. Assessment of existing contamination is conducted in coordination with DTSC's School Property Evaluation and Cleanup Division, which is responsible for assessing, investigating and cleaning up proposed school sites. This Division ensures that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects the students and staff who will occupy a new school. Therefore, hazardous emissions and handling impacts on schools related to land use projects included in the 2040 MTP/SCS would be less than significant.

The transportation projects included in the 2040 MTP/SCS could increase the capacity to transport hazardous materials on roads within the AMBAG region, including within 0.25 mile of schools. However, all materials must be used, stored and disposed of in accordance with applicable federal,

state and local laws, which would effectively reduce the potential impacts associated with hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or potential future school. Transportation projects in the 2040 MTP/SCS may also improve road safety, thereby reducing the potential for accidents in proximity of schools related to hazardous materials. Therefore, the hazardous materials impacts related to existing and proposed schools from implementation of the transportation projects included in the 2040 MTP/SCS would be less than significant.

Mitigation Measures

Mitigation measures are not required.

Threshold 4: Be located on a site which is included on a list of hazardous materials compiled by the Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment

IMPACT HAZ-6 IMPACT HAZ-3 THE 2040 MTP/SCS INCLUDES LAND USE PROJECTS AND TRANSPORTATION PROJECTS THAT COULD OCCUR ON PREVIOUSLY UNKNOWN HAZARDOUS MATERIAL SITES OR SITES ON THE LIST COMPILED BY GOVERNMENT CODE SECTION 65962.5. THUS, CONSTRUCTION OF THESE PROJECTS COULD CREATE A HAZARD TO THE PUBLIC OR ENVIRONMENT. IMPACTS WOULD BE SIGNIFICANT BUT MITIGABLE.

Throughout the AMBAG region there are many sites where historical releases of hazardous materials or wastes have occurred; these are listed in environmental databases pursuant to Government Code Section 65962.5. As described above, there are hundreds of documented sites of contamination in some stage of DTSC or SWRCB oversight in the region. These sites range from small releases that have had localized effects on private property and have already been remediated to large scale releases from long-term historical industrial practices that have had wider ranging effects on groundwater. Specific sites of documented contamination are not evaluated in this analysis because this is a programmatic level document. Further, because the precise timing of future land use developments is unknown, an evaluation of the potential for specific sites of known contamination within the AMBAG region to be affected by land use projects included in the 2040 MTP/SCS cannot be conducted. However, land use can be used to generally characterize the potential for release of hazardous materials (i.e., hazardous materials releases are more likely to have occurred in areas that currently or historically supported industrial uses). In addition, construction activities that disturb subsurface materials could encounter previously unidentified contamination from past practices or placement of undocumented fill or even unauthorized disposal of hazardous wastes. Encountering these hazardous materials could expose workers, the public or the environment to adverse effects depending on the volume, materials involved and concentrations.

A common practice that is typically required by lending institutions when properties change hands is for a Phase I ESA to be prepared to research and disclose the prior uses of the site and the likelihood that residual hazardous materials and/or waste might be present in underlying soil and/or groundwater. Also, in many instances implementing and/or permitting agencies require submittal of a Phase I ESA prior to approval or implementation of a project. These studies include research in a variety of government databases to determine whether the site has had prior underground tanks or other industrial uses that could result in hazardous materials on or below the ground surface. However, with the exceptions for streamlining projects in transit priority areas and siting public schools, there are no general regulatory requirements to conduct a Phase I ESA, or subsequent

investigation of potential contamination. Therefore, because it cannot be assumed these practices would regularly occur, the impacts related to land use projects included in the 2040 MTP/SCS would be significant because there could be significant hazard to the public or the environment.

Similarly, there would be potential for transportation projects to encounter previously unidentified contamination from past practices on sites that have not been listed in environmental databases pursuant to Government Code Section 65962.5. Thus, the impacts of transportation projects included in the 2040 MTP/SCS would be significant because there could be significant hazard to the public or the environment.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that result in hazardous materials impacts. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

HAZ-3 Site Remediation

If an individual project included in the 2040 MTP/SCS is located on or near a hazardous materials and/or waste site pursuant to Government Code Section 65962.5, or has the potential for residual hazardous materials and/or waste as a result of location and/or prior uses, the implementing agency shall prepare a Phase I ESA in accordance with the American Society for Testing and Materials' E-1527-05 standard. For work requiring any demolition or renovation, the Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done. All recommendations included in a Phase I ESA prepared for a site shall be implemented. If a Phase I ESA indicates the presence or likely presence of contamination, the implementing agency shall require a Phase II ESA, and recommendations of the Phase II ESA shall be fully implemented. Examples of typical recommendations provided in Phase I/II ESAs include removal of contaminated soil in accordance with a soil management plan approved by the local environmental health department; covering stockpiles of contaminated soil to prevent fugitive dust emissions; capturing groundwater encountered during construction in a holding tank for additional testing and characterization and disposal based on its characterization; and development of a health and safety plan for construction workers.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

With implementation of this mitigation, impacts would be reduced to less than significant because project sites with hazardous material contamination that are previously unknown and not included on the list compiled by the Government Code Section 65962.5 would be identified prior to commencement of project construction. Additionally, prior to commencement of construction, measures to remediate contamination, such as containment and disposal of contaminated soil pursuant to federal and state regulations would be required. These measures would prevent

significant hazards to the public or the environment. Thus, impacts would be reduced to a less than significant level.

Threshold 5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area

Threshold 6: For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area

IMPACT HAZ-7 IMPACT HAZ-4 TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE DEVELOPMENT INCLUDED IN THE PROPOSED 2040 MTP/SCS MAY BE LOCATED NEAR A PUBLIC USE AIRPORT OR PRIVATE AIRSTRIP. EXISTING REGULATIONS AND REGULATORY OVERSIGHT WOULD REDUCE THE INHERENT HAZARD OF DEVELOPMENT NEAR AIRPORTS TO SAFE LEVELS, AND IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Land use projects and transportation projects included in the 2040 may be located near a public use airport or a private airstrip. Impacts associated with development near existing airports are largely dependent upon site- and project-specific information that is not currently available and would be provided in the future as projects within the 2040 MTP/SCS undergo project level environmental review. However, any development and subsequent planning decisions in proximity to airports would be subject to review under the State Aeronautics Act provided under Public Utilities Code §§ 21167 et seq. Specific projects that may affect navigable airspace are also subject to FAA review, as outlined under 14 CFR Parts 77.5, 77.7 and 77.9. Additionally, land use development would be subject to existing zoning regulations, including height restrictions. Because there are existing federal, state and local regulations and oversight in place that would effectively reduce the inherent hazard associated with development near airports to an acceptable and safe level, the impacts of the 2040 MTP/SCS would be less than significant.

Mitigation Measures

Mitigation measures are not required.

Threshold 7: Impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan

IMPACT HAZ-8 IMPACT HAZ-5 LAND USE DEVELOPMENT AND TRANSPORTATION PROJECTS INCLUDED IN THE 2040 MTP/SCS COULD INTERFERE WITH EXISTING EMERGENCY AND EVACUATION. HOWEVER, REQUIRED REGULAR UPDATES TO EMERGENCY RESPONSE AND EVACUATION PLANS WOULD ACCOUNT FOR DEVELOPMENT AND PROJECTS. IMPACTS RELATED TO INTERFERENCE OR IMPAIRMENT OF AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN WOULD BE LESS THAN SIGNIFICANT.

Construction of the land use development and transportation projects included in the 2040 MTP/SCS 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 so that alternative evaluation routes could be developed and employed, construction activities would have a less than significant impact.

The land use projects included the 2040 MTP/SCS emphasize infill and transit-oriented development, which would generally focus growth in existing urbanized areas of the AMBAG region. 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 the 2040 MTP/SCS would be reflected in the regular updates of emergency and evacuation plans applicable to the AMBAG 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, congestion for the region is projected to increase between the baseline 2015 conditions and 2040, as discussed in Section 4.14, *Transportation and Circulation*. 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.

Mitigation Measures

Mitigation measures are not required.

Threshold 8: Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands

~~IMPACT HAZ-9~~ ~~IMPACT HAZ-6~~ THE 2040 MTP/SCS INCLUDES LAND DEVELOPMENT AND TRANSPORTATION PROJECTS WITHIN AREAS OF MODERATE, HIGH AND VERY HIGH FIRE HAZARD. INFILL DEVELOPMENT EMPHASIZED IN THE 2040 MTP/SCS AND EXISTING REGULATIONS AND PROGRAMS WOULD REDUCE THE VULNERABILITY OF PEOPLE AND STRUCTURES TO WILDLAND FIRE. HOWEVER, THE RISK OF LOSS, INJURY OR DEATH FROM WILDLAND FIRE WOULD BE POSSIBLE GIVEN THE FIRE HAZARD ACROSS MUCH OF THE AMBAG REGION. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As described above, CAL FIRE has mapped nearly the entire AMBAG region as having moderate, high, or very high fire hazard. The 2040 MTP/SCS focuses on infill development, which would concentrate people and structures in existing urbanized areas where the risk of wildland fire is less than in more rural areas where fuels are more abundant. However, not all projects and development included in the 2040 MTP/SCS would be infill projects in urbanized areas, and some projects would inevitably be located in areas at risk of wildland fires. Examples of projects that would be located in moderate to high fire hazard areas include suburban commercial/mixed use projects on the south side of the City of San Juan Bautista in San Benito County and suburban residential projects on the southeast side of the City of Scotts Valley, in Santa Cruz County.

New construction would be subject to the California Fire Code, which includes safety measures to minimize the threat of fire, 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 CCR sets forth the minimum development standards for emergency access, fuel modification, setback, signage and water supply, which help prevent loss of structures or people by reducing wildfire hazards. The codes and regulations would reduce the risk of loss, injury or death from wildland fire, but not entirely. Thus, because some land use development projects would be located in areas of high or very high fire hazards, and existing codes and regulations cannot fully prevent wildland fires from damaging structures or populations, impacts related to land use included in the 2040 MTP/SCS would be potentially significant.

Similarly, some of the transportation projects included in the 2040 MTP/SCS, such as the Freedom Boulevard Pavement Preservation Project (CO-74SC), would be within highways and transportation corridors that CAL FIRE has mapped as moderate, high, or very high fire hazard. Transportation projects would not expose additional people to risk of wildland fire, but would expose transportation infrastructure to risk of loss or damage to wildland fire. Thus, the impacts of transportation projects included in the 2040 MTP/SCS would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that result in impacts related to wildland fire. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

HAZ-6 Wildland Fire Risk Reduction

If an individual project included in the 2040 MTP/SCS is located within the wildland-urban interface or areas favorable for wildland fires such that project-specific CEQA analysis finds a significant risk of loss, injury or death from fire, the implementing agency shall require appropriate mitigation to reduce the risk. Examples of mitigation to reduce risk of loss, injury or death from wildfire include, but are not limited to:

- Avoid introducing new or expanded development such as residential subdivisions, schools and hospitals into fire-prone, fire-controlled ecologies (e.g., indigenous Monterey pine forest, Santa Cruz sand hills/knobcone pine forest, coastal maritime chaparral).
- Require adherence to the local hazards mitigation plan, as well as the local general plan policies and programs aimed at reducing the risk of wildland fires through land use compatibility, training, sustainable development, brush management, public outreach and service standards for fire departments.
- Encourage the use of fire-resistant vegetation native to the AMBAG region and/or the local microclimate of the project site and discourage the use of fire-prone species especially non-native, invasive species such as pampas grass or giant reed.
- 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 wildland fires 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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 wildland fire would be reduced. These measures would make structures more fire resistant and less vulnerable to loss in the event of a wildland fire. These measures would also reduce the potential for construction of the 2040 MTP/SCS projects to inadvertently ignite a wildland fire. However, it is not possible to entirely prevent wildland fires or fully protect people and structures from the risks of wildland fires, despite implementation of mitigation. Thus, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

c. Specific 2040 MTP/SCS Projects That May Result in Impacts

The analysis within this section discusses the potential hazards and hazardous materials related impacts associated with the transportation improvement projects included in the 2040 MTP/SCS. The projects within the 2040 MTP/SCS are evaluated herein in their entirety and all would be subject to existing federal, state and local regulations and programs that regulate and manage hazards and hazardous materials. As described above, the 2040 MTP/SCS includes transportation projects that could increase the transport, use, storage and disposal of hazardous materials and waste within the AMBAG region. A comprehensive list of specific projects that could increase the transport, use, storage and disposal of hazardous materials and waste within the AMBAG region cannot be provided in this section because the specific location of land use development projects is undetermined. However, the transportation projects listed in Table 35Table 16 would involve increasing the capacity on roads that the U.S. DOT has identified as hazardous material routes. Increasing the capacity of these roads could increase the amount of hazardous material and waste transported on the roads. In addition to the projects listed in the table, construction of any number of the transportation projects would presumably require the use of petroleum products, at a minimum.

Table 35 2040 MTP/SCS Projects that May Result in Increased Transport of Hazardous Materials

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-CT011-CT	SR 68 - Commuter Improvements	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
MON-CT017-CT	SR 68 - (Holman Hwy - access to Community Hospital)	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
MON-CT022-CT	SR 156 - Corridor Widening Project	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
MON-CT030-SL	U.S. 101 - Salinas Corridor	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
MON-GRN008-GR	U.S. 101 - Walnut Avenue Interchange	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SB-COG-A54	State Route 25 Corridor Improvements Project	San Benito County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SB-CT-A01	SR 156 Widening - San Juan Bautista to Union Road	San Benito County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SB-CT-A17	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	San Benito County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SB-CT-A44	Highway 25 4-Lane Widening, Phase 1	San Benito County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-RTC-24e-RTC	<u>3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street</u> 3 - Hwy 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport

AMBAG Project No.	Projects	Location	Impact	Description of Impact
SC-RTC-24g-RTC	4 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-RTC 24f-RTC	2 - Hwy 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Ped Bridge	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-RTC 24r-RTC	94 - Hwy 1: Northbound Auxiliary Lane from San Andreas Road/Larkin Valley Road to Freedom Boulevard	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-SC-38-SCR	Hwy 1/San Lorenzo Bridge Replacement	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-SC-P81-SCR	Hwy 1/Mission Street at Chestnut/King/Union Intersection Modification	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport

As described above, the land use development and transportation projects could also be located on hazardous material sites, including sites on the list compiled by Government Code Section 65962.5 (i.e., Cortese list). Land use development would also locate structures and people in areas susceptible to wildland fire hazards. However, there are no specific projects that can be listed in this section because the specific timing of land use development projects is undetermined.

As described above, some of the land use development and transportation projects would be located within areas that CAL FIRE has mapped as moderate, high, or very high fire hazard. Additionally, catastrophic fires could occur anywhere in the AMBAG region. Thus, any number of the projects included in the 2040 MTP/SCS could be susceptible to risk of wildland fire impacts.

d. Cumulative Impacts

Impacts associated with hazards and hazardous materials related to implementation of the 2040 MTP/SCS are analyzed above. Hazards and hazardous materials impacts may be related to: 1) the transport, use, storage or disposal of hazardous materials; 2) reasonably foreseeable upset or accidental conditions involving the release of hazardous materials; 3) emission of hazardous materials within 0.25 mile of a school; 4) location on an unknown or known hazardous materials site; 5) airport related hazards; 6) conflicts with emergency response plans; and 7) wildland fires.

The potential impacts related to items 1, 2, 3, and 4, listed above, are generally related to site-specific and project-specific characteristics and conditions, and would not be significantly affected by other development outside of the AMBAG region. Although the transport of hazardous materials may occur on rail or on roadways, such as U.S. Highway 101, that traverse both the AMBAG region and adjacent counties, there are existing federal, state and local regulations and oversight in place that would effectively reduce the inherent hazard associated with routine transport of such materials. Regulations and oversight, as outlined in the impacts analysis above, would also

effectively reduce the potential for individual projects to create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions, within the AMBAG region as well as adjoining counties. Thus, the cumulative impacts related to items 1 through 4, listed above, would be less than significant.

Impacts related to airport hazards are also site specific depending on the characteristics and design of individual projects and their location relative to distance and location of nearby airports. Existing regulations place limitations on the types of development that can be permitted within various aircraft zones surrounding an airport, such as building height restrictions or prohibiting residential occupancy. Mandatory compliance with these regulations would prevent substantial hazards related to airports. Cumulative impacts would be less than significant.

Emergency response plans are generally specific to a particular city or county or parts thereof. For example, in the event of an imminent emergency in Monterey County, emergency response is typically from police, ambulance and fire departments local to the county, and not from areas outside of the AMBAG region, such as Santa Clara County. Thus, the cumulative impacts related to conflict with emergency response plans would be less than significant.

Transportation projects and the land use pattern included in the 2040 MTP/SCS would locate structures and population within areas mapped as moderate, high or very high fire hazards. There are numerous structures located, and people currently residing, within areas of the AMBAG region and surrounding counties that have also been mapped as a fire hazard zone. The risk of loss from existing development and the anticipated growth within the AMBAG region and surrounding counties, combined with similar risk from growth in surrounding counties, would result in cumulative impacts related to wildland fire hazards. Although Mitigation Measure HAZ-6 would make structures implemented in accordance with the 2040 MTP/SCS more fire resistant and reduce the potential for wildland fire ignition, the risk of wildland fires would not be eliminated entirely. Thus, the impacts of the 2040 MTP/SCS with regard to wildfire fire hazards would be cumulatively considerable.

4.10 Hydrology and Water Quality

This section describes water quality, groundwater supply, drainage, runoff, flooding and dam inundation impacts of development facilitated by the 2040 MTP/SCS.

4.10.1 Setting

The AMBAG region contains two primary watersheds: the Salinas River Valley, which is the third-longest river in California and traverses the length of Monterey County and the Pajaro River Valley, the primary tributary of which begins in San Benito County and runs through southeastern Santa Cruz County (Regional Water Management Group [RWMG] 2013). In addition, several smaller watersheds are located between the western face of the Coast Range mountains and the Pacific Ocean in both Monterey and Santa Cruz Counties and in the southwest and northeast portions of San Benito County.

The Salinas River originates at the Santa Margarita Reservoir in San Luis Obispo County, just to the south of AMBAG's planning area, and extends approximately 155 miles northward to the Monterey Bay (RWMG 2013). The headwaters of the Salinas River are generally undeveloped, while the remainder of the valley is predominantly agricultural with several urban areas, the largest being the City of Salinas.

The California Integrated Regional Water Management (IRWM) Planning is a process that promotes prioritizing water related efforts in a region identifying and implementing water management solutions throughout that region. Based on information provided in the IRWMs plans in the Monterey Bay area, the following discussion of hydrology and water resources is divided into the following four geographic areas: (1) greater Monterey County, (2) the Monterey Peninsula area, (3) the Pajaro River Watershed and (4) northern Santa Cruz County. Greater Monterey County generally includes the entire Salinas River Watershed north of the San Luis Obispo County line, all of the Gabilan and Bolsa Nueva Watersheds in the northern part of the County, and all of the coastal watersheds of the Big Sur coastal region within Monterey County (Monterey County 2013; Pajaro Valley Water Management Agency [PVWMA] et al. 2014). The Monterey Peninsula area lies between the Salinas River and the Big Sur coast, from Point Lobos on the south to Sand City on the north. The Pajaro River Watershed is bound by the Santa Cruz Mountains to the north and Gabilan Range to the south, while its water drains into Monterey Bay (PVWMA et al. 2014). The northern Santa Cruz County region encompasses all of Santa Cruz County except for the Pajaro River Watershed (County of Santa Cruz 2014).

a. Water Quality

Water quality is a concern because of its potential effect on human health, 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

In the AMBAG region, polluted stormwater and urban runoff discharges have degraded the water quality of creeks, rivers, sloughs, reservoirs and the Pacific Ocean. Runoff pollutants can include pesticides, fertilizers, green waste, animal waste, human waste, petroleum hydrocarbons such as gasoline and motor oil, trash and other constituents. Due to the prevalence of agriculture in the

Salinas River Valley and the lower Pajaro Valley, pesticide-laden runoff is one of the primary sources of surface water contamination, as shown below in Table 36. In addition, 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 from farmland and transportation facilities are referred to as “non-point” sources because the pollutants are generated from multiple locations rather than a single source and location. Many of these discharges result in untreated pollutants entering waterways. Pollutants contained within urban runoff primarily include suspended solids, oil, grease, pesticides, pathogens and air pollutants.

The State Water Resources Control Board (SWRCB), in compliance with the Clean Water Act (CWA), Section 303(d), has prepared a list of impaired water bodies in the State of California. Table 36 shows the major water bodies in greater Monterey Bay area that are listed as impaired by SWRCB.

The impairments listed in Table 36 indicate that the Pajaro River and lower Salinas River experience the broadest array of water quality issues, primarily due to pesticides and other substances in agricultural runoff. Polluted runoff has also impaired the ocean as well as inland waterways. The Northern Santa Cruz County IRWMP states that urban runoff has degraded water quality at moderate levels in coastal lagoons and at ocean beaches. Sewer leaks and overflows contribute to this problem (County of Santa Cruz 2014). All urban lagoons in the planning region are posted as unsafe for swimming year-round due to high bacteria levels. Furthermore, local beaches are frequently posted as unsafe for human contact in response to elevated bacteria. Santa Cruz County has had 50-100 beach-days of posting every year since AB 411 reporting began in 1999 (County of Santa Cruz 2014).

To address surface water quality impairments, the Central Coast Regional Water Quality Control Board (RWQCB) has prescribed total maximum daily loads (TMDLs) in the AMBAG region for nitrates, sediment, pathogens and mercury (PVWMA et al. 2014). The nitrate and sediment TMDLs, completed in 2012, identified irrigated agriculture as a substantial anthropogenic source of both nitrate and sediment loading.

Table 36 Major Water Bodies Listed as Impaired

Water Body	Impairment Constituent
Monterey County	
Alisal Creek	Chlorophyll-a, Fecal Coliform, Nitrate, Sodium
Elkhorn Slough	Low Dissolved Oxygen, Pesticides, Sediment/Sedimentation, Total Coliform, pH
Espinosa Lake	Chlorpyrifos, Diazinon
Monterey Harbor	Metals, Sediment Toxicity
Moro Cojo Slough	Ammonia (Unionized), <i>E. coli</i> , Low Dissolved Oxygen, Pesticides, Sediment/Sedimentation, Total Coliform, pH
Moss Landing Harbor	Chlorpyrifos, Diazinon, Low Dissolved Oxygen, Nickel, Pathogens, Pesticides, Sediment Toxicity, pH
Salina River (middle, near Gonzales Road crossing to confluence with Nacimiento River)	<i>E. coli</i> , Fecal Coliform, Pesticides, Temperature, Turbidity, Unknown Toxicity, pH
Salina River (middle, near Gonzales Road crossing to confluence with Nacimiento River)	<i>E. coli</i> , Fecal Coliform, Pesticides, Temperature, Turbidity, Unknown Toxicity, pH
Salinas River Lagoon (North)	Nutrients, Pesticides
Salinas River Lagoon (South)	Turbidity, pH
San Antonio River (below San Antonio Reservoir)	<i>E. coli</i> , Fecal Coliform
San Benito County	
San Benito River	Boron, Electrical Conductivity, <i>E. coli</i> , Fecal Coliform, Sedimentation/Siltation, Unknown Toxicity, pH
Santa Cruz County	
Harkins Slough	Chlorophyll-a, Low Dissolved Oxygen, Pathogens
Pacific Ocean (Point Año Nuevo to Soquel Point)	Dieldrin
Pajaro River	Boron, Chlordane, Chloride, Chlorpyrifos, DDD (Dichlorodiphenyldichloroethane), Dieldrin, <i>E. coli</i> , Fecal Coliform, Low Dissolved Oxygen, Nitrate, Nutrients, PCBs (Polychlorinated biphenyls), Sediment/Siltation, Sodium, Turbidity, pH
San Lorenzo River	Chlordane, Chlorpyrifos, Nutrients, PCBs, Pathogens, Sedimentation/Siltation,
San Lorenzo Lagoon	Pathogens
Watsonville Slough	Low Dissolved Oxygen, Pathogens, Pesticides, Turbidity
Watsonville Slough	Low Dissolved Oxygen, Pathogens, Pesticides, Turbidity
Source: State Water Resources Control Board, 2012 Integrated Report, 303(D) Listed Waters. http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml	

c. Water Supply

Greater Monterey County

Local groundwater and surface water provide the water supply for the greater Monterey County region. The primary source of water for most users in the area is groundwater, which is largely extracted from the Salinas Valley Groundwater Basin (RWMG 2013). In 2010, an estimated total of 460,443 acre-feet (AF) was pumped from this groundwater basin, including 416,421 AF for agriculture and 44,022 AF for urban areas. In general, 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”). Despite groundwater recharge from infiltration in river beds and from deep percolation of rainfall, the Greater Monterey County Integrated Regional Water Management Plan (RWMG 2013) found an overdraft of groundwater by 17,000 acre-feet per year (AFY) in 1995 and projected an overdraft of 14,700 AFY in 2030.

Monterey Peninsula Area

The total usable storage of water in the Monterey Peninsula area is estimated at 37,500 AF (MPWMD 2014). Groundwater from the Carmel River and Seaside Basins comprise the majority of this water supply, while the Los Padres Dam and Reservoir on the Carmel River account for less than two percent of total storage. In the Carmel River Basin, which provides about 70 percent of the area’s domestic water supply, pumping of wells causes substantial declines in groundwater levels during the dry season and leads to decreased surface flows in the Lower Carmel River along as much as nine river miles. Complete recharge of this aquifer generally occurs quite rapidly after winter rains commence and the Carmel River begins flowing into the dry reaches.

To meet municipal demand above the level that can be supplied from the Carmel River Basin, water is pumped from a well field in the Seaside Groundwater Basin (MPWMD 2014). The Seaside Groundwater Basin underlies a hilly coastal plain that slopes northward toward the Salinas Valley and westward toward Monterey Bay. Groundwater extraction near the coast increased markedly beginning in 1995, resulting in declining water levels and depletion of groundwater storage. Although sustainable yield from the Seaside Basin is estimated at 2,880 AFY, basin-wide groundwater withdrawals in recent years have been on the order of 5,600 AFY. In 2006, a Final Decision was rendered that adjudicated the basin and set a three-year goal aimed at reducing annual extractions to 3,000 AFY, which is termed the “natural safe yield” (MPWMD 2014).

Beyond the groundwater supply, desalination could be combined with aquifer storage and recovery in the Seaside Groundwater Basin to meet the Monterey Peninsula’s potable water supply needs. The Monterey Peninsula Water Supply project includes construction of a desalination plant in Marina that would produce 6,250 AFY and serve 112,000 people in cities throughout Monterey County (MPWSP 2017). The project has three components: desalination, aquifer storage and recovery and Pure Water Monterey (groundwater replenishment). Additionally, Monterey County is examining alternatives for Los Padres Dam to utilize the water supply and there is a project in the Carmel Area Water District to produce and distribute recycled water. The pipelines currently being installed to transport water from Pure Water Monterey and the desalination facility in Marina are anticipated to be completed by the end of 2017. Although some infrastructure is currently being installed, for the purposes of this analysis, the desalination plant itself is considered speculative.

Pajaro River Watershed

Water supply in the Pajaro River Watershed primarily consists of groundwater, with an estimated sustainable yield of 24,000 AFY (PVWMA n.d.). In the coastal portion of the watershed, groundwater has routinely been pumped above the safe yield level. Users in the lower Pajaro Valley pump nearly twice the sustainable yield of the Valley’s groundwater basin annually (Pacific Institute 2013). In addition to groundwater, imported water from the Central Valley Project (CVP) is delivered to the watershed from the San Luis Reservoir. On average, CVP deliveries total 31,000 AFY for agriculture and 95,800 AFY for municipal and industrial services (PVWMA et al. 2014). After accounting for these water resources, the Pajaro River Watershed Integrated Regional Water Management Plan

(PVWMA et al. 2014) projects a supply gap of 10,000 AFY to meet projected demand in 2035. This is down from the projected supply gap of about 70,000 AFY in the 2007 Integrated Regional Water Management Plan (PVWMA et al. 2014). In response to water shortage, the use of recycled water in the watershed is increasing. A recycled water facility in Watsonville is fully operational and produces approximately 4,000 AFY of recycled water for agricultural customers along the Pajaro Valley coast (PVWMA et al. 2014).

Santa Cruz County

Local groundwater and surface water contribute to the water supply of northern Santa Cruz County. Four primary groundwater basins are located in this area: the Santa Margarita-Lompico Basin west of Scotts Valley, the Purisima Basin under Capitola and to the north, the Aromas Basin to the southeast and the Pajaro Valley Alluvium Basin in the Watsonville area (County of Santa Cruz 2014). Current water needs exceed available supplies in large parts of each of the four basins of the region. The two primary aquifers that comprise the Santa Margarita-Lompico Basin are both in overdraft. Aquifers underlying the Soquel–Aptos area are also in overdraft. Additional water is not available from these sources to support current levels of demand or even modest future growth. For the City of Santa Cruz, approximately 95 percent of its water supply comes from surface sources, such as the San Lorenzo River, augmented by three wells which pump from the Purisima aquifer (Cross 2013). This aquifer also serves the Soquel Creek Water District, the Central Water District, several smaller water systems and hundreds of private wells (City of Santa Cruz 2013). Water demand for the region is projected to exceed the projected supply by 591 AFY in a normal year and 5,930 AFY in multiple dry years (County of Santa Cruz 2014).

Groundwater

Greater Monterey County

Nitrogen in the lower Salinas Valley Watershed, in the form of nitrate, is the primary contaminant of the Salinas Valley Groundwater Basin (RWMG 2013). Nitrate contamination in the Salinas Valley results primarily from the use of nitrogen-based synthetic fertilizers for irrigated agriculture and commonly occurs in the unconfined and semi-confined aquifers that underlie areas of intense agricultural activity. However, nitrate contamination can also be caused from septic system failures, from wastewater treatment ponds located in floodplains that convey sewage during flood events, and from livestock waste. All of the Salinas Valley cities have had to replace domestic water wells because nitrate levels have exceeded drinking water standards (RWMG 2013).

The intrusion of seawater poses another threat to groundwater quality in the Salinas Valley Groundwater Basin (RWMG 2013). As both irrigated agriculture and urban development have increased during the past several decades, groundwater demand has exceeded available recharge. Seawater intrusion was first observed in a few wells in the Castroville area in 1932. It is estimated that the Salinas Valley Groundwater Basin has an average annual non-drought overdraft of approximately 50,000 AF, although during a recent drought the annual overdraft was estimated at 150,000–300,000 AFY (RWMG 2013). As a result of this consistent overdraft, groundwater levels in the Salinas Valley Groundwater Basin have dropped below sea level, allowing seawater to intrude from Monterey Bay into aquifers located 180 and 400 feet below ground surface. Since the mid-1990s, recycled water distributed by the Castroville Seawater Intrusion Project within the “front area” of seawater intrusion has reduced groundwater pumping there, slowing the advance of seawater. In addition, a recent study (Monterey County Weekly, 2017; MCWD 2017) found that shallow aquifers around Marina contain a considerable amount of freshwater, suggesting that

seawater intrusion may not be as severe as previously thought. However, sea level rise would increase the pressure of saltwater on the coastal Salinas Valley Groundwater Basin aquifers, causing increased seawater intrusion (RWMG 2013).

Monterey Peninsula Area

Recent monitoring of groundwater in the Carmel River Basin has focused on temperature and seawater intrusion, while the Seaside Coastal Subarea has focused monitoring on the potential for seawater intrusion and other contaminants (MPWMD 2014). This monitoring effort has not indicated substantial changes in water quality or revealed any evidence of seawater intrusion in either groundwater basin (MPWMD 2014).

Santa Cruz County

Seawater intrusion occurs in the mid-County as well as Watsonville Slough watersheds, jeopardizing groundwater supply. In addition, much of the county's groundwater has naturally high concentrations of arsenic and chromium VI. In unincorporated areas, potential sources of nitrate pollution include septic systems, livestock and agricultural operations. On a more localized level, leakage and spills from gas stations, dry cleaners and other hazardous materials sites has caused groundwater contamination. Groundwater underlying the Watsonville Sloughs Watershed also has substantial nitrate contamination (County of Santa Cruz 2014). In the coastal Purisima Formation, seawater threatens wells in the City of Santa Cruz and Soquel Creek Water District (Cross 2013). Due to intrusion at the Soquel Point Well, the City of Santa Cruz and the Soquel Creek Water District drilled a new well near 41st avenue to allow shifting of pumping away from the coast (County of Santa Cruz 2016).

Pajaro River Watershed

Groundwater in the Pajaro River Watershed is affected by several contaminants: seawater intrusion along the coast, perchlorate plumes in San Martin and Hollister and salinity in the upper watershed (PVWMA et al. 2014). Seawater intrusion contributes to salt contamination of groundwater up to three miles inland, which renders groundwater unusable for growing many high value crops in this agricultural area (Pacific Institute 2013). The north Elkhorn Slough has reported gradual encroachment of seawater intrusion (100 mg/L chloride) and south Elkhorn Slough has reported seawater intrusion in the 180-foot aquifer (500 mg/L chloride). Other water quality concerns include nitrates, manganese and methyl tertiary butyl ether (MTBE) from leaking underground storage tanks with gasoline (PVWMA et al 2014).

d. Flooding and Dam Inundation

Flooding can occur during periods of excessive rainfall or as a result of wave run-up along the coast (Monterey County 2014). Flooding in steep, mountainous areas is usually confined to the stream channel and adjacent floodplain. Larger rivers typically have longer, more predictable flooding sequences and broad floodplains.

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 (Monterey County 2014).

Monterey County

In Monterey County, substantial wave run-up can take place during storms in the Pacific Ocean between November and February, in conjunction with high tides and strong winds. Portions of Monterey County most susceptible to flooding are the Salinas Valley, the City of Seaside, the City of Monterey and the Elkhorn Slough area (Figure 28) (Monterey County 2014). Three major dams and reservoirs, as well as several small dams, are located in and within the vicinity of Monterey County (Monterey County 2014). According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan, the three largest dams (Nacimiento, San Antonio and Los Padres dams) have never failed or been subject to substantial damage. San Clemente Dam was removed in 2015.

Dam inundation maps show that the greatest risk from dam failure is in Carmel Valley, where failure of the Los Padres Dam would cause inundation of urbanized areas (Monterey County 2014). Dam failure in Salinas Valley would also cause substantial inundation, whether caused by the failure of San Antonio or Nacimiento Reservoir. Studies reveal that either failure would overflow the 100-year floodplain in Salinas Valley. However, the risk would predominately be to agricultural land.

San Benito County

The San Juan and Hollister Valleys in northern San Benito County are most susceptible to 100-year floods. In addition, flooding may occur from landslide blockage of canyons and, as discussed below, from dam failure (Figure 29).

San Benito County may be subject to dam inundation from three surface reservoirs within the County - Hernandez, Paicines and San Justo - and from the Leroy Anderson Dam in neighboring Santa Clara County to the north (San Benito County 2015d). The San Justo and Leroy Anderson Dams are located near urban areas. In the event of complete dam failure, water could inundate the San Juan Valley; however, the probability of such an occurrence is low (San Benito County 2015d).

Santa Cruz County

The Pajaro and San Lorenzo River Valleys are subject to flooding (Santa Cruz County 2015a). The Pajaro River and adjacent floodplain runs through agricultural lands within the Pajaro Valley and, downstream, through downtown Watsonville. The San Lorenzo River runs through the populated San Lorenzo Valley and into downtown Santa Cruz (Figure 30). A levee was constructed along the San Lorenzo River in Santa Cruz in 2002 which has substantially reduced the flood risk for downtown residents, merchants and landowners (Santa Cruz County 2015a).

Given their location, a major dam failure at either the Bay Street Reservoir or Newell Creek Dam could result in extensive property damage or loss of life in the San Lorenzo Valley and the City of Santa Cruz (Santa Cruz County 2015a). A dam failure at either the Mill Creek, Oak Site, or Sempervirens Dams could affect people and property in northern Santa Cruz County, to the east of the community of Boulder Creek. Soda Lake is a storage facility for fine-grained material or "fines" from the Wilson Quarry in San Benito County. Failure of the Soda Lake levees could potentially release this material and impact one or more nearby residences and encroach upon Highway 129. Although located in neighboring counties, a failure of the Elmer J Chesbro, Uvas, or San Justo dams could potentially impact people and properties along the Pajaro River in Santa Cruz County. Given the monitoring protocol at the Newell Creek and Bay Street reservoirs, the probability of dam failure is very low (Santa Cruz County 2015a).

Figure 28 Monterey County Flood Map

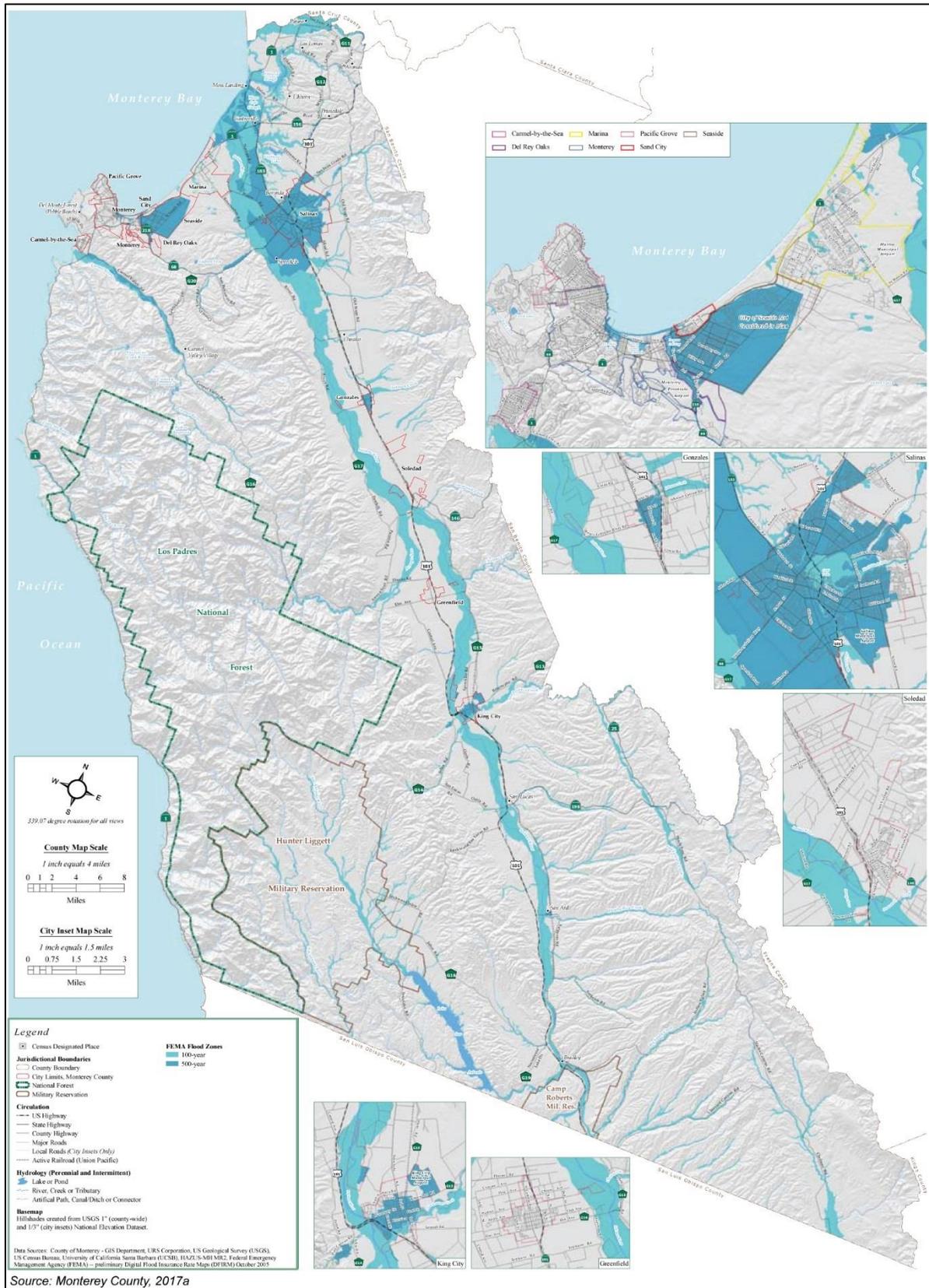


Figure 29 San Benito County Flood Map

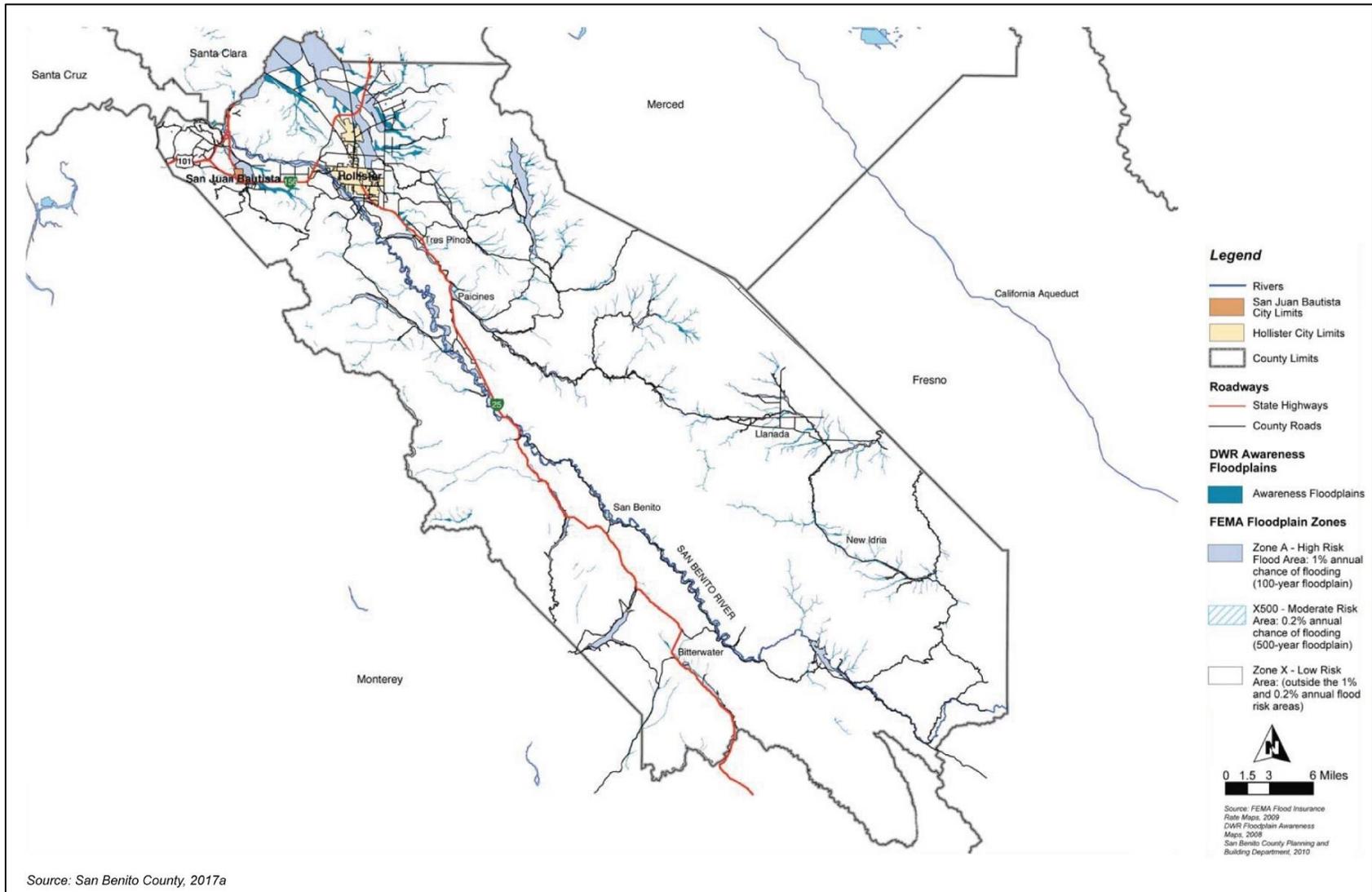
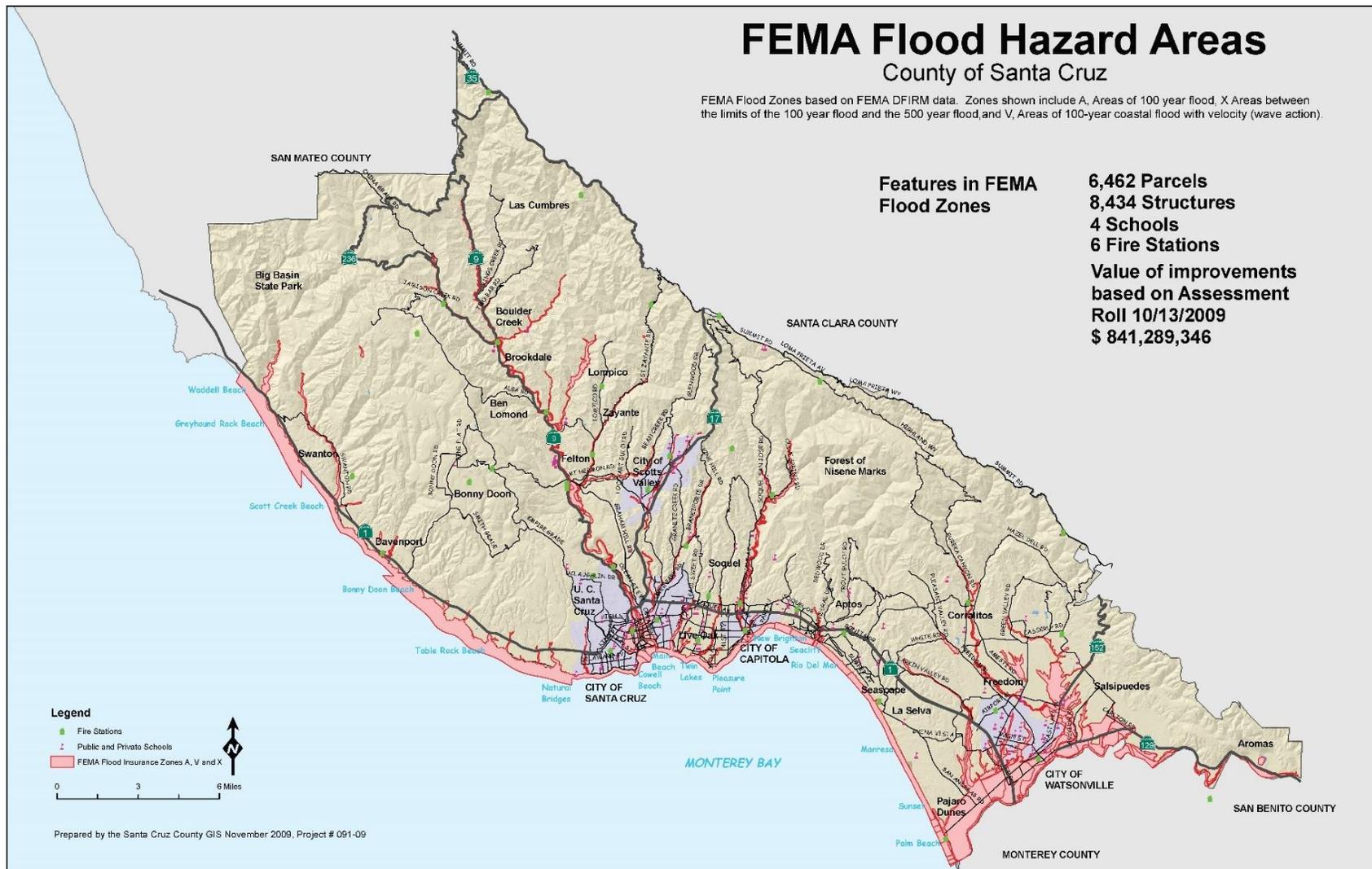


Figure 30 Santa Cruz County Flood Map



Source: Santa Cruz County GISWeb, 2012.

e. Tsunami and Seiche

Tsunamis are high sea waves that are caused by earthquake, submarine landslide, or other disturbances. A seiche is a temporary disturbance or oscillation in water level of a lake or partially enclosed body of water, usually caused by changes in atmospheric pressure.

Monterey County

With approximately 100 miles of Pacific Ocean coastline, Monterey County is subject to the hazard of tsunamis. In the last 200 years, eight observed tsunamis have affected Monterey County (Monterey County 2014). Almost all of these tsunamis were produced by earthquakes and resulted in wave run-ups of one meter or less. Coastal low-lying areas and riverine valleys in northern Monterey County are highly susceptible to tsunamis. For example, areas as far inland as Castroville are susceptible to a moderate tsunami run-up (less than 21 feet), and areas as far inland as downtown Salinas and Castroville are susceptible to extreme tsunami run-ups (21 feet to 50 feet). The Monterey County Multi-Jurisdictional Hazard Mitigation Plan does not identify hazards from seiches (Monterey County 2014).

San Benito County

San Benito County is an inland county separated from the Pacific Ocean by the Coast Range and does not contain any large bodies of water. Therefore, according to the San Benito County General Plan EIR (2015b), the County is not vulnerable to tsunamis or seiches.

Santa Cruz County

Some damage associated with tsunamis has occurred along the Santa Cruz County coastline, specifically from the magnitude 9.0 earthquake in Japan in 2011 (Santa Cruz County 2015a). Like Monterey County, the Santa Cruz County coastline could be impacted during a tsunami event. Areas most susceptible as referenced in the Santa Cruz County Local Hazard Mitigation Plan are located in proximity to the Pajaro River mouth and low-lying coastal areas between the cities of Santa Cruz and Capitola. Seiches are not identified as a geologic hazard in Santa Cruz County (Santa Cruz County 2015a).

f. Regulatory Setting

Federal

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. The AMBAG region is within a region administered by the NCRWQCB.

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 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 on 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.

State

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 AMBAG 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 AMBAG region include: Pajaro Valley Water Management Agency, Salinas Valley Basin Groundwater Sustainability Agency, Arroyo Seco Groundwater Sustainability Agency, Marina Coast Water District, Monterey Peninsula Water Management District, County of Santa Cruz – West Santa Cruz Terrace, Santa Margarita Groundwater Agency, and the San Benito County Water District Groundwater Sustainability Agency (DWR 2017). These agencies will prepare the required GSPs for their respective groundwater basins. The Santa Margarita Groundwater Agency is anticipating having their GSP completed by March 2018. For all other GSAs, they have until January 31, 2020 to be managed under a GSP and the GSP should be updated every five years. 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 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.

Industrial General Permit

The Industrial General Permit (Order 2014-0057-DWQ) regulates industrial stormwater discharges and authorized non-stormwater discharges from industrial facilities in California. The Industrial General Permit is called a general permit because many industrial facilities are covered by the same permit, but comply with its requirements at their individual industrial facilities. The SWRCB and RWQCBs implement and enforce the Industrial General Permit, which may impact any industrial development under the 2040 MTP/SCS land use scenario.

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 the 2040 MTP/SCS, 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

of 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 where it should before construction begins.

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

Monterey County

The Monterey County Code Chapter 16.14, Urban Stormwater Quality Management and Discharge, was adopted to enhance watercourses within the unincorporated Urbanized Areas by controlling the entry of urban pollutants into stormwater runoff that may enter the County storm drain system. Other goals of this chapter include, but are not limited to: benefit the people and the environment of the County by protecting water quality in the waters within its jurisdiction, reduce the presence of pollutants in stormwater to the maximum extent practicable, and effectively prohibit non-stormwater discharges into the County storm drain system. In addition, Monterey County has adopted an Agricultural Water Conservation Plan (Ordinance 3851) requiring growers in agricultural zoned property to file plans with the Monterey County Water Resources Agency showing water conservation measures implemented during the previous year. Similarly, an ordinance requiring the filing of Urban Water Conservation Plans (Ordinance 3886) was adopted in 1996. Monterey County Code Section 16.16.050 contains provisions for flood hazard reduction. Provisions include anchoring, construction materials and methods, elevation and floodproofing and flood openings.

The Monterey County General Plan (Monterey County, 2010) Conservation and Open Space Element contains goals and policies related to hydrology and water quality. Specifically, Goal OS-3 is to “prevent soil erosion to conserve soils and enhance water quality.” Related policies under Goal OS-3 are to implement BMPs (Policy OS-3.1), establish criteria to evaluate and address drainage, water

quality and stream stability problems from increased stormwater runoff (Policy OS-3.3), and regulation of activity on slopes to reduce water quality impacts (Policy OS-3.5).

Monterey County, along with the Monterey Peninsula cities of Carmel-by-the-Sea, Del Rey Oaks, Monterey, Pacific Grove, Sand City and Seaside, is a participating member of the Monterey Regional Storm Water Management Program (MRSWMP). Participating members collaborate on projects and other Permit-related activities to satisfy a number of their individual MS4 General Permit requirements.

The 2010 Urban Water Management Plan for the California-American Water Company's Central Division – Monterey County District covers most of the Monterey Peninsula including the incorporated cities of Carmel-by-the-Sea, Del Rey Oaks, Monterey, Pacific Grove, Sand City and Seaside as well as the unincorporated communities of Pebble Beach, Carmel Valley East and West, Carmel Highlands and the Presidio of Monterey (California American Water Company 2012). Total water use in the plan region is anticipated to be 13,936 AFY in 2030 while projected water supply in 2030 is 16,276 AFY. Therefore, there is sufficient supply to meet the projected demand in the service area (California American Water Company 2012). The 2010 UWMP includes conservation measures and BMPs that are currently being implemented or are in the process of being implemented to reduce water demand in the area as well as water supply reliability and water shortage contingency planning.

San Benito County

The San Benito County Code of Ordinances Chapter 19.17, Grading, Drainage and Erosion Control, sets forth rules and regulations to control excavation, grading, drainage and erosion, establishes the administrative procedure for issuance of permits, and provides for approval of plans and inspection of grading construction, drainage measures and erosion control methods. Pursuant to Section 19.17.011(c), in granting a grading permit, the County may attach such conditions as necessary to prevent creation of a public nuisance or hazard to public or private property. The conditions may include, but are not limited to:

- The use of check dams, cribbing, rip rap or other devices to prevent erosion;
- Application of mulching, fertilizing, watering or other methods to establish new vegetation, and stockpiling and reapplication of top soil;
- Restricting the locations of where earth or organic material may be deposited;
- Requiring the preparation of erosion control plans indicating proposed methods for the control of runoff, erosion and sediment control;
- Requiring the preparation of revegetation plans detailing the revegetation of all exposed surfaces during development; and
- Requiring the preparation of drainage plans that include on-site retention of water to pre-development levels

Increases in peak stormwater flows are addressed in the San Benito County Code of Ordinances, Title 23 (Subdivision Ordinance), Chapter 23.31 (Improvement Designs), Article III (Storm Drainage Design Standards). These standards focus on the 100-year design storm standard for the sizing of detention basins used to provide peak flow attenuation. Chapter 15.05 of the San Benito County Code governs the utilization of water resources in the County. It provides for a permitting system for the extraction of groundwater as well as measures intended to protect these resources. Section 19.15 of the San Benito County Code of Ordinances contains provisions for flood hazard reduction

for construction, utilities, subdivisions, recreational vehicles and manufactured homes. Specific construction standards include anchoring, elevation and floodproofing and construction materials and methods.

The San Benito County 2035 General Plan (San Benito County, 2015a) Public Facilities and Services Element and Natural and Cultural Resources Element contain goals and policies specific to hydrology and water quality. Specifically, Public Facilities and Services Element Goal PFS-3 is to “ensure reliable supplies of water for unincorporated areas to meet the needs of existing and future agriculture and development, while promoting water conservation and the use of sustainable water supply sources.” Related policies under Goal PFS-3 include water district support (PFS-3.1), water rights protection (PFS-3.3), drought response (PFS-3.5), groundwater management (PFS-3.7) and integrated management (PFS-3.8). Additionally, Public Facilities and Services Element Goal PFS-6 is “to manage stormwater from existing and future development using methods that reduce potential flooding, maintain natural water quality, enhance percolation for groundwater recharge, and provide opportunities for reuse.” This goal is supported by policies PFS-6.1 for adequate stormwater facilities, PFS-6.2 use of best management practices, PFS-6.3 natural drainage design, PFS-6.7 runoff water quality, and PFS-6.8 Reduce Erosion and Sedimentation. The Natural and Cultural Resources Element contains Policy NCR-4 related to water resources, which is “to protect water quantity and quality in natural water bodies and groundwater basins and avoid overdraft of groundwater resources.” The goal is supported by Policy NCR-4.2 water quality tests, Policy NCR-4.5 groundwater recharge, and Policy NCR-4.7 best management practices.

San Benito County is a member of the Pajaro River Watershed Flood Prevention Authority, established in 2000, with the mission to identify, fund and implement flood prevention and control strategies in the Pajaro River Watershed.

The City of Hollister updated their UWMP, the 2015 Hollister Urban Area Water Management Plan, in July 2016 (City of Hollister 2015). The Hollister UWMP is a collaborative effort between the San Benito County Water District, Sunnyslope County Water District, and the City of Hollister and builds on and updates the 2010 UWMP. The Hollister UWMP covers 20 square miles of the City of Hollister and some unincorporated county lands surrounding the City. Future water demand and water supply have been calculated in the Hollister UWMP. Projected potable 2035 water demand and water supply is 10,170 AFY (City of Hollister 2015).

Santa Cruz County

The Santa Cruz County Code of Ordinances Chapter 7.79 sets forth rules and regulations to control runoff and pollution by protecting the surface and groundwater quality, groundwater recharge, beneficial uses, and watershed health of receiving waters of the County from discharge of pollutants. Sections 7.79.040 through 7.79.060 prohibit discharges, illicit connections and waste disposal into receiving waters. Section 7.79.100 requires BMPs for construction activities to be planned prior to issuance of a County grading permit. Chapter 16.22 of the Santa Cruz County Code of Ordinances establishes rules and regulations to eliminate and prevent the conditions of accelerated erosion. Per Section 16.22.060, prior to issuance of a building permit or development permit, an erosion control plan indicating proposed methods for the control of runoff, erosion, an sediment movement must be submitted to and approved by the County. Santa Cruz County Code of Ordinances Section 12.10.220 adopts the California Residential Building Code, which includes base flood elevation and design flood evaluation for flood resistant construction.

The Santa Cruz General Plan and Local Coastal Program (Santa Cruz County, 1994) Conservation and Open Space Chapter contains objectives and policies specific to water supply, wastewater

treatment, disposal and drainage. Specifically, Objective 5.5a is “to protect and manage the watersheds of existing and future surface water supplies to preserve the quality and quantity of water produced and stored in these areas to meet the needs of County residents, local industry, agriculture and the natural environment.” The objective is implemented through Policy 5.5.3, which designates areas located within one mile of upstream intakes as water quality constraint areas; Policy 5.5.6, land division and density requirements in water supply watersheds, which requires new parcel sizes to be at least 10 acres to reduce water supply; and Policy 5.5.10, retaining undeveloped lands in watersheds to maintain water quality by minimizing development. Additionally, Objective 5.7 is “to protect and enhance surface water quality in the County’s streams, coastal lagoons and marshes by establishing best management practices on adjacent lands.” This objective is implemented through Policy 5.7.1 prohibits new development adjacent to streams and bodies of water if development would cause adverse impacts on water quality, Policy 5.7.3 erosion control and lagoon protection requires installation and maintenance of sediment basins and/or other strict erosion control measures; Policy 5.7.4 control of surface runoff requires new development to minimize the discharge of pollutants, and Policy 5.7.7 contains stormwater discharge permit requirements to maintain water quality.

Santa Cruz County and the City of Capitola have a Stormwater Management Program (2010) that builds on efforts to preserve and enhance Santa Cruz County watersheds and is the County and City’s response to the new statewide NPDES permit requirements for agencies designated by the SWCB. Activities in the Stormwater Management Program are based on the USEPA stormwater regulations, the SWRCB General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer System (Small MS4) and the Model Urban Runoff Program (MURP).

The City of Santa Cruz Urban Water Management Plan was prepared by the City of Santa Cruz Water Department in August 2016 (City of Santa Cruz 2016). The UWMP covers approximately 20 square miles including the City of Santa Cruz, a small part of the City of Capitola, adjoining unincorporated areas in Santa Cruz County, and coastal agricultural lands north of the city. Projected demand for potable water in 2035 is 3,220 million gallons per year (MGY) and the projected supply is 3,180 MGY. Therefore, there is not enough supply to meet the projected demand (City of Santa Cruz 2016). The UWMP contains a water shortage contingency planning section to present information about how the City of Santa Cruz manages the water system during a water shortage emergency and actions that would occur in response to an interruption of water supplies. Similarly, the Scotts Valley Water District has prepared a 2015 Urban Water Management Plan (Scotts Valley Water District 2016). The Scotts Valley Water District is approximately 5.5 square miles and includes most of the City of Scotts Valley as well as some unincorporated areas north of the City. Water demand in 2040 is projected to be 1,661 AFY and water supply is estimated at 1,661 AFY including planned sources of water, such as recycled water (Scotts Valley Water District 2016).

Many cities within the AMBAG region have similar hydrology and water quality goals and policies in their respective general plans.

4.10.2 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project’s impacts would have a significant impact related to hydrology and water quality:

1. Violate any water quality standards or waste discharge requirements;

2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
5. 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;
6. Otherwise substantially degrade water quality;
7. Place housing within a 100-year flood hazard area;
8. Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
9. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;
10. Be subject to inundation by seiche, tsunami, or mudflow;
11. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.
12. Require or result in construction of new water facilities or expansion of such facilities, the construction of which could cause significant environmental effects; and/or
13. Require or result in construction of new stormwater drainage facilities or expansion of such facilities, the construction of which could cause significant environmental effects.

b. Project Impacts and Mitigation Measures

This section describes water quality, groundwater supply, drainage, runoff, flooding, inundation and water supply impacts associated with the 2040 MTP/SCS. Table 37 summarizes the specific transportation projects that could result in the flooding impacts discussed in this section. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could result in the hydrology and water quality conditions as described in the following sections.

Threshold 1:	Violate any water quality standards or waste discharge requirements
Threshold 3:	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site
Threshold 6:	Otherwise substantially degrade water quality

Impact W-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2040 MTP/SCS 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. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS would result in both short-term and long-term impacts to water quality.

Certain transportation improvements would increase overall impervious surface area throughout the AMBAG region. For example, new roadways or road widening projects would introduce pavement in areas that are currently undeveloped. Infill development projects envisioned under the land use scenario could also introduce impervious surfaces, 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 2040 MTP/SCS 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 where projects are 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 2040 MTP/SCS 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 the 2040 MTP/SCS 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, 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 the 2040 MTP/SCS would not result in impacts to the local stormwater system.

Depending on the location and design specific to transportation projects included in the 2040 MTP/SCS, 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 the 2040 MTP/SCS 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 the 2040 MTP/SCS would increase the volume of point-source wastewater discharges in the AMBAG region, required compliance and monitoring of effluent prior to discharge from treatment facilities would ensure impacts would be less than significant.

Development under the 2040 MTP/SCS 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 the 2040 MTP/SCS 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

None required.

<p>Threshold 2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level</p> <p>Threshold 11: Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed</p> <p>Threshold 12: Require or result in construction of new water facilities or expansion of such facilities, the construction of which could cause significant environmental effects</p>
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Impact W-2 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2040 MTP/SCS WOULD INCREASE WATER DEMAND IN THE AMBAG REGION. THIS DEMAND MAY POTENTIALLY REQUIRE NEW OR EXPANDED WATER SUPPLIES, ENTITLEMENTS, OR FACILITIES. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS would result in both short-term and long-term impacts to water supply throughout the AMBAG 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 the proposed 2040 MTP/SCS 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 AMBAG region. Most transportation improvements involve modification of existing facilities and would not result in a substantial increase in landscaped areas that require irrigation. However, streetscaping projects proposed in the 2040 MTP/SCS, such as the San Carlos Streetscaping (MON-CAR007-CM) in Monterey County and the West Gateway Improvement Project (SB-COH-A13) in San Benito County, could require water for landscaping. Furthermore, new and extended roadways could include tree and shrub plantings. In addition, future transit projects with restrooms envisioned by the 2040 MTP/SCS would require potable water. It is likely that many projects involving landscaping and infill development near transit would be located in urban areas served by overdrafted groundwater basins, including the City of Watsonville and the City of Santa Cruz. Development associated with the land use scenario envisioned in the 2040 MTP/SCS may also impact water supplies requiring additional water for mixed use development and infill development. The increased density envisioned by the 2040 land use scenario would increase the demand on the region's water supply as a result of AMBAG's regional growth forecast. Therefore, new or expanded water supplies, entitlements, or facilities may be required, and this impact is significant.

Major 2040 MTP/SCS projects, particularly new and extended roadways and parking facilities, such as the Rio Road Parking Facility (MON-CAR005-CM) in Monterey County, 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 within existing rights-of-way at the expense of natural infiltration.

As discussed in the Regulatory Setting, UWMPs for the AMBAG 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 AMBAG area. A list of GSAs in the AMBAG 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 AMBAG area and would include consideration for the water demand anticipated by the 2040 MTP/SCS.

Although compliance with existing regulations would require consideration of water demand, the magnitude of impacts associated with individual 2040 MTP/SCS 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

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that have water supply impacts. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

W-2(a) Construction Dust Suppression Water Supply

The RTPAs shall and sponsor agencies can and should ensure that all 2040 MTP/SCS projects, where feasible, reclaimed and/or desalinated water is used for dust suppression during construction activities. This measure shall be noted on construction plans and shall be spot checked by the local jurisdiction.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies.

W-2(b) Landscape Watering

In jurisdictions that do not already have an appropriate local regulatory program related to landscape watering, 2040 MTP/SCS projects that would 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

W-2(c) Porous Pavement

In jurisdictions that do not already have an appropriate local regulatory program related to porous pavement, the sponsor of a 2040 MTP/SCS 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

W-2(d) Water Infrastructure Improvements

The sponsor of 2040 MTP/SCS 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.

Implementing Agencies

Implementing agencies include cities and counties for land use projects.

W-2(e) Bioswale Installation

The sponsor of a 2040 MTP/SCS 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.

Implementing Agencies

Implementing agencies for AMBAG transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Implementation of the above measures would reduce impacts from water supply in the AMBAG region. However, due to the programmatic nature of the 2040 MTP/SCS 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 the 2040 MTP/SCS along with 2040 MTP/SCS 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 4:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site
- Threshold 5:** 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 13:** Require or result in construction of new stormwater drainage facilities or expansion of such facilities, the construction of which could cause significant environmental effects.

Impact W-3 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2040 MTP/SCS WOULD INCREMENTALLY INCREASE STORMWATER FLOWS IN THE AMBAG REGION. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS 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 Monterey County Code Chapter 16.14 to control the entry of urban pollutants into stormwater runoff; San Benito County Code of Ordinances Chapter 19.17 to regulate the control of excavation, grading, drainage and erosion; and Santa Cruz County Code of Ordinances Chapter 7.79 to control runoff and pollution by protecting the surface and groundwater quality and groundwater recharge of receiving waters of the County from discharge of pollutants. 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 the 2040 MTP/SCS 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

None required.

Threshold 7:	Place housing within a 100-year flood hazard area
Threshold 8:	Place within a 100-year flood hazard area structures which would impede or redirect flood flows
Threshold 9:	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam
Threshold 10:	Be subject to inundation by seiche, tsunami, or mudflow

Impact W-4 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2040 MTP/SCS COULD BE SUBJECT TO FLOOD HAZARDS, DAM FAILURE, OR TSUNAMI. HOWEVER, PURSUANT TO COMPLIANCE WITH EXISTING REGULATIONS, THE 2040 MTP/SCS WOULD NOT EXPOSE PEOPLE OR STRUCTURES TO A SIGNIFICANT RISK OF LOSS, INJURY, OR DEATH ASSOCIATED WITH THESE HAZARDS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the 2040 MTP/SCS could be subject to flooding hazards due to storm events, sea-level rise due to climate change and/or dam failure. The transportation projects with potentially significant impacts are listed in Table 37.

Flooding

Future transportation and land use development in low-lying areas and in proximity to waterways and/or dam inundation zones may be subject to flood hazards. 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. Such damage would typically occur adjacent to rising rivers or streams. Erosion caused by flooding can damage paved facilities and bridge supports can be undermined or washed away. Flood hazards can also endanger occupants of habitable structures.

In the AMBAG region, projects in the following areas would be most susceptible to these hazards: the Salinas Valley, the City of Seaside, and the Elkhorn Slough area in Monterey County; the San Juan and Hollister Valleys in San Benito County; and the Pajaro and San Lorenzo River Valleys in Santa Cruz County. Representative projects that could be subject to flooding are listed in Table 37.

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 AMBAG region, on a yearly schedule to ensure that they are performing and being maintained in a safe manner.

Locally, each county in the AMBAG region manages flood control. One management technique used by the Monterey County Water Resources Agency is a flood warning system to prepare and warn residents in the event of a major flood. All three dams and reservoirs in Monterey County are inspected annually to ensure they are in good operating order to prevent flooding. San Benito County flood management is primarily a local government function. San Benito oversees floodplain land use decisions for planning and emergency preparedness and response measures. Additionally,

San Benito is a member of the Pajaro River Watershed Flood Prevention Authority to identify, fund and implement flood prevention and control strategies in the Pajaro River Watershed. Flood control management in Santa Cruz County is provided by the County Flood Control District and Floodplain Administration, which identifies, regulates, remediates and educates the County's population to reduce the damage from flooding in the County. In addition to local management agencies, all three counties have 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.

Federal, state and local programs and ordinances would ensure that transportation improvements and development under the 2040 MTP/SCS would not be at significant risk from flooding. Therefore, impacts from floods would be less than significant.

Tsunami

Low-lying coastal areas in northern Monterey County and southern Santa Cruz County are susceptible to impacts from tsunamis. As shown in Table 37, specific transportation projects programmed in the 2040 MTP/SCS for these areas include the Upper Struve Slough Trail and the Monterey Bay Sanctuary Scenic Trail Network. In addition, development projects be located at low elevations near the coast would be susceptible to tsunamis. According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2014), over the last 200 years there have been eight observed tsunamis in the region. Almost all of these tsunamis were produced by earthquakes and resulted in wave run-ups of one meter or less. Therefore, the likelihood that the region will experience a tsunami has been estimated to be high, averaging one- to 11-foot wave run-ups for coastal and low-lying areas (Monterey County 2014). In 2011, the 9.0 earthquake in Japan caused a tsunami in the AMBAG region resulting in damage in both Monterey and Santa Cruz counties (Santa Cruz County 2015). Given the high likelihood for tsunami hazards in the region and the potential for land use development included in the 2040 MTP/SCS to be located near the coast, development under the 2040 MTP/SCS would occur in areas subject to tsunami hazards.

Compliance with enforced design standards and regulations in the AMBAG region would address and minimize impacts from tsunamis. The Monterey County Office of Emergency Services has a tsunami warning system to alert people of a coming tsunami and encourages residents to prepare ahead for possible evacuation. The Monterey County Operational Area Tsunami Incident Response Plan (Monterey County Office of Emergency Services 2007) includes information regarding tsunami watch or warnings as well as a local plan for responding to a tsunami. The Plan contains information on response agencies, evacuation zones, evacuation routes and safe areas for different regions of Monterey (Monterey County Office of Emergency Services 2007). Santa Cruz County's current tsunami mitigation strategy is based on notification and evacuation. The strategy includes continuation of an up to date Emergency Management Plan, effective public information program and continuing collaborative efforts with other cities and agencies in the region to provide up to date mapping, preparation, information, warning dissemination and education. Tsunami mitigation actions in Santa Cruz include management of an early warning system including a defined public information process and establishing a reverse 911 system that would notify all homes and businesses of a tsunami in an inundation area (Santa Cruz County 2015).

The Monterey County General Plan (Monterey County, 2010) Safety Element contains goals and policies to reduce the risk of hazards resulting from seismic activity, including tsunamis. Specifically, Policy S-1.6 requires new development to be prohibited in areas of known geologic or seismic hazards unless measures recommended by a California certified engineering geologist or

geotechnical engineer are implemented to reduce the hazard. Policy S-5-15 identifies tsunami evacuation routes as any routes in an incorporated or unincorporated area leading inland away from the coastline to elevations 20 feet or higher. The Santa Cruz General Plan and Local Coastal Program (Santa Cruz County, 1994) Public Safety and Noise Chapter serves to reduce the risk of hazards resulting from seismic, flood and fire hazards. Specifically, Policy 6.1.5 requires the location and/or clustering of development away from potentially hazardous areas when feasible and condition development permits based on the recommendations of the site's Hazard Assessment or other technical reports. Policy 6.4.3 allows development in areas immediately adjacent to coastal bluffs and beaches only if a geologist determines that wave action, storm swell and tsunami inundation are not a hazard to the proposed development or that the hazard can be adequately mitigated.

Although there is a risk of tsunamis in the AMBAG region, incorporating required 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 associate with a tsunami. Additionally, emergency evacuation plans would address safe travel routes in the event of a tsunami. Therefore, impacts from tsunamis would be less than significant.

Seiche

As described in the Setting, seiches are not identified as a hazard in the AMBAG region. Therefore, no impacts related to seiches would result.

Mitigation Measures

None required.

c. Specific MTP/SCS Projects that May Result in Impacts

All 2040 MTP/SCS projects that require new construction or landscaping may result in impacts as discussed in impacts W-1 through W-3; and therefore, are not specifically identified in table format below. The 2040 MTP/SCS projects are listed in Appendix B. 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.

Table 37 identifies projects that may result in flooding impacts as discussed in Impact W-4. Given the large number of projects proposed across the tri-county area in the 2040 MTP/SCS, Table 37 shows a representative rather than comprehensive list of projects that would result in flooding-related impacts.

Table 37 2040 MTP/SCS Projects that May Result in a Flooding Impact

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-GRN016-GR	Elm Avenue Bike Lanes	Greenfield	W-4	Potential impacts from flooding
MON-KCY039-CK	1st Street Bike Lanes	King City	W-4	Potential impacts from flooding
MON-CT022-CT	SR 156 – Corridor Widening Project	Monterey County	W-4	Potential impacts from flooding
MON-SNS029-SL	John Street – U.S. 101	Salinas	W-4	Potential impacts from flooding
MON-SNS037-SL	Main Street (North) Widening	Salinas	W-4	Potential impacts from flooding
MON-SNS094-SL	Hemingway Drive Extension	Salinas	W-4	Potential impacts from flooding
MON-KCY043-CK	Roundabout at U.S. 101/Broadway Street/San Antonio Drive	King City	W-4	Potential impacts from flooding
SB-CT-A01	SR 156 Widening – San Juan Bautista to Union Road	San Juan Bautista	W-4	Potential impacts from flooding
SB-SBC-A50	Hospital Road Bridge	Hollister	W-4	Potential impacts from flooding
SB-SBC-A51	Y Road Bridge	San Benito	W-4	Potential impacts from flooding
SB-SBC-A52	Union Road Bridge	Hollister	W-4	Potential impacts from flooding
SC-WAT-P43-WAT	Upper Watsonville Slough Trail	Watsonville	W-4	Potential impacts from flooding and tsunami
SC-WAT-P46-WAT	Lower Watsonville Slough Trail	Watsonville	W-4	Potential impacts from flooding
SC 25SC	Highway 1 and Highway 9 Intersection Modifications	Santa Cruz	W-4	Potential impacts from flooding
SC-RTC 27a-RTC	Monterey Bay Sanctuary Scenic Trail Network	Santa Cruz	W-4	Potential impacts from flooding and tsunami

d. Cumulative Analysis

Impact to hydrology and water quality may be related to: violation of water quality standards, interference with groundwater recharge, increased erosion, increased non-point source pollution, increased runoff, affects to flood zones and exposure of people to a significant risk of loss, injury, or death involving flooding (including flooding as a result of the failure of a levee or dam), seiche, tsunami, or mudflow.

Cumulative development would increase erosion and sedimentation resulting from grading and construction, as well as changes in drainage patterns which could degrade surface and ground water quality. In addition, new development would increase the generation of urban pollutants that may adversely affect water quality in the long term. As with the 2040 MTP/SCS, 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 W-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 would be less than significant, and the 2040 MTP/SCS’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. As in the AMBAG 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 W-2, the 2040 MTP/SCS may impact groundwater supply in the AMBAG 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, the 2040 MTP/SCS'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.

4.11 Land Use

4.11.1 Setting

a. Land Use Patterns

The AMBAG region is comprised of Monterey, San Benito and Santa Cruz Counties. These counties are located along the Central Coast of California and generally surround Monterey Bay. Monterey Bay is located south of the San Francisco Bay area and north of San Luis Obispo County. San Mateo and Santa Clara Counties are located to the north; Merced and Fresno Counties are located to the east. Monterey County shares a short border segment with Kings County to the southeast.

The combined area encompasses approximately 3.3 million acres, incorporating the Pajaro and Salinas River Valleys, adjacent coastal lowland and surrounding mountains. Terrain within the region is varied. The Santa Cruz, Gabilan and Santa Lucia mountain ranges and the Diablo range are located along the eastern border of the tri-county region. The highest elevation is the Junípero Serra Peak (5,860 feet above sea level), located in Monterey County. AMBAG's planning area is predominantly rural with urban development clustered along the Monterey Bay coastline and in agricultural inland valleys. A summary of the land use setting for each county is described below.

Monterey County

Monterey County encompasses 2.12 million acres and is predominantly rural with the exception of 12 incorporated cities; Carmel, Del Rey Oaks, Gonzales, Greenfield, Pacific Grove, Marina, Monterey, Salinas, Seaside, Sand City, Soledad and King City. Agriculture is the largest land use in Monterey County representing approximately 60 percent (1.27 million acres) of the total land area. The second largest land use consists of public and quasi-public land uses such as parks, military facilities, recreational and community facilities, which makes up 24 percent (about 508,800 acres) of the total land area. Approximately 5 percent (about 106,000 acres) of Monterey County, including the incorporated cities, is developed with residential, commercial and industrial land use categories; of the unincorporated county, approximately one percent is developed. The remaining 11 percent (about 233,200 acres) is in resource conservation or other miscellaneous land uses. Most of the urban development is concentrated in the northern third of the county, near the incorporated cities of Salinas, Marina and Monterey (Monterey County, 2010a).

Santa Cruz County

Santa Cruz County encompasses 285,713 acres and is predominantly rural with the exception of four incorporated cities: Scotts Valley, Santa Cruz, Capitola and Watsonville and the surrounding urbanized unincorporated area. Agriculture represents approximately 14 percent of the total land area (40,000 acres). Residential land is approximately 4 percent (11,428 acres) of the land area; developed non-residential uses comprise approximately 1.5 percent (4,285 acres). Parks, recreation and open space comprise 1.4 percent (4,000 acres); miscellaneous uses comprise 3.6 percent (10,286 acres) of the land area. The remaining acreage is undeveloped (Santa Cruz County, 2013b).

San Benito County

San Benito County encompasses approximately 886,719 acres and is predominantly rural except the incorporated cities of San Juan Bautista and Hollister. Agriculture, which includes grazing, is the

predominate land use in the unincorporated county, totaling approximately 734,826 acres (83.2 percent). Of the remainder, 78,931 acres (8.9 percent) is owned by city, State and Federal governments. Residential land accounts for only 9,668 acres (1.1 percent) of existing land use in the unincorporated county. Remaining lands are undeveloped (San Benito County 2035 General Plan, 2015a).

b. Regulatory Setting

There are numerous State and local laws, regulations, policies, programs, plans, codes and ordinances that regulate land use in the AMBAG region. Local land use changes are regulated by the general plans, specific plans and zoning ordinances of the counties of Monterey, San Benito and Santa Cruz and the cities within each 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 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.

State

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 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 an SOI, LAFCOs are required to first conduct a review of the municipal services provided in the county.

Local

The following section focuses on the key plans that regulate land use in the AMBAG region, which are the county and city general plans and Local Coastal Programs, the Airport Land Use Compatibility Plans and master plans regulating land dedicated to university campuses. This section outlines the status of those plans.

Monterey County General Plan

The Monterey County General Plan (Monterey County, 2010a) includes 12 planning areas. The planning horizon year is 2030, with full buildout of 10,015 new residential units. One of the primary challenges that the Monterey County General Plan addresses is how to plan future growth when high quality farmlands are in the valley and flatlands, and have been forced to compete with urban developments, while foothills along the valley serve as natural and scenic resources unique to Monterey County (Monterey County, 2010a).

Santa Cruz County General Plan

The Santa Cruz County Board of Supervisors adopted the 1994 General Plan and Local Coastal Program in 1994 (Santa Cruz County, 1994). The 1994 General Plan consists of several parts that are organized into three volumes: the General Plan/Local Coastal Program Land Use Plan; a collection of Village, Town, Community and Specific Plans; and the General Plan and Local Coastal Program Environmental Impact Report. The prominent issues that the County focuses on in the 1994 General Plan are: providing adequate services, providing affordable housing, preserving the county's environmental quality and preventing conversions of agricultural lands. The General Plan is consistent with the County's policy of directing a large share of future growth into the incorporated cities, and the unincorporated areas within the Urban Services Line to preserve the character of the rural portion of the county (Santa Cruz County, 1994).

San Benito County General Plan

The San Benito County 2035 General Plan (San Benito County, 2015a) sets a clear direction for the future of the county and includes goals, policies and programs necessary to achieve the community's vision and guiding principles. This plan also addresses issues of sustainability, including environmental protection, economic expansion and diversification and equity. The plan was shaped over a three-year period by an extensive outreach process that engaged residents, businesses, stakeholders, developers and decision-makers (San Benito County, 2015a).

City of Carmel-by-the-Sea General Plan

The City of Carmel-by-the-Sea adopted its General Plan in 2003 (City of Carmel-by-the-Sea, 2003). The City combined its General Plan with its Local Coastal Plan to ensure coordination of these two documents. This General Plan includes the following elements: Land Use and Community Character, Circulation, Housing, Coastal Access and Recreation, Coastal Resource Management, Public Facilities and Services, Open Space/Conservation, Environmental Safety and Noise (City of Carmel-by-the-Sea, 2003).

City of Del Rey Oaks General Plan

The City of Del Rey Oaks adopted the update to its General Plan in 1997 (City of Del Rey Oaks, 1997). This General Plan includes the following elements: Land Use, Housing, Circulation, Conservation and Open Space, Safety and Noise. The overarching goal of this General Plan is to enhance the beauty, health, safety and quality of life for residents (City of Del Rey Oaks, 1997).

City of Gonzales General Plan

The City of Gonzales adopted the Gonzales 2010 General Plan in 2011 (City of Gonzales, 2010). A main focus of the 2010 General Plan is providing a long-range plan with an Urban Growth Area that contains approximately 2,150 acres of new land for urbanization. This General Plan includes the

following elements: Land Use, Circulation, Housing, Community Health and Safety, Conservation and Open Space, Community Services and Facilities, Community Character and Sustainability (City of Gonzales, 2010).

City of Greenfield General Plan

The City of Greenfield adopted the General Plan in 2005 (City of Greenfield, 2005). In addition to the seven elements that are required by State law, this General Plan also includes the following elements: growth management, economic development and recreation. The goals of the Greenfield General Plan are to promote a high quality physical and social environment with rural character, provide a full range of municipal services and support a people-oriented environment for all (City of Greenfield, 2005).

City of Pacific Grove General Plan

The Pacific Grove 1994 General Plan (City of Pacific Grove, 1994) is principal policy document for guiding future conservation and development of the City. This General Plan includes the following elements: Land Use, Housing, Transportation, Parks and Recreation, Natural Resources, Historic and Archaeological Resources, Urban Structure and Design, Public Facilities and Health and Safety (City of Pacific Grove, 1994). The City of Pacific Grove is in the process of updating and adopting a LCP and published the Draft LUP in February 2017 (City of Pacific Grove, 2017).

City of Marina General Plan

The City of Marina General Plan (City of Marina, 2000) was adopted by the City in 2000. The overall goal of the Marina General Plan is the creation of a community which provides a high quality of life for all its residents; which offers a broad range of housing, transportation and recreation choices; and which conserves irreplaceable natural resources. This General Plan includes the following elements: Community Land Use, Community Infrastructure and Community Development and Design (City of Marina, 2000).

City of Monterey General Plan

The City of Monterey adopted the General Plan in 2005 (City of Monterey, 2005). The General Plan goals and policies focus on preserving and enhancing Monterey's aesthetic environment, which the City developed around two central concepts: Monterey's special physical setting and its image as a town. This General Plan includes the following elements: Urban Design, Land Use, Circulation, Housing, Conservation, Open Space, Safety, Noise, Economic, Social, Historic Preservation and Public Facilities (City of Monterey, 2005).

City of Salinas General Plan

The City of Salinas General Plan (City of Salinas, 2002a) was adopted in 2002. Since the last comprehensive update in 1988, the city grew substantially and is now the largest city in Monterey County. The major focus of this General Plan is how to protect valuable agricultural resources while promoting a diversified economy. This General Plan includes the following elements: Land Use, Community Design, Housing, Conservation/Open Space, Circulation, Safety and Noise (City of Salinas, 2002a). To plan for and manage future growth, the General Plan identified areas primarily to the north and east of Salinas, currently outside of the city's boundaries, as the "Future Growth Area." The City of Salinas subsequently amended its Sphere of Influence boundary and annexed the Future Growth Area. The Final Supplement for the Salinas General Plan Final Program EIR (City of

Salinas, 2007), was prepared to evaluate the proposed Sphere of Influence amendment and annexation. The document also addresses city-wide GHG emissions and global climate change.

Pursuant with State requirements, the General Plan Housing Element is periodically updated. The current Housing Element, *City of Salinas 2015-2023 Housing Element (City of Salinas, 2015b)*, was adopted on December 15, 2015. The *2015-2023 Housing Element Initial Study-Negative Declaration (City of Salinas, 2015a)*, was prepared to evaluate the update to the Housing Element. The city also approved an Economic Development Element in 2017 (City of Salinas, 2017).

City of Seaside General Plan

The City of Seaside adopted the existing General Plan in 2004 (City of Seaside, 2004). The City is currently updating the Plan. The main opportunities and challenges that this General Plan focuses on includes: encouraging the development and redevelopment of North Seaside, while revitalizing the central core of the community; establishing a positive and unique identity on the Monterey Peninsula; creating new job and revenue generating development opportunities; protecting natural resources, such as open space and scenic vistas as development occurs encouraging the provision and maintenance of quality development; and improving the overall quality of life. In addition to the required seven elements, this General Plan also includes Urban Design and Economic Development Elements (City of Seaside, 2004).

City of Sand City General Plan

The City of Sand City adopted its General Plan in 2002 (City of Sand City, 2002). The focus of the General Plan is to enhance the features that make this community unique, including that it is walkable, transit oriented and capable of providing an integration of residential and commercial uses. The themes of this General Plan are economic diversification, active redevelopment, enhanced community appearance and image, organized and well-planned growth, elimination of land use conflicts and cohesive residential neighborhoods (City of Sand City, 2002).

City of Soledad General Plan

The City of Soledad adopted its General Plan in 2005 (City of Soledad, 2005). The primary focus of the Plan is to foster a climate conducive for expanded economic development in Soledad, including expanding opportunities for shopping and tourism, providing more and better paying jobs and ensuring affordable housing. In addition to covering the required seven elements, this General Plan also includes the Front Street Improvement Plan and Downtown Specific Plan (City of Soledad, 2005).

City of King General Plan

The King City General Plan (City of King, 1998) was adopted in 1998. The overall goal of the General Plan is to provide for orderly growth and development and to maintain a balanced community. In addition to including the required seven elements, this General Plan also includes an Economic Development Element (City of King, 1998).

City of Scotts Valley General Plan

The City of Scotts Valley adopted its General Plan in 1994 (City of Scotts Valley, 1994). The General Plan focuses on how to handle physical changes within the city that are a result of rapid population increase and local development. In addition to the seven mandatory elements, this General Plan

also includes the Parks & Recreation and Public Services & Facilities Elements (City of Scotts Valley, 1994). An update of the General Plan is underway.

City of Santa Cruz General Plan

The City of Santa Cruz 2030 General Plan (City of Santa Cruz, 2012b) was adopted in 2012, and is a comprehensive update of the 1990-2005 General Plan. The General Plan seeks to connect the University of California, Santa Cruz population with the residents of the Santa Cruz community. The 2030 General Plan expresses Santa Cruz community members' desires for the city's physical, economic, social, cultural and environmental characteristics, and seeks to establish plans for future growth and improvement in the upcoming 25 years (City of Santa Cruz, 2012b).

City of Capitola General Plan

The City of Capitola adopted the General Plan in 2014 (City of Capitola, 2014). The General Plan guiding principles focus on the following topics: community identity, community connections, neighborhoods and housing, environmental resources, economy, fiscal responsibility, mobility and health and safety. In addition to the seven mandatory elements, this General Plan also includes an Economic Development Element (City of Capitola, 2014).

City of Watsonville General Plan

The City adopted the existing Watsonville 2005 General Plan in 1994 (City of Watsonville, 1994). This General Plan addresses the following major issues: population growth, housing growth, agricultural preservation and the provision of adequate and affordable housing. The General Plan includes the following elements: Growth and Conservation, Land Use, Urban Design, Housing, Children, Recreation, Environmental Resources, Circulation, Public Facilities and Public Safety (City of Watsonville, 1994). The City also published a Draft 2030 General Plan in 2012, but the City Council has not adopted the General Plan Update (City of Watsonville, 2017b).

City of Hollister General Plan

The City of Hollister General Plan (City of Hollister, 2005), adopted in 2005, identifies growth as a major factor in the loss of agricultural land. As a result, the 2005 General Plan reduced the size of the city's planning area. Since adoption of the General Plan, further growth has been constrained by inadequate infrastructure, congestion on SR 25, insufficient wastewater capacity issues and a moratorium on major development. The General Plan sets six major goals for the city: encourage pedestrian-friendly mixed-use development downtown; provide core services in every neighborhood; encourage multiple modes of transportation; provide a range of housing styles and affordability levels; provide for an environment that encourages healthy living; and promote economic and environmental sustainability (City of Hollister, 2005). In 2017, the City began the process of updating the General Plan (City of Hollister, 2017).

City of San Juan Bautista General Plan

The City of San Juan Bautista 2035 General Plan (City of San Juan Bautista, 2015) was adopted in 2016. The General Plan's Land Use element sets out a vision for future growth in the city that includes: retention of agriculture and open space around the city's perimeter; reinvestment in existing neighborhoods; continued vitality of the downtown and the city's arts and cultural events; and a focus on infill development, community design and growth management (City of San Juan Bautista, 2015).

Monterey County Airport Land Use Compatibility Plans

The four airports within Monterey County are: Monterey Regional Airport, Marina Municipal Airport, Mesa Del Rey Airport and Salinas Municipal Airport. The Monterey County Airport Land Use Commission is in the process of updating the Airport Land Use Compatibility Plans (ALUCPs) for Monterey Regional Airport and Marina Municipal Airport. The ALUC published the Draft ALUCPs for these two airports in January 2017. The ALUC published the plan for Salinas Municipal Airport in 1982 and the plan for Mesa Del Rey Airport in 1978. The goals of the ALUCPs are to protect residents from the negative environmental noise, safety and traffic impacts that can potentially be induced by airports (Monterey County Airport Land Use Commission, 1978, 1982, 2017a, 2017b).

San Benito County Airport Land Use Compatibility Plans

The San Benito County Airport Land Use Commission reviews development proposed within the Airport Influence Area of the Hollister Municipal Airport and Frazier Lake Airpark. The ALUC reviews applications in compliance with the policies in the Hollister Municipal Airport Land Use Compatibility Plan and the Comprehensive Land Use Plan - Frazier Lake Airpark (San Benito County, 2001 and 2012).

Santa Cruz County Airport Land Use Compatibility Plans

The Santa Cruz County Community Development Department is the ALUC with authority in Santa Cruz County. The 1994 General Plan and Local Coastal Program for the County of Santa Cruz and the Watsonville 2005 General Plan serve as the ALUCP for the Watsonville Municipal Airport, which is the only public airport in the County of Santa Cruz. Additionally, in July 2017, the City of Watsonville published Watsonville Municipal Airport Regulations to augment the existing ordinances of the City of Watsonville Municipal Code that regulate land use activities within and near the Watsonville Municipal Airport (Santa Cruz County, 1994; City of Watsonville, 1994 and 2017a).

Fort Ord Reuse Authority Base Reuse Plan

The Fort Ord Reuse Authority (FORA) is responsible for the oversight of Monterey Bay area economic recovery from the closure and reuse planning of the former Fort Ord military base. The former Fort Ord is located on the California coastline near the Monterey Peninsula consisting of 45 square miles/28,000 acres. FORA prepared the Reuse Plan for the former Fort Ord pursuant to the provisions of Senate Bill 899 to guide the development of the Former Military Reservation. The Fort Ord Reuse Plan is made up of four volumes, which includes a Draft Habitat Management Plan, Business and Operations Plan and the Final EIR (Fort Ord Reuse Authority, 1997).

University of California, Santa Cruz Long Range Development Plan

The University of California, Santa Cruz (UCSC) Long-Range Development Plan 2005-2020 (2005 LRDP) provides a comprehensive framework for the physical development of the UC Santa Cruz campus. The 2005 LRDP supports UCSC's academic, research and public service mission while maintaining the campus's strong traditions of environmental stewardship and sustainability. UCSC chose the 2020 planning horizon to match the original horizon of the City of Santa Cruz's new General Plan, underscoring the interrelatedness of UCSC and the greater community (University of California, Santa Cruz, 2005). The University is in the process of updating the Long-Range Development Plan for the 2020-2040 planning period (University of California, Santa Cruz, 2017).

California State University, Monterey Bay Comprehensive Master Plan

California State University, Monterey Bay (CSUMB) is in the process of updating its campus master plan. In October 2017, the Draft June 2017 version of the Comprehensive Master Plan is undergoing analysis through the production of an EIR in accordance with CEQA. The new Master Plan will build on earlier planning efforts that facilitated the transition of the campus from the former Fort Ord Army Base, to a 21st-century setting for teaching, learning and research. The Plan will consider a wide range of issues encompassing the academic environment, student and residential life, sustainability, mobility and infrastructure systems and connections with Monterey Bay communities (CSUMB, 2017).

4.11.2 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact on land use:

1. Physically divide an established community;
2. 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; and/or
3. Conflict with any applicable habitat conservation plan or natural community conservation plan.

Impacts are also considered significant if a specific transportation improvement or land use change would displace homes or businesses. Impacts related to conflicts with habitat conservation plans or natural community conservation plans are discussed in Section 4.4, *Biological Resources*.

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. Due to the programmatic nature of the 2040 MTP/SCS, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible. However, this section describes generalized impacts associated with the transportation improvement projects and the land use scenario envisioned by the 2040 MTP/SCS.

Threshold 1: Physically divide an established community
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Impact LU-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2040 MTP/SCS WOULD NOT PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY. THIS IS IMPACT WOULD BE LESS THAN SIGNIFICANT.

In general, the 2040 MTP/SCS 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.

The 2040 MTP/SCS is intended 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 roads may be expanded and widened under the 2040 MTP/SCS, 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 the 2040 MTP SCS to increase mobility and decrease VMT, therefore the projects should result in bringing communities closer together rather than dividing them. New road, highway interchanges, bicycle lanes, and ADA accessibility projects included in the 2040 MTP transportation system 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 2040 MTP/SCS would encourage infill, mixed use and transit oriented development within existing urbanized areas. The land use scenario follows adopted city and county General Plans and regulations and promotes infill development in existing communities. This type of development would not divide a community; rather it would promote the development of existing vacant or underutilized properties. This 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 the 2040 MTP/SCS originate from either local circulation plans or state projects supported by cities and counties. 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

None Required.

Threshold 2: Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Impact LU-2 THE 2040 MTP/SCS 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, the 2040 MTP/SCS 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 the 2040 MTP/SCS. Thus, implementation of the 2040 MTP/SCS is dependent on local government policy decisions and voluntary action. The proposed 2040 MTP/SCS 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 the 2040 MTP/SCS 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 2040. The 2040 MTP/SCS was prepared with the specific intent to comply with the SB 375 goal to reduce GHG emissions. The 2040 MTP/SCS 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 AMBAG to develop regional growth projections, the transportation network and programs, housing needs estimates and the SCS land use strategies

The 2040 MTP/SCS encourages a multimodal transportation network with emphasis on non-motorized transportation and land use patterns to reduce the distance between trip destinations. This approach is consistent with the general provisions of the Caltrans Smart Mobility 2010 framework.

The 2040 MTP/SCS will help the region reach its GHG emission reduction targets established by the California Air Resource Board (CARB) under SB 375, as discussed in Section 4.8 *Greenhouse Gas Emissions/Climate Change*. The 2040 MTP/SCS encourages infill and TOD development to reduce automobile traffic and commute trip lengths. The 2040 MTP/SCS would surpass the CARB-established goal of a net zero per capita increase in GHG emissions from passenger vehicles and light trucks in 2020 and a five percent reduction by 2035, by instead achieving a GHG emissions reduction of 4.3 percent per capita by 2020 and 6.6 percent per capita reduction in 2035 (see Section 4.8, *Greenhouse Gas Emissions/Climate Change*).

At the local level, the 2040 MTP/SCS builds on and incorporates regional and local planning efforts completed by the Regional Transportation Planning Agencies and local agencies through the general plan process. Other key regional and local examples include:

- Fort Ord Reuse Authority Base Reuse Plan
- University of California, Santa Cruz Long Range Development Plan
- California State University, Monterey Bay Master Plan

The land use scenario envisioned in the 2040 MTP/SCS was developed in close coordination with AMBAG member agency planning staff, the LAFCO within each of the three counties, and builds on the current local general plans. This involved close coordination with each RTPA's Technical Advisory Committee, a Planning Director's Forum. AMBAG held more than 100 one-on-one meetings with local jurisdictions to discuss the land use pattern included in the 2040 MTP/SCS.

The land use scenario envisioned by the 2040 MTP/SCS was modeled using UPlan. UPlan allocates the future population increase across generalized UPlan land use categories. These generalized UPlan land use categories are the result of condensing the 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.

The 2040 MTP/SCS was developed in close collaboration with the three counties and 18 cities that comprise the AMBAG 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 MTP/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 AMBAG. While this consensus suggests that the 2040 MTP/SCS would not conflict with key policies or regulations adopted to avoid or mitigate environmental impacts, as presented throughout this EIR, the 2040 MTP/SCS would result in significant and unavoidable impacts in several environmental issue areas, including: aesthetics/visual resources, air quality, biological resources, cultural resources, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality (water supply), noise, population and housing, and transportation and circulation. Because the 2040 MTP/SCS 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 with implementation of mitigation measures, such as impacts related to wildland fire hazard or increases in VMT. No additional feasible mitigation measures are available to reduce significant and unavoidable impacts beyond those identified in this EIR.

c. Specific RTP Projects That May Result in Impacts

All proposed projects listed in Appendix B and summarized in Section 2.0, *Project Description*, would associate with Impacts LU-1 and LU-2.

d. Cumulative Impacts

Planned growth in counties neighboring the AMBAG region,, when combined with the projected growth of the AMBAG 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 AMBAG region is adjacent to seven counties: San Mateo, Santa Clara, Merced, Fresno, Kings, Kern and San Luis Obispo. The land between each of these counties and the AMBAG region is undeveloped agricultural land, grazing land, or open space. There are no developed communities or urban growth areas at or near the seven county boundaries adjacent to the AMBAG region. Therefore, the 2040 MTP/SCS would not contribute to a significant cumulative impact related to the physical division of communities.

Each of seven adjacent counties has adopted general plans that direct new growth to existing developed areas, strongly support agricultural land preservation, and are part of other regional MTP/SCSs. These general plans include goals, policies and programs adopted for the purpose of avoiding or mitigating environmental effects. San Mateo and San Luis Obispo Counties have adopted Local Coastal Plans, each of 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 the 2040 MTP/SCS does not extend into the adjacent counties, and the goals, policies, programs and regulations adopted by the seven adjacent counties is

geographically limited to each of those seven 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 the proposed MTP/SCS related to conflict with plans, policies and regulations would be less than significant.

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4.12 Noise

This section evaluates noise and vibration impacts of the proposed 2040 MTP/SCS. Both temporary impacts relating to construction activities and long-term impacts associated with implementation of the planned transportation projects and the land use scenario envisioned in the 2040 MTP/SCS are discussed.

4.12.1 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

Many principal noise generators within the AMBAG region are associated with transportation (i.e., airports, freeways, arterial roadways and railroads). Local collector streets are not considered significant noise sources as traffic volume and speeds are generally much lower than for freeways and arterial roadways. Generally, transportation-related noise is the dominant noise source within urban environments.

Similar to the environmental setting for noise, the vibration environment is typically dominated by traffic from nearby roadways and activity on construction sites. Heavy trucks typically operate on major streets and can generate groundborne vibrations that vary depending on vehicle type, weight and pavement conditions. Nonetheless, vibration due to roadway traffic is typically not perceptible.

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 the AMBAG region. This can be attributed to the extensive network of major, primary and secondary arterials, as well as the large number of vehicle trips that occur each day. Within Monterey County, U.S. Highway 101 and Highway 1 have the largest vehicle volumes and the highest noise levels. In 2015, daily traffic volumes on Highway 1 ranged from 13,178 vehicles south of Watsonville at County line during off-peak months to 83,272 vehicles between Del Monte Avenue/Fremont Boulevard and Lightfighter Drive. U.S. Highway 101 daily traffic volumes in Monterey County ranged from 6,345 vehicles south of Bradley Road during off-peak months to 77,780 vehicles between Boronda Road and Laurel Drive during peak months (TAMC 2016). Within Santa Cruz County, Highway 1 experiences the greatest level of traffic in the AMBAG region. In 2015, daily traffic on Highway 1 ranged from approximately 8,000 vehicles (Davenport Landing Road/Swanton Road) to 97,000 vehicles (Bay Avenue and also Soquel Avenue) (Caltrans 2015a). The noisiest single road corridor in San Benito County is U.S. Highway 101, although it traverses only seven miles through a relatively undeveloped portion of the County. In 2015, daily traffic on U.S. Highway 101 in San Benito County was between 25,000 and 60,200 vehicles (Caltrans 2015b). Levels of highway noise typically range from 70 to 80 dB(A) at a distance of 50 feet from the highway (Federal Highway Administration 2003).

Additionally, the AMBAG region has many arterial roadways. Typical arterial roadways have one or two lanes of traffic in each direction. Noise from these sources can be a substantial environmental concern where buffers (e.g., buildings, landscaping, etc.) are inadequate to reduce noise levels or where the distance from centerline to sensitive uses is relatively small. Given typical daily traffic volumes of 10,000 to 40,000 vehicle trips, noise levels along arterial roadways can typically range from Ldn 65 to 70 dBA at a distance of 50 feet from the roadway centerlines (FHA 2003).

Aircraft Operation

The AMBAG region has six public-use airports:

- Monterey Regional
- Salinas Municipal
- King City Municipal (Mesa del Rey)
- Marina Municipal
- Watsonville Municipal
- Hollister Municipal

Of these, only the Monterey Regional Airport has scheduled air carrier service.

In addition to the publicly-owned airports, several private airports operate in the region. Of these, the Frazier Lake Airpark is the only one that allows public use. The remaining privately owned airports are used to support the agricultural industry or are used for other business purposes.

There are currently two operational military airfields in the AMBAG region:

- Camp Roberts Army Airfield and Heliport
- Fort Hunter-Liggett Army Heliport

Railroad Operations

Rail lines for goods movement (e.g., agricultural materials) are located throughout the AMBAG region. The only regular rail passenger service currently operating in the region is provided by Amtrak, the most popular long distance passenger train in the U.S. The Coast Starlight, which connects Los Angeles to Seattle, stops in Salinas, is the only Amtrak rail station in the region. The route operates one train in each direction daily. In the future, Amtrak will expand the Coast Starlight service by adding stops at new stations in Soledad and King City (AMBAG 2017c).

In 2012 the SCCRTC purchased a rail line extending almost 32 miles from Davenport to Pajaro and is evaluating the potential use of this rail line, in combination with projects to ~~to~~ on improve parallel corridors, to enhance mobility in the region.

Railroad operations generate high, relatively brief, intermittent noise events. These noise events are an environmental concern for sensitive uses located along rail lines and near sidings and switching yards. Locomotive engines and the interaction of steel wheels and rails are one primary source of rail noise. The latter creates rolling noise which is caused by continuous rolling contact, impact noise when a wheel encounters a rail joint, turnout or crossover and squeal generated by wheel/rail friction on tight curves. For very high speed rail vehicles, air turbulence can be a significant source of noise. Air horns and crossing bell gates are another primary source of rail noise.

Rail operations generate varying noise levels depending on the type of rail activity. Heavier commuter or freight trains, which are diesel-powered, generate more noise than electrically-powered light-rail vehicles. According to the Federal Transit Administration (FTA), six commuter trains traveling at 50 miles per hour with a horn blowing generate a noise level of 81 dBA Leq at 50 feet. This same activity without a horn generates a noise level of 68 dBA Leq at 50 feet. In comparison, 12 light rail transit trains traveling 40 miles per hour generate a noise level of 65 dBA Leq at 50 feet. These same light rail transit trains generate a noise level of 57 dBA Leq at 20 miles per hour at 50 feet (FTA 2006).

According to the FTA Transit Noise and Vibration Impact Assessment guidance document (2006), vehicle propulsion rail units generate the following noises: (1) whine from electric control systems and traction motors that propel rapid transit cars, (2) diesel-engine exhaust noise from locomotives, (3) air-turbulence noise generated by cooling fans and (4) gear noise. Additional noise of motion is generated by the interaction of wheels/tires with their running surfaces. The interaction of steel wheels and rails generates three types of noise: (1) rolling noise due to continuous rolling contact, (2) impact noise when a wheel encounters a discontinuity in the running surface, such as a rail joint, turnout or crossover and (3) squeal generated by friction on tight curves.

When comparing electric- and diesel-powered trains, speed dependence is strong for electric-powered transit trains because wheel/rail noise dominates, and noise from this source increases strongly with increasing speed. On the other hand, speed dependence is less for diesel-powered commuter rail trains, particularly at low speeds where the locomotive exhaust noise dominates. As speed increases, wheel-rail noise becomes the dominant noise source and diesel- and electric-powered trains will generate similar noise levels. For transit vehicles in motion, close-by sound levels also depend upon other parameters, such as vehicle acceleration and vehicle length, plus the type/condition of the running surfaces. For very high speed rail vehicles, air turbulence can also be a significant source of noise. In addition, the guideway structure can also radiate noise as it vibrates in response to the dynamic loading of the moving vehicle.

Industrial and Manufacturing

Noise from industrial complexes and manufacturing plants are characterized as stationary or point sources even though they may include mobile sources like heavy equipment. Local governments typically regulate noise from industrial, manufacturing and construction equipment and activities through enforcement of noise ordinance standards, implementation of general plan policies and imposition of conditions of approval for building or grading permits.

In general, in the AMBAG region and throughout California, industrial complexes and manufacturing plants are located away from sensitive land uses and, as such, noise generated from these sources has less of an effect on surrounding properties. In contrast to industrial and manufacturing facilities, construction sites are located throughout the AMBAG region and often within, or adjacent to, residential areas.

Construction Noise and Vibration

Noise and vibration from construction sites are characterized as stationary or point sources even though heavy construction equipment is often mobile. Construction activities typically generate high, intermittent noise and vibration on and adjacent to construction sites and related noise and vibration impacts are short-term, occurring primarily on week days and during daylight hours. The dominant source of noise from most construction equipment is their diesel engine. During pile driving or pavement breaking events, impact noise is the dominant source and equipment produces the highest vibration levels. Construction equipment operates in two modes, stationary and mobile. Stationary equipment operates in one location for one or more days at a time and can generate a constant noise level (e.g., pumps, generators and air compressors) or variable noise levels (e.g., pile drivers and pavement breakers). Mobile equipment moves around the construction site (e.g., dozers, tractors). Noise levels vary depending on the power cycle being used. Mobile equipment such as trucks, move to and from the site using adjacent streets/roads.

c. Regulatory Framework

Various federal agencies have set standards for transportation-related noise and vibration sources that participate in 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.

Federal

Relevant federal regulations include those established by the FHWA, 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 Leq 57 and 66 dB, respectively, during the peak hour of traffic noise. Table 38 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.

Table 38 Noise Abatement Criteria

Activity Category	Hourly Leq	Hourly L ₁₀ 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, amphitheatres, 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 2017a

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 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 pass-by 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 must be considered for 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.

AIRCRAFT NOISE

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 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 § 772.7, projects are categorized as Type I or Type II projects. FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment.

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 the widening an existing ramp by a full lane width for its entire length. Projects unrelated to increased noise levels, such as striping, lighting, signing and landscaping projects, are not considered Type I projects.

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.

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* (FTA 2006). 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.

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 clearly requires that 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. Rather a goal of 45 decibels is set forth and the attenuation requirements are focused on achieving that goal. It is assumed 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.

State

Relevant state noise regulations include those are discussed below. There are no adopted State policies or standards for groundborne vibration.

Governor's Office of Planning and Research

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

Caltrans establishes noise limits for vehicles licensed to operate on public roads (Caltrans 2013). For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The State pass-by 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* guidelines for assessing noise levels associated with roadway projects (Caltrans 2011b).

California Streets and Highways Code

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.

Airport Noise Standards and Compatibility Planning

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 the California Department of Transportation.

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 dB 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 dB 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)."

Local

To identify, appraise and remedy noise and vibration problems in local communities, each county and city in the AMBAG region is required to adopt a noise element as part of its General Plan. Local governments use the Governor's Office of Planning and Research's General Plan Guidelines (2017), including land use compatibility guidelines, to prepare General Plan noise elements.

Each noise element is required to analyze and quantify current and projected noise levels associated with local noise sources, including, but not limited to: highways and freeways, primary arterials and major local streets, rail operations, air traffic associated with the airports; local industrial plants; and other ground stationary sources that contribute to the community noise environment. Beyond statutory requirements, local jurisdictions are free to adopt their own goals and policies in their noise elements, although most jurisdictions have chosen to adopt noise/land use compatibility guidelines that are similar to those recommended by the State. The overlapping Ldn ranges indicate that local conditions (existing noise levels and community attitudes toward dominant noise sources) should be considered in evaluating land use compatibility at specific locations.

In addition to regulating noise through noise element policies, local jurisdictions regulate noise through enforcement of local ordinance standards. These standards generally relate to noisy activities (e.g., use of loudspeakers and construction) and stationary noise sources and facilities (e.g., air conditioning units and industrial activities).

As discussed above, the State Aeronautics Act (Public Utilities Code, Section 21670 et seq.) requires the preparation of an ALUCP for nearly all public-use airports in the State (Section 21675). An Airport Land Use Commission (ALUC) is responsible for preparing the ALUCPs and ensuring compatible land uses in the vicinity of airports within their jurisdiction (Section 21676). Monterey County and San Benito Counties each have an ALUC and ALUCPs. The San Benito County ALUC most recently adopted an updated ALUCP for the Hollister Municipal Airport in 2012 (San Benito County ALUC 2012), and has a 2001 ALUCP for the Hollister Municipal Airport and the Frazier Lake Airpark (San Benito County ALUC 2001). The Monterey County ALUC is in the process of updating ALUCPs for Monterey Regional Airport and Marina Municipal Airport (Monterey County 2017b) because the current ALUCPs are from 1987 and 1996 respectively (Monterey County ALUC 1996 and 1987). Santa Cruz County, however, is exempt from having an ALUC or preparing an ALUCP because it has only one public use airport owned by a single city (Watsonville) (Caltrans 2011). Instead, the City of Watsonville is required to submit its general and specific plans to the Caltrans Division of Aeronautics for review.

4.12.2 Impact Analysis

a. Methodology and Significance Thresholds

The analysis of noise impacts considers the effects of both temporary construction-related noise and long-term noise associated with proposed transportation system improvements. Temporary construction noise was estimated based upon levels presented in the FTA *Transit Noise and Vibration Impact Assessment*. Long-term traffic-related noise was estimated using a modification of the Federal Highway Traffic Noise Model (TNM).

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact related to noise:

1. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
3. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; and/or

4. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

The analysis of potential impacts includes an assessment of all applicable standards, including those established by local jurisdictions, counties, the State of California and federal agencies, where appropriate.

Since this document analyzes noise impacts on a program level only, project-level analyses for various projects within the 2040 MTP/SCS will be necessary in the future. The project proponent or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures prior to construction.

b. Project Impacts and Mitigation Measures

This section describes generalized impacts associated with some of the projects anticipated in the 2040 MTP/SCS. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could result in noise impacts as described in the following sections.

Threshold 1:	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
Threshold 2:	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels
Threshold 4:	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project

Impact N-1 CONSTRUCTION ACTIVITIES ASSOCIATED WITH TRANSPORTATION PROJECTS AND LAND USE PROJECTS UNDER THE 2040 MTP/SCS WOULD CREATE TEMPORARY NOISE AND VIBRATION LEVEL INCREASES IN DISCRETE LOCATIONS THROUGHOUT THE AMBAG REGION. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Noise

The operation of equipment during the construction of roadway infrastructure, as well as infill development projects near transit and other land use development envisioned in the 2040 MTP/SCS, would result in temporary increases in noise in the immediate vicinity of individual construction sites. As shown in Table 39, average noise levels associated with the use of heavy equipment at construction sites can range from about 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 involve the use of equipment such as backhoes, bulldozers, shovels and front-end loaders.

Table 39 Typical Construction Noise Levels (dBA)

Equipment	Typical Level 25 Feet from the Source	Typical Level 50 Feet from the Source	Typical Level 100 Feet from the Source	Typical Level 200 feet from the Source	Typical Level 800 Feet from the Source
Air Compressor	87	81	75	69	57
Backhoe	86	80	74	68	56
Concrete Mixer	91	85	79	73	61
Grader	91	85	79	73	61
Paver	95	89	83	77	65
Saw	82	76	70	64	52
Scraper	95	89	83	77	65
Truck	94	88	82	76	64

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006.

Noise generated by construction activity would be variable depending on the project and intensity of equipment used. Roadway widening and new roadway projects would likely require the operation of many pieces of heavy-duty equipment that generate high noise levels. Alternatively, pedestrian trail improvements would typically be less intense requiring minimal, if any, use of heavy equipment. There are instances where activities that typically generate lower noise levels would generate relatively high noise levels. For example, a pedestrian trail improvement may include bridge pilings or require heavy equipment to clear vegetation. 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 construction site with heavy-duty equipment may be exposed to noise levels exceeding 65 dBA. Therefore, this impact is significant because applicable noise standards could be exceeded, or because a substantial temporary increase in ambient noise levels in the project vicinity could occur.

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. As shown in Table 40, the highest impact caused by equipment such as pile drivers or large bulldozers can generate vibrations of 1.518 to 0.089 inches per second PPV at a distance of 25 feet. Similar to construction noise, vibration levels would be variable depending on the type of construction project and related equipment use.

Table 40 Construction Equipment Vibration Levels

Equipment		PPV at 25 feet (inches per second)	RMS at 25 feet (Vdb)
Pile Driver (Impact)	Upper Range	1.518	112
	Typical	0.644	104
Pile Driver (Sonic)	Upper Range	0.734	105
	Typical	0.170	93
Vibratory Roller		0.210	95
Clam Shovel Drop (Slurry Wall)		0.202	94
Hydrol Mill (Slurry Wall)	In Soil	0.008	66
	In Rock	0.017	75
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006

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 (i.e., greater than 0.2 inches per second PPV) 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 when it occurs within 50 feet of 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 within 100 feet and damage existing structures within 50 feet. Therefore, this impact is significant because transportation or land use project construction could cause excessive groundborne vibration or groundborne noise levels.

Noise and Vibration Reduction Provided by Local Policies

Some of the cities and counties in the AMBAG region include specific regulations in their municipal code to reduce construction noise impacts. In most cases, these regulations restrict construction activities to specific times and days (e.g. Seaside, Marina, Pacific Grove and Hollister). Such local policies serve to reduce the impacts of noise and vibration on surrounding communities by prohibiting construction during the night when people are engaged in noise-sensitive activities like sleeping.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that result in construction noise impacts. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

N-1 (a) Measures to Ensure Compliance with Local Construction Noise and Vibration Regulations

Implementing agencies of 2040 MTP/SCS projects shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites, appropriate measures shall be implemented to ensure compliance with local ordinance requirements relating to construction noise and vibration. 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

N-1 (b) Pile Driving

For any project within 800 feet of sensitive receptors that requires pilings, the implementing agencies shall require caisson drilling or sonic pile driving as opposed to impact pile driving, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

N-1 (c) Construction Equipment Noise and Vibration Control

Implementing agencies of 2040 MTP/SCS projects shall ensure that equipment and trucks used for project construction utilize the best available noise and vibration control techniques, including mufflers, intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

N-1 (d) Impact Equipment Noise Control

Implementing agencies of 2040 MTP/SCS projects 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

N-1(e) Construction Activity Timing Restrictions

The following timing restrictions shall apply to MTP/SCS project construction activities located within 2,500 feet of a 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

N-1(f) Placement of Stationary Noise and Vibration Sources

Implementing agencies of 2040 MTP/SCS projects shall locate stationary noise and vibration sources as far from sensitive receptors as feasible. Stationary noise sources that must be located near existing receptors will be adequately muffled.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

N-1(g) Physical Impacts Due to Vibration

Implementing agencies of 2040 MTP/SCS 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 potential damage to buildings located on or off-site. 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.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Implementation of required mitigation would reduce impacts from construction noise. However, even with application of Mitigation Measures N-1(a) through N-1(g), construction noise from all 2040 MTP/SCS projects may not be reduced below applicable thresholds and impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

Threshold 1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies
Threshold 3: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project

Impact N-2 IMPLEMENTATION OF THE 2040 MTP/SCS WOULD POTENTIALLY EXPOSE EXISTING AND FUTURE SENSITIVE RECEPTORS TO SIGNIFICANT MOBILE SOURCE NOISE LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Traffic

Overall traffic levels on highways and roadways in the AMBAG region are projected to increase as a result of regional growth through the year 2040 (refer to Section 4.14, *Transportation and Circulation*). The 2040 MTP/SCS includes projects that would potentially increase traffic noise by increasing traffic levels along and in the vicinity of affected facilities. Such projects include: construction of new interchanges, roadway widening, roadway extensions, new roadways and improvements to roads that would allow increased traffic volumes. Widening projects, roadway extension and new roadways would accommodate additional traffic volumes and/or relocate noise

sources closer to receptors. In addition, the anticipated number of annual vehicle miles traveled (VMT) in 2040 would be increased from 15,835,910 annually under existing conditions (2015) to 19,687,508 annually with the 2040 MTP/SCS (Revenue Constrained Scenario), an increase of approximately 4,062,402 VMT annually, or approximately 24 percent. Although many areas along freeway and roadway corridors are at least partially shielded from traffic noise by topography, buildings, walls and other barriers, an increase in VMT and new and extended roadways would result in higher traffic noise levels as compared to existing conditions. Therefore, this impact is significant because applicable noise standards could be exceeded, or because a substantial permanent increase in ambient noise levels in the project vicinity could occur.

Airports

The 2040 MTP/SCS includes airport improvements at the following airports: Marina Municipal Airport, King City (Mesa Del Rey) Municipal Airport and Monterey Regional Airport in Monterey County; Hollister Airport in San Benito County; and Watsonville Municipal Airport in Santa Cruz County. Proposed airport projects include lighting and fencing replacement, runway overlay, runway extension, installation of apron drainage system, taxiway improvements (e.g., markings, lighting, signage), construction of new hangars and terminal complex and related roadway construction.

Most of the proposed projects serve to improve or repair existing facilities and would not change aircraft activity and flight patterns and associated noise impacts. However, the extension project proposed for the Watsonville Municipal Airport (SC-AIR-P01-WAT) would potentially facilitate larger aircraft that could increase noise levels associated with flight activity. Specific project details are not known at this time and thus the potential noise increase associated with larger aircrafts cannot be determined. However, this project would require project-specific environmental review including noise impacts and would comply with existing Watsonville Municipal Airport regulations, which include noise abatement procedures (City of Watsonville 2017). Specific noise abatement procedures include using low RPM settings on Runway 20 and prevention of full power climb outs on downwind departures or over congested areas. Overall, noise impacts from airport projects would be less than significant.

Rail Operations

The 2040 MTP/SCS includes investments in passenger rail and train service, such as extending existing rail service from San Jose and Salinas, providing commuter rail service from Hollister to Gilroy, and establishing daily intercity Amtrak rail service between San Francisco and Los Angeles with stops in Salinas, Soledad and King City. 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 41.

Rail transit projects included in the 2040 MTP/SCS would be located in urban areas to facilitate ridership. 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.

The 2040 MTP/SCS also includes new facilities that encourage more efficient intermodal transport using rail. The number of freight trains currently operating each day is dependent upon the demands of the industries using rail services and can vary greatly from day to day. While increases in freight rail transport would increase the number of freight trains, these trains would likely operate as-needed rather than on a fixed schedule. Therefore, noise levels and frequency of pass-by trips would continue to vary daily. Overall, however, an increase in train volumes would cause an

increase in noise levels adjacent to rail corridors. 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 41 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
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		100	50
Ventilation Shafts		200	100
Power Substations		250	125

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006

Bus Operations

The 2040 MTP/SCS includes projects to expand transit bus service, such as express bus service from the City of Hollister to Gavilan College and the Caltrain Station. Transit services along new routes may expose sensitive receptors to bus noise. 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 42.

Table 42 Screening Distances for Noise Assessments – Bus Transit Projects

Type of Project		Screening Distance (Feet)	
		Unobstructed	Intervening Buildings
Busway		500	250
BRT on Exclusive Roadway		200	100
Bus Facilities	Access Roads	100	50
	Transit Center	225	150
	Storage and Maintenance	350	225
	Park and Ride Lots with Buses	225	150

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2006

Increased frequency of bus service along existing corridors would also increase noise exposure. However, the addition of local buses and shuttles is unlikely to increase noise by significant levels as

bus routes would be in urban areas with high ambient noise levels. In addition, the 2040 MTP/SCS also includes projects to replace older diesel buses with new compressed natural gas buses that produce less noise. Overall, however, sensitive land uses would be located within close proximity to new bus activity, and would potentially be exposed to noise levels that exceed acceptable standards, a significant impact.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measure developed for the 2040 MTP/SCS program where applicable for transportation projects that result in significant mobile source noise levels. The measure below does not apply to land use projects. Project-specific environmental documents may adjust this mitigation measure as necessary to respond to site-specific conditions.

N-2 Noise Assessment and Control for Mobile and Point Sources

Sponsor agencies of 2040 MTP/SCS projects shall complete detailed noise assessments 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 that may impact noise sensitive receptors. The implementing agency 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)

Where new or expanded roadways, rail, or transit projects are found to expose receptors to noise exceeding normally acceptable levels, the implementing agency shall implement techniques as recommended in the project-specific noise assessment. 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) shall be considered. Long expanses of walls or fences shall 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 shall be used, including solid fences, walls and landscaped berms.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies.

Significance After Mitigation

Implementation of the above mitigation measure would reduce noise from mobile sources. However, even with implementation of Mitigation Measure N-2, mobile source noise from buildout of the 2040 MTP/SCS 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.

Threshold 1: Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies

Threshold 4: A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project

Impact N-3 THE PROPOSED 2040 MTP/SCS LAND USE SCENARIO WOULD ENCOURAGE INFILL DEVELOPMENT NEAR TRANSIT AND OTHER TRANSPORTATION FACILITIES, WHICH MAY PLACE SENSITIVE RECEPTORS IN AREAS WITH UNACCEPTABLE NOISE LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The 2040 MTP/SCS is based on a land use and transportation scenario which defines a pattern of future growth and transportation system investment for the region emphasizing an infill approach near transit and other transportation facilities such as bicycle networks. 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. 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 AMBAG region can and should implement the following measures, where relevant to land use projects implementing the 2040 MTP/SCS. 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-3 Noise Mitigation for Land Uses

If a 2040 MTP/SCS 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.

Implementing Agencies

Implementing agencies for land use projects include cities and counties.

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-3 noise from buildout of the 2040 MTP/SCS 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.

Threshold 2: Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Impact N-4 THE PROPOSED 2040 MTP/SCS WOULD RESULT IN NEW TRUCK, BUS AND TRAIN TRAFFIC THAT COULD EXPOSE SENSITIVE RECEPTORS AND FRAGILE BUILDINGS TO EXCESSIVE VIBRATION LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

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 AMBAG region, and that 2040 MTP/SCS transportation projects include roadway expansion and construction of new 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. The 2040 MTP/SCS includes the development of additional railway facilities along existing tracks, extension of existing railways and construction of new rail lines, as well as establishment of a new Amtrak rail route. This would potentially increase rail activity along existing lines and also introduce rail activity to new areas. These changes may expose nearby sensitive receptors and fragile buildings to a substantial increase in vibration levels relative to the existing condition. Impacts would be significant because excessive groundborne vibration or groundborne noise levels could be generated.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation

measures developed for the 2040 MTP/SCS program where applicable for transportation projects that could generate excessive vibration impacts. These measures can and should also be implemented for future infill projects near transit pursuant to the 2040 MTP/SCS that would result in vibration impacts. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

N-4 Vibration Mitigation for Transportation Projects

Implementing agencies of 2040 MTP/SCS 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 2006)* 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:

- Rail Traffic
 - Maximizing the distance between tracks and sensitive uses
 - Conducting rail grinding on a regular basis to keep tracks smooth
 - Conducting wheel truing to re-contour wheels to provide a smooth running surface and removing wheel flats
 - Providing special track support systems such as floating slabs, resiliently supported ties, high-resilience fasteners and ballast mats;
 - Implementing operational changes such as limiting train speed and reducing nighttime operations.
- 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

Implementing Agencies

Implementing agencies for AMBAG transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

Implementation of the above mitigation measure would reduce potential impacts to a less than significant level. However, even with implementation of Mitigation Measure N-4, vibration from buildout of the 2040 MTP/SCS may continue to be excessive. Impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less-than-significant levels are feasible.

c. Projects That May Result in Impacts

The 2040 MTP/SCS projects are listed in full in Appendix B. Some may create noise impacts, as discussed herein. Due to the large number of transportation projects that would result in noise impacts, Table 43 provides only a sample of specific projects that could result in noise or vibration impacts, such as auxiliary lane and rail projects.

Table 43 2040 MTP/SCS Projects that May Result in Noise/Vibration Impacts

AMBAG Project No.	Project	Location	Impact	Description of Impact
MON-CT011-CT	SR 68 – Commuter Investments	Monterey County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
MON-SOLO14-SO	SR 146 Bypass	Soledad	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
MON-CT031-CT	U.S. Highway 101 – South County Frontage Roads	Monterey County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
MON-MST011-MST	Salinas Bus Rapid Transit	Salinas	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
MON-TAMC003-TAMC	Rail Extension to Monterey County	Monterey County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-CT-A44	Highway 25 4-Lane Widening, Phase I	San Benito County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-COH-A11	Union Road (formally Crestview Drive) Construction	Hollister	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-COH-A18 A19	Westside Boulevard Extension	Hollister	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-SJB-A07	Third Street Extension	San Juan Batista	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-SJB-A08	Lavagnino Drive Construction	San Juan Batista	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-SJB-A09	Connect Lang Street to the Alameda	San Juan Batista	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SC-RTC-24e-RTC	<u>3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street</u> <u>Highway 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street</u>	Santa Cruz	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SC-RTC-24f-RTC	Highway 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Pedestrian Bridge	Santa Cruz	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SC-RTC24g-RTC	<u>Highway 1: Auxiliary Lanes from State Park Drive to Park Avenue</u>	Santa Cruz	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SC-MTD-P12-MTD	Highway 17 Express Service Restoration and Expansion	Santa Cruz County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration

AMBAG Project No.	Project	Location	Impact	Description of Impact
SC-MTD-P14-MTD	Local Transit Service Restoration and Expansion	Santa Cruz County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration

d. Cumulative Analysis

Noise impacts are based on factors related to site-specific and project-specific characteristics and conditions, such as distance to noise sources and barriers between land uses and noise sources. Therefore, cumulative impacts related to construction, traffic and transit noise would be similar to 2040 MTP/SCS impacts discussed above and significant and unavoidable. The 2040 MTP/SCS is not expected to substantially increase inter-regional travel, because the 2040 MTP/SCS addresses accommodating projected growth. Therefore, the 2040 MTP/SCS related contributions to traffic noise outside the region are expected to be minimal; however, because 2040 MTP/SCS impacts would be significant the overall contribution to significant cumulative traffic noise impacts in adjoining counties would be cumulatively considerable. The 2040 MTP/SCS 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.

4.13 Population and Housing

4.13.1 Setting

This section evaluates the impacts to the regional housing supply and population growth associated with implementation of the 2040 MTP/SCS. The information presented was compiled from multiple sources, including U.S. Department of Housing and Urban Development (HUD), AMBAG's Draft 2018 Regional Growth Forecast and General Plans and associated EIRs for jurisdictions in the AMBAG region.

a. Growth Forecasting

The Draft 2018 Regional Growth Forecast (AMBAG, 2017d) projects the region's population, housing and employment to 2040. The Draft 2018 Regional Growth Forecast is used to support regional planning efforts such as the Regional Travel Demand Model and the 2040 MTP/SCS as well as local planning such as the development of General Plans and project review.

Developing population, housing and employment forecast estimates for the Monterey Bay region consists of two distinct stages. The first stage is the identification of regional and county level forecast figures through the use of widely accepted forecasting methodologies. The second stage is the disaggregation of county-level forecast numbers to the jurisdictional level and subsequently to the Traffic Analysis Zones (TAZ), using data gathered from jurisdictions (AMBAG 2017a).

b. Existing Population, Housing and Employment

Existing population, housing units and employment for unincorporated Monterey, San Benito and Santa Cruz County and the 18 cities in the AMBAG region are shown in Table 44. As of 2015, the region contains 762,676 residents, 262,660 housing units and 337,600 jobs, with a jobs-to-housing ratio of 1.28 (AMBAG 2016).

Table 44 2015 Population, Housing and Employment for the AMBAG Region

Jurisdiction	Population ¹	Housing Units ¹	Jobs ²
Monterey County	432,637	139,177	203,550
Carmel-by-the-Sea	3,824	3,417	2,935
Del Rey Oaks	1,655	741	359
Gonzales	8,411	1,987	4,477
Greenfield	16,947	3,794	7,024
King City	14,008	3,283	4,441
Marina	20,496	7,334	6,340
Monterey	28,576	13,637	34,030
Pacific Grove	15,251	8,184	5,000
Salinas	159,486	43,001	64,396
Sand City	376	176	1,517
Seaside	34,185	10,913	9,650
Soledad	24,809	3,927	3,442
Unincorporated County Territory	104,613	38,783	59,939
San Benito County	56,445	18,262	18,000
Hollister	36,291	10,757	13,082
San Juan Bautista	1,846	750	559
Unincorporated County Territory	18,308	6,755	4,359
Santa Cruz County	273,594	105,221	116,050
Capitola	10,087	5,537	7,062
Santa Cruz	63,830	23,535	40,986
Scotts Valley	12,073	4,691	7,475
Watsonville	52,562	14,131	22,644
Unincorporated County Territory	135,042	57,327	37,883
AMBAG Total	762,676	262,660	337,600

Source: AMBAG's Draft 2018 Regional Growth Forecast.

c. Regulatory Setting

Federal

Federal Uniform Relocation and Real Property Acquisition Policies Act of 1970

The Federal Uniform Relocation and Real Property Acquisition Policies Act (Uniform Act), 42 U.S.C. § 4601 et seq., passed by Congress in 1970, is a federal law that establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. The Uniform Act's protections and

assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects (HUD 2017b).

Title 23 CFR 450.322(f)

The Code of Federal Regulations, Title 23 CFR 450.322(f) requires that the metropolitan planning organization (MPO) update the regional transportation plan using the latest available estimates and assumptions for population, land use, travel, employment, congestion and economic activity.

State

California Transportation Commission Regional Transportation Plan Guidelines

Assembly Bill (AB) 69 was passed in 1972 and required the State to establish Regional Transportation Planning Agencies (RTPA) throughout the State to prepare Regional Transportation Plans (RTP) or Metropolitan Transportation Plan (MTP). AMBAG is the designated RTPA for Monterey, San Benito and Santa Cruz Counties. AMBAG is required to submit an updated RTP/MTP to the California Transportation Commission (CTC) and Caltrans every 4 years. The CTC has established guidelines to assist MTPs in preparing RTPAs (CTC, 2017a) and RTPAs in preparing the RTPs (CTC, 2017b). These guidelines recommend that RTP projections be based on available data and forecasting methodologies while being consistent with Department of Finance (DOF) projections. The guidelines were updated in 2010 to include requirements of Senate Bill (SB) 375.

California Relocation Assistance Act

The California Relocation Assistance Act of 1971 (Government Code § 7260 et seq.) is similar to the Uniform Relocation Assistance Act of 1970 (federal). However, it applies to State and local programs and projects that receive State funding, regardless of whether they receive federal funding.

Homeowners and Private Property Protection Act of 2008

Proposition 99, the Homeowners and Private Property Protection Act, was approved by voters in 2008. Proposition 99 amended the State Constitution and prohibits local agencies from using eminent domain to acquire owner-occupied residences and transferring it to private entities.

California Government Code, Section 65583

California Government Code Section 65583 specifies the State Housing Element requirements. The Housing Element is one of the State-mandated elements of the General Plan and is updated every eight years. The State Department of Housing and Community Development (HCD) is responsible for reviewing Housing Elements to ensure compliance with State law.

Local

Monterey County

The Monterey County General Plan (Monterey County, 2010a) contains several goals, policies and implementations that aim to improve the housing supply, the range of housing types and housing affordability levels. For example, Goal H-2, *Assist in the provision of housing that meets the needs of all socioeconomic segments of the County*, provides policies that support the development of housing affordable to the general workforce of Monterey County and address housing needs of special populations and extremely low income households through a range of housing options. In

addition to incentivizing affordable housing, Goal H-3, *Provide suitable sites for housing development which can accommodate a range of housing by type, size, location, price and tenure, that achieves an optimal jobs/housing balance, conserves resources and promotes efficient use of public services and infrastructure*, aims to provide an adequate supply and diversity of housing in the County.

San Benito County

The Housing Element of the San Benito County 2035 General Plan (San Benito County, 2015a) contains similar goals, policies and programs as Monterey County to provide affordable housing, a variety of housing types and ensure adequate housing for all persons. For example, Goal HOU-2, *To promote the provision of adequate housing for all persons in the County including those with special housing needs and to emphasize the basic human need for housing as shelter*, expresses the County's intent to encourage private builders and developers to participate in federal, state, or other programs that assist in providing and maintaining housing affordable to all income groups and special needs groups. The San Benito County Housing Element also contains Goal HOU-3, encouraging the preservation, maintenance and improvement of existing housing, which would reduce potential displacement of homes and/or households from redevelopment.

Santa Cruz County

The Housing Element of the County of Santa Cruz's General Plan (Santa Cruz County, 1994) contains several goals, policies and programs, much like Monterey and San Benito Counties, which aim to address the particular housing needs of people with special needs, different incomes and different housing needs. For example, Goal 1: *Ensure land is available to accommodate an increased range of housing choices, particularly for multi-family units and smaller sized units*, contains policies that aim to maintain or change zoning designations to ensure adequate housing supply in the County. In addition, Goal 3 of the Housing Element aims to remove unnecessary government constraints that may hinder housing development and affordability.

Many cities within the AMBAG region have similar population and housing goals and policies in their respective general plans. Several of these general plans include goals, policies, programs, or implementation measures that address the housing supply, special needs housing accommodations and regional housing shares. In addition to providing different types of housing to different groups of people, many of the cities in the AMBAG region aim to secure a balanced jobs-to-housing ratio. The Housing Elements of local jurisdictions serve as guidance documents in anticipation of future growth and, as in several of the cities' Housing Elements in the AMBAG region, provide provisions for zoning ordinances that promote housing opportunities.

4.13.2 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact to population and housing:

1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure);

2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; and/or
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

b. Project Impacts and Mitigation Measures

This section describes generalized impacts associated with proposed transportation improvements and the future land use scenario under the 2040 MTP/SCS. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS could result in the impacts as described in the following section.

Threshold 1: Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)

Impact PH-1 THE 2040 MTP/SCS WOULD RESULT IN SUBSTANTIAL POPULATION GROWTH IN THE AMBAG REGION. THIS IMPACT IS SIGNIFICANT AND UNAVOIDABLE.

From 2015 to 2040, the region's total population is forecasted to increase by 120,624 residents to 883,300 total residents. Table 45 shows the forecasted population growth for the region as a whole and by jurisdiction.

Table 45 Forecasted AMBAG Population Growth 2015-2040

Jurisdiction	2015	2020	2040	Population Change (2015-2040)	Percent Change (2015-2040)
Monterey County	432,637	448,211	501,751	69,114	16%
Carmel-by-the-Sea	3,824	3,833	3,876	52	1%
Del Rey Oaks	1,655	1,949	2,987	1,332	80%
Gonzales	8,411	8,827	18,756	10,345	123%
Greenfield	16,947	18,192	22,327	5,380	32%
King City	14,008	14,957	16,063	2,055	15%
Marina	20,496	23,470	30,510	10,014	49%
Monterey	28,576	28,726	30,976	2,400	8%
Pacific Grove	15,251	15,349	16,138	887	6%
Salinas	159,486	166,303	184,599	25,113	16%
Sand City	376	544	1,494	1,118	297%
Seaside	34,185	34,301	37,802	3,617	11%
Soledad	24,809	26,399	29,805	4,996	20%
Unincorporated County Territory	104,613	105,361	106,418	1,805	2%
San Benito County	56,445	62,242	74,668	18,223	32%
Hollister	36,291	39,862	46,222	9,931	27%
San Juan Bautista	1,846	2,020	2,251	405	22%
Unincorporated County Territory	18,308	20,360	26,195	7,887	43%
Santa Cruz County	273,594	281,147	306,881	33,287	12%
Capitola	10,087	10,194	10,809	722	7%
Santa Cruz	63,830	68,381	82,266	18,436	29%
Scotts Valley	12,073	12,145	12,418	345	3%
Watsonville	52,562	53,536	59,743	7,181	14%
Unincorporated County Territory	135,042	136,891	141,645	6,603	5%
AMBAG Total	762,676	791,600	883,300	120,624	16%

Source: AMBAG's Draft 2018 Regional Growth Forecast.

Regional population is forecasted to increase by 16 percent from 2015 to 2040. As shown above, population growth in the cities of Del Rey Oaks, Gonzales, Greenfield, Marina, Sand City, Soledad, Hollister, San Juan Bautista, Santa Cruz and the unincorporated territory of San Benito County, would increase at a faster rate than the AMBAG region as a whole. In contrast, population growth in the cities of Carmel-by-the-Sea, King City, Monterey, Pacific Grove, Seaside, Capitola and Scotts Valley and the unincorporated portions of Monterey and Santa Cruz Counties would increase at a slower rate than the region as a whole. The population of the City of Salinas is forecasted to increase at a similar rate to the region overall.

The 2040 MTP/SCS would induce population growth directly through the development of the SCS land use scenario and indirectly as a result of the transportation projects included in the Plan. Between 2015 and 2040, the AMBAG region would grow by 120,624 people; 42,633 housing units; and 57,400 jobs. As shown in Figure 3, Figure 4, Figure 6 and Figure 8 in Section 2.0, *Project*

Description, growth would be concentrated within existing communities, including the coastal plain that extends from the Santa Cruz/Capitola area in the north, south along the Monterey Peninsula, as well as some communities along major transportation corridors such as Hollister and Gonzales. The land use scenario envisioned by the 2040 MTP/SCS would encourage infill, mixed use and TOD within existing urbanized areas. This type of development would promote the development of existing vacant or underutilized properties and would locate people closer to existing employment, goods and services within established communities. In addition, investments in alternative modes of transportation and an emphasis on infill and TOD would result in land use developments with higher densities, mixed use land uses and an emphasis on transit use over single-occupancy vehicle use, while investments in capacity increasing roadway improvements may indirectly lead to land use developments that have been historically typical for suburban development with low densities.

As mentioned above, population growth in the cities of Del Rey Oaks, Gonzales, Greenfield, Marina, Sand City, Soledad, Hollister, San Juan Bautista, Santa Cruz and the unincorporated territory of San Benito County, would increase at a faster rate than the AMBAG region as a whole. Consistent with the goals of the 2040 MTP/SCS, the dense growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit-oriented and compact. However, many rural communities with minimal development at present would see substantial population growth through 2040. Some of these areas include the City of Gonzales and unincorporated areas of San Benito County, which would see a 123 percent and 43 percent increase in population, respectively. Similarly, the cities of Hollister, Marina, Sand City and Del Rey Oaks would see significant population growth, as shown in Table 45.

Transportation improvements associated with the 2040 MTP/SCS would not result in direct population growth beyond anticipated growth in the region, and projects under the proposed 2040 MTP/SCS are designed to fully support the transportation needs of the growing population while implementing the infill development approach outlined in Chapter 4, *Sustainable Community Strategy*, of the MTP/SCS. However, the land use components of the 2040 MTP/SCS would induce substantial population growth in the region, leading to a significant impact related to population growth.

Mitigation Measures

Mitigation of the 2040 MTP/SCS impacts on population growth would be infeasible. A moratorium on building permits, for example, would restrict housing and business development, which would cause potential residents or companies to be located outside of major population centers within the AMBAG region. However, a regionwide moratorium would be difficult to implement, if not completely infeasible, for economic, political and legal reasons, especially over an extended period of time. Additionally, a moratorium would cause potential residents to reside in neighboring regions and commute into the region, which would increase GHG emissions and counter sustainability goals included in the 2040 MTP/SCS. A regionwide restriction on public services and utilities would also serve to limit population growth, but would be difficult, if not completely infeasible, to implement for the reasons described above.

Additionally, failing to accommodate the forecasted population growth would be inconsistent with a fundamental objective of the 2040 MTP/SCS. Moreover, Government Code Section 65080(b)(2)(B)(ii) requires that the MTP/SCS must house all the population of the region, including all economic segments of the population, over the course of the planning horizon of the MTP/SCS. The MTP/SCS itself does not control local land use decisions. A building moratorium would impede the ability of local jurisdictions to construct a sufficient housing supply for the forecasted population

growth. As a result, no mitigation measures to reduce this impact to less-than-significant levels are feasible.

Significance After Mitigation

Because no mitigation measures are feasible, as described above, impacts related to population growth inducement would be significant and unavoidable.

Threshold 2: Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere

Threshold 3: Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere

Impact PH-2 LAND USE DEVELOPMENT INCLUDED IN THE 2040 MTP/SCS WOULD TEMPORARILY DISPLACE EXISTING HOUSING AND PEOPLE AS INDIVIDUAL HOUSING DEVELOPMENT SITES ARE REDEVELOPED. HOWEVER, THIS DISPLACEMENT WOULD BE TEMPORARY AND WOULD BE OFFSET BY A SIGNIFICANT NET INCREASE IN HOUSING UNITS BY 2040. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Land use development included in the 2040 MTP/SCS would likely displace existing housing and people, primarily low- and medium-density single-family, multi-family, or mobile home dwelling units, as existing housing units are demolished to make way for new development. However, new residential development would generally occur at higher densities and with more modern housing, frequently as part of mixed-use development. During construction of individual projects, residents may be temporarily displaced. However, there are normal factors in the market place 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. As described in the Regulatory Setting above, 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, the 2040 MTP/SCS would result in a net increase in housing units. Between 2015 and 2040, the projected increase in housing capacity in the region would be 42,633 units, or an increase of 16 percent. The most dramatic increases would occur in the cities of Marina, Sand City, Hollister, Gonzales, Del Rey Oaks, Soledad, Santa Cruz and unincorporated portions of San Benito County, as shown in Table 45. Because the MTP/SCS 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, the MTP/SCS includes the replacement housing that would be necessitated by individual projects.

Implementation of the 2040 MTP/SCS would 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, such as road widening or extension projects, would require acquisition of right-of-way in areas with high density housing or business along transportation corridors and may displace 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, the 2040 MTP/SCS would result in a net increase of 42,633 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.

Mitigation Measures

No mitigation is required.

c. Specific MTP/SCS Projects That May Result in Impacts

As discussed above, the 2040 MTP/SCS would result in less than significant impacts related to displacement of housing or people. Although some transportation network improvements, such as road widening or extension projects, would require acquisition of right-of-way in areas with high density housing or business along transportation corridors, it cannot feasibly be determined whether such widening or right-of-way acquisition would displace housing units or residents without project-specific design details.

d. Cumulative Impact Analysis

Although many projects included in the 2040 MTP/SCS may not individually be significant, the cumulative impact in 2040 resulting from the combined impacts of the 2040 MTP/SCS and impact projections from adopted plans within the cumulative impact analysis area would be significant when considered together. As described above, implementation of the regional growth and land use change as well as transportation network improvements associated with the 2040 MTP/SCS would induce substantial population growth. The combination of the direct population impacts from the 2040 MTP/SCS and population growth from adopted plans in adjoining counties would result in significant cumulative population growth impacts by 2040. Because cumulative population growth throughout the cumulative impact analysis area region by 2040 would be significant, and because the 2040 MTP/SCS incremental impacts related to population generation are significant, the incremental population impacts of the proposed MTP/SCS are also cumulatively considerable. No feasible mitigation is available to reduce this contribution to less than cumulatively considerable levels.

As described above, housing displacement caused by transportation projects and land use development included in the 2040 MTP/SCS would be temporary and would be offset by a significant net increase in housing units by 2040. As shown in Table 4 in Section 3.0, *Environmental Setting and Impact Analysis Approach*, housing growth within the cumulative impact analysis area would increase from 1,936,560 units in 2015 to 2,315,493 units in 2040, a nearly 20 percent increase over 25 years. Because short-term displacement would be mitigated through both existing regulations and normal market factors, and because there would be a net increase in housing units overall, cumulative impacts related to displacement would be less than significant, and the contribution of the 2040 MTP/SCS to this impact would not be cumulatively considerable.

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4.14 Transportation and Circulation

This section describes the current transportation conditions and examines the effects of the changes in projected land use and transportation projects included in the 2040 MTP/SCS on transportation conditions in 2040. This section evaluates the impacts related to transportation such as changes in travel times, accessibility to jobs, traffic congestion, vehicle miles traveled and transit utilization that may result from the implementation of the 2040 MTP/SCS.

4.14.1 Setting

The existing transportation system in the region consists of a complex network of state and federal highways, local streets and roads, transit services, a series of bicycle paths and pedestrian walkways, railroad lines and a number of aviation facilities.

a. Roadway Network

The roadway network within the region consists of several thousand miles of roadways, including highways, regional arterial roads and other collector and local streets. Within the region, the designated routes in the national highway system are all state or federal highways, including: Highway 101 for its entire length through the region, Highway 156 from Highway 101 to Highway 1, and Highway 1 from Highway 17 in Santa Cruz to Highway 68 in Monterey. Vehicle travel served by these highways includes all trip lengths and trip purposes, ranging from external trips to and from the region, external trips traveling through the region (e.g. from San Jose to Los Angeles on Highway 101), and internal travel between points within the region.

The three counties and 18 incorporated cities within the region are responsible for an extensive network of city and county roads. Major highway routes through the region include:

- Highway 101, a north-south route primarily serving Monterey County, and connecting through San Benito County and the San Jose/San Francisco Bay area;
- Highway 1, which closely follows the Pacific coastline and is the single longest highway in the region, attracting substantial recreational and tourist traffic;
- Highway 17, which connects Santa Cruz and the San Jose Area, carrying a high volume of both commuter and recreational traffic;
- Highway 68 and Highway 183 in Monterey County;
- Highway 25 and Highway 156 in San Benito County; and
- Highway 9 and Highway 129 in Santa Cruz County.

These highways and other expressways, arterials and collectors not only serve local traffic, but provide access and mobility for trips beginning and/or ending outside the region. Table 46 identifies the major roadways in the region and current roadway congestion issues. Current roadway conditions and congestion issues reflect baseline (2015) conditions, unless a more recent date is noted.

Table 46 Highway Descriptions and Congestion Issues

Highway	Length within AMBAG Region	Description
State Highway 1	139.8 miles	<p>Highway 1 is one of two routes that traverse the entire region, connecting the Monterey Bay Area to Northern and Southern California. This important highway provides the primary access to the region's coastal areas, as well as serving the needs of residents and visitors to much of the region's urbanized areas, and assisting with agricultural commodity movement.</p> <p>Highway 1 is designated a California State Scenic Highway from the intersection with State Highway 68 south to the San Luis Obispo County line, a distance of approximately 78 miles. At the Santa Cruz and San Mateo County border, Highway 1 is designated a California State Scenic Highway as it travels north towards San Francisco. Highway 1 changes in character as it moves down the Pacific Coast, from a rural, undivided two lane highway, to a four lane arterial, to a four lane divided highway, and finally to a six lane divided highway. Congestion issues include commuter traffic around and through the cities of Monterey and Santa Cruz and tourism traffic along its entire length, but especially in the Big Sur and Carmel-by-the-Sea areas.</p> <p>Portions of Highway 1 have been closed in Monterey County due to mudslides and a collapsed bridge at Pfeiffer Canyon. As of October 23, 2017, the newly constructed Pfeiffer Canyon Bridge has reopened; however, the highway remains closed at Mud Creek due to a substantial landslide and is anticipated to be closed through late 2018 June 1, 2018 (Caltrans, 2017b). However, this temporary lull in operations of Highway 1 is not considered representative of baseline conditions.</p>
State Highway 9	25.7 miles	<p>Highway 9 is a two-lane rural highway as it enters the region from San Mateo County in the Santa Cruz Mountains. It is a 27-mile route between the cities of the Santa Clara Valley and Santa Cruz at its junction with Highway 1. It is considerably curvy and traverses forested areas, which limit travel speeds. Highway 9 serves communities in the San Lorenzo Valley, including Boulder Creek, Ben Lomond, and Felton, and is a heavily used commuter and recreational travel route.</p> <p>A section of Highway 9 has been temporarily reduced to one-way controlled traffic at Western Avenue in Santa Cruz County due to a mudslide removal. This temporary traffic control is expected remain in place until December 31, 2017 (Caltrans, 2017b). This temporary reduction in travel lanes on Highway 9 is not considered representative of baseline conditions.</p>
State Highway 17	12.5 miles	<p>Highway 17 is a four-lane freeway/expressway providing the shortest travel distance between the Santa Clara Valley and Santa Cruz County. Travelers to and from the San Francisco Bay area and Santa Cruz County use Highway 17. The route is heavily used for recreational travel on weekends and for commuter travel on weekdays and is therefore subject to delay.</p> <p>Starting at the Santa Clara/Santa Cruz County line near Summit Road, Highway 17 is a rolling to mountainous road, with slopes from four percent to six percent. Segments along this route are narrow, do not have shoulders, or have a narrow median with guard rail. Highway 17 reached its design capacity of 40,000 vehicles per day in 1968. Although this road does not have signalized intersections, there are several unsignalized intersections with acceleration/deceleration lanes as well as t-intersections with local roads. Just south of Scotts Valley, Highway 17 becomes a freeway with shoulders. The freeway portion terminates at the interchange with Highway 1 in the City of Santa Cruz. The program Safe on 17 has been an effective collaboration between <u>SCCRTC</u>, Caltrans <u>and</u> the California Highway Patrol and local and elected officials to encourage motorists to travel at safe speeds and use caution on Highway 17.</p>

Highway	Length within AMBAG Region	Description
State Highway 25	72.1 miles	<p>Highway 25 enters the region in the north about two miles south of its interchange with U.S. Highway 101 in Santa Clara County. Although only a two-lane undivided highway, it provides the most direct connection between U.S. Highway 101 and the City of Hollister, as well as being the sole north-south highway for the rest of San Benito County.</p> <p>Highway 25 is primarily a two-lane undivided roadway from the Santa Clara/San Benito County line and the intersection with Highway 198 in southern Monterey County. In this section, Highway 25 provides direct access to the East Entrance to Pinnacles National Park.</p> <p>Due, in part, to both differences between housing market costs and a jobs/housing imbalance, increasing commute travel from residents from San Benito County to Santa Clara County has substantially affected the operation of Highway 25, especially from Hollister to the Santa Clara County line.</p>
State Highway 68	22 miles	<p>Highway 68 begins at Asilomar State Beach in the City of Pacific Grove and is the only highway access from Pacific Grove to Highway 1. At Highway 1, the roads merge for about three miles, then Highway 68 continues east past the Laguna Seca Recreation Area and Monterey County's Toro Regional Park and on into Salinas, where it connects to U.S. Highway 101.</p> <p>Highway 68 is the most direct highway link between the Monterey Peninsula and the City of Salinas and is heavily used by commuters and visitors.</p> <p>State Highway 68 is a designated California State Scenic Highway from its intersection with State Highway 1 in Monterey to the Salinas River. From Asilomar State Beach to State Highway 1, Highway 68 is a steep two-lane highway with narrow shoulders, many curves and signalized intersections. From Highway 1 eastbound, Highway 68 is a four-lane divided road for less than a mile before narrowing to a two-lane undivided rural highway (with signalized intersections) to Toro Park, where it becomes a four-lane freeway to the Spreckels interchange. From here to Blanco Road in the City of Salinas it is a four-lane expressway, and then it becomes a signalized arterial (South Main Street and John Street) through Salinas to U.S. Highway 101. Motorists experience substantial delay on Highway 68 due to its heavy use and signalized intersections.</p>
U.S. Highway 101	107.6 miles	<p>U.S. Highway 101 is the only federal highway in the region. Highway 101 enters the region at the northwest corner of San Benito County as a four-lane freeway/expressway.</p> <p>U.S. Highway 101 is the main north-south route for the region, used heavily by residents of the region, and for external trips to and through the region. It is an important truck route along its entire length. Near Prunedale travel demand significantly outpaces capacity. This section is characterized by at-grade intersections that serve increasing commuter, recreational and truck traffic.</p> <p>At the northern boundary of the City of Salinas, Highway 101 has been improved to a freeway through the urbanized area, and then it continues as an expressway southward toward the Monterey/San Luis Obispo County line, with alternating segments of four-lane divided expressway and freeway.</p>
State Highway 129	14.1 miles	<p>Highway 129 connects Highway 1 in Watsonville and U.S. Highway 101 in San Benito County, east of Watsonville. Highway 129 traverses hilly terrain with sharp curves and steep grades. It provides the shortest route between the agriculture center of Watsonville and U.S. Highway 101. It therefore carries a large volume of heavy trucks, especially since semitrailer trucks over 45 feet in length are not allowed on Highway 152, which is another connection between Watsonville and Highway 101.</p> <p>Highway 129 is a four-lane road from Highway 1 to the Watsonville City limits, where it narrows to a two-lane rural road with narrow or no shoulders. The</p>

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Highway	Length within AMBAG Region	Description
		terrain it traverses, and the resulting roadway characteristics place severe limits on traffic speeds and volume.
State Highway 146	18.3 miles	Highway 146 is two separate rural two-lane roads, one from U.S. Highway 101 in Monterey County east, and the other from Highway 25 in San Benito County west. These roads do not connect for travel across the Gabilan Mountains, but do provide access to Pinnacles National Park via its western and eastern entrances, respectively.
State Highway 152	11.4 miles	Highway 152 connects the City of Watsonville to Gilroy, northeast of Watsonville in Santa Clara County. In Watsonville, Highway 152 begins at its intersection with Highway 1. It traverses Hecker Pass between Watsonville and Gilroy, before ultimately ending at its junction with U.S. Highway 101 in Gilroy. Highway 152 is primarily a two-lane undivided highway along most of its length, but the segment between Highway 1 and Elkhorn Road in Pajaro is a four-lane divided expressway. As the road crosses Mt. Madonna via Hecker Pass, it becomes hilly with many curves. Due to safety concerns, trucks over 45 feet in length are prohibited on travelling on Highway 152 over Hecker Pass. These trucks are diverted to Highway 129 and other routes.
State Highway 156	23.9 miles	Highway 156, like Highway 129 and Highway 152, is a major route connecting U.S. Highway 101 and Highway 1. Starting from its interchange with Highway 1 and Highway 183 in Castroville, the highway merges with U.S. Highway 101 in Prunedale and then becomes a separate route again near San Juan Bautista. At San Juan Bautista, the highway continues easterly north of Hollister to the Santa Clara County line just south of its terminus with Highway 152. Highway 156 is a California State Scenic Highway from one mile east of Castroville to its intersection with U.S. Highway 101 near Prunedale. At San Juan Bautista, Highway 156 begins as a four-lane divided expressway, but after three miles becomes a two-lane, undivided highway to approximately one mile east of Hollister. Highway 156 is a two-lane expressway as it bypasses Hollister and maintains that configuration to the Santa Clara County line. The reduction in travel lanes can be a traffic bottleneck between Highway 1 and U.S. Highway 101 during peak periods and weekends. Highway 156B is the business route of the highway running directly through Hollister, providing access to the Hollister Airport.
State Highway 183	10.1 miles	Highway 183 is a rural two-lane highway connecting Castroville and Salinas. In Castroville, Highway 183 is also known as Merritt Street and begins at an at-grade interchange with Highway 1. The highway is congested between Highway 1 to Davis Road in the City of Salinas, particularly during commute hours on weekdays. It also experiences high rates of agricultural truck traffic movement. In the City of Salinas, the highway becomes two four-lane divided arterials on Market and North Main Streets. Highway 183 terminates at the U.S. Highway 101 on-ramp south of Bernal Drive/North Main Street.
State Highway 198	26.2 miles	Highway 198 is a two-lane conventional highway beginning at U.S. Highway 101 just west of San Lucas in southern Monterey County and continuing east to the Fresno County line. Traffic volumes are low and are primarily interregional.
State Highway 236	16.4 miles	Highway 236 is a two-lane rural road that provides access from Highway 9 at Boulder Creek west to Big Basin Redwoods State Park. Passing through the park, Highway 236 first heads north and then east to reconnect with Highway 9 approximately eight miles north of Boulder Creek. The highway generally is not congested, but does contain narrow to no shoulders, sharp curves and hilly terrain.

Operations

A variety of performance measures are used to assess transportation systems. Depending on the type of performance evaluation required, performance measures may be very specific and focus on intersections or roadway segments, or performance measures may be aggregated to evaluate the overall operation of a regional transportation system. A regional travel model typically only contains information on the number of lanes and link capacity on roadway segments and lacks information detailed enough to calculate accurate intersection information.

Because of the programmatic nature of the 2040 MTP/SCS, the performance measures discussed herein are aggregated by county and as a region to evaluate the overall performance of the transportation system. Transportation performance measures were used as planning metrics in creating the 2040 MTP/SCS. Transportation performance measures that address performance goals, as detailed in Chapter 5 of the 2040 MTP/SCS, include:

- Total daily hours of vehicle delay;
- Peak period⁸ and total congested vehicle miles traveled (CVMT);
- Percent of work trips that are 30 minutes or less by transit during peak period;
- Average work trip travel time during peak period; and
- Percent of jobs within 0.5 mile of a high quality transit stop.

Daily hours of vehicle delay is calculated by determining the difference between the estimated travel time under actual (often congested) conditions and under uncongested conditions, for each highway and roadway segment and each hour period of the day. These hourly delays per vehicle are multiplied by the annual average hourly traffic for each period hour, and summed to get total daily vehicle hours of delay. Table 47 shows the existing vehicle hours of delay in 2015 for each county in the AMBAG region, and the region as a whole.

Table 47 Existing Vehicle Hours of Delay (2015)

County	Total Daily Vehicle Hours of Delay*
Monterey	15,028
Santa Cruz	15,950
San Benito	2,000
AMBAG Region	32,978

Source: Regional Travel Demand Model (AMBAG, 2014b)

The basic measure of the amount of vehicle travel generated is vehicle miles traveled (VMT). One vehicle traveling one mile constitutes one vehicle mile, regardless of the size of the vehicle or the number of passengers in the vehicle. Increases in VMT are associated with regional growth that would occur with or without the 2040 MTP/SCS. Thus, the VMT data may not reflect deficient traffic operations, although VMT does have a strong correlation with congestion. CVMT measures the number of vehicle miles traveled in the AMBAG region in congested conditions. For the purposes of this EIR analysis, congested conditions are roadways operating at level-of-service (LOS) E and LOS F during peak period. LOS is a qualitative measure describing the operational conditions within a

⁸ Peak period consists of morning peak period (6:00 A.M. to 9:00 A.M.) and evening peak period (4:00 P.M. to 7:00 P.M.).

traffic stream. LOS has letter designations ranging from A to F, representing progressively worsening traffic operations, with LOS F being the worst possible operations. According to the AMBAG's Regional Travel Demand Model (RTDM) (2014), in 2015, there were 499,064 CVMT during peak period in the AMBAG region. AMBAG's RTDM includes socioeconomic growth projections based on AMBAG's ~~Draft~~ 2018 Regional Growth Forecast.

Other metrics used to evaluate current and future operations include the percent of work trips that are 30 minutes or less by transit during peak period. This is a measurement of the general effectiveness of improvements focused on increasing transit use as the mode of choice for work trips. The average work trip travel time during the peak period is a general comparison of overall commute time reductions associated with transportation improvements. Linking transit access with employment centers is another measure of effectiveness. Specifically, the 2040 MTP/SCS focuses on increasing the percentage of jobs within 0.5 mile of a high quality transit stop. A high quality transit corridor is defined as a corridor that contains transit service with 15 minute frequencies during peak period or a corridor that contains a rail stop. In 2015, 21.4 percent of jobs in the AMBAG region were within 0.5 mile of a high quality transit stop. Improvements to transit service and access are intended, in part, to reduce the average work trip travel time during the peak period. According to the AMBAG's RTDM (2014), baseline conditions show the average work trip travel time is 15.6 minutes.

The development and assumptions associated with the RTDM are available in electronic format on AMBAG's RTDM resource materials webpage, at:

http://ambag.org/programs/met_transp_plann/documents/TMIP/Region_Overview.pdf

The RTDM was peer reviewed by Travel Model Improvement Program (TMIP) in 2011, which is sponsored by the Federal Highway Administration (FHWA). The peer review is available online at: http://ambag.org/programs/met_transp_plann/documents/TMIP/Peer_Review_Final_Report.pdf

Comprehensive documentation of the modeling methodology, assumptions, calibration and inputs used for the RTDM is provided in Appendix F of the 2040 MTP/SCS.

b. Public Transit Systems

Monterey-Salinas Transit (MST) provides fixed route transit service in Monterey County. The fixed route service includes 56 routes and consists of a fleet of 123 vehicles, mostly buses (MST, 2017a). MST bus stations are located in the cities of Carmel-by-the-Sea, Del Rey Oaks, Greenfield, Gonzales, King City, Marina, Monterey, Pacific Grove, Salinas, Seaside and Soledad, as well as the community of Chualar. MST also provides public transit service in areas of unincorporated Monterey County, including the communities of Castroville, Pajaro, Prunedale, Moss Landing, Toro Park, Carmel Valley, Carmel Highlands and Big Sur. To assist inter-regional connections, MST also provides service to the Watsonville Transit Center in Santa Cruz County and the Gilroy Caltrain station and Diridon Train Station in the City of San Jose in Santa Clara County. MST had 4.41 million passenger trips on its fixed route system in Fiscal Year 2016 (MST, 2016).

The Santa Cruz Metropolitan Transit District (METRO) provides fixed route transit service in Santa Cruz County. METRO provides essential bus transit services for all local residents, including students, Highway 17 commuters, transit-dependent and choice riders. The county's network for local and express bus routes includes transit centers in Felton, Scotts Valley, Santa Cruz, Capitola and Watsonville. METRO buses serve 479 miles of road throughout the County and cover the majority of arterial and collector routes. Transit to Monterey County is provided at the Watsonville Transit Center via connections with MST. Greyhound provides service from Santa Cruz to surrounding

regions. Santa Cruz Metro had approximately 5.6 million passenger trips on its fixed route system in Fiscal Year 2016 (METRO, 2016).

San Benito County Express is the primary transit provider in the County of San Benito with service in Hollister and countywide via intercity connections. The County Express system currently provides three fixed routes in the City of Hollister, complementary Americans with Disabilities Act (ADA) Paratransit service and a general public Dial-A-Ride. San Benito County Express had 75,200 unlinked trips in Fiscal Year 2015, which included services to Gilroy and Gavilan Community College (Council of San Benito County Governments, 2016).

c. Air Transportation

The AMBAG region has six publicly-owned civil aviation airports, which include the following:

- Monterey Regional
- Salinas Municipal
- King City Municipal (Mesa Del Rey)
- Marina Municipal
- Watsonville Municipal
- Hollister Municipal

Of these airports, only the Monterey Regional Airport provides scheduled air carrier service. There are also several private airports in the region that are used primarily for agricultural or business purposes, but one of these, the Frazier Lake Airport, also allows public use.

Several civil aviation helipads are maintained for helicopter use in the region, including the Mee Hospital helipad in King City, a Texaco helipad in San Ardo, the Soledad Correctional Training Facility helipad, the Watsonville Community Hospital helipad, the Alta Vista helipad near Watsonville, the Dominican Hospital helipad, the Hollister Municipal Airport helipad, the Natividad Medical Center helipad in Salinas and the Hazel Hawkins Memorial Hospital helipad in Hollister.

Currently, there are two operational military airfields in the region: Camp Roberts Army Airfield and Heliport and the Hunter-Liggett Army Airfield.

d. Marine Transportation

Marine transportation activities along the coastal land areas are related to recreation and commercial fishing. There are no general cargo or passenger ship terminals in the AMBAG region. Public use marine facilities on the Monterey Bay include the Monterey Harbor and the Moss Landing Harbor in Monterey County and the Santa Cruz Harbor in Santa Cruz County.

e. Rail Transportation

The rail network within the region includes all rail lines or other facilities currently served by a railroad for passenger or freight movement, rail lines used for recreational service, rail lines not currently in use, and abandoned rail lines or facilities (either with or without track). With the exception of Watsonville Junction, all of the region's rail lines are single track. Some of the abandoned rail lines have been converted to bicycle/pedestrian trail use.

Passenger Rail

The only regular passenger rail transportation currently operating in the region is provided by Amtrak. Amtrak trains share the Union Pacific Railroad main line tracks. There is one passenger rail station located in the City of Salinas at 30 Railroad Avenue, in the downtown area. This stop services Amtrak's Coast Starlight train, which connects Los Angeles to Seattle.

Monterey County

Both passenger and freight rail service are available in Monterey County. Amtrak provides rail service for its Coast Starlight train twice daily via a station stop in Salinas. Four freight stations are located in Castroville, Gonzales, Salinas and Watsonville Junction (Pajaro Community Area).

Santa Cruz County

~~Freight rail service, once operated by Southern Pacific Railroad and then by Union Pacific and now Monterey Bay Railway has been a historically important form of transportation within Santa Cruz County. There are currently three rail lines in or adjacent to Santa Cruz County. The Santa Cruz Branch rail line extends from Watsonville junction in Pajaro north to Davenport and passes through much of the county's urban area. The Santa Cruz Branch line was purchased by the SCCRTC in 2012. The Felton Branch line is owned and operated by the private Santa Cruz Big Trees and Pacific Railway Company. It primarily provides summertime and holiday excursions between Felton and the Beach Boardwalk in Santa Cruz and is also occasionally used for freight. The Coast Rail Route is Union Pacific main coastal line extending from San Jose to San Diego. There is currently no passenger rail service in Santa Cruz County. In 2015 the RTC completed the Santa Cruz Rail Transit Feasibility Study which evaluated the feasibility of adding rail transit service on the Santa Cruz Branch Rail Line between Santa Cruz and Watsonville. The RTC is evaluating the potential use of this rail line, in combination with projects on parallel corridors as part of the Unified Corridor Investment Study to enhance mobility in the region.~~

San Benito County

There is currently no passenger rail service in San Benito County.

Rail Freight

The majority of rail freight service in the region is provided by the Union Pacific Railroad Company and by Iowa Pacific Holdings, which operates in the AMBAG region under the business name of Santa Cruz and Monterey Bay Railway (SCCRTC, n.d.). Agricultural produce and construction materials are the principal rail freight shipments in the region. Freight service is provided (although currently it is seldom used) along the Santa Cruz Branch line, ~~the rail line between Watsonville Junction and the City of Santa Cruz, the Davenport branch line and the Hollister spur.~~ SCCRTC purchased the Santa Cruz Branch line in 2012, between Davenport and Pajaro. Santa Cruz and Monterey Bay Railway continues to operate limited freight service on the rail line and maintain the rail track (SCCRTC, n.d.). It is anticipated that Santa Cruz and Monterey Bay Railway will not be the rail service operator much longer and the RTC is currently negotiating with a potential replacement rail service operator.

Rail freight service to Hollister and northern San Benito County is provided by the Union Pacific Hollister Branch line (Union Pacific, 2016). Union Pacific Railroad retains an exclusive easement to operate freight rail service on the line.

f. Bicycle and Pedestrian Facilities

The AMBAG region has approximately 1,446 miles of bikeways (AMBAG, 2014c). Bikeways are facilities that provide primarily for, and promote, bicycle travel. There are four types of bikeway classifications identified by the California Department of Transportation (Caltrans) (Caltrans, 2017a). These classes are as follows:

- **Class I.** Paths or trails, separated from roadways, for the exclusive use of bicycle and pedestrian modes of travel
- **Class II.** Designated lanes for bicycles on roadways
- **Class III.** Roads where bicycles and vehicles share the travel lanes of the roadway
- **Class IV.** Designated lanes for bicycles on roadways, but which are also separated from the roadway traffic by barricades, such as bollards.

There are several major bike routes through the region, including the Monterey Bay Sanctuary Scenic Trail (MBSST). Although not yet fully constructed, the MBSST is a pedestrian and bicycle pathway network that is envisioned to run from the Santa Cruz/San Mateo County line to Pacific Grove in Monterey County.

Monterey County

Monterey County has 887 miles of bikeways (AMBAG, 2014c). One of the major continuous bikeways in the county is the Monterey Bay Coastal Bike Trail, which is approximately 29 miles long stretching from Castroville to the Monterey Peninsula and parts of Pebble Beach. The Monterey Bay Coastal Bike Path runs adjacent to the Fort Ord Dunes State Park located between the cities of Seaside and Marina. The state park also has its own bike path that is accessible on both ends of the Fort Ord Dunes Park from the Monterey Coastal Bike Path. Sections of the MBSST have been completed in Monterey County between Pacific Grove and Monterey, between Sand City and Seaside and between Marina and Castroville. Most of these sections are Class I bikeways, but short sections are Class II and Class III (TAMC, 2008).

Santa Cruz County

Santa Cruz County has approximately 366 miles of bikeways (AMBAG, 2014c). It is likely that additional bikeways have been constructed since the 2014 adoption of the most recent MTP/SCS. Many of the county's major collector and arterial roadways have been established as Class II bikeways (bike lanes), providing an extensive network of resources linking cities throughout the county. For example, Class II bikeways are provided on Bay Drive and High Street in the City of Santa Cruz, providing a bicycle connection between the downtown area of the city and the University of California at Santa Cruz. There are few Class I bikeways (bike paths) in the County. The Wilder Ranch Bike Path, which is a Class I bikeway located just west of the City of Santa Cruz is part of the Monterey Bay Sanctuary Scenic Trail. Funding has either been partially or fully secured for an additional approximately 13 miles of the Monterey Bay Sanctuary Scenic Trail in Santa Cruz County (SCCRTC, 2017).

San Benito County

San Benito County has approximately 193 miles of bikeways (AMBAG, 2014c). Bicycle facilities in San Benito County are generally concentrated in and around Hollister. A Class I bikeway is located approximately parallel with State Highway 25 from near the southern limits of Hollister to near the

center of the city, north of Rancho San Justo Park. Class II bikeways are provided on several streets in Hollister, including State Highway 25 Bypass, Westside Boulevard, Southside Road and Union Road. A Class I bikeway extends between Tres Pinos School and the community of Tres Pinos, south of the City of Hollister. Within the City of San Juan Bautista, a short section of San Juan Highway is in the northern part of town has designated bike lanes. Additionally, Class II bike lanes extend north of San Juan Bautista to Anzar High School on either side of San Juan Highway. The Juan Bautista de Anza National Historic Trail traverses San Juan Bautista and the western part of the county.

g. Transportation Demand Management/Transportation System Management

Transportation Demand Management (TDM) refers to all programs and strategies which are intended to reduce the number of trips required over the transportation network or shift the distribution of trips between time periods across the network (FHWA, 2012). Transportation System Management (TSM) represents a variety of management techniques designed to improve the efficiency and effectiveness of the transportation system. These techniques improve operations and/or services of existing and future transportation networks (FHWA, 2012).

Traffic Congestion Management

The Department of Energy's Fuel Efficient Traffic Signal Management Program has assisted in increasing the number of synchronized traffic signals within the region to promote free flowing traffic conditions, less use of vehicle fuel and decreased pollution due to less congestion. In the past, some jurisdictions within the region have implemented minor design improvements to the existing transportation infrastructure in lieu of costly capital construction or reconstruction. In the future, signalization, channelization and the construction of acceleration and deceleration lanes with ramp metering at key interchanges are expected to achieve traffic flow improvements.

Intermodal Transportation

Traffic engineers and transportation planners in the AMBAG region have employed one or more of the following methods of enhancing intermodality to increase the use of the existing transportation capacity more efficiently:

- Coordinate transit routes and schedules with those of inter-city rail and bus service;
- Provide amenities and facilities for bicycle and pedestrian access to transit stops;
- Facilitate and encourage access to the regional air carrier airport by paratransit, transit, taxi, transportation network companies and bicycle; and
- Provide park and ride facilities with bicycle, pedestrian and transit access amenities.

Ridesharing

Rideshare programs help reduce congestion and improve traffic flow. AMBAG, with grant assistance from the Monterey Bay Air Resources District (MBARD), has successfully implemented a subsidized vanpool program, which reduced vehicles trips associated with agricultural activities and production in the region. Rideshare and carpool programs exist throughout Monterey Bay to facilitate ridesharing. Private rideshare transportation companies, such as Uber and Lyft, are also available transportation options in the AMBAG region.

Preferential Transit/Carpool Treatment/Electric Vehicle Charging

Methods employed by local jurisdictions to encourage people to reduce their use of single-occupant vehicles include: preferential parking for carpools and vanpools; subsidized transit passes; use of agency vans for vanpooling; and provision of an on-site transportation coordinator. Regional transit agencies strive to ensure that the major developments within their service areas are transit accessible and that transit stops are located to promote transit use. Some employers in the region, such as the Community Hospital of the Monterey Peninsula, have implemented employee shuttle programs.

Parking Management

Parking management refers to programs that result in more efficient use of parking resources and can either provide an incentive or disincentive to single occupant vehicle use. Parking facilities that are shared between multiple users and destinations are found within the region. Park and ride lots are a form of off-site shared parking facilities and facilitate ridesharing. Park and ride lots within the region have been placed in locations where people can easily meet and form carpool trips. In an effort to encourage ridesharing, there are fifteen formal, informal and joint use park and ride lots in the Monterey Bay region. Of the six park and ride lots that serve Santa Cruz County commuters, four are publically owned and two are shared use by agreement with local churches (Caltrans, 2014). San Benito County has two formal park and ride lots (Caltrans, 2014). Monterey County commuters have five formal park and ride lots from which to choose (MST, 2017; Caltrans, 2014). Parking garages are frequently associated with shared parking in the AMBAG region and are located near destinations attracting a large number of visitors. Parking regulations which control when and how long vehicles may park and the cost of the parking in a location is another form of parking management in the region.

h. Regulatory Setting

Federal

Moving Ahead for Progress in the 21st Century Act

The Moving Ahead for Progress in the 21st Century Act (MAP-21), was enacted in 2012. Through the MTP development process, MAP-21 encourages MPOs, such as AMBAG, 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 (23 U.S.C. §134(g)(3)(A)).

Specifically, MAP-21 requires that the MTP planning process provide for consideration of projects and strategies that will:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility of people and for freight;

- 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;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system (23 U.S.C. §134(h)(1)).

Fixing America's Surface Transportation Act

Fixing America's Surface Transportation (FAST) Act builds on the changes made by MAP-21, and was signed into law in December 2015 (Public Law 114-94). The FAST Act authorizes \$305 billion through fiscal year 2020 for highways, highway and motor vehicle safety, public transportation, rail and research and technology programs and provides a dedicated source of federal funds for freight projects. The FAST Act expands the scope of consideration of the metropolitan planning process to include: consideration of intercity transportation, including intercity buses, intercity bus facilities and commuter vanpool providers; improving transportation system resiliency and reliability; reducing or mitigating the stormwater impacts of surface transportation; and enhancing travel and tourism. In addition, it requires strategies to reduce the vulnerability of existing transportation infrastructure to natural disasters.

Under the FAST Act, the U.S. Department of Transportation requires that MPOs, such as AMBAG, prepare long-range transportation plans and update them every four years if they are in areas designated as "nonattainment" or "maintenance" for federal air quality standards. Before enactment of the FAST Act and its predecessor, MAP-21, the primary federal requirements regarding long-range transportation plans were included in the metropolitan transportation planning rules (23 CFR Part 450 and 49 CFR Part 613). The FAST Act makes a number of changes to the statutes that underpin these regulations. Per federal requirements, long-range transportation plans must:

- Be developed through an open and inclusive process that ensures public input; seeks out and considers the needs of those traditionally under served by existing transportation systems; and consults with resource agencies to ensure potential problems are discovered early in the planning process;
- Be developed for a period of not less than 20 years into the future; long-range transportation plans must reflect the most recent assumptions for population, travel, land use, congestion, employment and economic activity;
- Have a financially constrained element, transportation revenue assumptions must be reasonable, and the long range financial estimate must take into account construction-related inflation costs;
- Include a description of the performance measures and performance targets used in assessing the performance of the transportation system;
- Include a system performance report evaluating the condition and performance of the system with respect to performance targets adopted by the state that detail progress over time;
- Include multiple scenarios for consideration and evaluation relative to the state performance targets as well as locally-developed measures.
- Conform to the applicable federal air quality plan, called the State Implementation Plan, for ozone and other pollutants for which an area is not in attainment; and

- Consider planning factors and strategies in the local context (California Transportation Commission, 2010)

State

California Transportation Plan

The California Transportation Plan is prepared by the California State Transportation Agency every five years to provide a long-range policy framework to meet the State's future mobility needs and reduce greenhouse gas emissions to goals set by the California Global Warming Solutions Act of 2006 (AB 32, discussed in Section 4.8, Greenhouse Gas Emissions/Climate Change) and implementing legislation SB 375 (discussed below). The most recent California Transportation Plan was adopted in 2016. The California Transportation Plan defines goals, performance-based policies, and strategies to achieve the State's collective vision for California's future statewide, integrated, multimodal transportation system by envisioning a sustainable system that improves mobility and enhances quality of life. The California Transportation Plan is developed in collaboration with transportation stakeholders such as AMBAG. Through ongoing engagement, the California Transportation Plan is intended to provide goals and visions to support a fully integrated, multimodal, sustainable transportation system that supports the quality of life, prosperous economy, human and environmental health and social equity.

State Regional Transportation Plan Requirements

Government Code Sections 65080 et seq. state that MPOs must prepare and adopt a long-range transportation plan, such as a RTP or MTP, directed at achieving a coordinated and balanced regional transportation system, including, but not limited to, mass transportation, highway, railroad, maritime, bicycle, pedestrian, goods movement and aviation facilities and services. The plan must be action-oriented and pragmatic, considering both the short-term and long-term future, and shall present clear, concise policy guidance to local and state officials. The transportation plan must consider factors specified in the FAST Act metropolitan transportation planning rules (23 CFR Part 450 and 49 CFR Part 613), and each transportation planning agency must consider and incorporate, as appropriate, the transportation plans of cities, counties, districts, private organizations and state and federal agencies.

Pursuant to Government Code section 65080(d), MPOs, such as AMBAG, that are located in nonattainment and monitoring areas must update their long-range transportation plans at least every four years. If the current long-range transportation plan is determined to be adequate such that an update is not warranted, the MPO may re-adopt the current plan.

The California Transportation Commission has developed guidelines to assist MPOs with developing their RTPs so that they are consistent with federal and state transportation planning requirements. The guidelines are updated and adopted periodically, as needed. For the first time, two separate guidelines were adopted in January 2017 to guide RTP development in MPOs and RTPAs. Both documents incorporate new legislation and the associated goals, particularly related to reducing GHG emissions and improving air quality. Both the 2017 RTP Guidelines for MPOs (California Transportation Commission, 2017a) and the 2017 RTP Guidelines for RTPAs (California Transportation Commission, 2017b) specify that the requirements outlined in the documents apply to all RTP updates begun following adoption. Since the 2040 MTP/SCS and RTPs were started prior to the January 2017 adoption date of the 2017 RTP Guidelines, the earlier 2010 RTP Guidelines may

be used. However, AMBAG has elected to use the 2017 RTP Guidelines for the 2040 MTP/SCS and the RTPAs have elected to use the 2017 RTP Guidelines for the RTPs.

The 2017 RTP Guidelines include guidelines for regional travel demand modeling. The regional travel demand model guidelines are “scaled” to different sizes of MPOs. The guidelines also describe the methods for projecting of future travel demand, as well as the key assumptions typical of transportation demand models. Additionally, the guidelines describe the consultation and coordination process, which are designed to foster involvement by all interested parties including air quality agencies, discuss the environmental considerations of an RTP, and list the general contents of an RTP document.

Senate Bill 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*.

Senate Bill 743

SB 743 changes the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (see Pub. Resource Code, § 21099, subd. (b)(2)). SB 743 provides opportunities to streamline CEQA for qualifying urban infill development near major transit stops in metropolitan regions statewide. A transit-oriented infill project can be exempt from CEQA if consistent with a specific plan for which an EIR was prepared, and also consistent with the use, intensity, and policies of an SCS or Alternative Planning Strategy that is certified by the CARB as meeting its greenhouse gas reduction targets. A city or county may designate an “infill opportunity zone” by resolution if it is consistent with the general plan and any applicable specific plan, and is a transit priority area within the adopted SCS or Alternative Planning Strategy. This infill opportunity zone is then exempt from level of service standards in the congestion management plan. Furthermore, under the bill parking impacts are no longer considered significant impacts on the environment for select development projects within infill areas with nearby frequent transit service.

On November 27, 2017, the Governor’s Office of Planning and Research transmitted to the California Natural Resources Agency its proposal for updates and amendments to the State CEQA Guidelines. The updates include new Guidelines Section 15064.3, which proposes to replace congestion based metrics, such as auto delay and level of service, with Vehicle Miles Traveled (VMT) as the basis for determining significant impacts, unless the guidelines provide specific exceptions. The California Natural Resources Agency has begun the formal administrative rulemaking process under the Administrative Procedure Act. The rulemaking process may lead to further revisions of the CEQA Guidelines. After completing the rulemaking process, the Secretary for the Natural Resources Agency may adopt the proposed changes to the CEQA Guidelines. In August 2014, the Governor’s Office of Planning and Research circulated its draft changes to the State CEQA Guidelines implementing SB 743 for public comment. Revised draft guidelines were released on January 20, 2016. In addition to new exemptions for projects that are consistent with specific plans, the draft SB 743 guidelines replace congestion based metrics, such as auto delay and level of service, with Vehicle Miles Traveled as the basis for determining significant impacts, unless the guidelines provide specific exceptions. Following any revisions Governor’s Office of Planning and Research deems appropriate, it will submit the draft guidelines to the Natural Resources Agency for commencement of a formal rulemaking process.

Assembly Bill 1358

AB 1358, also known as the Complete Streets Act of 2008, amended the California Government Code Section 65302 to require that any substantive revisions to a city or county's Circulation Element include provisions for accommodations of all roadway users, including bicyclists and pedestrians.

California Bicycle Transportation Act

The California Bicycle Transportation Act of 1994 requires all cities and counties to have an adopted bicycle master plan to apply for Bicycle Transportation Account funding source.

Regional and Local

Regional Transportation Planning Agency Transportation Plans

As described in Section 1.2, *Project Background*, there are three RTPAs that oversee some planning, programming and administration functions related to transportation projects and coordinating directly with local agencies in their part of the AMBAG region. These RTPAs include TAMC for Monterey County, SBtCOG for San Benito County and SCCRTC for Santa Cruz County. Each RTPA prepares a county-level long-range RTP. Under federal regulations (23 CFR 450.322(c)) and State law (Government Code 65080(d)), the RTPAs must update their RTPs every four years. RTPs must be consistent with the California Transportation Plan.

Local Agency General Plans

State law requires cities and counties to adopt general plans, which must incorporate a transportation element, also often called a circulation element. A general plan's transportation element is an infrastructure plan and policy document used to determine the needed expansion or modification of the transportation network (including services) to accommodate planned population and employment growth. The elements generally address expectations for transportation network operations and safety based on goals and policies of the city or county. Transportation elements typically address the roadway network and its traffic operations, goods movement, public transit, bicycle facilities and pedestrian facilities. Below are some of the key transportation goals and policies of the Monterey County General Plan (Monterey County, 2010a), San Benito County 2035 General Plan (San Benito County, 2015a) and Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994).

Monterey County

Goal C-1 Achieve an Acceptable Level of Service by 2030

Key policies to achieve this goal include: maintaining level of service D for county roads and intersections, unless certain conditions apply; developing and adopting a traffic impact fee; and coordinating with TAMC and other affected agencies to continue efforts to improve traffic congestion at critical locations.

Goal C-2 Optimize Use of the County's Transportation Facilities

Key policies to achieve this goal include: protecting public transportation facilities from the encroachment of incompatible land uses; encouraging a reduction in the number of vehicle miles

traveled per person; encouraging land use patterns that reduce the need to travel by automobile; and locating and designing new development with convenient access and efficient transportation.

Goal C-4 Provide a Public Road and Highway Network for the Efficient and Safe Movements of People and Commodities

Key policies to achieve this goal include: monitoring county roadways, intersections, bikeways and pedestrian facilities in cooperation with TAMC and Caltrans to observe and identify capacity and safety concerns; and ensuring priority is given to the improvement and maintenance of highways and arterial roads that carry a significant amount of people and goods.

Goal C-6 Promote Viable Transportation Alternatives

Key policies to achieve this goal include: encouraging new development to be concentrated along major transportation corridors and near cities to make transit services to these areas more feasible; encouraging the use of public transit and alternative modes of transportation through land use designations and zoning which cluster employment centers with a mix of other land uses; and endorsing efforts to accommodate mobility-impaired persons on regularly scheduled public transit operations.

Goal C-8 Encourage a Rail System that Offers Efficient and Economical Transport of People and Commodities

Key policies to achieve this goal include: encouraging passenger rail, light rail, or bus rapid transit service to urban centers; and encouraging transit-oriented development around existing and future rail, light rail, or bus rapid transit stations.

Goal C-9 Promote a Safe, Convenient Bicycle Transportation System Integrated as part of the Public Roadway System

Key policies to achieve this goal include: coordinating with TAMC and all appropriate private and public interests and agencies to develop an integrated, comprehensive bicycle plan; considering improved bike routes in the construction or expansion of roadways within major transportation corridors; promoting the safe integration of bicycle systems with other public transportation modes; and encouraging bicycling as a viable transportation mode for visitor-serving areas.

San Benito County

Goal C-1 Provide an Adequate Road System that is Safe, Efficient, Reliable and within the County's Ability to Finance and Maintain

Key policies to achieve this goal include: ensuring that, whenever possible, roadway, highway, public transit systems and pedestrian and bicycle trails are interconnected with other modes of transportation; assessing fees on all new development to ensure new development pays its fair share of the costs for new and expanded transportation facilities; and maintaining level of service D for county roads and intersections, unless certain conditions apply.

Goal C-2 Provide a Safe, Continuous and Accessible System of Facilities for Bicycle and Pedestrian Travel in Appropriate Areas of the County

Key policies to achieve this goal include: encouraging complete, safe, and interconnected bicycle, pedestrian and equestrian systems that provide access to major destinations in the County; encouraging development project applicants to provide sidewalks or pedestrian paths, or other safe

and convenient accommodations for pedestrians; and working with SBCOG to support the installation of roadway improvements that better accommodate pedestrians.

Goal C-3 Promote a Safe and Efficient Public Transit System that Provides a Viable Travel Alternative to Automobiles, Maximizes Mobility and Reduces Roadway Congestion and Greenhouse Gas Emissions

Key policies to achieve this goal include: encouraging transit lines, stops and facilities in locations where land uses and density would support transit use; encouraging major employment centers to work with the Local Transportation Authority to facilitate the provision of adequate public transit facilities; and requiring all new development proposals to be consistent with and implement the San Benito County Regional Transportation Plan transit policies.

Goal C-4 Encourage Alternative Transportation Modes to Reduce the Demand for Vehicular Trips, Especially During Congested Commute Times

Key policies to achieve this goal include: supporting SBCOG programs that promote the use of ridesharing, vanpooling and carpooling to decrease vehicle trips; and encouraging employers to provide transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, employee education and preferential parking for carpools/vanpools

Santa Cruz County

It is the goal of the County to reduce automobile trips and congestion by improving alternative transportation modes, developing effective travel demand management strategies and whenever possible improving the efficiency rather than increasing the size of the existing road system. Policies to achieve this goal include reducing vehicle miles travelled by encouraging concentrated commercial centers with mixed residential and commercial uses; and encouraging use of bicycles, public transit and other modes of transportation besides single-occupancy vehicles.

City and County Bicycle Master Plans and Other Modal Plans

City- and countywide bicycle and pedestrian master plans, active transportation plans and other mode-specific plans serve as policy documents to guide the development and maintenance of the transportation network, support facilities and non-infrastructure programs. These plans describe the acceptable operating standards, levels of service, facility classifications and mode-specific goals and policies of a given city or county. This EIR does not explicitly identify localized traffic issues that might be the focus of a city- or countywide modal plan; rather, it addresses issues of overall system performance from a regional perspective.

4.14.2 Impact Analysis

a. Methodology and Significance Thresholds

Thresholds of significance to determine whether implementation of the 2040 MTP/SCS would result in significant transportation and circulation impacts were chosen in part by determining which effects of the 2040 MTP/SCS 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 2040 MTP/SCS.

The criteria for determining whether the 2040 MTP/SCS 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 AMBAG. Significant impacts to transportation and traffic would occur if the plan would:

1. Conflict with the following measures of effectiveness for the performance of the circulation system:

- a. Total daily hours of vehicle delay;
- b. Total peak period CVMT;
- c. Percent of work trips that are 30 minutes or less by mode during peak period; and/or
- d. Percent of jobs within 0.5 mile of a high quality transit stop

Any increase in performance indicators a. and b. compared to existing baseline conditions would be considered a significant impact. Any decrease in performance measures c. and d. compared to existing baseline conditions would be considered a significant impact.

2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
3. Substantially disrupt:
 - a. Transit service; and/or
 - b. Bicycle and pedestrian facilities.
4. Result in any increase in total vehicle miles traveled on all freeways and roadways above existing conditions;
5. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
6. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and/or
7. Result in inadequate emergency access.

It is important to emphasize that population growth, urbanization and volume of average daily traffic generated in the AMBAG region will increase by 2040, with or without implementation of the 2040 MTP/SCS. 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 AMBAG and its member agencies. The analysis below describes the full effect of the proposed 2040 MTP/SCS in combination with future growth, as compared to existing baseline conditions.

Traffic Methodology

AMBAG utilized its regional travel demand model (RTDM) to compare the 2040 conditions under the 2040 MTP/SCS to the 2015 baseline conditions using a range of performance metrics (see Appendix C). The AMBAG RTDM is a trip-based platform that includes Monterey, San Benito and Santa Cruz counties. The RTDM allows AMBAG to obtain an understanding of the transportation network performance characteristics (e.g., vehicle speeds, volume to capacity relationships, travel time, VMT) and estimate how socioeconomic changes (e.g., population increases, land use development) will impact travel demand. The RTDM allows for comparisons of different scenarios,

including consequences of future changes or absence of change to the transportation system (e.g., building new facilities, improving existing facilities, or doing nothing at all).

The most current version of the AMBAG RTDM was created in 2014, incorporating improvements from an earlier Model Improvement Plan developed by AMBAG. AMBAG developed the Model Improvement Plan to address recommended improvements provided by a peer review panel selected in 2011 under the FHWA-sponsored Travel Model Improvement Program. The peer review is available online at:

http://ambag.org/programs/met_transp_plann/documents/TMIP/Peer_Review_Final_Report.pdf.

The 2014 RTDM includes detailed transportation and transit networks, as well as a geographically based Traffic Analysis Zone layer containing socioeconomic data for the base year 2015 and forecast years 2020, 2035 and 2040. The forecasted socioeconomic data is based on the AMBAG Draft 2018 Regional Growth Forecast, which is described in detail in Appendix A to the 2040 MTP/SCS. The AMBAG RTDM is calibrated using data from the 2011-2012 California Household Travel Survey (CHTS).

The RTDM is comprised of four primary time periods: a morning peak period from 6:00 AM to 9:00 A.M.; an evening peak period from 4:00 PM to 7:00 P.M.; a mid-day period from 9:00 A.M. to 4:00 P.M.; and a night period from 7:00 P.M. to 6:00 A.M. The RTDM is calibrated to both Average Annual Daily Traffic (AADT) and to the peak period count data. Further details on RTDM calibration can be found in the AMBAG RTDM Technical Documentation Report, available online at:

http://ambag.org/programs/met_transp_plann/documents/TMIP/Region_Overview.pdf.

The 2014 RTDM is a traditional four-step trip based approach, and as such includes models for Trip Generation, Trip Distribution, Mode Choice and Trip Assignment. Specific differences compared with traditional modeling approaches include a population synthesis to drive the trip generation socioeconomic variables; calculation of household, employment and intersection density and diversity variables using GIS techniques; the use of person-based trip rates; destination choice model for the trip distribution; and a mode choice component designed and estimated entirely from the 2011-2012 CHTS data. The RTDM allows the operator to model any number of future land development scenarios and projects, including the traffic modifications and improvements that would be implemented under the 2040 MTP/SCS. Comprehensive documentation of the modeling methodology, assumptions, calibration and inputs is provided in Appendix F of the 2040 MTP/SCS.

b. Project Impacts and Mitigation Measures

This section describes generalized impacts associated with the 2040 MTP/SCS. Due to the programmatic nature of the 2040 MTP/SCS, 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 2040 MTP/SCS would result in transportation and traffic impacts as described in the following sections.

It should be noted that although this is a program-level analysis, and not project specific, some of the 2040 MTP/SCS projects include expanding the capacity of highways in the region, such as adding additional travel lanes to Highway 101 near Salinas. Numerous studies and research suggest that an expansion of highway capacity may induce travel (Governor's Office of Planning and Research 2016; Handy 2015; Durantón & Turner 2011). According to the Governor's Office of Planning and Research (2016), the initial reduction in traffic congestion and travel times from increased capacity is attractive to travelers, resulting in more trips on the facility and increasing the total VMT. These

types of projects may result in the following trip-making changes, which have implications for total VMT, according to Governor’s Office of Planning and Research:

- **Longer Trips.** The ability to travel a long distance in a shorter time increases the attractiveness of destinations that are further away, increasing trip length and VMT.
- **Changes in Mode Choice.** When transportation investments are devoted to reducing automobile travel time, travelers tend to shift toward automobile use from other modes, which increases VMT.
- **Route Changes.** Faster travel times on a route attract more drivers to that route from other routes, which can increase or decrease VMT depending on whether it shortens or lengthens trips.
- **Newly Generated Trips.** Increasing travel speeds can induce additional trips, which increases VMT. For example, an individual who previously telecommuted or purchased goods on the internet might choose to accomplish those ends via automobile trips as a result of increased speeds.
- **Land Use Changes.** Faster travel times along a corridor lead to land development further along that corridor; that development generates and attracts longer trips, which increases VMT. Over several years, this component of induced VMT can be substantial, e.g. approximately half of the total effect on VMT.”

The 2040 MTP/SCS coordinates land use and transportation projects through the 2040 horizon year. The SCS is intended to identify a land use strategy that supports the objectives of SB 375 to achieve, among other things: increased roadway optimization, increased modes of travel other than single-occupancy automobiles, increased access to jobs and amenities, minimized increases in VMT and reduced GHG emissions. Among the strategies to meet these goals is a mix of land uses balanced to minimize VMT and maximize the ability for residents and visitors of the region to conduct everyday activities without the need to travel by car. As a consequence, the RTDM and associated transportation system performance results discussed in this analysis capture the effects of land use changes on overall travel demand in the region. Although the AMBAG RTDM does not specifically evaluate induced travel from the perspective of longer trips, changes in mode choice, route changes or newly generated induced trips, at the regional level these effects may be negligible compared to the overall amount of travel. As discussed in the Federal Highway Administration’s “HERS-ST Highway Economic Requirements System - State Version: Technical Report - Appendix B: Induced Traffic and Induced Demand” (August 2005), “If the demand is for a single facility, then induced traffic will appear large relative to previous volumes, because most of the change in trips will be from diverted trips. At the regional level, induced traffic would be a smaller share of total traffic growth, because only trips diverted from other regions, plus substitutions between transportation and other goods, make up the induced share.” Therefore, any additional VMT resulting specifically from induced travel demand would not substantially change the following impact analysis or conclusions.

Threshold 1: Conflict with the following measures of effectiveness for the performance of the circulation system:

- a. Total daily hours of vehicle delay
- b. Total peak period congested vehicle miles traveled (CVMT)
- c. Percent of work trips that are 30 minutes or less by mode during peak period

Impact T-1 DAILY HOURS OF VEHICLE DELAY AND TOTAL PEAK PERIOD CVMT IN THE AMBAG REGION WOULD INCREASE BETWEEN BASELINE 2015 CONDITIONS AND 2040 CONDITIONS WITH IMPLEMENTATION OF THE 2040 MTP/SCS. THE PERCENT OF COMMUTER TRIPS THAT ARE 30 MINUTES OR LESS WOULD DECREASE IN SINGLE- AND HIGH OCCUPANCY VEHICLES, BUT WOULD INCREASE FOR TRANSIT TRIPS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Table 48 compares daily vehicle hours or delay for existing conditions in 2015 and 2040 conditions with implementation of the 2040 MTP/SCS for each county and the AMBAG region as a whole. The conditions in 2040 without implementation of the 2040 MTP/SCS are also shown for informational purposes.

Table 48 Daily Hours of Vehicle Delay

County/Region	Existing Conditions (2015)	2040 Conditions with 2040 MTP/SCS	2040 Conditions without 2040 MTP/SCS
Monterey	15,028	24,987	30,922
San Benito	2,000	10,632	12,309
Santa Cruz	15,950	24,380	28,101
AMBAG Region	32,978	59,999	71,332

Source: RTDM (AMBAG, 2014b)

As shown in Table 48, the 2040 daily vehicle hours of delay would substantially increase above existing conditions in all three counties, as well as the AMBAG region as a whole. As the table shows, at the regional level, the daily hours of vehicle delay would increase by 27,021 hours, which would be an approximately 45 percent increase of existing conditions. This increase is largely a result of projected growth throughout the region by 2040. The AMBAG Draft 2018 Regional Growth Forecast projects the population of the AMBAG region to increase by approximately 16 percent between 2015 and 2040. Thus, some increase in vehicle hours of delay would be unavoidable, regardless of the 2040 MTP/SCS, because more people would live and work in the region in the future. The 2040 MTP/SCS includes projects that would improve overall traffic flow, increase public transit use and encourage more infill development. These types of projects reduce the amount of time motorists are delayed at intersections, reduce the number of vehicles on the road during peak periods and locate people closer to employment centers. Nonetheless, the daily hours of vehicle delays would increase between existing 2015 conditions and 2040 conditions.

Population growth and increased employment in the AMBAG region would also inevitably increase total peak period CVMT. As Table 49 shows, the daily peak period CVMT in the region in 2040 would increase with or without the implementation of the 2040 MTP/SCS. There would be 1,118,524 daily peak period CVMT in 2040 with implementation of the 2040 MTP/SCS. This would be an approximately 149 percent increase compared to existing 2015 conditions. On a per capita basis, as the table also shows, daily peak period CVMT in the region would increase by approximately 0.68 CVMT per person in 2040 compared to 2015, an approximately 115 percent increase over existing conditions (0.59 CVMT per person under existing conditions).

Table 49 Total Daily Peak Period CVMT

Measurement	Existing Conditions (2015)	2040 Conditions with 2040 MTP/SCS	2040 Conditions without 2040 MTP/SCS
Total CVMT on Congested Facilities	499,064	1,118,524	1,259,191
Per Capita CVMT on Congested Facilities	0.59	1.27	1.43

Source: RTDM (AMBAG, 2014b)

Table 50 compares the percentage of commuter trips that are within ~~exceed~~ 30 minutes in duration during the morning peak period (6:00 A.M. to 9:00 A.M.) and evening peak period (4:00 P.M. to 7:00 P.M.). The table provides the existing conditions in 2015, and the 2040 conditions with implementation of the 2040 MTP/SCS for each type of motorized transportation mode in the region. The table also shows the percent of commuter trips within 30 minutes or less in 2040 without implementation for the 2040 MTP/SCS for informational purposes.

Table 50 Percent of Commuter Trips by Mode Within 30 Minutes - Peak Period

Mode	Existing Conditions (2015)	2040 Conditions with 2040 MTP/SCS	2040 Conditions without 2040 MTP/SCS
Drive Alone	84.3%	84.5% 84.0%	83.9%
Carpool	84.3%	84.5% 84.0%	83.9%
Transit	13.0%	15.8% 14.8%	13.0%

Source: RTDM (AMBAG, 2014b)

As shown in Table 50, the percent of commuter trips that are 30 minutes or less during peak period would decrease by approximately 0.3 percent from 2015 to 2040 across passenger vehicle modes. As previously described, population and employment growth between 2015 and 2040 in the AMBAG region is expected to increase by approximately 16 percent and 17 percent, respectively. Thus, the rate of population and employment growth in the region would far exceed the percent loss of commuter trips that are 30 minutes or less in passenger vehicles. This suggests that the 2040 MTP/SCS projects would be effective at reducing commute distances and delays in the AMBAG region as population and commuters continue to grow in comparison to conditions without the 2040 MTP/SCS. Additionally, as shown in Table 50, implementation of the 2040 MTP/SCS would increase the percentage of commuter trips on transit that can be made within 30 minutes, which would be an improvement compared to existing 2015 conditions.

Nonetheless, because daily vehicle hours of delay, total peak period CVMT and commuter trips exceeding 30 minutes in the AMBAG region would increase between 2015 conditions and 2040 conditions, the impacts of the 2040 MTP/SCS would be significant.

Mitigation Measures

The 2040 MTP/SCS already includes policies, alternative transportation projects and transportation demand management projects, which would encourage the use of transportation modes other than passenger vehicles. Nonetheless, the daily hours of vehicle delay, total peak period CVMT and the percentage of commuter work trips exceeding 30 minutes in passenger vehicles would still increase

in 2040 compared to the existing 2015 conditions. No feasible additional mitigation measures have been identified that would further reduce these metrics. Refer to Section 7, Alternatives, for a discussion of 2040 MTP/SCS alternatives that examine land use and transportation scenarios that incorporate different assumptions regarding the combinations of future land uses and transportation system improvements.

Significance After Mitigation

This impact would remain significant and unavoidable.

Threshold 1: Conflict with the following measures of effectiveness:
 d. Percent of jobs within 0.5 mile of a high quality transit stop;

Impact T-2 THE 2040 MTP/SCS WOULD INCREASE THE PERCENT OF JOBS WITHIN 0.5 MILE OF A HIGH QUALITY TRANSIT STOP COMPARED TO EXISTING 2015 CONDITIONS. THIS WOULD BE A BENEFICIAL IMPACT.

Table 51 compares percent of jobs that are within of 0.5 mile of a high quality transit stop under 2015 and 2040 conditions with implementation of the 2040 MTP/SCS. Conditions in 2040 without implementation of the 2040 MTP/SCS are also provided for informational purposes.

Table 51 Percent of Jobs Within 0.5 Mile of a High Quality Transit Stop

County	Existing Conditions (2015)	2040 Conditions with 2040 MTP/SCS	2040 Conditions without 2040 MTP/SCS
AMBAG Region	21.4%	29.6%	20.6%

Source: RTDM (AMBAG, 2014b) and Geographic Information System analysis (see Appendix G of the MTP/SCS)

As shown in Table 51, the 2040 MTP/SCS would increase the percentage of jobs that are within 0.5 mile of a high quality transit stop compared to existing 2015 conditions. Thus, the 2040 MTP/SCS would have a beneficial impact by increasing the percentage of jobs within 0.5 mile of a high quality transit stop. Therefore, impacts would be less than significant under this threshold.

Mitigation Measures

Mitigation measures are not required.

Threshold 3: Substantially disrupt:
 a. Transit service

Impact T-3 THE 2040 MTP/SCS INCLUDES TRANSIT PROJECTS THAT WOULD IMPROVE AND EXPAND TRANSIT SERVICES IN THE REGION. THE 2040 MTP/SCS WOULD INCREASE THE PERCENTAGE OF JOBS WITHIN PROXIMITY TO TRANSIT STOPS AND THE PERCENT OF TRANSIT TRIPS LESS THAN 30 MINUTES DURING PEAK PERIOD. THUS, THE 2040 MTP/SCS WOULD NOT SUBSTANTIALLY DISRUPT TRANSIT SERVICE AND IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The 2040 MTP/SCS transit projects include increasing bus capacity on congested facilities, such as Highway 1 in Monterey and increasing the frequency of some bus line services. The 2040 MTP/SCS projects also include bus maintenance and preventative maintenance, which would help ensure reliability of the bus fleets of the MST, Santa Cruz METRO and San Benito County Express, and

minimize the potential for transit disruptions due to equipment failure. These types of projects and improvements would improve conditions for bus operations in the region. As indicated in Table 52, the percent of peak hour transit trips that are 30 minutes or less in duration would increase between 2015 and 2040 with implementation of the 2040 MTP/SCS. This suggests that bus line service would move more efficiently within the roadway network of the AMBAG region. However, as discussed above, daily hours of vehicle delay in 2040 would substantially increase above existing conditions, which would also affect bus line services. Thus, the increase in the percentage of transit trips that are less than 30 minutes during peak period can be attributed to infill development included in the 2040 MTP/SCS land use scenario. Infill development would position the workforce and places of employment closer together, essentially creating shorter commute distances and bus trips, regardless of whether or not the road network is congested. This concept is reflected in the increase in the percent of jobs within 0.5 mile of a high quality transit stop that would occur in the future under the 2040 MTP/SCS, as shown in Table 52. An increase in the percentage of transit trips that are less than 30 minutes during peak period in 2040 with implementation of the 2040 MTP/SCS would be an improvement compared to existing conditions.

Table 52 General Transit Use Indicators

Indicator	Existing Conditions (2015)	2040 Conditions with 2040 MTP/SCS	2040 Conditions without 2040 MTP/SCS
Transit Trips*	374,215	451,991	430,781
Percent of Peak Hour Work Trips by Transit that are 30 Minutes or Less	13.0%	14.8%	13.0%
Percent of Jobs within 0.5 Mile of a High Quality Transit Stop	21.4%	29.6%	20.6%

Source: RTDM (AMBAG, 2014b) and Geographic Information System analysis (see Appendix G of the MTP/SCS)

* The transit trips shown in this table include bicycle and pedestrian trips, as well as transit trips.

The transit use indicator values for the 2040 MTP/SCS shown in Table 52 are likely low given the lack of sensitivity to transit within the RTDM. It is common practice to calibrate models to observe conditions within the region. Currently the region has relatively low transit ridership; however, it also has very few passenger rail services. Further, the region does not have a wide-spread practice of TOD. Thus, the RTDM is not sensitive to premium transit service⁹ or land use changes near those services and underestimates the total ridership gains that would be realized with the introduction of new types of infrastructure. Improvements would result from both the SCS land use scenario emphasis on infill and TOD and implementation of additional transit services and facilities. These improvements would be beneficial for MST, Santa Cruz METRO and San Benito County Express transit services. Impacts would be less than significant because transit service would not be substantially disrupted.

Mitigation Measures

Mitigation measures are not required.

⁹ Premium transit service typically means a high quality transit, either bus or rail, that reduces transit travel times, enhances regional connectivity, and provides improved vehicle and transit amenities to attract new customers.

Threshold 3: Substantially disrupt:
b. Bicycle and pedestrian facilities

Impact T-4 THE 2040 MTP/SCS WOULD IMPROVE CONDITIONS FOR BICYCLE AND PEDESTRIAN TRAVEL IN THE AMBAG REGION AND BICYCLE AND PEDESTRIAN FACILITIES WOULD NOT BE SUBSTANTIALLY DISRUPTED. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The 2040 MTP/SCS is intended to improve the system for all modes of transit so vehicles and non-motorized transit can use the streets simultaneously and safely in comparison to existing conditions. The 2040 MTP/SCS includes goals and policies to support bicycle and pedestrian facilities. Projects within the 2040 MTP/SCS would add new pedestrian and bicycle facilities, including sidewalks, trails and bike lanes, as well as safety measures, such as intersection crosswalks and safety programs at local schools. Bicycle and pedestrian improvement projects identified in the 2040 MTP/SCS are aimed primarily at improving bicycle and pedestrian safety and expanding facilities such as bike lanes. For example, the 2040 MTP/SCS includes projects that would result in the addition of more than 377 miles of Class I and Class II bike lanes to the AMBAG region by 2040. Pedestrian and bicycle facilities would be designed and constructed in compliance with applicable safety regulations, such as the California Manual of Uniform Traffic Control Devices. As shown in Table 52 above, the 2040 MTP/SCS projects would increase transit trips, which includes pedestrian and bicycle trips, in the AMBAG region in 2040 compared to 2015. The 2040 MTP/SCS would result in additional and improved facilities to accommodate pedestrian and bicycle travel modes, and would not substantially disrupt bicycle and pedestrian facilities. Impacts would be less than significant.

Mitigation Measures

Mitigation measures are not required.

Threshold 4: Result in any increase in vehicle miles traveled on all freeways and roadways above existing conditions.

Impact T-5 DAILY VMT WOULD INCREASE BETWEEN THE BASELINE 2015 CONDITIONS AND 2040 CONDITIONS. THUS, IMPACTS FROM IMPLEMENTATION OF THE 2040 MTP/SCS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Table 53 compares the daily VMT for existing conditions in 2015 and 2040 conditions with implementation of the 2040 MTP/SCS on freeways and roadways for each county and the AMBAG region as a whole. The daily VMT in 2040 without implementation of the 2040 MTP/SCS is provided in the table for informational purposes.

Table 53 Daily Vehicle Miles Travelled

County/Region	Existing Conditions (2015)	2040 Conditions with 2040 MTP/SCS	2040 Conditions without 2040 MTP/SCS
Monterey	9,764,441	12,091,679	12,216,546
San Benito	1,382,599	2,119,312	2,111,029
Santa Cruz	4,688,870	5,476,518	5,414,346
AMBAG Region	15,835,910	19,687,508	19,741,921
Per Capita AMBAG Region	20.8	22.3	22.4

Source: RTDM (AMBAG, 2014b)

As shown in Table 53, the daily VMT in each county, and the AMBAG region as a whole would increase in 2040 compared to existing 2015 conditions (see Appendix C). The increase, on a regional basis, would be 3,851,598 VMT daily, an approximately ~~24.3~~ **49.6** percent increase of existing daily VMT conditions in 2015. As previously discussed, population growth in the region would inevitably increase daily VMT, regardless of the potential implementation of the 2040 MTP/SCS. However, some of the 2040 MTP/SCS projects that would directly create VMT, separate from unrelated population growth, would include projects that expand public transit fleets. While these types of projects would add daily VMT to the region by introducing new vehicles to the region, they would essentially move more people per VMT than an equivalent number of passenger cars required to move the same number of people. Nonetheless, compared to existing conditions, the daily VMT in the region and each of the three counties would increase in 2040 under implementation of the 2040 MTP/SCS. Impacts would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that would increase the capacity of a roadway. For land use projects under their jurisdiction, the cities and counties in the AMBAG region can and should implement the following mitigation measure. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

T-5 Project-Level VMT Analysis and Reduction

Transportation project sponsor agencies shall evaluate transportation projects that involve increasing roadway capacity for their potential to increase VMT. Where project-level increases are found to be potentially significant, implementing agencies shall identify and implement measures that reduce VMT. Examples of measures that reduce the VMT associated with increases in roadway capacity include tolling new lanes to encourage carpools and fund transit improvements; converting existing general purpose lanes to high occupancy vehicle lanes; and implementing or funding off-site travel demand management.

Implementing agencies shall evaluate VMT as part of project-specific CEQA review and discretionary approval decisions for land use projects. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce VMT. Examples of measures that reduce VMT include infill development, mixed use and transit oriented development,

complete street programs, reduced parking requirements, and providing alternative transportation facilities, such as bike lanes and transit stops.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Significance After Mitigation

If implementing agencies adopt and require this mitigation, impacts would be reduced because less VMT would be added to the counties, and thus the AMBAG region. However, the implementation of project-level VMT-reducing measures – such as mixed uses and TOD – may not be feasible and cannot be guaranteed on a project-by-project basis. Additionally, it is unlikely that an increase in daily VMT above existing conditions could be fully avoided in 2040, 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 2040 MTP/SCS Project 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 the 2040 MTP/SCS. The projects within the 2040 MTP/SCS are evaluated herein in their entirety and all are intended to improve traffic circulation rather than cause adverse impacts. However, as described above, the 2040 MTP/SCS would increase existing 2015 VMT by approximately 24.3 ~~19.6~~ percent in 2040, as well as increase the daily hours of vehicle delays and the daily CVMT in the region. These effects were found to be significant and unavoidable impacts, as described above. The RTDM data does not have the capability to distinguish which project or projects would specifically result in increased daily VMT, daily hours of vehicle delay, or daily CVMT. However, any number of the 2040 MTP/SCS projects that expand roadway capacity or improve traffic flow and circulation could presumably increase VMT, and any increase in VMT could potentially increase vehicle delays and CVMT. Thus, there are no specific projects that can be listed in this section related to the adverse impacts of increased daily VMT, daily hours of vehicle delays, and daily CVMT in the AMBAG region.

As described above, the 2040 MTP/SCS would also slightly increase the percent of commuter trips made in passenger vehicles that exceed 30 minutes in length. The percent of commuter trips that exceed 30 minutes when the commuter is in passenger vehicles, whether driving alone or in a carpool, is correlated with daily VMT, daily CVMT and daily hours of vehicle delay on roadways in the AMBAG region. Thus, there are no specific projects that can be listed in this section related directly to these impacts.

d. Cumulative Analysis

The 2040 MTP/SCS is a cumulative plan by design that integrates transportation investments with land use strategies for an entire region of the state that shares, or is connected by, common economic, social and environmental characteristics. As such, the analysis of transportation and traffic impacts presented above is a cumulative analysis compliant with the requirements of CEQA. However, the following cumulative impact analysis discussion has been prepared to evaluate whether the 2040 MTP/SCS would contribute additional traffic delays, congestion, or other such transportation impacts to areas beyond the AMBAG region. Movement within, through, and beyond

the AMBAG region is necessary for commuters, personal travel and goods movement. Thus, this cumulative analysis focuses on the potential impacts on the transportation network within the adjoining counties to the AMBAG region. The cumulative analysis impact area for transportation and traffic consists of the AMBAG region and the seven counties adjoining the AMBAG region: Fresno, Kern, Kings, Merced, San Luis Obispo, Santa Clara and San Mateo.

Within the cumulative analysis impact area, implementation of the 2040 MTP/SCS combined with cumulative development outside the region has the potential to result in congestion and delay occurring outside the AMBAG region, which would be considered a significant cumulative impact. The 2040 MTP/SCS is designed to maintain and foster the balance between jobs and housing within the AMBAG region and provides a strategy to allocate growth in such a way as to achieve a more balanced jobs/housing ratio and to optimize transportation investments that support those land uses.

As discussed above, implementation of the 2040 MTP/SCS would have significant and unavoidable impacts related to increases in daily hours of vehicle delay, daily CVMT and the percentage of commuter trips in passenger vehicles that exceed 30 minutes in the AMBAG region. Daily hours of vehicle delay and daily CVMT are outputs of the RTDM and include the effects of trips made from outside of the AMBAG region. Thus, the effects of travel from outside the AMBAG region are accounted for and captured in the program-level analysis of impacts, above.

As discussed above, the 2040 MTP/SCS would also have significant and unavoidable impacts related to an increase in daily VMT in the AMBAG region in 2040. As described above, daily VMT in the AMBAG region is partially due to commuters travelling to and from employment in the adjoining counties, particularly Santa Clara County and San Mateo County in the San Francisco Bay Area. The 2040 MTP/SCS is designed to promote economic growth and employment in the AMBAG region, while also providing the proper balance between jobs and housing within the region. With more employment in the AMBAG region, fewer residents of the region may commute to adjoining counties for employment. Thus, the increased daily VMT in 2040 resulting from the 2040 MTP/SCS may not necessarily be from commuter trips to and from employment destinations outside of the AMBAG region, and the 2040 MTP/SCS may not increase daily VMT on roadways in adjoining counties. Nonetheless, as shown in Table 53, the 2040 MTP/SCS would increase the baseline 2015 conditions for daily VMT by 3,851,598 VMT, which is an approximately ~~19.6~~ 24.3 percent increase over existing conditions. While the majority of the VMT would be expected to remain within the AMBAG 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 roadways in the counties with the highest relative employment, such as Highway 101 and 17 into Santa Clara County and Highway 1 into San Mateo County. The increased VMT in adjoining areas would contribute to traffic delays and congestion given that increases would be on major commuter routes and heavily travelled roadways in the adjoining counties, and that these counties are also expected to experience increased population growth into the future. Thus, cumulative impacts on traffic operations would be significant and the 2040 MTP/SCS contribution to congestion and traffic in adjoining areas would be cumulatively considerable. Mitigation Measure T-5 would reduce the 2040 MTP/SCS contribution, but it would remain cumulatively considerable.

4.15 Tribal Cultural Resources

This section evaluates effects on tribal cultural resources related to implementation of the 2040 MTP/SCS.

4.15.1 Setting

The AMBAG region was historically occupied by the Costanoans, or coast people, Esselen, Salinan and Northern Valley Yokuts. Monterey County was occupied by the Esselen in the west, the Costanoan in the north and the Salinan to the south. The northwestern portion of San Benito County was occupied by the Costanoan, the southeastern by the Northern Valley Yokuts and the southwestern by the Salinan. Santa Cruz County was occupied by the Costanoan.

The Costanoans occupied permanent village sites in the valleys and maintained numerous hunting camps in the mountain terrain that they occupied seasonally. The subsistence for the Costanoan depended heavily on acorns and plant species during the various seasons (San Benito County 2015b).

The Costanoans, like most Native California groups, were organized according to politically independent land-holding groups referred to by anthropologists as tribelets. There were approximately 40 Costanoan tribelets. The basic Ohlone social unit was the family household of about 15 individuals, which was extended patrilineally (Broadbent 1972; Harrington 1933). Households grouped together to form villages and villages combined to form tribelets. Tribelets exchanged trade goods such as obsidian, shell beads and baskets; participated in ceremonial and religious activities together; intermarried; and could have extensive reciprocal obligations to one another involving resource collection.

Contact was established in the Costanoan territory with the founding of the Mission Nuestra Senora de la Soledad in 1791. The Costanoans suffered disenfranchisement and cultural collapse during the post-contact period and by 1810 the traditional lifeway of the Costanoans had virtually ceased. In 1971 descendants of the Costanoans united as a corporation, the Ohlone Indian tribe (San Benito County 2015b).

The Esselen inhabited the upper Carmel Valley in the Santa Lucia Mountains between Point Sur and Lopez Point, with the inland boundary just east of the Salinas River. The Esselen occupied seasonal villages depending on resource availability (Breschini and Haversat 2001).

Salinan territory ranged from Carmel Valley south to Morro Bay. They occupied permanent villages. Salinan subsistence was centered on the gathering of acorns and other edible plants and the hunting of animals such as dove, quail, rabbit and deer (Taylor 2013).

Northern Valley Yokuts populations were concentrated along waterways in the San Joaquin River. Settlements were typically composed of single-family dwellings, sweathouses and ceremonial structures. Subsistence revolved around water resources in the San Joaquin Valley, with a focus on salmon and acorns (Wallace 1978).

Tribal cultural resources that could be present within the AMBAG region include but are not limited to Native American burial sites, village or occupation sites, traditional resource gathering locations and natural landforms such as mountain peaks, ridge tops, or rivers. For example, as discussed in the AB 52 consultation meeting with Louise Miranda-Ramirez for the 2040 MTP/SCS (see below), Moss Landing is a special site to the Ohlone Costanoan Esselen Nation (Ramirez 2017). Such

resources are present throughout the AMBAG region, including known and documented sites as well as undocumented sites that will be identified through cultural resources survey or ground disturbance.

Regulatory Setting

Assembly Bill 52

California Assembly Bill 52 of 2014 (AB 52) was enacted on July 1, 2015 and expands 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” (PRC Section 21084.2). It further states that the lead agency avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources:

1. “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: 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
2. A cultural 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.

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. 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 formal consultation process are those that have requested notice of projects proposed within 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.”

Existing Conditions

AMBAG has conducted AB 52 consultation for the 2040 MTP/SCS. This consultation included written communication with the Torres Martinez Desert Cahuilla Indians, who are not affiliated with the AMBAG region and are thus not discussed in the setting above, and written and verbal

communication with the Ohlone/Costanoan-Esselen Nation (OCEN). These communications are summarized below:

OCEN

- On July 6, 2015, AMBAG received a letter from the Ohlone/Costanoan-Esselen Nation (OCEN) requesting formal notice of proposed projects pursuant to AB 52
- On December 21, 2015, AMBAG sent a letter to Louise Miranda Ramirez, OCEN Tribal Chairwoman, notifying the tribe of the 2040 MTP/SCS and transmitting a copy of the Notice of Preparation (NOP)
- On January 17, 2017, OCEN submitted a letter in response to the NOP requesting consultation on projects affecting their aboriginal homelands.
- AMBAG contacted Louise Miranda Ramirez, OCEN Tribal Chairwoman, via phone and email during preparation of the 2040 MTP/SCS EIR and met in person on September 12, 2017 for formal consultation.

Torres Martinez Desert Cahuilla Indians

- On May 17, 2016, AMBAG received a letter from the Torres Martinez Desert Cahuilla Indians (letter dated May 9, 2017) requesting formal notice of proposed projects pursuant to AB 52
- On June 13, 2016, AMBAG sent a letter to Michael Mirelez, Cultural Resource Coordinator for the Torres Martinez Desert Cahuilla Indians, notifying the tribe of the 2040 MTP/SCS and transmitting a copy of the NOP; no response to this letter was received, and therefore formal AB 52 consultation was not required (Public Resources Code Section 21080.3.1(d))

Written communications between AMBAG and the OCEN and Torres Martinez Desert Cahuilla Indians tribes is provided in Appendix E. A summary of the results of the in person meeting are provided in the analysis below.

4.15.2 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 to tribal cultural resources:

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

This section describes generalized tribal cultural resources impacts associated with the 2040 MTP/SCS. Due to the programmatic nature of the 2040 MTP/SCS, a precise, project-level analysis of the specific impacts associated with individual transportation and land use projects is not possible. However, all projects under the 2040 MTP/SCS that are subject to CEQA must comply with AB 52. In general, implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the 2040 MTP/SCS could result in tribal cultural resources impacts as described in the following section.

Threshold 1: 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 THE 2040 MTP/SCS HAVE THE POTENTIAL TO IMPACT TRIBAL CULTURAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

Based on consultation with OCEN Tribal Chairwoman Louise Miranda Ramirez, tribal cultural resources are present throughout the AMBAG region. This includes Native American burial sites, village or occupation sites, traditional resource gathering locations and natural landforms. Other places are special to OCEN for spiritual or familial reasons. One example of such a site is Moss Landing. Other sites may be known to OCEN but are confidential and were not disclosed during consultation. Therefore, tribal cultural resources could be encountered during implementation of the transportation improvement projects listed in the 2040 MTP/SCS and the land use scenario envisioned by the 2040 MTP/SCS. 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 AMBAG region. Impacts to tribal cultural resources may include damage or destruction of the resources. Adherence to the requirements of AB 52 would encourage 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

To minimize impacts to tribal cultural resources identified as a result of project-specific AB 52 consultation, for transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation developed for the 2040 MTP/SCS program where applicable for transportation projects that result in impacts to tribal cultural resources. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. 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 may require formal tribal consultation. If the implementing agency 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

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

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 a less than significant level.

c. Specific MTP/SCS Projects that May Result in Impacts

All 2040 MTP/SCS projects that require construction may result in impacts as discussed above; and therefore, are not specifically identified in table format below. All 2040 MTP/SCS projects are referenced in Appendix B. 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. The mitigation measure discussed above would apply to these specific projects.

d. Cumulative Analysis

Tribal cultural resources are regionally specific and determined by the local tribes. However, development in the AMBAG area would increase under buildout of the 2040 MTP/SCS 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 AMBAG 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 the 2040 MTP/SCS contribution would be cumulatively considerable. The mitigation measure described earlier in this section would reduce these impacts, but not to less-than-cumulatively-considerable levels.

4.16 Less than Significant Environmental Factors

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 the impact sections of the EIR.

Aesthetics/Visual Resources

All applicable thresholds pertinent to this issue are addressed in Section 4.1, *Aesthetics/Visual Resources*.

Agriculture and Forestry Resources

Thresholds of Significance

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact on agricultural resources:

1. 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;
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract;
3. Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timber Production;
4. Result in the loss of forest land or conversion of forest land to non-forest use; and/or
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

Thresholds 1, 2 and 5 are addressed in Section 4.2, *Agriculture and Forestry Resources*. Thresholds 3 and 4 are discussed below.

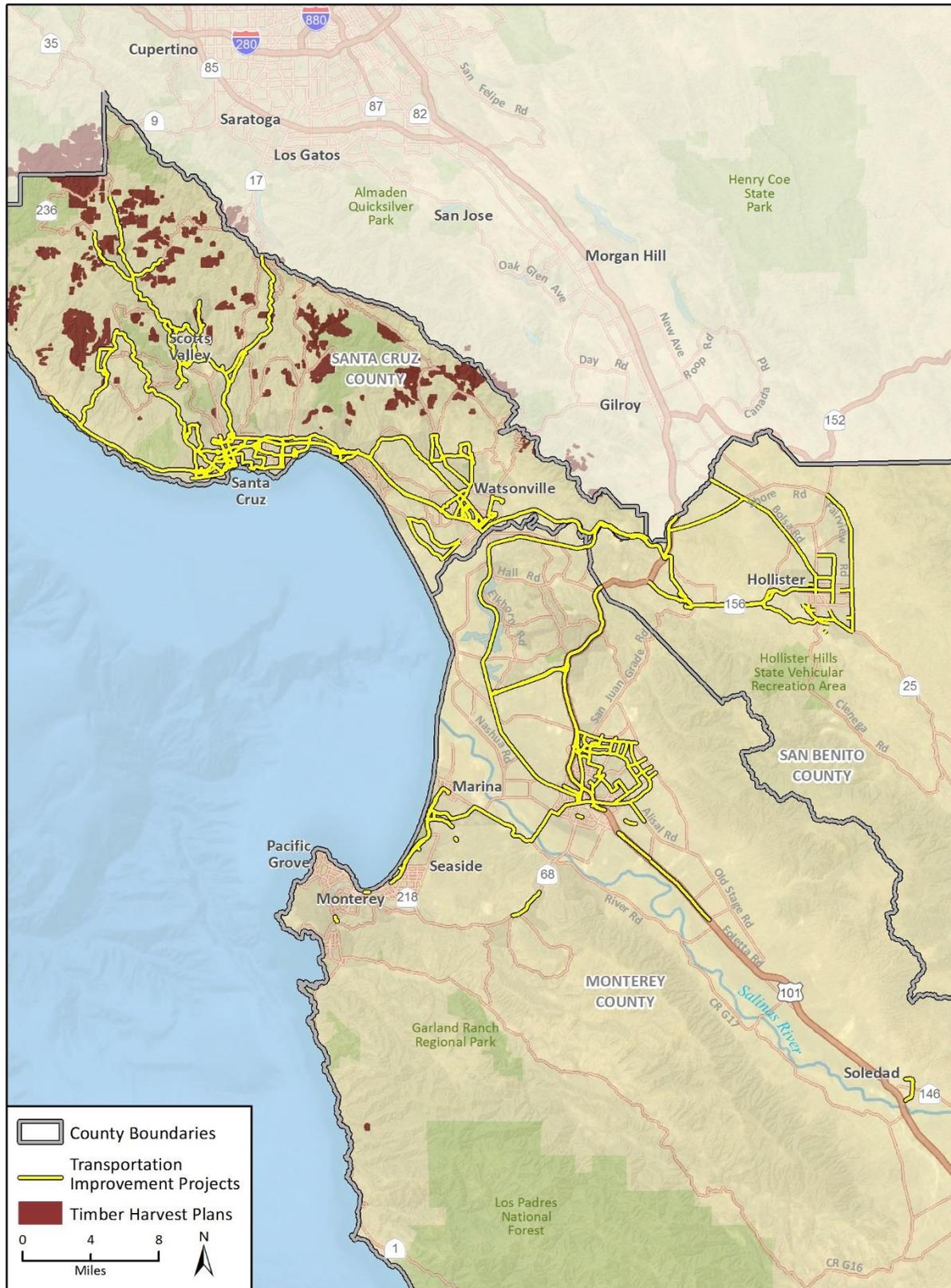
Assessment of Impacts

Threshold 3: Conflict with existing zoning for, or cause rezoning of, forest land to non-forest use

Threshold 4: Result in the loss of forest land or conversion of forest land to non-forest use

The majority of timber resources in the AMBAG region are located in Santa Cruz County. Figure 31 shows Timber Harvesting Plans (THP) in Monterey, San Benito and Santa Cruz Counties. As shown, all but one THP (in southern Monterey County) are located in the mountains of Santa Cruz County (CAL FIRE 2012). Additionally, according to the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program's (FRAP) 2010 Assessment, Santa Cruz County is the only county in the AMBAG region that contains land zoned with a Timber Production Zone designation (FRAP 2010). As of 2009, Santa Cruz County had approximately 115,000 acres of Timberland (FRAP 2010).

Figure 31 Plan Area Timber Harvesting Plans



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 Additional data provided by AMBAG 2017e; California Department of Forestry and Fire Protection, 2017.

Fig 14 Plan Area Timber Harvesting Plans

The land use development pattern in Santa Cruz County, as shown in Figure 8 in Section 2.0, *Project Description*, would concentrate development within existing urbanized areas. Some development could occur within and around Scotts Valley and along Highway 9. Limited development could overlap with existing Timber Harvest Plans. However, these areas of overlap are primarily Town/Rural Residential and would not result in the loss of forest land. In addition, the SCS land use scenario does not rezone any existing land, including within the Santa Cruz mountains. Therefore, future development in areas zoned as forest land would be required to comply with applicable development standards and zoning regulations, and thus would by design comply with zoning for forest land and timberland.

Because land use strategies contained within the 2040 MTP/SCS would help to encourage growth in developed areas rather than a more dispersed land use pattern that could result in conversion of forest land, and because of the majority of timber areas are outside the identified land use development areas in Santa Cruz County, the impacts on existing zoning and land use designations for forest land and timberland and conversion of forest land, would be less than significant.

Air Quality and Health Impacts/Risks

All applicable thresholds pertinent to this issue are addressed in Section 4.3, *Air Quality and Health Impacts/Risks*.

Biological Resources

All applicable thresholds pertinent to this issue are addressed in Section 4.4, *Biological Resources*.

Cultural and Historic Resources

All applicable thresholds pertinent to this issue are addressed in Section 4.5, *Cultural and Historic Resources*.

Energy

All applicable thresholds pertinent to this issue are addressed in Section 4.6, *Energy*.

Geology and Soils

Thresholds of Significance

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact related to geology and soils:

1. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground-shaking, seismic-related ground failure, including liquefaction, or landslides;
2. Result in substantial soil erosion or the loss of topsoil;
3. 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;
4. Be located on expansive soil, creating substantial risks to life or property; and/or
5. 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.

Thresholds 1 through 4 are discussed in Section 4.7, *Geology and Soils*. Threshold 5 is discussed below.

Assessment of Impacts

Threshold 5: 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

The 2040 MTP/SCS does not include transportation projects that would require the use of septic tanks or alternative waste water disposal systems. The expansion and/or improvement of streets, highways, transit facilities, airports and related transportation infrastructure would not include elements that would require wastewater treatment or otherwise necessitate the development of septic systems. Future development projects implementing the 2040 MTP/SCS land use would almost all connect to centralized wastewater infrastructure; the few development projects in rural areas requiring septic tanks or alternative wastewater disposal systems would comply with local regulatory requirements that assure 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.

Greenhouse Gas Emissions/Climate Change

All applicable thresholds pertinent to this issue are addressed in Section 4.8, *Greenhouse Gas Emissions/Climate Change*.

Hazards and Hazardous Materials

All applicable thresholds pertinent to this issue are addressed in Section 4.9, *Hazards and Hazardous Materials*.

Hydrology and Water Quality

All applicable thresholds pertinent to this issue are addressed in Section 4.10, *Hydrology and Water Quality*.

Land Use

All applicable thresholds pertinent to this issue are addressed in Section 4.11, *Land Use*.

Mineral Resources

Thresholds of Significance

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact on mineral resources:

1. 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; and/or
2. 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.

Both thresholds are discussed below.

Assessment of Impacts

Threshold 1: 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

Threshold 2: 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

The 2040 MTP/SCS primarily involves modifications to existing roadways, including improvements related to intersections, safety and widening, as well as alternative transportation projects. In addition, a majority of future development would be infill and TOD and would be located within existing urbanized areas. Infill and TOD projects would not be located on sites with known mineral resources or locally important mineral resources. For projects not considered to be infill or TOD, 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.

The Monterey County General Plan Conservation and Open Space Policy OS-2.1 states that the County shall protect on-site and off-site land uses that would incompatible with mineral extraction activities (Monterey County, 2010a). In San Benito County, Goal NCR-5 of the San Benito County 2035 General Plan (San Benito County, 2015a) intends to protect and support mineral resource extraction while avoiding land use conflicts and environmental impacts from current and historical mining activities. Policies and programs in the Conservation and Open Space Element of the Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994) would ensure that conflicts are minimized between new development and mineral resource areas (Policy 5.16.4).

There are no projects included in the 2040 MTP/SCS 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.

Noise

All applicable thresholds pertinent to this issue are addressed in Section 4.12, *Noise*.

Public Services

Thresholds of Significance

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact on public services:

1. Result in substantial adverse physical impacts associated with the provision of new of 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:

- a. Fire protection;
- b. Police protection;
- c. Schools;
- d. Parks; and/or
- e. Other public facilities.

All thresholds are discussed below.

Assessment of Impacts

Threshold 1: Result in substantial adverse physical impacts associated with the provision of new of physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire and police protection, schools, parks, or other public facilities

Transportation projects identified within the 2040 MTP/SCS would not generate demand for public services, including fire and police protection, schools, or parks. 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.

Future development projects occurring as a result of the 2040 MTP/SCS could result in increased demand for public services that exceed existing service capabilities. 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. 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 throughout Section 4 the EIR. Any significant associated with new or physically altered governmental facilities have already been disclosed previously in Section 4.

The general plans for each county in the AMBAG region include goals, policies and programs which intend to ensure the protection and that supply of services meets local demand. Cities have similar general plan policies. The Monterey County General Plan Public Service Element Goal PS-1 intends to ensure that adequate public facilities and services and the infrastructure to support new development are provided over the life of the General Plan (Monterey County, 2010a). Policies PS-1.1 and PS-1.2 are designed to ensure that improvement and financing is designed to accommodate new services, provide adequate public facilities and maintain acceptable levels of service. The San Benito County 2035 General Plan Public Facilities and Services Element Goal PFS-1 intends to provide residents and businesses quality, cost, effective and sustainable public facilities and services (San Benito County, 2015a). Policies PFS-1.1, PFS-1.2 and PFS-1.4 are designed to ensure that the County maintains adequate public facilities, identifies and finds solutions to support key public

facility infrastructure, and to preserve, improve and replace facilities to maintain adequate levels of service for existing and future development. The Parks, Recreation and Public Facilities Element of the Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 1994) contains objectives related to Fire, Police and Public Services and Facilities which are designed to provide high levels of protection services, and promote the improvement of public services and facilities (Objectives 7.16, 7.17 and 7.27).

Population and Housing

All applicable thresholds pertinent to this issue are addressed in Section 4.13, *Population and Housing*.

Recreation

Thresholds of Significance

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project's impacts would have a significant impact on recreation:

1. 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; and/or
2. Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Both thresholds are discussed below.

Assessment of Impacts

Threshold 1: 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
Threshold 2: Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment

Transportation projects identified within the 2040 MTP/SCS would not generate demand for parks or recreation resources. Future development projects occurring as a result of the MTP/SCS would increase localized demand on parkland. Development of the individual projects in the 2040 MTP/SCS would be required on a project-by-project basis to pay development fees towards 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. In accordance with this regulation, each county in the AMBAG region requires that new residential development provide parkland and/or pay in lieu fees for the provision of parkland. For example, Monterey County General Plan Policy PS-11.10 requires that residential subdivision projects provide and maintain park and recreational land facilities, or pay in-lieu fees, in proportion to the extent of need created by the development (Monterey County, 2010b). San Benito County specifically requires that new development provide parkland at the rate of five acres per 1,000 residents (San Benito County, 2010c). Santa Cruz County Code Section 15.01.060 requires countywide dedication and/or fees associated with residential development. Cities also typically

have similar types of policies in their general plans and/or Code of Ordinances. All future development included in the 2040 MTP/SCS 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.

It should also be noted that some of the active transportation projects included in the 2040 MTP/SCS would provide new recreational opportunities such as new Class I-III bike lanes, hiking trails, and improve access to recreational facilities. 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.

Transportation and Circulation

Thresholds of Significance

1. Conflict with the following measures of effectiveness for the performance of the circulation system:

- a. Total daily hours of vehicle delay;
- b. Total peak period CVMT;
- c. Percent of work trips that are 30 minutes or less by mode during peak period; and/or
- d. Percent of jobs within 0.5 mile of a high quality transit stop.

Any increase in performance indicators a. and b. compared to existing baseline conditions would be considered a significant impact. Any decrease in performance measures c. and d. compared to existing baseline conditions would be considered a significant impact.

2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
3. Substantially disrupt:
 - a. Transit service; and/or
 - b. Bicycle and pedestrian facilities.
4. Result in any increase in total vehicle miles traveled on all freeways and roadways above existing conditions;
5. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
6. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and/or
7. Result in inadequate emergency access.

Thresholds 1, 3 and 4 are addressed in Section 4.14, *Transportation and Circulation*. Thresholds 2, 5, 6 and 7 are discussed below.

Assessment of Impacts

Threshold 2: Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways

Threshold 2 pertains to the congestion management process, which pursuant to federal regulations, is a required part of the metropolitan transportation planning process for regions with one or more urbanized areas with a population of 200,000 or more. Santa Cruz County and San Benito County have ~~has~~ opted out of the congestion management planning process because it does not have a single urbanized area with a population of 200,000. Also, AMBAG does not require congestion management planning because the AMBAG region does not have a single urbanized area with a population of 200,000 or greater. However, within the AMBAG region, SBtCOG, SCCRTC and TAMC, all prepare and routinely update RTPs for their respective jurisdictions. The RTPs incorporate the basic principles of the congestion management process, specifically including a list of projects, goals and strategies to reduce and manage congestion on transportation facilities within their jurisdiction. AMBAG has made the congestion management process an integral part of the regional transportation planning process, including the 2040 MTP/SCS. The 2040 MTP/SCS, specifically Appendices B and C of the 2040 MTP/SCS, contains a compilation of the projects proposed in the RTPs prepared by TAMC, SBtCOG and SCCRTC. Thus, the 2040 MTP/SCS is consistent with the congestion management plans and programs of the RTPAs in the region, and impacts related to conflicting with applicable CMPs would be less than significant.

Threshold 5: Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks

Threshold 6: Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Threshold 7: Result in inadequate emergency access

The 2040 MTP/SCS does not include components that would result in changes in air traffic patterns that would result in substantial safety risks, and therefore this impact would be less than significant. To minimize safety risks, any development and subsequent planning decisions in proximity to airports would be subject to review under the State Aeronautics Act provided under Pub. Util. Code §§ 21167 et seq. Specific projects that may affect navigable airspace are also subject to FAA review, as outlined under 14 CFR Parts 77.5, 77.7 and 77.9.

Transportation projects included in the 2040 MTP/SCS 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. Therefore, this impact would be less than significant.

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).¹⁰ 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.

Tribal Cultural Resources

All applicable thresholds pertinent to this issue are addressed in Section 4.15, *Tribal Cultural Resources*.

Utilities and Service Systems

Thresholds of Significance

Appendix G of the State CEQA Guideline identifies the following criteria for determining whether a project’s impacts would have a significant impact on utilities and service systems:

1. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
2. Require or result in the construction of new wastewater treatment or expansion of existing facilities, the construction of which could cause significant environmental effects;
3. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
4. Have insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements required;
5. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the projects projected demand in addition to the provider’s existing commitments;
6. Not be served by a landfill with sufficient capacity to accommodate the projects solid waste disposal needs; and/or
7. Not comply with federal, state and local statutes and regulations related to solid waste

Thresholds 3 and 4 are discussed in Section 4.10, *Hydrology and Water Quality*.¹¹ Thresholds 1, 2, 5, 6 and 7 are discussed below.

¹⁰ Caltrans Manual on Uniform Traffic Control Devices available online at http://www.dot.ca.gov/hq/traffops/engineering/mutcd/ca_mutcd2014rev1.htm.

¹¹ Thresholds 3 and 4 herein are identified as Thresholds 13, and 11 in Section 4.10, *Hydrology and Water Quality*, respectively.

Assessment of Impacts

Threshold 1:	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board
Threshold 2:	Require or result in the construction of new wastewater treatment or expansion of existing facilities, the construction of which could cause significant environmental effects
Threshold 5:	Result in a determination by the wastewater treatment provider which serves or may serve the project that is has inadequate capacity to serve the projects projected demand in addition to the provider's existing commitments

The 2040 MTP/SCS transportation improvements would not lead to the construction of projects that include habitable residences, commercial buildings or other facilities that would generate permanent sources of new wastewater that requires treatment. Thus, transportation projects within the 2040 MTP/SCS would not exceed wastewater treatment requirements, require construction or expansion of wastewater treatment facilities or require a determination by a wastewater treatment provider.

The SCS land use scenario would promote infill and TOD development within urbanized areas. Although land use development projects would require wastewater treatment, this development would primarily occur at sites that are currently served by existing wastewater treatment facilities and connected to the local sewer services. However, some development projects may generate wastewater volumes that exceed the treatment capacity of existing wastewater treatment facilities. Depending on the exact timing and location of future development, it may become necessary to construct new wastewater treatment facilities or expand existing facilities to maintain adequate treatment capacity. Facility expansions or new treatment facilities would be subject to project-specific CEQA review. In addition, implementation of new or expanded wastewater facilities to serve new land use development is incorporated into the SCS, the environmental effects of which are evaluated throughout Section 4 the EIR. Any significant associated with new or expanded wastewater facilities have already been disclosed previously in Section 4..

Threshold 6:	Not be served by a landfill with sufficient capacity to accommodate the projects solid waste disposal needs
Threshold 7:	Not comply with federal, state and local 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 included in the 2040 MTP/SCS is built out.

For the non-diverted waste generated by projects included in the 2040 MTP/SCS, solid waste would require disposal in area landfills. There are over five active operating solid waste facilities in Santa Cruz County, three in San Benito County and 15 in Monterey County. These landfills are adequate for the existing solid waste generated in the AMBAG region, 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. Solid waste impacts would therefore be less than significant.

5 MTP Consistency with Other Plans Analysis

The purpose of the 2040 MTP/SCS is to coordinate and facilitate the planning and programming of transportation facilities and services within the tri-county Monterey Bay region through 2040 in accordance with State and Federal regulations.

The Policy Element of the 2040 MTP/SCS states that AMBAG's goals are to ensure that the transportation system planned for the Monterey Bay region accomplishes the following:

- **Access and Mobility.** Provide convenient, accessible and reliable travel options while maximizing productivity for all people and goods in the region
- **Economic Vitality.** Raise the region's standard of living by enhancing the performance of the transportation system
- **Environment.** Promote environmental sustainability and protect the natural environment
- **Healthy Communities.** Protect the health of our residents; foster efficient development patterns that optimize travel, housing and employment choices and encourage active transportation
- **Social Equity.** Provide an equitable level of transportation services to all segments of the population
- **System Preservation and Safety.** Preserve and ensure a sustainable and safe regional transportation system

In preparation for drafting the 2040 MTP/SCS, AMBAG considered the above referenced strategy areas and goals while collaborating with local jurisdictions to identify a common set of land use placetypes. AMBAG developed the placetypes to provide a common definition of density and character across the 21 jurisdictions in the region. These placetype designations are consistent with the general plans for each of the 18 cities and three counties that comprise the AMBAG region and generally match the respective land use policies and objectives contained therein. The placetypes were then used to establish an existing as well as a future land use pattern. The future land use pattern concentrates more growth in commercial and mixed use corridors with high quality transit rather than in rural areas.

Each of the 18 city and three county general plans include circulation elements that are coordinated and consistent with the respective land use diagrams, goals, policies and programs. The circulation elements lay out goals, policies and programs describing a broad range of transportation modes and opportunities that, among other things, support the land use goals, policies and programs. The circulation diagrams for the city and county general plans are consistent with the land use diagrams that depict the respective city and county future land use patterns. These circulation diagrams describe the transportation infrastructure requirements necessary to facilitate those growth patterns. The 2040 MTP/SCS is built on and consistent with facilities and infrastructure laid out in the circulation elements of the city and county general plans

This EIR qualitatively evaluates local and sub-regional planning efforts and potential impacts of the 2040 MTP/SCS related to inconsistency with policies pertaining to infrastructure improvements intended to improve the regional transportation system. Specific projects included in the 2040

MTP/SCS that may support and encourage land use changes were identified early in the planning process and were assessed for consistency with the following:

- General Plan policies and development controls that require voter approval (such as those set by initiative);
- General Plan policies and development controls that are based on joint-powers agreements (such as regional open space reserves, buffers between communities, or urban service boundaries and urban limit lines); or
- General Plan policies and development controls reflecting infrastructure or potentially significant environmental constraints.

Local jurisdictions are responsible for adopting land use policies as part of their general and community plans and implementing them through local ordinance. Therefore, AMBAG has no direct control over local land use planning. Nevertheless, AMBAG makes regional efforts to assist local jurisdictions in aligning local land use policies with the proposed 2040 MTP/SCS. Such programs could assist local jurisdictions via technical support and funding. Examples include, but are not limited to: creating economic development forums to address needed increases in jobs; funding transit, bicycle and pedestrian infrastructure that supports the increased use of alternative modes; and working with local jurisdictions to update their general plans with policies that are consistent with the 2040 MTP/SCS where appropriate.

As demonstrated in this chapter, per CEQA Guidelines Section 15125(d), the 2040 MTP/SCS has no inconsistencies with applicable general plans and regional plans. Consistency with regional plans such as the “AMBAG Blueprint” and General Plans prepared for Monterey, San Benito and Santa Cruz Counties is addressed herein. Consistency with transportation planning documents, including regional and local bicycle and pedestrian plans, transit plans and roadway improvement plans are addressed in Section 4.14, *Transportation and Circulation*, and summarized in this section. In addition, Local Coastal Programs (LCP) consistency is discussed for Monterey and Santa Cruz counties as projects may occur within the coastal zone. As an element of the General Plan, LCPs are intended to demonstrate consistency with the Coastal Act for the portion of the statewide coastal zone located within Monterey County. Each LCP includes both a land use plan (LUP) and an implementation plan (IP) that together distill statewide Coastal Act coastal resource policies to the local level.

No Natural Community Conservation Plans or Habitat Conservation Plans pertain to project areas defined in the 2040 MTP/SCS, as described in Section 4.4, *Biological Resources*.

5.1 The Blueprint

In June 2011, AMBAG completed a regional vision plan entitled *Envisioning the Monterey Bay Area: A Blueprint for Sustainable Growth and Smart Infrastructure* (AMBAG, 2011). This document is commonly referred to as “the Blueprint.” The Blueprint was the predecessor of the AMBAG SCS. The Blueprint supports a sustainable growth pattern and the expansion of opportunities for alternative forms of travel. It includes policies to improve housing, neighborhood, and transportation choices while conserving natural resources. The Blueprint presents a vision for how the region might start to achieve the GHG reduction targets specified by the California Air Resources Board (CARB) through what is called the “Sustainable Growth Patterns” scenario. The GHG reduction target is a zero percent per capita increase in GHG emissions based on 2005 levels by 2020 and a five percent reduction by 2040.

While the Blueprint does not demonstrate compliance with the GHG reduction targets, it serves as a basis from which many of the major goals and policies within the current 2040 MTP/SCS were developed as part a collaborative process across the AMBAG region. As discussed within Section 4.8, *Greenhouse Gas Emissions/Climate Change*, the 2040 MTP/SCS would meet GHG reduction targets through 2040. Therefore, the Blueprint and 2040 MTP/SCS are consistent relative to the overall objective which is to expand and improve the efficiency of the regional transportation network and achieve GHG reduction targets.

5.2 Monterey County General Plan/Local Coastal Program

The Monterey County 2010 General Plan (Monterey County, 2010a) includes policies that address the existing and future land use for rural areas within the County that are used predominately for agricultural purposes as well as developed areas within incorporated cities and unincorporated communities. One of the land use planning challenges within Monterey County is that higher quality farmlands are located in the valleys where cities have also been established. On the other hand, foothills lining the valleys have unique scenic and environmental characteristics. These conditions require goals and policy statements that strike a balance between providing for growth and development while preserving significant resources countywide.

Monterey County's Land Use Element establishes policies to designate the general distribution and intensity of residential, commercial, industrial, agricultural, public facilities and open space uses. The primary vision of this Element is to create a general framework that encourages growth within or near developed/developing areas to reduce impacts to agricultural production and natural resources, and to avoid impacting public services that currently serve these areas. Areas where development is encouraged include incorporated cities and designated community areas where existing services are available. These areas are subject to additional planning by each incorporated city and within community plans/specific plans adopted by the Board of Supervisors for unincorporated community areas.

The proposed 2040 MTP/SCS encourages urban infill and transit oriented development (TOD) development and the development of transportation infrastructure that would support these uses, as well the overall efficiency of the existing regional transportation network. Projects identified by TAMC that comprise the RTP for Monterey County emphasize improving existing highway infrastructure, transit services, and related measures that focus potential impacts within existing urbanized areas. This is consistent with Land Use Element policies that avoid or reduce impacts to agricultural production, natural resources and existing public services within rural areas of Monterey County.

The coastal zone within Monterey County is divided into four LUPs: North County, Del Monte Forest, Carmel Area and Big Sur Coast. Projects in the 2040 MTP/SCS that support or facilitate coastal access while meeting other provides of the Coastal Act would be consistent with the Monterey County LCP. The four LUPs are integrated into the 1982 County General Plan and remain in effect. Preparation of the 2040 MTP/SCS has been closely coordinated and is consistent with the 1982 and 2010 County General Plans, and is therefore consistent with the LUPs. Projects occurring within the Monterey County coastal zone would be evaluated for consistency with the LUPs as part of the project specific environmental review (Monterey County, 1982, 1983, 1996, 2010 and 2012).

5.3 San Benito County General Plan

The San Benito County Board of Supervisors adopted the 2035 General Plan in 2015. The San Benito County 2035 General Plan (San Benito County, 2015a) includes policy statements that address sustainability, environmental protection and economic growth and diversification. The plan was developed in part by input received by stakeholders including residents, businesses, land owners and decision-makers. The Vision and Guiding Principles chapter of the General Plan update identify the following objectives as they relate to land use and community character:

1. Encourage new growth in existing unincorporated communities, new communities, or clustered developments to preserve prime farmland and rangeland, protect natural habitats, and reduce the financial, social and environmental impacts of urban sprawl.
2. Ensure that there is a mix of residential, commercial, employment, park, open space, school and public land uses to create a sense of place by supporting condensed, pedestrian accessible and transit oriented development.
3. Promote higher residential densities in existing unincorporated urban areas and new communities while encouraging mixed use development.
4. Ensure new development complements and preserves the unique character and beauty of San Benito County.
5. Establish defined boundaries to separate cities and unincorporated communities from prime agricultural land and important natural resources, using such features as agriculture buffers, greenbelts, open space and parks.

The 2040 MTP/SCS is consistent with the land use objectives as it encourages urban infill, high residential densities and TOD within existing urban centers. Because the 2040 MTP/SCS is focused in part on projects within existing urban infill areas, it supports policies within the San Benito County General Plan that are intended to preserve prime farmland and rangeland; protect natural habitats; and provide a mix of urban development areas that support pedestrian accessibility and transit oriented development.

5.4 Santa Cruz County General Plan/Local Coastal Plan

The Santa Cruz County General Plan/Local Coastal Plan was adopted by the Santa Cruz County Board of Supervisors in 1994. The Plan goals, policies, programs, resource and constraint mapping, along with county implementing ordinances, determine the location and pace of urban development. The intent is to regulate the quality of development and control the pace of development consistent with the availability of public services while protecting the natural resources that maintain and enhance the county's unique environment.

A basic land use policy of the Santa Cruz County General Plan focuses on separating urban and rural areas. This Urban/Rural Boundary – which is defined in the General Plan according to the Urban Services Line (USL) and the Rural Services Line (RSL) established around each incorporated city – encourages new development within existing urban areas while preserving agricultural land and natural resources in the rural areas.

Within Santa Cruz County, there are existing enclaves in rural areas which are developed at urban densities. Generally, these enclave boundaries are defined by an RSL. Some urban services are available within these areas. County policy allows the provision of full urban services, including

public sanitation facilities, to serve these communities. In areas outside of the USL or beyond the RSL established for these enclave areas, the "Rural Density Matrix" provides for parcel-specific determination of allowable densities based on the availability of services, environmental and site-specific constraints and resource protection factors required by the Growth Management System and the General Plan and LCP Land Use Plan.

Because commute patterns can have a negative impact on traffic, energy consumption, air quality and related environmental resources, the relationship between jobs and housing is an important topic in the Santa Cruz County General Plan. The General Plan recognizes the various types of commute behavior and includes policies to provide adequate housing opportunities and encourage an employment base that supports a diversity of income levels.

The 2040 MTP/SCS is generally consistent with the broad goals and policies of the Santa Cruz County General Plan/LCP in that both clearly support focused development within existing urban boundaries to preserve natural habitats and agricultural resources. Further, both documents address the importance of maintaining a job/housing balance by, in part, diversifying transportation options as well as supporting efforts focused on reducing regional traffic congestion. The Santa Cruz County LCP is integrated into the County General Plan. Preparation of the 2040 MTP/SCS has been closely coordinated and is consistent with the County General Plan, and is therefore consistent with the LCP.

5.5 Monterey Bay Area Transit Agency Plans

5.5.1 Monterey Salinas Transit Business Plan and Short Range Transit Plan

Last adopted in 2005, the *Business Plan and Short Range Transit Plan* is Monterey-Salinas Transit's (MST) primary planning document (MST, 2005). The Plan describes the role of public transit in the community including ongoing and anticipated service needs throughout the existing service area as well as in new growth areas that will need transit service in the coming years.

The MST *Business Plan and Short Range Transit Plan* uses two separate systems for performance measurement: one for the Fixed Route System, and the second for MST RIDES Paratransit. Performance measures for the Fixed Route System look at various factors of ridership (total customer boardings, ridership per vehicle revenue hour and utilization of lines), service delivery (increased customer satisfaction, strengthen employee developments and satisfaction, enhance support by MST members and other stakeholder, and operate safely, effectively and efficiently), and special services (the MST Trolley—Waterfront Visitors Express, Laguna Seca lines, supplemental service for community events, limited charter service for special events, and ADA compliance and accommodations). Performance measures for MST RIDES Paratransit program uses an evaluation system of 20 performance measures to support the MST's mission statement, which focuses on "increase customer satisfaction" and "operate safely, effectively and efficiently." These 20 performance measures fall into categories of input (resources: operating expenses, employees), output (service produced: vehicle revenue hours, vehicle revenue miles), end product (service consumed: passengers, passenger revenue), efficiency (input vs. output), service effectiveness (output vs. end product), cost effectiveness (input vs. end product), service quality (miles/road call, accidents per 10,000 miles) and customer satisfaction (telephone and letter).

Access to transit service and overall performance of the transit systems would improve with implementation of the 2040 MTP/SCS and related projects. The 2040 MTP/SCS includes projects in

Monterey County that would address transit operations, rehabilitation of existing facilities, improvements to American's with Disabilities Act (ADA) service, and infrastructure and other benefits including replacement of existing buses and related equipment. Examples of specific projects within the 2040 MTP/SCS that would meet some of these needs include service expansions to Salinas (MON-MST008-MST, MON-MST011-MST, MON-MST020-MST), increased frequency of various transit lines (MON-MST018-MST), improvements of the Salinas ITC station (MON-SNS120-SL), and countywide support for ADA services (MON-TAMC012-TAMC). As discussed, the 2040 MTP/SCS contains the TAMC RTP, which was developed in consultation with MST. Thus, the 2040 MTP/SCS would be consistent with the current *Business Plan and Short Range Transit Plan* (MST, 2005).

5.5.2 Santa Cruz METRO Short-Range Transit Plan

The Santa Cruz METRO *2013 Short-Range Transit Plan* update was adopted in May 2014. This update includes an assessment of the strengths and weaknesses of the existing service design for both fixed route and ParaCruz services; a forecast of future financial and capital needs; and an updated marketing plan. Regarding existing service, the Plan notes that Santa Cruz METRO has an excellent route system with heavy ridership. Several recommendations are included that build upon the success of the current system and focus on the use of existing resources to simplify services. These include the following:

- Simplifying service frequencies between downtown Santa Cruz and UCSC;
- Improving speed for more riders in the Watsonville – Cabrillo corridor;
- Consolidating routes to simplify service in Santa Cruz and Mid-County; and
- Creating Transit Emphasis Corridors where service frequencies are at least every 15-minutes during peak times and capital enhancements can be prioritized.

The Santa Cruz METRO fixed route and ParaCruz each have their own measures for performance. For the 33 fixed route bus lines, which includes four transit centers in the Santa Cruz area, measures tracked weekday and weekend services for the following: total annual ridership by route, averages for number of boardings, daily hours of revenue service, daily trips, daily vehicle miles, boardings per revenue hour, boardings per trip, boardings per mile and on-time performance. These factors are used to calculate productivity of the overall system. METRO ParaCruz tracks operating trends and performance indicators. Operating trends include ridership numbers, revenue hours, revenue miles. Performance indicators are measured by cost effectiveness (operating cost per passenger, farebox recovery ratio, average revenue per passenger, average subsidy per passenger) and service efficiency (passengers per revenue hour and passengers per revenue mile).

As shown in the performance measures developed for the 2040 MTP/SCS, access to transit service and overall performance of the transit systems would improve with implementation of the 2040 MTP/SCS and related projects. Specific projects within the 2040 MTP/SCS that would expand transit service include such projects as SC-MTD-P12-MTD and SC-MTD-P14-MTD, which expand Highway 17 service and local transit service, addressing recommendations made in the short-range plan to expand regional transit operations. Projects also include improved access to UCSC, including operation of the campus shuttle service and Night Owl (Project SC-UC-P74-UC), programs encouraging sustainable commutes to the campus (SC-UC-P63-UC, UCSC Vanpool Program; SC-UC-P69-UC, UCSC Commute Counseling Program; SC-UC-P70-UC, UCSC Commuter Incentive Programs) and additional electric vehicle charging stations (Project SC-UC-P65-UC). Based on these findings,

the 2040 MTP/SCS would be consistent with the Santa Cruz METRO *2013 Short-Range Transit Plan* (METRO, 2014).

5.5.3 San Benito County Local Transportation Authority Short- and Long-Range Transit Plan

The San Benito County Local Transportation Authority (LTA) adopted *Future Horizons for San Benito County: Short- and Long-Range Transit Plan* in 2016. The 2016 Plan provides an evaluation of local fixed route service, intercounty service and demand response services, as well as an alternatives analysis.

The vision for public transportation in San Benito County is characterized by:

1. Ridership growth;
2. Sustainable, sufficient funding;
3. Reliable, efficient, affordable transportation;
4. Multi-modal, sustainable TOD;
5. Positive economic impact in the community; and
6. Healthy environment with improved air quality and reduced congestion.

The focus of the long-range portion of the Plan is to “establish goals and projects for transit growth which connects land use and transportation strategies. The LRTP shall also meet legal mandates for planning and programming set by SB 375.”

The San Benito LTA uses a Performance Measurement system to identify service issues or service needs, with data is collected in relation the LTA’s Mission, Vision, and the eight guiding principles. The Plan provides a detailed table organized by goal, objective, measure, service, proposed standard and actual performance. The objectives and their measures include:

- Safe Transit Service (miles between preventable accidents, miles between passenger injuries, on the job injuries, drug and alcohol testing program);
- Productive service (passengers per vehicle revenue hour, by service type);
- Reliable transit service (on-time performance, missed trips);
- Effective service (cost per passenger, by service type);
- Affordable service (fare increases);
- Increase use of transit (ridership growth, by type of service);
- Accessibility (frequency of service, coverage, service to key destinations, transfer wait time, new service ridership projections, special services for difficult to service populations);
- High customer satisfaction (ratings, complaints);
- Cost effective use of technology (cost/benefit/urgency analysis);
- Accountability and transparency (performance reporting, financial);
- Leadership with partners, businesses, employers and the community (contacts/meetings per year, community association membership and attendance, industry association membership and attendance, participation in community events);
- Accessibility (annual marketing plan, marketing cost per operating costs, public participation program);

- Staff and drivers project positive quality image (driver turnover rates, hours of sensitivity and customer service training per employee);
- Accurate transit information on a timely basis through multiple channels (onboard, signage and web updates);
- Cost effective service (cost per vehicle service hour, cost per vehicle service mile);
- Use of public funding efficiently (subsidy per passenger, farebox recovery);
- Budget (annual budget, maintain budget);
- Partnerships with cities and counties (as required)

As demonstrated in the performance measures developed for the 2040 MTP/SCS, access to transit service and overall performance of the transit systems would improve with implementation of the 2040 MTP/SCS and related projects. The 2040 MTP/SCS includes projects in San Benito County that would in part address needs identified in the short-range transit plan, such as greater connectivity throughout the region, with improved bus rapid transit and rail passenger service in key corridors to meet the need for service to and from Santa Cruz County (for jobs and activities in the cities of Watsonville and Santa Cruz, UC Santa Cruz and various recreation areas along the coastline), and meet the need for service into Monterey County (for destinations such as CSUMB, and the cities of Salinas and Monterey, and other areas served by Monterey-Salinas Transit). Based on these findings, the 2040 MTP/SCS would be considered consistent with the Short- and Long-Range Transit Plan (LTA, 2016).

5.6 Local Agency Formation Commissions

Monterey, San Benito and Santa Cruz Counties each have a Local Agency Formation Commission (LAFCO). LAFCOs are independent countywide bodies created pursuant to State law that make decisions about the boundaries of and services provided by cities and special districts, as governed by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000 et seq.). Statutory purposes of LAFCOs are to encourage the orderly formation and development of local governments, preserve agricultural and open space lands, discourage urban sprawl and ensure the efficient delivery of government services.

As regulatory agencies, LAFCOs may approve the formation of new cities and special districts, approve changes in boundaries (e.g., annexations, consolidations, mergers, dissolutions), and may allow cities or special districts to provide services outside their boundaries. LAFCOs establish and periodically update the spheres of influence of each city and district, and may initiate proposals to change boundaries based upon the Spheres of Influence or special studies. LAFCOs are also required to prepare Municipal Service Reviews (MSRs) for every city and special district in their jurisdiction that demonstrate the capacity of each organization to provide adequate facilities and services. The MSRs must then be updated every five years. LAFCOs implement the Cortese-Knox-Hertzberg Local Government Reorganization Act, CEQA, open meeting laws, the Revenue and Taxation Code and local policies and procedures.

The projects and land use scenario comprising the 2040 MTP/SCS were developed in consultation with municipalities and other sponsoring agencies within Monterey, San Benito and Santa Cruz counties, and were coordinated with city and county general plan land use diagrams. The city general plan land use diagrams identify the city spheres of influence (SOI) and confine proposed land uses within their SOIs. County general plan land use diagrams depict land use in unincorporated areas, some of which include areas within city SOIs that has not yet been annexed.

County land use diagrams typically show agricultural or open space designations for these areas and presume that any new urban development will occur following annexation. The county general plans include policies that direct urban growth to within city SOIs. The 2040 MTP/SCS is consistent with and supports city and county policy and programs related to existing and potential future SOIs that effect the location and pace of growth and development in the region, and is consistent with the respective city SOIs.

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6 Other Statutory Considerations

This section discusses growth-inducing impacts, irreversible environmental impacts and significant and unavoidable impacts that would be caused by the proposed project.

6.1 Growth Inducing Impacts

Section 15126.2(g) of the *State CEQA Guidelines* requires a discussion of a proposed 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.

6.1.1 Employment, Household and Population Growth

According to the AMBAG ~~Draft~~ 2018 Regional Growth Forecast, population in the AMBAG region is projected to grow from 762,676 in 2015 to 883,300 by 2040; an increase of approximately 16 percent. Employment within the region is projected to grow by approximately 57,400 jobs over the same period, an increase of approximately 17 percent. As discussed in Section 4.13, *Population and Housing*, the proposed projects under the 2040 MTP/SCS are designed and intended to accommodate projected growth up to the year 2040. The projects under the 2040 MTP/SCS would be phased to respond to growth as it occurs under adopted local general plans. As a result, the 2040 MTP/SCS would not directly induce growth beyond that projected by 2040; rather, it is intended to accommodate growth in a way that will help meet objectives described in Chapter 4, *Sustainable Community Strategy (SCS)*, of the proposed Plan. Employment, population and household growth would occur within the AMBAG region regardless of whether the 2040 MTP/SCS is implemented. The land use scenario envisioned by the 2040 MTP/SCS would emphasize the development of infill and transit oriented development (TOD) projects within existing urbanized areas; and therefore, may redistribute growth patterns. The location of infill and TOD projects would generally be on properties that have been identified as vacant or underutilized within applicable local jurisdictions. Infill and TOD projects would not necessarily result in significant new population growth within these jurisdictions; rather the 2040 MTP/SCS would accommodate anticipated growth and concentrate it within existing urban cores instead of on the periphery of urban areas or within rural or semi-rural areas. Therefore, direct growth-inducing population growth impacts would be less than significant.

Implementation of the 2040 MTP/SCS would create short-term economic growth in the region as a result of construction-related job opportunities. Implementation of the 2040 MTP/SCS 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 the 2040 MTP/SCS.

6.1.2 Removal of Obstacles to Growth

The majority of 2040 MTP/SCS transportation improvements are located in existing urbanized areas such as Salinas, Monterey, Hollister and Santa Cruz; however, projects are also located in rural or semi-rural areas. Such transportation improvements can remove an obstacle to growth by either creating additional traffic capacity (in the case of road widening projects) or providing new or better access to undeveloped areas (in the case of road extensions). 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 therefore could be considered growth inducing.

However, the 2040 MTP/SCS transportation improvements are designed to fully support compact development approach outlined in Chapter 4, *Sustainable Community Strategy*, of the 2040 MTP/SCS and fully support the complementary transportation needs of the growing population. The SCS is designed to accommodate growth by encouraging infill and TOD development. The 2040 MTP/SCS transportation improvement projects are intended and designed to support the land use projects established in the SCS. Therefore, the 2040 MTP/SCS is consistent with projected and planned growth. Further, all transportation improvement projects are anticipated by the general plans of the applicable local jurisdictions, as all improvements have been coordinated with the applicable local jurisdiction.

6.2 Irreversible Effects

Section 15126.2(c) of the CEQA Guidelines requires a discussion of significant irreversible environmental changes that would occur as a result of a proposed project.

Many of the adverse impacts that could occur from implementation of the 2040 MTP/SCS are short-term in nature resulting primarily from construction of the proposed transportation projects, urban infill and TOD projects. Typical construction-related impacts can involve the following issues: noise, air quality, aesthetics and construction-related erosion and associated water quality impacts. In addition, 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 (see Section 4.6, *Energy*). The use of these resources during construction would increase demand and impact supplies across the AMBAG 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 EIR. In addition, the 2040 MTP/SCS would result in an overall increase in the urbanized character of the region. This would 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. Mitigation measures have been prescribed to minimize these impacts. However, in certain instances, as discussed in Section 6.3 below, could remain significant with implementation of mitigation measures.

6.3 List of Significant and Unavoidable Impacts

The proposed 2040 MTP/SCS would result in the following significant and unavoidable impacts.

- Impact AES-1: public views of scenic vistas and designated scenic corridors
- Impact AES-2: degradation of existing visual character
- Impact AG-1: conversion of Important Farmland to nonagricultural use
- Impact AQ-2: fugitive dust and ozone precursor emissions during construction
- Impact AQ-3: increased PM10 emissions compared to 2015 existing conditions
- Impact AQ-4: exposure of sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors
- Impact B-1: substantial adverse impacts on special status plant and animal species
- Impact B-2: substantial adverse impacts on sensitive habitats, including federally protected wetlands
- Impact B-3: interference with wildlife movement
- Impact CR-1: disturbance of known or unknown historical resources
- Impact CR-2: disturbance of known and unknown archeological resources
- Impact CR-3: disturbance of known and unknown paleontological resources
- Impact E-2: generation of energy demand that may require construction of new energy facilities or the expansion of such facilities
- Impact GHG-4: not independently achieve SB 32 targets, of 40 percent below 1990 levels
- Impact GHG-5: result in a net increase in transportation projects within areas likely to be affected by sea level rise midcentury
- Impact HAZ-6: risk of loss, injury or death from wildland fire
- Impact W-2: increased water demand potentially requiring new or expanded water supplies, entitlements, or facilities
- 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 N-1: temporary noise and vibration level increases above applicable thresholds
- Impact N-2: exposure of existing and future sensitive receptors to significant mobile source noise levels
- Impact N-3: placement of sensitive receptors in areas with unacceptable noise levels
- Impact N-4: exposure of sensitive receptors and fragile buildings to excessive vibration levels
- Impact PH-1: substantial population growth
- Impact T-1: conflict with performance measures related to totally daily hours of vehicle delay, total peak period CVMT and percent of work trips that are 30 minutes or less
- Impact T-5: increased daily VMT between the baseline 2015 conditions and 2040 conditions

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7 Alternatives

As required by Section 15126(d) of the State CEQA Guidelines, this EIR examines a reasonable range of alternatives to the proposed 2040 MTP/SCS. 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.)

The primary objective of the MTP/SCS is to comply with applicable regulatory requirements, including CTC Guidelines and SB 375, including SB 375’s regional GHG reduction targets. AMBAG’s specific objectives for the 2040 MTP/SCS are to additionally ensure that the transportation system planned for the AMBAG region accomplishes the following:

- Serves regional goals, objectives, policies and plans.
- Responds to community and regional transportation needs.
- Promotes energy efficient, environmentally sound modes of travel and facilities and services.
- Promotes equity and efficiency in the distribution of transportation projects and services.

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. The 2040 MTP/SCS is specifically intended for the AMBAG region; therefore, an alternative location for the 2040 MTP/SCS as a whole is not possible. However, within the AMBAG region, the 2040 MTP/SCS 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 AMBAG are described in Appendix E of the 2040 MTP/SCS and the preferred scenario (proposed project) is

described in detail within Chapter 2, *Transportation Investments* and Chapter 4, *Sustainable Communities Strategy*, of the 2040 MTP/SCS. Scenarios were based on policies and goals adopted by the AMBAG Board of Directors and the RTPA Boards of Directors. Performance measures were then developed in coordination with the RTPAs 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 1 of the 2040 MTP/SCS whereas the performance measures are described in Chapter 5. 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 AMBAG's land use model and recently updated regional travel demand model (RTDM), as well as the EMFAC 2014 model.

7.1 Alternatives Development and Screening Process

During the development of the 2035 MTP/SCS, AMBAG 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 for the tri-county region as well as other performance measures. Extensive outreach with partner agencies, local jurisdictions, key stakeholders and the public was ongoing throughout the 2035 MTP/SCS planning process through workshops and meetings, surveys and interactive tools.

Beginning in 2015, AMBAG began the technical update to the 2035 MTP/SCS. This planning effort began by gathering and updating critical data as well as working with local jurisdictions on growth forecasts for 2020, 2035 and 2040. The regional growth forecast was then used as the growth parameter for the updating the various transportation and land use scenarios for the 2040 MTP/SCS.

Utilizing input from the public and stakeholders, AMBAG updated the land use and transportation scenarios through 2040. AMBAG evaluated these scenarios using a set of transportation, environmental and equity performance measures approved by the Board of Directors. These MTP/SCS scenarios were refined with continued extensive input from partner agencies and key stakeholders as well as from community workshops held in spring 2017. Ultimately, the AMBAG Board selected a single preferred scenario in June 2017. The preferred scenario, or the 2040 MTP/SCS, 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 the proposed 2040 MTP/SCS:

- **Alternative 1: No Project Alternative.** The No Project Alternative is comprised of a land use pattern that reflects existing land use trends and a transportation network comprised of transportation projects that are currently in construction or are funded in the short range Metropolitan Transportation Improvement Program (MTIP).
- **Alternative 2: Livable Communities Alternative.** The Livable Communities Alternative includes a land use pattern that further concentrates forecasted population and employment growth in urban areas with a focus on infill, mixed use and transit oriented development (TOD) in and around commercial corridors. The transportation network under this alternative includes transit investments in addition to other alternative modes of transportation to serve a more concentrated growth pattern. Specifically, active transportation investments such as bicycle facilities, sidewalks, traffic calming measures and intersection safety improvements would be prioritized in this alternative. A greater level of investment would be focused on closing transit gaps by expanding local transit, rather than interregional or long distance services.

- **Alternative 3: Maintained Mobility Alternative.** The Maintained Mobility Alternative includes a land use pattern comprised of existing land use plans and a transportation network that includes more transportation projects focused on mobility, rehabilitation and safety. A greater level of investment is focused on local street and road projects combined with investment in long distance transit service such as rail to increase mobility within the region. Operations and maintenance projects are included to improve safety on the region’s local streets and roads and transit system also are given a higher priority.

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 the 2040 MTP/SCS. As required by CEQA, this section also includes a discussion of the “environmentally superior alternative” among those studied.

7.2 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).)

For this EIR, there were no alternatives that were considered by the lead agency and rejected as infeasible during the scoping process.

7.3 Alternative 1: No Project Alternative

7.3.1 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 AMBAG ~~Draft~~ 2018 Regional Growth Forecast. Rather than focusing on coordinating transportation projects that serve infill and transit oriented development, the transportation network would be comprised of committed transportation projects included in the MTIP.

7.3.2 Impact Analysis

a. Aesthetics/Visual Resources

Implementation of this alternative would result in fewer visual impacts as compared to the 2040 MTP/SCS, because many of the proposed interchanges, bridges and roadway extensions, as well as transit and rail facilities would not be constructed. Nevertheless, ~~some many~~ 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 AMBAG 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

greater impacts to scenic resources in the less developed portions of the AMBAG region. Thus, impacts related to visual character would be significant and unavoidable as with the 2040 MTP/SCS. The overall level of impact resulting from combined transportation improvement and land use projects would be similar when compared to the 2040 MTP/SCS with some impacts greater while other impacts less, but would remain significant and unavoidable.

b. Agricultural Resources

This alternative would result in fewer transportation infrastructure projects being constructed, including roadway widening and other projects that could directly convert agricultural land to non-agricultural use. However, 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, including within areas currently used for agricultural production. Given the extent of Important Farmland in Monterey, San Benito and Santa Cruz Counties, impacts related to converting Important Farmland to non-agricultural use, conflicts between urban and agricultural land uses, and conflicts with existing agricultural zoning and/or Williamson Act contracts would be worse under this alternative than for the proposed 2040 MTP/SCS. Mitigation would not be required for this alternative; as such, mitigation would not be available to reduce impacts to a less than significant level. Therefore, this impact would be significant and unavoidable for the No Project Alternative, compared to significant but mitigable for the 2040 MTP/SCS. The overall impact to agricultural resources resulting from the No Action Alternative would be greater than under the 2040 MTP/SCS.

c. Air Quality and Health Impacts/Risks

Implementation of this alternative would result in reduced short-term air quality impacts from construction activity. As discussed in Section 4.3, *Air Quality and Health Impacts/Risks*, total regional emissions of ROG would be 0.01 ton per day higher and NO_x would be 0.02 ton per day higher under this alternative than emissions anticipated with implementation of the 2040 MTP/SCS. 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 the 2040 MTP/SCS would not occur. Since these developments would not occur, sensitive receptors would not be exposed to health risks from TACs during construction or operation. Overall air quality impacts would therefore be reduced under this alternative when compared to the 2040 MTP/SCS. However, long term operational impacts related to PM₁₀ and exposing sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors would remain significant and unavoidable.

d. Biological Resources

Implementation of this alternative may result in less impact to biological resources resulting from transportation improvement projects, as fewer roadway extensions, widening 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 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. 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 the 2040 MTP/SCS. Impacts would remain significant and unavoidable.

e. Cultural and Historic Resources

As described in Section 4.5, *Cultural and Historic Resources*, some of the 2040 MTP/SCS projects may be located in proximity to historical resources or include repair or replacement of potentially historical structures (e.g. bridges). Because 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 the 2040 MTP/SCS. However, project-specific impacts may still be significant.

Implementation of this alternative would involve less ground disturbance associated with transportation improvements than would occur under the 2040 MTP/SCS. 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 or paleontological 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 projects would be similar when compared to the 2040 MTP/SCS. Impacts to archaeological and paleontological resources would remain significant and unavoidable.

f. Energy

Because this alternative would result in less construction of transportation infrastructure, overall energy use associated with construction activities would be reduced when compared to the 2040 MTP/SCS. However, this alternative would not include many of the capital improvements envisioned under the proposed 2040 MTP/SCS that would improve transportation efficiency and reduce regional energy demand. Energy use will increase over time as the result of regional socioeconomic (population and employment) growth, regardless of implementation of the 2040 MTP/SCS. ~~The No Project Alternative would result in higher total and per capita energy use as compared to the 2040 MTP/SCS. As discussed in Section 4.6, *Energy*, the 2040 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy, and would be consistent with applicable energy conservation policies. Because the No Project Alternative would slightly reduce both total and per capita energy use, impacts would be reduced when compared to the 2040 MTP/SCS and impacts related to inefficient, unnecessary, or wasteful direct or indirect energy consumption would be less than significant.~~

The 2040 MTP/SCS would generate energy demand that may require construction of new energy facilities; this impact, as discussed in Section 4.6, *Energy*, would be significant and unavoidable. Although the No Project Alternative would reduce the amount of energy consumed overall, it too may require the construction of expansion of energy facilities to meet future demand. This impact would therefore be significant and unavoidable, and the overall impact would be similar to the 2040 MTP/SCS.

g. Geology and Soils

Impacts related to erosion and loss of topsoil would be less than significant pursuant to compliance with existing regulations, similar to the 2040 MTP/SCS. Because this alternative does not include as many new interchanges, bridges, roads and fixed facilities, there would be 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 than under the proposed 2040 MTP/SCS than under the No Project Alternative. 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 the 2040 MTP/SCS, the overall impact of the No Project Alternative would be slightly greater to unmitigated risks of geologic hazards.

h. Greenhouse Gas Emissions/Climate Change

The No Project Alternative would result in fewer impacts associated with GHG emissions during construction activities as fewer transportation infrastructure projects would be constructed. GHG emissions under the No Project Alternative would be higher than GHG emissions with the 2040 MTP/SCS. This is primarily a result of more VMT with the No Project Alternative. Although this alternative would continue existing land use trends and would not include adoption of an SCS. Therefore, the overall impact of this alternative would be greater than what would occur under the 2040 MTP/SCS.

i. Hazards and Hazardous Materials

This alternative would result in fewer infrastructure projects being constructed, thereby reducing hazardous material use, storage and transportation resulting from construction of those projects. However, the amount of hazardous materials being transported to support land use development in the region would remain the same. Because the No Project Alternative would be subject to existing regulations and programs, impacts relating to routine transport, use, or disposal of hazardous materials; risk of upset and accident conditions; emissions within one-quarter mile of a school; airport hazards; and interference with emergency response and evacuation plans would be less than significant, similar to 2040 MTP/SCS. Because this alternative would allow more housing near wildlands, it would increase the vulnerability of people and structures to wildland fire. This impact, which is significant and unavoidable for the 2040 MTP/SCS, would be greater under the No Project Alternative and would remain significant and unavoidable. Due to the increased severity of this significant impact, overall hazards and hazardous materials impacts would be greater under this alternative than under the 2040 MTP/SCS.

j. Hydrology and Water Quality

This alternative would result in fewer transportation infrastructure projects being constructed. Therefore, this alternative would reduce water quality impacts resulting from construction-related erosion and sedimentation and would generate less water demand for dust suppression activities. These impacts would remain less than significant pursuant to compliance with existing regulations, similar to the 2040 MTP/SCS.

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 the 2040 MTP/SCS. 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 the 2040 MTP/SCS 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 2040 as the MTP/SCS. 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 2040 MTP/SCS. This impact, which is significant and unavoidable for the 2040 MTP/SCS, 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 the 2040 MTP/SCS.

k. Land Use

As with the 2040 MTP/SCS, this alternative would not be anticipated to divide an established community. As noted in Section 4.11, *Land Use*, the 2040 MTP/SCS 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 objective of the 2040 MTP/SCS 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. The No Project Alternative would not provide 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 the 2040 MTP/SCS. 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. 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 2040 MTP/SCS 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, fewer transportation infrastructure projects would result in less construction activity under the No Project Alternative. This would reduce temporary noise impacts throughout the AMBAG 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 reduced as compared to the 2040 MTP/SCS, increased traffic volumes resulting from regional growth would continue to occur. Whether noise impacts would be greater or less than those anticipated under the 2040 MTP/SCS remains dependent on site-specific considerations that cannot currently be known. Regionally, the difference in VMT between the No Project Alternative and the 2040 MTP/SCS 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 the 2040 MTP/SCS.

Because most rail and transit improvements planned under the 2040 MTP/SCS would not be implemented under this alternative, the potential for increased rail and transit noise would be reduced under the No Project Alternative.

Overall, noise-related impacts across the region would be similar to the 2040 MTP/SCS, and would continue to be significant and unavoidable.

m. Population and Housing

The No Project Alternative would result in the same population increase in the region by 2040 as the proposed 2040 MTP/SCS. As such, impacts related to population growth would be similar to the 2040 MTP/SCS and would continue to be significant and unavoidable. Because fewer transportation projects would be implemented and land uses would be less dense (thus resulting in less demolition and redevelopment of existing housing), displacement-related impacts would be reduced under this alternative when compared to the 2040 MTP/SCS. This impact would be less than significant. Overall population and housing impacts would be less than the 2040 MTP/SCS.

n. Transportation and Circulation

This alternative would not include many of the projects envisioned under the proposed 2040 MTP/SCS, including new highway and intersection projects, new bikeway and pedestrian projects (active transportation), new railroad projects, new transit projects, new intelligent transportation system/transportation demand management projects and aviation 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.

Overall, VMT within the AMBAG region would increase as a result of regional population growth. As discussed in Section 4.14, *Transportation and Circulation*, daily VMT in the AMBAG region in 2040 would be 19,741,921 without implementation of the 2040 MTP/SCS. This would be 54,413 VMT more than the 19,687,508 VMT that would be generated with implementation of the 2040 MTP/SCS. Thus, under the No Project Alternative, there would be greater daily VMT in 2040 compared to conditions with the 2040 MTP/SCS.

Additionally, there would be an increase in daily CVMT compared to daily CVMT under the 2040 MTP/SCS. CVMT, as it is used in this EIR, is equivalent to the VMT on facilities that operate unacceptably during peak traffic hours. This is because the 2040 MTP/SCS projects increase capacity of roadways and transit services in the AMBAG region, as well as improve circulation at facilities that operate unacceptably during peak hours. Without these projects, the No Project Alternative would result in more miles travelled on congested facilities during the most congested periods of the day.

Under the No Project Alternative, projects to increase bus capacity on congested facilities and the frequency of bus lines would not be implemented. Additionally, the 2040 MTP/SCS projects that are intended to ensure a reliable bus fleet would not be implemented under the No Project Alternative. Without these types of projects, operation of public transit may be unreliable or fail to meet the frequency and performance standards established by MST, Santa Cruz METRO and San Benito County Express. Thus, compared to the 2040 MTP/SCS, the No Project Alternative would have a greater adverse impact on transit service in the AMBAG region.

Overall, the No Project Alternative would result in increased daily VMT in the AMBAG region compared to the 2040 MTP/SCS, it would also increase CVMT and adverse impacts to public transit. Thus, overall, impacts to transportation and circulation would be greater under the No Project Alternative.

o. Tribal Cultural Resources

Implementation of this alternative would involve less ground disturbance associated with transportation improvements than would occur under the 2040 MTP/SCS. 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 a less than significant level, similar to the 2040 MTP/SCS. However, because of the increased potential to disturb tribal cultural resources from development outside of urbanized areas and no mitigation applicable to this alternative, the overall impact of the No Action Alternative would be greater than under the 2040 MTP/SCS.

7.4 Alternative 2: Livable Communities Alternative

7.4.1 Description

The Livable Communities Alternative includes a land use pattern similar to the 2040 MTP/SCS, but that is even more concentrated in urban areas with a focus on mixed use and infill development along and adjacent to existing commercial corridors. The proposed 2040 MTP/SCS land use scenario emphasizes infill and TOD projects that would locate both residents and jobs closer to existing and planned high quality transit, thereby encouraging the use of alternative modes of transit, walking and bicycling. Improvements that would occur under Alternative 2 would serve a similar purpose; however, the density and intensity of infill development along commercial corridors would be increased regardless of the presence of high quality transit. The transportation network in this alternative includes additional transit investments in alternative modes intended to serve shorter, local trips given the more concentrated growth pattern. Specifically, active transportation investments such as bicycle facilities, sidewalks, traffic calming measures and intersection safety

improvements would be prioritized. Under this alternative, investment would be focused on closing transit gaps by enhancing local transit bus service rather than interregional or long distance services. In addition, active transportation projects such as bicycle facilities, trails and pedestrian improvements are programmed throughout the region under this alternative.

7.4.2 Impact Analysis

a. Aesthetics/Visual Resources

Implementation of Alternative 2 would result in compact urban development patterns similar to the 2040 MTP/SCS as it emphasizes infill and TOD and enhanced local transit service along existing commercial corridors. To the extent that infill and TOD would be visually consistent with the surrounding urbanized environment, this alternative would result in impacts similar to those described for the 2040 MTP/SCS. As projects in this alternative would be emphasized in denser, urban areas along commercial corridors, projects within suburban or rural areas would not occur to the extent proposed in the 2040 MTP/SCS; thus, visual/aesthetic impacts in these areas would be less. However, similar to the 2040 MTP/SCS, many capital improvements would be constructed that could impact scenic views on scenic routes, and the gradual transformation toward a more urban/suburban character throughout the AMBAG region would continue. Overall, aesthetic impacts under this alternative would be similar to the 2040 MTP/SCS with some impacts greater while other impacts less. Identified impacts would remain significant and unavoidable even with all mitigation measures in Section 4.1, *Aesthetics/Visual Resources*, still being required.

b. Agricultural Resources

Alternative 2 would further concentrate land use development within existing urbanized areas and would construct fewer transportation infrastructure projects such as roadway widening. As such, this alternative would have less potential to directly convert Important Farmland to non-agricultural use, conflicts with existing agricultural zoning and/or Williamson Act contracts, or otherwise convert agricultural land. As some transportation projects and land use development could occur in agricultural areas throughout the AMBAG region, some Important Farmland could still be converted to non-agricultural use. As such, mitigation measures identified in Section 4.2, *Agriculture and Forestry Resources*, would still be required and impacts would be significant but mitigable. Overall, however, the severity of this impact would be less than for the proposed 2040 MTP/SCS.

c. Air Quality and Health Impacts/Risks

Implementation of this alternative would result in higher short-term air quality impacts compared to the proposed 2040 MTP/SCS because urban construction activities would expose higher numbers of people to construction-related air emissions. Under this alternative, ROG, NO_x and PM₁₀ emissions would remain the same as compared to the proposed 2040 MTP/SCS, and emissions of CO and PM_{2.5} would slightly decrease (see Modeling Methodology in 2040 MTP/SCS Appendix F). The overall VMT would be slightly less in Alternative 2 than the 2040 MTP/SCS by approximately 9,176 VMT as there would be shorter distance trips between residential and commercial areas and those trips would likely be made using enhanced local transit services or by walking and bicycling rather than the single occupant vehicle. Although VMT and overall regional emissions would remain the same or slightly decrease depending on the pollutant, sensitive receptors would be exposed to greater concentrations of TACs based on the land use pattern. Therefore, compared to the proposed project, some air quality-related impacts would be greater while other impacts would be less. All

mitigation measures identified in Section 4.3, *Air Quality and Health Impacts/Risks*, would be required. Long term operational impacts related to PM₁₀ and exposing sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors would remain significant and unavoidable. Overall, air quality and health risk impacts of Alternative 2 would be similar to impacts under the 2040 MTP/SCS.

d. Biological Resources

Alternative 2 would further concentrate land use development within existing urbanized areas and would construct fewer transportation infrastructure projects such as roadway widening. As such, less overall ground disturbance outside of already-developed areas would occur. Because of the reduced ground disturbance, fewer impacts to biological resources impacts would occur, including impacts to special status plant and animal species, sensitive habitats and wildlife movement. As some transportation projects and land use development could occur in previously undeveloped or otherwise sensitive areas throughout the AMBAG region, some biological resources impacts could still occur. Mitigation measures identified in Section 4.4, *Biological Resources*, would still be required and impacts would remain significant and unavoidable. Overall, however, the severity of this impact would be less than for the proposed 2040 MTP/SCS.

e. Cultural and Historic Resources

As discussed previously, this alternative would result in less overall ground disturbance outside of existing urbanized areas. As a result, Alternative 2 would generate fewer impacts to archaeological and paleontological resources than the 2040 MTP/SCS, but impacts resulting from the transportation projects would remain similar. Mitigation identified in Section 4.5, *Cultural and Historic Resources*, would continue to be required and impacts would remain significant and unavoidable, similar to the 2040 MTP/SCS. However, the overall severity of these impacts would decrease under this alternative.

Although archaeological and paleontological impacts would decrease under this alternative, impacts to historical resources may increase. This is because more development would occur within existing urban areas, where historical buildings and structures are more likely to be located. Redevelopment or demolition that may be required to implement transportation improvements and/or infill development under this alternative may result in the permanent loss of more historic structures than the 2040 MTP/SCS. While implementation of Mitigation Measure CR-1 would reduce impacts to the extent feasible, some project-specific impacts may be unavoidable. Overall, impacts would be similar to 2040 MTP/SCS with some impacts being greater, while other impacts would be less, but impacts to historic, archaeological and paleontological resources would remain significant and unavoidable.

f. Energy

The proposed 2040 MTP/SCS land use scenario emphasizes infill and TOD projects that would locate both residents and jobs closer to existing and planned high quality transit, thereby encouraging the use of alternative modes of transit (e.g. buses, rail), walking and bicycling. Improvements that would occur under Alternative 2 would serve a similar purpose; however, the density and intensity of infill development would increase. In addition, this alternative would include greater investments in transit and alternative transportation modes. Given the increased density and focus on transit, this alternative would decrease VMT as compared to the 2040 MTP/SCS: from 19,687,508 daily VMT to 19,678,332 daily VMT, a decrease of approximately 0.045 percent (see Modeling Methodology in

Appendix F to the 2040 MTP/SCS). As discussed in Section 4.6, *Energy*, the 2040 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy. The same is true for this alternative, and when compared to the 2040 MTP/SCS, this alternative would serve to reduce the overall consumption of energy, such that impacts would be reduced when compared to the 2040 MTP/SCS. Impacts related to inefficient, unnecessary, or wasteful direct or indirect energy consumption would continue to be less than significant.

The 2040 MTP/SCS would generate energy demand that may require construction of new energy facilities; this impact, as discussed in Section 4.6, *Energy*, would be significant and unavoidable. Although Alternative 2 would reduce the amount of energy consumed overall, it too may require the construction or expansion of energy facilities to meet future demand. This impact would therefore be significant and unavoidable, similar to the 2040 MTP/SCS. Overall, because Alternative 2 would reduce the amount of energy consumed compared to the 2040 MTP/SCS, impacts would be less than the 2040 MTP/SCS.

g. Geology and Soils

This alternative would concentrate land use development in infill areas and would focus transportation investments on transit and active transportation modes, rather than new or expanded roadways. As a result, development would be more compact in general, and fewer highway and road projects would be constructed. As such, fewer large-scale infrastructure projects would be at risk of both fault rupture and ground-shaking hazards. Although land development would be more compact, such development would accommodate the same number of residents and employees in the future. Therefore, the same number of people would potentially be exposed to the risk of injury or death from structural failure. Impacts related to seismic hazards, liquefaction, unstable soils and landslides would therefore be similar to or slightly less than the 2040 MTP/SCS. Mitigation identified in Section 4.7, *Geology and Soils*, would continue to apply and impacts would be significant but mitigable.

Because future land use and capital improvement projects under this alternative would be more dense and concentrated, less overall ground disturbance would occur. Construction-related soil erosion impacts would therefore be reduced, and would be less than significant, as with the 2040 MTP/SCS. Overall, geology and soils impacts would be less than under the 2040 MTP/SCS.

h. Greenhouse Gas Emissions/Climate Change

Construction-related GHG emissions under this alternative would be similar to the proposed 2040 MTP/SCS because the number and types of projects constructed would be similar. Annual GHG emissions during operations of Alternative 2 would be slightly lower (~~0.01~~ 0.05 percent) than the proposed project (see Modeling Methodology in Appendix F to the 2040 MTP/SCS), primarily due to the decrease of VMT and the focus towards TOD and infill development near high quality transit. Because long-term emissions of GHGs would be lower under this alternative, the overall impact would be less than under the 2040 MTP/SCS. This alternative is expected to meet the GHG emission reduction requirements associated with SB 375 due to lower VMT, increased transit and other measures. All mitigation measures included in Section 4.8, *Greenhouse Gas Emissions/Climate Change*, would be required.

i. Hazards and Hazardous Materials

This alternative would concentrate land use development in infill areas and would focus transportation investments on transit and active transportation modes, rather than new or

expanded roadways. These changes in the type and location of transportation and land use development projects would not substantially alter the amount of hazardous materials that are used, stored, or transported in the AMBAG region. Overall, the amount of hazardous materials being transported in the region would remain the same. Because Alternative 2 would be subject to existing regulations and programs, impacts relating to routine transport, use, or disposal of hazardous materials; risk of upset and accident conditions; emissions within one-quarter mile of a school; airport hazards; and interference with emergency response and evacuation plans would be less than significant, similar to 2040 MTP/SCS. Because this alternative would reduce the amount of housing near wildlands, it would decrease the vulnerability of people and structures to wildland fire. However, this impact would remain significant and unavoidable given the fire hazard across much of the AMBAG region. Compared to the 2040 MTP/SCS, the overall impact of Alternative 2 would be less.

j. Hydrology and Water Quality

As discussed previously, this alternative would result in less overall ground disturbance outside of existing urbanized areas. As a result, Alternative 2 would introduce fewer impervious surfaces than the 2040 MTP/SCS and would therefore generate less runoff. Because projects would be concentrated in urban areas, runoff would include more urban pollutants such as heavy metals from auto emissions, oil and grease than projects under the 2040 MTP/SCS. However, because less development would occur in agricultural areas, there would not be agricultural runoff onto adjacent urban areas containing fertilizers and pesticides. While projects under this alternative may require less grading and vegetation removal, including in proximity to creeks, the urban nature of this alternative may result in more disturbance of soils on previously contaminated sites. As such, water quality in creeks may be less impacted, but water quality within urban areas may be more impacted. Because of these tradeoffs, Alternative 2 would be anticipated to have comparable water quality impacts in that water quality impacts would be greater in some areas while less in other areas compared to the 2040 MTP/SCS. Compliance with existing regulations would reduce impacts to a less than significant level, similar to the 2040 MTP/SCS.

In terms of water supply, this alternative would have less potential to reduce groundwater recharge and would result in less landscaping due to the denser development pattern. The types of projects under this alternative may generate demand for water during construction and operation, similar to the 2040 MTP/SCS projects. While groundwater recharge would be slightly better under this alternative, this alternative would still generate water demand. Given that overdraft conditions of area groundwater basins and other regional water supply concerns would still occur under Alternative 2, impacts regarding water supply and demand would remain significant and unavoidable. All related mitigation measures identified in Section 4.10, *Hydrology and Water Quality*, would be required.

Overall hydrology and water quality impacts would be similar to the 2040 MTP/SCS.

k. Land Use

As with the 2040 MTP/SCS, this alternative would not be anticipated to divide an established community. As noted in Section 4.11, *Land Use*, the 2040 MTP/SCS 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 objective of the 2040 MTP/SCS 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. Alternative 2 would continue to provide capital improvements planned within the region. In addition, given the increased focus on infill, TOD, transit and active modes of transportation, this alternative would do more to achieve social, economic and environmental goals and policies in the region. Land use impacts would therefore be less under this alternative.

Because Alternative 2 is similar to the 2040 MTP/SCS, it would result in the same significant and unavoidable impacts to the identified environmental issue areas, potentially creating inconsistencies with city or county policies intended to protect these resources but for several resources these impacts would be less than under the 2040 MTP/SCS. Therefore, impacts related to consistency with land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects under this alternative would be less than under the 204 MTP/SCS, and continue to be significant and unavoidable.

I. Noise

Because transportation and land use projects would be more concentrated in already-developed areas under this alternative, more construction could occur within close proximity to sensitive receptors. Because more receptors would be exposed to construction noise under this alternative, these impacts would be greater than those for the 2040 MTP/SCS. Construction-related mitigation measures in Section 4.12, *Noise*, would continue to be required, and the impact would remain significant and unavoidable.

As discussed under *Transportation and Circulation* below, this alternative would reduce VMT when compared to the 2040 MTP/SCS. Therefore, operational noise generated by passenger vehicles would decrease. Given the nominal reduction in VMT, this overall reduction would likely not be noticeable. While this alternative would increase the use of alternative modes, including transit, bus and shuttle services would likely occur primarily within urbanized areas, which already experience high ambient noise levels. However, sensitive receptors would be more concentrated in urban areas. Mitigation measures identified in Section 4.12, *Noise*, would continue to be required and impacts would remain significant and unavoidable, similar to the 2040 MTP/SCS. Overall impacts to noise under Alternative 2 would be similar to impacts of the 2040 MTP/SCS.

m. Population and Housing

This alternative would result in the same population increase in the region by 2040 as the proposed 2040 MTP/SCS. As such, impacts related to population growth would be similar to the 2040 MTP/SCS and would continue to be significant and unavoidable. Because of the higher density development pattern, potential for displacement would be higher under this alternative. However, the net increase in housing units by 2040 would offset this temporary impact, similar to the 2040 MTP/SCS. This impact would be less than significant. Overall population and housing impacts would be similar to the 2040 MTP/SCS.

n. Transportation and Circulation

Alternative 2 would include a similar range of transportation improvement projects as identified for the proposed 2040 MTP/SCS, with greater priority given to bicycle, pedestrian and local transit connections. Many of these projects are intended to address traffic congestion identified by local agencies in the RTPs, and in many cases would mitigate potential impacts associated with planned long-term development projects. However, others are intended to support improvements along

commercial corridors to facilitate access to alternative transportation modes. Thus, this alternative would decrease daily VMT from 19,687,508 VMT for the 2040 MTP/SCS to 19,678,332 VMT for Alternative 2 – a decrease of approximately 0.045 percent (see Modeling Methodology in Appendix F to the 2040 MTP/SCS). Based on this reduction in daily VMT, potential impacts to transportation and circulation would be less under Alternative 2 and those impacts that do occur may be focused in urban areas rather than suburban or rural areas. Regardless, impacts related to an increase in CVMT and VMT would remain significant and unavoidable. All mitigation measures included in Section 4.14, *Transportation and Circulation*, would be applicable to Alternative 2. Overall transportation impacts would be less than the 2040 MTP/SCS.

o. Tribal Cultural Resources

As discussed previously, this alternative would result in less overall ground disturbance outside of existing urbanized (disturbed) areas. As such, there would be less potential to disturb tribal cultural resources, including ancestral remains and sacred sites outside the urbanized areas. It should be noted, however, that such resources could be located within urbanized areas, and may be disturbed with relatively minor amounts of ground disturbance. As such, mitigation identified in Section 4.15, *Tribal Cultural Resources*, would continue to apply and the impact would be significant but mitigable. Overall impacts to tribal cultural resources under Alternative 2 would be similar to impacts of the 2040 MTP/SCS.

7.5 Alternative 3: Maintenance Mobility Alternative

7.5.1 Description

The Maintained Mobility Alternative incorporates the AMBAG Draft 2018 Regional Growth Forecast (AMBAG, 2017d) and includes a land use pattern comprised of more traditional suburban development compared to the land development envisioned in the 2040 MTP/SCS. The land use pattern in the 2040 MTP/SCS emphasize TOD and development of infill sites in existing urbanized areas of the AMBAG region. The suburban development included under Alternative 3 is less concentrating in urbanized areas or within proximity to transit services, but instead allows for development of open or vacant parcels or parcels with very little existing development on the site, often outside of but near urbanized areas. Suburban residential development is typically at lower density than residential infill development on a dwelling unit per acre basis.

Alternative 3 also includes a transportation network that consists of more traditional roadway and transit enhancements/projects focused on mobility and safety. Specifically, more emphasis is given to operations, maintenance projects and long distance transit service options to increase mobility within the region, including new rail service in Monterey and Santa Cruz County. The alternative would also include many operations and maintenance projects that are intended to improve safety on the region's local streets and roads. In comparison, the 2040 MTP/SCS focuses on mixed use infill development in commercial corridors with high quality transit and development of active transportation corridors to encourage biking or walking for shorter distance trips. Alternative 3 would seek to improve local roads and long distance transit service, but would not focus on reducing overall VMT in the region with more concentrated infill, TOD and local active travel options.

7.5.2 Impact Analysis

a. Aesthetics/Visual Resources

Alternative 3 would include a land use pattern consistent with existing general plans and a transportation network that includes more traditional roadway and transit enhancements/projects with more emphasis on operations and maintenance. Compared to the 2040 MTP/SCS, land use development would be less concentrated in infill and TOD areas. As such, land use under this alternative may result in greater impacts to scenic resources in the less developed portions of the AMBAG region. While this alternative would concentrate on operation and maintenance of the existing roadway network, capital improvement projects would still be implemented, continuing the gradual transformation toward a more urban/suburban character throughout the region and potential impacts to scenic vistas on designated scenic routes. Impacts related to scenic vistas, scenic resources and visual character would therefore be slightly greater under this alternative and all mitigation measures discussed in Section 4.1, *Aesthetics/Visual Resources*, would continue to be required.

b. Agricultural Resources

This alternative would result in more land use development outside of existing urbanized areas, including within areas currently used for agricultural production. In addition, more traditional roadway and transit projects under this alternative could result in more road widenings or extensions than the 2040 MTP/SCS. Given the extent of active and Important Farmland in Monterey, San Benito and Santa Cruz Counties, impacts related to converting Important Farmland to non-agricultural use, conflicts between urban and agricultural land uses and conflicts with existing agricultural zoning and/or Williamson Act contracts would be greater under this alternative than for the proposed 2040 MTP/SCS. Impacts would remain significant and unavoidable and related mitigation measures referenced in Section 4.2, *Agricultural Resources*, would apply.

c. Air Quality and Health Impacts/Risks

This alternative would include a land use pattern comprised of existing general plans and a transportation network that includes more traditional roadway and transit enhancements/projects focused on mobility and safety. Because of the less-dense land use pattern, implementation of this alternative would result in more short-term construction-related air quality impacts as compared to the proposed 2040 MTP/SCS. Although traditional development patterns would increase construction and construction-related emissions, fewer sensitive receptors would be exposed to TACs, as most construction would occur outside of urbanized areas. Under this alternative, ROG, NO_x and PM₁₀ emissions would be higher compared to the proposed 2040 MTP/SCS (see Modeling Methodology in Appendix F to the 2040 MTP/SCS). The overall VMT would be higher in Alternative 3 than the 2040 MTP/SCS by approximately 97,664 VMT. All mitigation measures identified in Section 4.3 *Air Quality* would be required. Long term operational impacts related to PM₁₀ and exposing sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors would remain significant and unavoidable. Overall air quality and health risk impacts under Alternative 3 would be greater than the impacts of the 2040 MTP/SCS.

d. Biological Resources

This alternative would include a land use pattern comprised of existing general plans and a transportation network that includes more traditional roadway and transit enhancements/projects

focused on mobility and safety. The land use pattern would therefore be less dense than the 2040 MTP/SCS, and the more traditional roadway and transit projects under this alternative could result in more road widenings or extensions than the 2040 MTP/SCS. As a result, more development would be expected to occur outside of existing urbanized areas, including in areas providing habitat for special status plant and animal species. 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 the 2040 MTP/SCS. Impacts would remain significant and unavoidable, and all related mitigation measures referenced in Section 4.3, *Biological Resources*, would apply.

e. Cultural and Historic Resources

As discussed previously, this alternative would result in more overall ground disturbance outside of existing urbanized areas. As a result, Alternative 3 would generate more impacts to archaeological and paleontological resources than the 2040 MTP/SCS. Mitigation identified in Section 4.5, *Cultural and Historic Resources*, would continue to be required and impacts would be significant and unavoidable, similar to the 2040 MTP/SCS.

Although archaeological and paleontological impacts would increase under this alternative, impacts to historical resources may decrease. This is because less development would occur within existing urban areas, where historical buildings and structures are more likely to be located. Redevelopment or demolition that may be required to implement transportation improvements and/or infill development under the 2040 MTP/SCS may result in the permanent loss of more historic structures. While this could still occur under Alternative 3, depending on the location and specific features of projects, the potential for this to occur would decrease. Implementation of Mitigation Measure CR-1 would reduce impacts to the extent feasible. However, overall, impacts would be similar to 2040 MTP/SCS with some impacts being greater, while other impacts would be less, with impacts remaining significant and unavoidable.

f. Energy

As discussed under *Transportation and Circulation* below, Alternative 3 would have similar transportation benefits, particularly related to highway/street operations, as envisioned under the 2040 MTP/SCS. However, it would result in less compact development than the 2040 MTP/SCS. In combination, these changes would result in an increase in VMT: from 19,687,508 daily VMT to 19,785,172 daily VMT, an increase of approximately 0.54 percent (see Modeling Methodology in Appendix F to the 2040 MTP/SCS). More vehicle trips would translate to higher total and per capita energy use as compared to the 2040 MTP/SCS. As discussed in Section 4.6, *Energy*, the 2040 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy. When compared to the 2040 MTP/SCS, this alternative would serve to slightly increase the overall consumption of energy, such that impacts would be increased when compared to the 2040 MTP/SCS. However, this alternative would not result in inefficient, unnecessary, or wasteful direct or indirect energy consumption, and impacts would continue to be less than significant.

The 2040 MTP/SCS would generate energy demand that may require construction of new energy facilities; this impact, as discussed in Section 4.6, *Energy*, would be significant and unavoidable. Alternative 3 would increase the amount of energy consumed overall, and may require the construction of expansion of energy facilities to meet future demand. This impact would therefore be significant and unavoidable, similar to the 2040 MTP/SCS. However, because this alternative

would consume more energy compared to the 2040 MTP/SCS, overall energy impacts would be greater.

g. Geology and Soils

While this alternative would include more traditional roadway improvements, such as widening projects, the emphasis would be on operations and maintenance. As such, fewer large-scale capital improvement projects would be expected, such that fewer projects would be at risk of both fault rupture and ground-shaking hazards. While land use development under this alternative would be more likely to occur outside of existing urbanized areas, such development would accommodate the same number of residents and employees in the future as the 2040 MTP/SCS. Therefore, the same number of people would potentially be exposed to the risk of injury or death from structural failure. Impacts related to seismic hazards, liquefaction, unstable soils, and landslides would therefore be similar to the 2040 MTP/SCS. Mitigation identified in Section 4.7, *Geology and Soils*, would continue to apply.

h. Greenhouse Gas Emissions/Climate Change

Construction-related GHG emissions under this alternative would be greater than compared to those associated with the 2040 MTP/SCS because the land use pattern comprises of existing general plans and a transportation network that includes more traditional roadway and transit enhancements/projects focused on mobility and safety. Since less infill and TOD is anticipated, implementation of this alternative would result in higher VMT when compared to the proposed 2040 MTP/SCS as Alternative 3. Due to the increase of approximately 97,664 VMT, this alternative would increase operational GHG emissions by ~~0.21~~ 0.50 percent compared to the 2040 MTP/SCS (see Modeling Methodology in Appendix F to the 2040 MTP/SCS). Therefore, this alternative would have a greater impact on GHG emissions compared to the proposed project.

i. Hazards and Hazardous Materials

This alternative would include more traditional roadway improvements, such as widening projects, with the emphasis on operations and maintenance. As such, fewer large-scale capital improvement projects would be expected, resulting in fewer infrastructure projects being constructed. This would reduce hazardous material use, storage and transportation resulting from construction of those projects. However, the amount of hazardous materials being transported to support land use development in the region would remain the same. Because Alternative 3 would be subject to existing regulations and programs, impacts relating to routine transport, use, or disposal of hazardous materials; risk of upset and accident conditions; emissions within one-quarter mile of a school; airport hazards; and interference with emergency response and evacuation plans would be less than significant, similar to 2040 MTP/SCS. Because this alternative would allow more housing near wildlands, it would increase the vulnerability of people and structures to wildland fire. This impact, which is significant and unavoidable for the 2040 MTP/SCS, would be greater under the No Project Alternative and would remain significant and unavoidable. Due to the increased severity of this significant impact, overall hazards and hazardous materials impacts would be greater under this alternative than under the 2040 MTP/SCS.

j. Hydrology and Water Quality

As discussed previously, this alternative would result in more overall ground disturbance areas as compared to the proposed 2040 MTP/SCS. As a result, Alternative 3 would introduce more

impervious surfaces than the 2040 MTP/SCS and would therefore generate more runoff. Pollutants would include a mix of urban runoff, including heavy metals and oil, and rural area runoff, including fertilizers and pesticides. Because of the increase in impervious surfaces and associated runoff, water quality impacts would be greater under this alternative compared to the 2040 MTP/SCS. Existing regulations identified in Section 4.10, *Hydrology and Water Quality*, would continue to apply and impacts related to water quality would be less than significant.

Increases to water demand are primarily associated with increased population levels. Alternative 3 would result in the same population increase in 2040 as the MTP/SCS. 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 2040 MTP/SCS. This impact, which is significant and unavoidable for the 2040 MTP/SCS, would be greater under alternative. Mitigation would continue to apply and impacts would remain significant and unavoidable. Overall hydrology and water quality impacts would be greater than the 2040 MTP/SCS.

k. Land Use

As with the 2040 MTP/SCS, this alternative would not be anticipated to divide an established community. As noted in Section 4.11, *Land Use*, the 2040 MTP/SCS 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 objective of the 2040 MTP/SCS 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. Alternative 3 would continue to provide capital improvements planned within the region. However, given that development would be less concentrated within existing urbanized areas, this alternative would do less to achieve social, economic and environmental goals and policies in the region. In addition, this alternative would increase the severity of several environmental impacts, as discussed herein. As such, it would conflict with State and local policies and regulations adopted for the purpose of avoiding or mitigating environmental effects. Because environmental effects would generally increase under this alternative and result in more potential conflicts with policies and regulations to prevent or reduce environmental effects, the overall land use impact would be greater under this alternative when compared to the 2040 MTP/SCS. Impacts would remain significant and unavoidable.

l. Noise

Because this alternative would result in construction of more traditional roadway improvements, such as road extensions and widening, construction-related noise may increase. However, the land use pattern under this alternative would be less dense overall, such that construction-related noise would be less concentrated within areas with existing sensitive receptors. However, construction noise would still occur and impacts would continue to be significant and unavoidable. All related mitigation measures specified in Section 4.12, *Noise*, would be required.

As discussed under *Transportation and Circulation* below, this alternative would increase VMT when compared to the 2040 MTP/SCS. Therefore, operational noise generated by passenger vehicles would increase, although the nominal increase would likely not be noticeable. Mobile source noise levels resulting from traffic would therefore be similar under Alternative 3 when compared to the 2040 MTP/SCS. Mitigation measures identified in Section 4.12, *Noise*, would continue to be required

and impacts would remain significant and unavoidable, similar to the 2040 MTP/SCS. Overall, Alternative 3 would result in similar noise impacts as the 2040 MTP/SCS.

m. Population and Housing

Alternative 3 would result in the same population increase in the region by 2040 as the proposed 2040 MTP/SCS. As such, impacts related to population growth would be similar to the 2040 MTP/SCS and would continue to be significant and unavoidable. Because fewer transportation projects would be implemented and land uses would be less dense (thus resulting in less demolition and redevelopment of existing housing), displacement-related impacts would be reduced under this alternative when compared to the 2040 MTP/SCS. This impact would be less than significant. Overall population and housing impacts would be slightly less than the 2040 MTP/SCS.

n. Transportation and Circulation

Alternative 3 would involve a similar range of transportation improvement projects as compared to the 2040 MTP/SCS. However, there is a greater emphasis on roadway improvements in this alternative. Many of these projects would expand capacity, relieve traffic congestion, maintain the local and regional roadways, and in many cases are intended as mitigation measures to reduce potential impacts associated with planned long-term development. Therefore, Alternative 3 would have similar transportation benefits, particularly related to highway/street operations as envisioned under the 2040 MTP/SCS. This alternative does not involve modifications to land use patterns; and therefore, would result in less compact development than the 2040 MTP/SCS. In combination, these changes to the transportation project list and land use scenario would result in slightly higher VMT when compared to the 2040 MTP/SCS: from 19,687,508 daily VMT to 19,785,172 daily VMT, an increase of approximately 0.54 percent (see Modeling Methodology in Appendix F to the 2040 MTP/SCS).

Nonetheless, both VMT and CVMT would increase between 2015 and 2040 as a result of population and employment growth, regardless of the alternative implemented. Based on VMT, potential impacts to transportation and circulation could be reduced under Alternative 3, although potential impacts would remain significant and unavoidable. All mitigation measures included in Section 4.14, *Transportation and Circulation*, would be applicable to Alternative 2. Overall transportation impacts would be similar to the 2040 MTP/SCS.

o. Tribal Cultural Resources

As discussed previously, this alternative would result in more overall ground disturbance outside of existing urbanized (disturbed) areas. As such, there would be more potential to disturb tribal cultural resources, including ancestral remains and sacred sites. Mitigation identified in Section 4.15, *Tribal Cultural Resources*, would continue to apply and the impact would be significant but mitigable. However, because of the increased potential to disturb tribal cultural resources from development outside of urbanized areas, the overall impact of the Alternative 3 would be greater than under the 2040 MTP/SCS.

7.6 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 the 2040 MTP/SCS, in compliance with the CEQA Guidelines.

Table 54 shows whether each alternative would have impacts that are less than, similar to, or greater than the 2040 MTP/SCS for each of the issue areas studied.

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 the MTP/SCS is to comply with applicable regulatory requirements, including CTC RTP Guidelines and SB 375, including SB 375's regional GHG reduction targets. AMBAG's specific objectives for the 2040 MTP/SCS are to additionally ensure that the transportation system planned for the AMBAG region accomplishes the following:

- Serves regional goals, objectives, policies and plans as approved by appropriate Policy Bodies.
- Responds to community and regional transportation needs.
- Promotes energy efficient, environmentally sound modes of travel and facilities and services.
- Promotes equity and efficiency in the distribution of transportation projects and services.

Based on the above analysis and summary in Table 54, Alternative 2 is the environmentally superior alternative, assuming all environmental issue areas are weighted equally. Under Alternative 2, land use patterns would further concentrate forecasted population and employment growth in urban areas with a focus on infill, mixed use and TOD in and around commercial corridors. Alternative 2 could be considered environmentally superior to the 2040 MTP/SCS primarily because, as shown in Table 54, overall impacts to the following resources would be less: agricultural resources, biological resources, energy, geology and soils, greenhouse gases, hazards and hazardous materials, land use and transportation and circulation.

Because Alternative 2 would include regionally identified transportation projects and an SCS component that would further concentrate development in urban areas, it would continue to 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. In addition, because Alternative 2 would increase investments in alternative and active transportation modes, it would promote energy efficient, environmentally sound modes of travel to a greater extent than the MTP/SCS. However, Alternative 2 may not be feasible in that AMBAG does not have land use authority and cannot require local agencies to change their land use designations that are required for Alternative 2 to be considered environmentally superior. Also, the proposed land use changes required to implement Alternative 2 may not be acceptable to the local jurisdictions as to their development goals and objectives.

The No Project Alternative (Alternative 1) would result in a less dense development pattern compared to the 2040 MTP/SCS, with Alternative 1 continuing existing land use trends. Because of the increased land development outside of existing urbanized areas, Alternative 1 would result in more ground disturbance than the 2040 MTP/SCS. Consequently, compared to the 2040 MTP/SCS, Alternative 1 would have greater overall impacts to agricultural resources, biological resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use, transportation and circulation and tribal cultural resources. As shown in Table 54, the total overall impact of Alternative 1 would be greater than the 2040 MTP/SCS.

Alternative 1 would implement committed transportation projects in the MTIP, but would not include other transportation infrastructure projects identified by the RTPAs. This alternative would not meet the SB 375 requirement for preparation of an SCS. Alternative 1 does not meet the key implementation strategies of the MTP/SCS regarding *Economic Development* to encourage infill housing; *Land Use and Environment* to 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; or *Transportation* to facilitate local jurisdiction adoption and implementation of a complete streets policy and provide local community shuttles or circulators that serve transit oriented development, high quality transit stops and neighborhood commercial centers.

Alternative 3 would result in a less dense development pattern than the 2040 MTP/SCS.

Alternative 3 would promote a land use pattern comprising of existing general plans. Because of the increased land development outside of existing urbanized areas, this alternative would result in more ground disturbance than the 2040 MTP/SCS, and as shown in Table 54, greater overall impacts to aesthetics/visual resources, agricultural resources, air quality, biological resources, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use, and tribal cultural resources. As shown in Table 54, the total overall impact of Alternative 3 would be greater than the 2040 MTP/SCS.

Alternative 3 would meet project objectives, but not to the extent of the 2040 MTP/SCS. Alternative 3 would include transportation investments and would adopt an SCS, thus meeting the fundamental objective of complying with applicable regulatory requirements. However, because development would be less focused on infill and TOD areas, and because fewer transportation improvements focused on alternative and active modes would be provided, Alternative 3 would not promote energy efficient, environmentally sound modes of travel, nor promote efficiency in the distribution of transportation projects and services, to the same extent as the 2040 MTP/SCS.

Table 54 Impact Comparison of Alternatives

Issue	Alternative 1: No Project	Alternative 2: Livable Communities	Alternative 3: Maintained Mobility
Aesthetics/Visual Resources	=	=	-
Agriculture and Forestry Resources	-	+	-
Air Quality and Health Impacts/Risks	+	=	-
Biological Resources	-	+	-
Cultural and Historic Resources	=	=	=
Energy	=	+	-
Geology and Soils	-	+	=
Greenhouse Gas Emissions/Climate Change	-	+	-
Hazards and Hazardous Materials	-	+	-
Hydrology and Water Quality	-	=	-
Land Use	-	+	-
Noise	=	=	=
Population and Housing	+	=	+
Transportation and Circulation	-	+	=
Tribal Cultural Resources	-	=	-
Total	-	+	-

Note: Comparison of impacts is based on the overall impact of the alternative on the resource or issue.

+ Alternative would result in less impacts than the 2040 MTP/SCS

= Alternative would result in impacts similar to the 2040 MTP/SCS

- Alternative would result in greater impacts than the 2040 MTP/SCS

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8.2 List of Preparers

This EIR was prepared by the Association of Monterey Bay Area Governments, with the assistance of Rincon Consultants, Inc. with support from Mintier Harnish. Consultant staff involved in the preparation of the EIR are listed below.

AMBAG

Heather Adamson, Director of Planning
Bhupendra Patel, Director of Modeling
Sean Vienna, Planner
Gina Schmidt, GIS Coordinator

RINCON CONSULTANTS, INC.

Richard Daulton, MURP, Principal
Megan Jones, MPP, Senior Program Manager
Chris Bersbach, MESM, Technical Services Program Manager
George Dix, Senior Environmental Planner/Project Manager
Smadar Levy, Associate Planner
Josephine Fong, Associate Planner
Michael Tom, Associate Biologist
Kari Zajac, MESM, Associate Planner
Lance Park, MAIEP, Associate Planner
Nikolas Kilpelainen, Associate Planner

MINTIER HARNISH (LAND USE AND PLANS CONSISTENCY)

Jim Harnish, JD, Principal/Owner

Appendix A

Notice of Preparation and NOP Response Letters

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans

Lead Agency: Association of Monterey Bay Area Governments Contact Person: Heather Adamson, Director of Planning
Mailing Address: 445 Reservation Road, Suite G Phone: 831-883-3750
City: Marina Zip: 93933 County: Monterey

Project Location: County: Monterey, Santa Cruz, San Benito City/Nearest Community:

Cross Streets: Project encompasses entire tri-county area Zip Code: Multiple

Longitude/Latitude (degrees, minutes and seconds): ° ' " N / ° ' " W Total Acres:

Assessor's Parcel No.: Section: Twp.: Range: Base:

Within 2 Miles: State Hwy #: Multiple state highways Waterways: Multiple throughout region

Airports: Multiple Railways: Multiple Schools: Multiple

Document Type:

- | | | | |
|---|--|------------------------------------|--|
| CEQA: <input checked="" type="checkbox"/> NOP | <input type="checkbox"/> Draft EIR | NEPA: <input type="checkbox"/> NOI | Other: <input type="checkbox"/> Joint Document |
| <input type="checkbox"/> Early Cons | <input type="checkbox"/> Supplement/Subsequent EIR | <input type="checkbox"/> EA | <input type="checkbox"/> Final Document |
| <input type="checkbox"/> Neg Dec | (Prior SCH No.) | <input type="checkbox"/> Draft EIS | <input type="checkbox"/> Other: |
| <input type="checkbox"/> Mit Neg Dec | Other: | <input type="checkbox"/> FONSI | |

Local Action Type:

- | | | | |
|---|---|--|--|
| <input type="checkbox"/> General Plan Update | <input type="checkbox"/> Specific Plan | <input type="checkbox"/> Rezone | <input type="checkbox"/> Annexation |
| <input type="checkbox"/> General Plan Amendment | <input type="checkbox"/> Master Plan | <input type="checkbox"/> Prezone | <input type="checkbox"/> Redevelopment |
| <input type="checkbox"/> General Plan Element | <input type="checkbox"/> Planned Unit Development | <input type="checkbox"/> Use Permit | <input type="checkbox"/> Coastal Permit |
| <input type="checkbox"/> Community Plan | <input type="checkbox"/> Site Plan | <input type="checkbox"/> Land Division (Subdivision, etc.) | <input checked="" type="checkbox"/> Other: MTP/SCS/RTP |

Development Type:

- | | |
|---|--|
| <input type="checkbox"/> Residential: Units _____ Acres _____ | <input type="checkbox"/> Transportation: Type _____ |
| <input type="checkbox"/> Office: Sq.ft. _____ Acres _____ Employees _____ | <input type="checkbox"/> Mining: Mineral _____ |
| <input type="checkbox"/> Commercial: Sq.ft. _____ Acres _____ Employees _____ | <input type="checkbox"/> Power: Type _____ MW _____ |
| <input type="checkbox"/> Industrial: Sq.ft. _____ Acres _____ Employees _____ | <input type="checkbox"/> Waste Treatment: Type _____ MGD _____ |
| <input type="checkbox"/> Educational: _____ | <input type="checkbox"/> Hazardous Waste: Type _____ |
| <input type="checkbox"/> Recreational: _____ | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Water Facilities: Type _____ MGD _____ | |

Project Issues Discussed in Document:

- | | | | |
|--|--|---|--|
| <input checked="" type="checkbox"/> Aesthetic/Visual | <input type="checkbox"/> Fiscal | <input checked="" type="checkbox"/> Recreation/Parks | <input checked="" type="checkbox"/> Vegetation |
| <input checked="" type="checkbox"/> Agricultural Land | <input checked="" type="checkbox"/> Flood Plain/Flooding | <input checked="" type="checkbox"/> Schools/Universities | <input checked="" type="checkbox"/> Water Quality |
| <input checked="" type="checkbox"/> Air Quality | <input checked="" type="checkbox"/> Forest Land/Fire Hazard | <input checked="" type="checkbox"/> Septic Systems | <input checked="" type="checkbox"/> Water Supply/Groundwater |
| <input checked="" type="checkbox"/> Archeological/Historical | <input checked="" type="checkbox"/> Geologic/Seismic | <input checked="" type="checkbox"/> Sewer Capacity | <input checked="" type="checkbox"/> Wetland/Riparian |
| <input checked="" type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Minerals | <input checked="" type="checkbox"/> Soil Erosion/Compaction/Grading | <input checked="" type="checkbox"/> Growth Inducement |
| <input checked="" type="checkbox"/> Coastal Zone | <input checked="" type="checkbox"/> Noise | <input checked="" type="checkbox"/> Solid Waste | <input checked="" type="checkbox"/> Land Use |
| <input checked="" type="checkbox"/> Drainage/Absorption | <input checked="" type="checkbox"/> Population/Housing Balance | <input checked="" type="checkbox"/> Toxic/Hazardous | <input checked="" type="checkbox"/> Cumulative Effects |
| <input checked="" type="checkbox"/> Economic/Jobs | <input checked="" type="checkbox"/> Public Services/Facilities | <input checked="" type="checkbox"/> Traffic/Circulation | <input type="checkbox"/> Other: |

Present Land Use/Zoning/General Plan Designation:

Multiple

Project Description: (please use a separate page if necessary)

The proposed 2040 MTP/SCS will guide the development of the Regional and Federal Transportation Improvement Programs (RTIP and FTIP) as well as other transportation programming documents and plans throughout Monterey, Santa Cruz and San Benito Counties. Specifically the project is intended to implement Regional Transportation Planning Agency goals regarding future mobility needs and identify programs, actions and a plan of projects intended to address these needs consistent with adopted goals and policies. The 2040 MTP/SCS includes the Sustainable Communities Strategy (SCS) pursuant to the requirements of SB 375. Accordingly, the 2040 MTP/SCS identifies transportation improvement projects and a land use scenario that would effectively meet SB 375 greenhouse gas emission requirements.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with an "X".
If you have already sent your document to the agency please denote that with an "S".

- | | |
|---|--|
| <input checked="" type="checkbox"/> Air Resources Board | <input checked="" type="checkbox"/> Office of Historic Preservation |
| <input type="checkbox"/> Boating & Waterways, Department of | <input type="checkbox"/> Office of Public School Construction |
| <input type="checkbox"/> California Emergency Management Agency | <input type="checkbox"/> Parks & Recreation, Department of |
| <input checked="" type="checkbox"/> California Highway Patrol | <input type="checkbox"/> Pesticide Regulation, Department of |
| <input checked="" type="checkbox"/> Caltrans District #5 | <input type="checkbox"/> Public Utilities Commission |
| <input checked="" type="checkbox"/> Caltrans Division of Aeronautics | <input checked="" type="checkbox"/> Regional WQCB #3 |
| <input checked="" type="checkbox"/> Caltrans Planning | <input type="checkbox"/> Resources Agency |
| <input type="checkbox"/> Central Valley Flood Protection Board | <input type="checkbox"/> Resources Recycling and Recovery, Department of |
| <input type="checkbox"/> Coachella Valley Mtns. Conservancy | <input type="checkbox"/> S.F. Bay Conservation & Development Comm. |
| <input checked="" type="checkbox"/> Coastal Commission | <input type="checkbox"/> San Gabriel & Lower L.A. Rivers & Mtns. Conservancy |
| <input type="checkbox"/> Colorado River Board | <input type="checkbox"/> San Joaquin River Conservancy |
| <input checked="" type="checkbox"/> Conservation, Department of | <input type="checkbox"/> Santa Monica Mtns. Conservancy |
| <input type="checkbox"/> Corrections, Department of | <input type="checkbox"/> State Lands Commission |
| <input type="checkbox"/> Delta Protection Commission | <input type="checkbox"/> SWRCB: Clean Water Grants |
| <input type="checkbox"/> Education, Department of | <input type="checkbox"/> SWRCB: Water Quality |
| <input type="checkbox"/> Energy Commission | <input type="checkbox"/> SWRCB: Water Rights |
| <input checked="" type="checkbox"/> Fish & Game Region #3, 4 | <input type="checkbox"/> Tahoe Regional Planning Agency |
| <input type="checkbox"/> Food & Agriculture, Department of | <input type="checkbox"/> Toxic Substances Control, Department of |
| <input type="checkbox"/> Forestry and Fire Protection, Department of | <input type="checkbox"/> Water Resources, Department of |
| <input type="checkbox"/> General Services, Department of | |
| <input type="checkbox"/> Health Services, Department of | Other: _____ |
| <input checked="" type="checkbox"/> Housing & Community Development | Other: _____ |
| <input checked="" type="checkbox"/> Native American Heritage Commission | |

Local Public Review Period (to be filled in by lead agency)

Starting Date December 21, 2015 Ending Date January 29, 2016

Lead Agency (Complete if applicable):

Consulting Firm: Rincon Consultants, Inc. Applicant: _____
Address: 437 Figueroa Street, Suite 203 Address: _____
City/State/Zip: Monterey, CA 93940 City/State/Zip: _____
Contact: Megan Jones Phone: _____
Phone: 831-333-0310

Signature of Lead Agency Representative:  Date: 12.21.15

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

Ohlone/Costanoan-Esselen Nation



Previously acknowledged as
The San Carlos Band of
Mission Indians
The Monterey Band
And also known as
O.C.E.N. or Esselen Nation
P.O. Box 1301
Monterey, CA 93942

www.ohlonecostanoanesselenation.org.

January 17, 2016

re: AMBAG, 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy

Saleki Atsa,

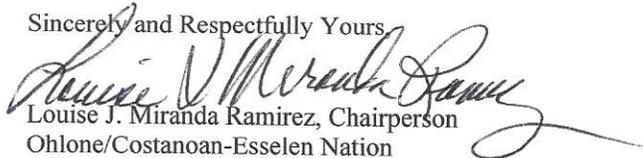
Ohlone/Costanoan-Esselen Nation is an historically documented previously recognized tribe. OCEN is the legal tribal government representative for over 600 enrolled members of Esselen, Carmeleno, Monterey Band, Rumsen, Chalon, Soledad Mission, San Carlos Mission and/or Costanoan Mission Indian descent. Though other indigenous people may have lived in the area, the area is the indigenous homeland of our people. Included with this letter please find a territorial map by Taylor 1856; Levy 1973; and Milliken 1990, indentifying Tribal areas.

Ohlone/Costanoan-Esselen Nation objects to all excavation in known cultural lands, even when they are described as previously disturbed, and of no significant archaeological value. Please be advised that it is our first priority that our ancestor's remains be protected and undisturbed. We desire that all sacred burial items be left with our ancestors on site or where they are discovered. All cultural items returned to Ohlone/Costanoan-Esselen Nation. We ask for the respect that is afforded all of our current day deceased, by no other word these burial sites are cemeteries, respect for our ancestors as you would expect respect for your deceased family members in today's cemeteries. **Our definition of respect is no disturbance.**

OCEN's Tribal leadership desires to be provided with archaeological reports/surveys, including subsurface testing, and presence/absence testing. OCEN request to be included in mitigation and recovery programs, reburial of any of our ancestral remains, placement of all cultural items, and that a Native American Monitor of Ohlone/Costanoan-Esselen Nation, approved by the OCEN Tribal Council be used within our aboriginal territory.

We request consultation on projects affecting our aboriginal homelands. We look forward to hearing more information about this project; please feel free to contact me at (408) 629-5189. Nimasianexelpasaleki. Thank you for your attention to this matter.

Sincerely and Respectfully Yours,


Louise J. Miranda Ramirez, Chairperson
Ohlone/Costanoan-Esselen Nation
(408) 629-5189

Cc: OCEN Tribal Council

Note: attached map has been excluded from the EIR appendix to maintain confidentiality

January 29, 2016

Heather Adamson
AMBAG
445 Reservation Road, Suite G,
Marina, California 93933

Email: hadamson@ambag.org

Re: Notice of Preparation for EIR on Proposed 2040 MTP/SCS

Dear Ms. Adamson:

Thank you for providing the Monterey Bay Unified Air Pollution Control District (Air District) with the opportunity to provide scoping level input on the above EIR.

The Air District suggests that the following policies and measures be considered in the EIR:

1. Roundabouts – Encourage construction of roundabouts to reduce congestion as well as criteria and GHG emissions whenever feasible. Funding is available through the District’s AB 2766 program.
2. Adaptive Signal Control - Encourage signal coordination systems that respond to real-time traffic conditions and thereby reduce congestion as well as criteria pollutants and GHGs. Funding is available through the District’s AB 2766 program.
3. Plug-In Electric/Fuel Cell Vehicles - Encourage the replacement of fossil fueled vehicles with either plug-in electric (PEV) or fuel cell vehicles to support the Governor’s Executive Order B-16-2012 to put 1.5 million zero-emission vehicles in the fleet by 2025.
4. PEV Charging Infrastructure - Encourage municipalities and project developers to support the implementation of electric vehicle charging infrastructure. The Monterey Bay PEV Readiness Plan should be consulted as a guide to the installation and permitting processes for EV charging infrastructure.
5. Climate Action Plans - If not already included, encourage Cities and Counties to adopt CAPs that help achieve the 2035 (5%) regional target established for our area under SB 375. Also, develop a model CAP for jurisdictions. Consistency with the applicable CAP alleviates the need for lead agencies to adopt quantitative GHG thresholds for their areas of jurisdiction.
6. Jobs/Housing Balance - Support land use polices that improves jobs/housing balance so people work in the community where they live rather than traveling great distances.
7. Development Along Highways - Prioritize reducing congestion and toxic emissions along congested highway corridors which are bordered by high density residential developments. Discourage development adjacent to congested highways.

8. AMBAG's Commute Alternatives Program - Highlight AMBAG's Commute Alternatives Program. This program serves to reduce VMT, congestion and GHG emissions from motor vehicles thereby helping to achieve the goals of SB 375 and the SCS.

Please let me know if you have any questions. I can be reached at (831) 647-9418 ext. 226 or bnunes@mbuapcd.org.

Best Regards,



Bob Nunes
Air Quality Planner

cc: David Frisbey, Air Quality Planner
Alan Romero, Air Quality Planner
Mike Gilroy, Deputy APCO
Amy Clymo, Supervising Air Quality Planner

Heather Adamson

From: dana bagshaw <cdbagshaw@att.net>
Sent: Saturday, January 30, 2016 8:26 AM
To: Heather Adamson
Subject: Environmental Review suggestion

Not only do we need to look at the impact of projects upon the environment, top priority to reduce carbon emissions, but we need to look at the impact of the environment upon a project. I'm thinking specifically of the impact of rising sea levels in the rail corridor.

Fixed-rail trains in the flood zones are not a good long-term investment.

Dana Bagshaw
145 Jenne Street
Santa Cruz
831-425-5182

Appendix B

2040 MTP/SCS Transportation Project List

Monterey County

Table 1 Active Transportation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-CAR001-CM	Bike Kiosks	Install bike kiosks at entrance points to the city.	\$13
MON-CAR002-CM	Carmel to Pebble Beach Bike/Ped Facility	Construct Class I or Class II bike facility.	\$86
MON-DRO006-DR	Gen. Jim Moore Bicycle Improvement	Stripe Class II - both sides within City limits.	\$10
MON-DRO007-DR	Canyon Del Rey Boulevard (Hwy 218) Bicycle Gap	Stripe Class II Bike lanes on East side of Canyon Del Rey Boulevard and complete gaps on Westside; Stripe/Restripe bike lanes to the left of right turn lanes.	\$500
MON-GON009-GO	Bike Lockers	Install bike lockers.	\$1
MON-GON010-GO	Bike Racks	Install bike racks.	\$1
MON-GON012-GO	River Road Bike Lane	Construct Class II bike lane.	\$5
MON-GON013-GO	Winery - Alta Street Bike Signs	Sign Class III bike lanes.	\$3
MON-GRN001-GR	Apple Avenue Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	\$1,548
MON-GRN005-GR	Thorne Road Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	\$1,548
MON-GRN010-GR	12th Street Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN011-GR	13th Street Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN012-GR	2nd Avenue Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN013-GR	3rd Street Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN014-GR	7th Street Bike Lanes	Construct Class III bike lanes.	\$1
MON-GRN015-GR	El Camino Real Exit Bike Lane	Construct Class II/III bike lane (Class II preferred).	\$1
MON-GRN016-GR	Elm Avenue Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN017-GR	Pine Avenue Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN018-GR	Walnut Avenue Bike Lanes	Construct Class II bike lanes.	\$1
MON-KCY008-CK	Airport Road Bike Lane	Sign Class III bike lanes.	\$1
MON-KCY009-CK	Metz Road Bike Lane	Stripe Class II, restripe roadway.	\$100
MON-KCY038-CK	Vanderhurst Bike Lanes	Install Class II bike lanes.	\$10
MON-KCY039-CK	1st Street Bike Lanes	Install Class II bike lanes.	\$10
MON-KCY040-CK	Broadway Bike Lanes	Install Class II bike lanes.	\$5
MON-KCY045-CK	Division Street Bike Lanes	Install Class II bike lanes.	\$25
MON-KCY046-CK	San Antonio Drive Bike Lanes	Install Class II bike lanes.	\$25
MON-KCY047-CK	N. Third Street Bike Lanes	Install Class II bike lanes.	\$25
MON-KCY048-CK	Fransiscan Way Bike Lanes	Install Class II bike lanes.	\$25
MON-MAR030-MA	Crescent Avenue Bike Lanes, Sidewalk	Construct missing sidewalk and bike lanes.	\$1,000
MON-MAR039-MA	Downtown Pedestrian Improvements	Sidewalk and crosswalk improvements downtown.	\$1,000
MON-MAR070-MA	Reservation Road Bike Lanes	Install bike lanes.	\$400
MON-MAR082-MA	Sidewalk Improvements	Construct new sidewalks throughout City.	\$1,000
MON-MAR087-MA	Beach Road Class II Bike Lanes	Install Class II bike lanes.	\$2
MON-MAR088-MA	Bostic Avenue Class II Bike Lanes	Install Class II bike lanes.	\$2
MON-MAR091-MA	Cardoza Avenue Class II Bike Lanes	Install Class II bike lanes.	\$3

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-MAR092-MA	Cardoza Avenue Class II Bike Lanes	Install Class II bike lanes.	\$3
MON-MAR094-MA	De Forest Road Class II Bike Lanes	Install Class II bike lanes.	\$2
MON-MAR101-MA	Lake Drive Class II Bike Lanes	Install Class II bike lanes.	\$3
MON-MAR102-MA	Lake Drive Class II Bike Lanes	Install Class II bike lanes.	\$3
MON-MAR104-MA	Old Marina Class I Bike Path	Install Class I bike path.	\$200
MON-MAR106-MA	Palm Avenue Class II Bike Lanes	Install Class II bike lanes.	\$3
MON-MAR108-MA	Remove and Replace Signs, Class III Bikeway	Remove and replace signs at signalized trail intersections; replace with R9-5 signs.	\$30
MON-MAR127-MA	Carmel Avenue Bike Lanes	Install Class II bike lanes on Carmel Avenue.	\$3
MON-MAR157-MA	Reservation Road/Beach Road Improvements	Widen roadway with sidewalk and bike lane improvements.	\$1,735
MON-MAR161-MA	Del Monte Boulevard Bike Lanes	Install Class II bike lanes and sidewalks.	\$262
MON-MRY001-MY	Aguajito Road	Construct new Class I bikeway.	\$4,000
MON-MRY002-MY	Del Monte - Washington Improvements	Construct pedestrian bridge over Del Monte and traffic signal improvements.	\$4,000
MON-MRY012-MY	Pacific Street Bike/Ped Improvements	Bike/ped and traffic flow improvements.	\$1,500
MON-MRY013-MY	Recreation Trail Improvements	Widening and rehabilitation of recreation trail.	\$10,000
MON-MRY014-MY	Window on the Bay	New bikeway and pedestrian facilities.	\$7,000
MON-MRY016-MY	Lower Presidio Pedestrian Connection	New pedestrian connector.	\$2,500
MON-MRY020-MY	Monterey City Bikeways Program	Install Class I, Class II and Class III bikeways throughout city.	\$10,000
MON-MRY035-MY	Citywide Intersection ADA upgrades	Install ADA curb ramps and APS.	\$70,000
MON-MRY037-MY	Citywide Wayfinding Sign Program	Provide a comprehensive vehicular, pedestrian and bicycle wayfinding sign program.	\$2,000
MON-MYC045-UM	Las Lomas Drive Bicycle Lane & Pedestrian Project	Install Class II bikeway, new sidewalks, curb & gutter, and a new drainage and water system.	\$2,673
MON-MYC046-UM	Laureles Grade Road	Install Class II bikeway.	\$6,497
MON-MYC053-UM	Metz Road	Install Class III bikeway.	\$24
MON-MYC059-UM	Nacimiento-Ferguson Road	Shoulder widening and geometrics.	\$18,500
MON-MYC068-UM	Porter Drive	Install Class III bikeway.	\$30
MON-MYC075-UM	River Road Operational Improvements	Widen shoulders and improve geometrics, and install class II bike lanes.	\$16,308
MON-MYC115-UM	Corral de Tierra	Install Class II bikeway.	\$8,508
MON-MYC118-UM	Williams Road	Install Class III bikeway.	\$2
MON-MYC129-UM	Arroyo Seco Road Project (CA PFH 129-1)	Rehab Arroyo Seco Road from Carmel Valley Road to Los Padres National Forest.	\$50
MON-MYC135-UM	Bluff Road	Install class III bikeway.	\$5
MON-MYC145-UM	Castro Street	Install class III bikeway.	\$1
MON-MYC149-UM	Central Avenue	Install Class III bikeway.	\$22
MON-MYC150-UM	Chualar River Road	Install Class III bikeway.	\$8
MON-MYC151-UM	Cooper - Nashua Road	Install Class III bikeway.	\$15
MON-MYC152-UM	Cooper Road	Install Class III bikeway.	\$9
MON-MYC172-UM	Elkhorn Road	Install Class II bikeway.	\$194
MON-MYC185-UM	Geil Street	Install Class III bikeway.	\$1
MON-MYC186-DR	Gen Jim Moore Path	Install Class I bikeway.	\$1,206
MON-MYC193-UM	Harrison Road	Install Class II bikeway.	\$82
MON-MYC240-UM	San Benancio Road	Install Class II bikeway.	\$5,182
MON-MYC258-UM	Sanctuary Scenic Trail Segment 7	Install class I bikeway.	\$3,411
MON-MYC291-UM	Reservation Road Bicycle Lanes	Install Class II bicycle lanes.	\$250

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-PGV004-PG	Lighthouse Avenue Corridor	Decorative Improvements, traffic calming and other mobility improvements from 12th Street to Lobos Street.	\$3,601
MON-PGV006-PG	Congress - Walkway	Install walkway.	\$300
MON-PGV008-PG	Recreation Trail Improvements	Add landscaping, hardscape, stairs, benches, handrails, crosswalks and signs.	\$1,000
MON-PGV011-PG	Recreational Trail Repairs	Repair failing sections of recreational trail.	\$1,500
MON-PGV017-PG	Forest Avenue Bike Lanes	Install Class II bike lanes on Forest Avenue.	\$300
MON-PGV019-PG	Pine Avenue Bike Lanes	Install Class II bike lanes on Pine Avenue and Wayfinding signage.	\$250
MON-PGV026-PG	David Avenue Bikeway	Install Class II/III bikeway and wayfinding signage along David Avenue.	\$200
MON-SCY009-SA	Bike Path Lighting	Install lighting on existing Class I path.	\$325
MON-SCY010-SA	Class I Bike Path	Complete connection of Monterey Bay Coastal Trail Class I bike path through Sand City.	\$400
MON-SCY011-SA	Class I Bike Path along Railroad	Install Class I bike path along railroad ROW.	\$1,300
MON-SCY012-SA	Class III Bikeways	Install Class III bikeway signage.	\$15
MON-SCY015-SA	Tioga Widening	Widen Tioga at Del Monte; install Class II bike lanes and fill sidewalk gaps.	\$600
MON-SEA029-SE	Lightfighter Drive Pedestrian Improvements	Sidewalk improvements and landscaping upgrades.	\$389
MON-SEA033-SE	Bike Upgrades - Citywide	Install Class II bike lanes citywide.	\$2,000
MON-SEA036-SE	Fremont Bike Lanes	Install Class II bike lanes on Fremont.	\$2,500
MON-SEA037-SE	ADA Transition Plan Upgrades	Roadway and sidewalk improvements.	\$32,000
MON-SNS003-SL	ADA Access Ramp Installations	Install ADA access ramp locations throughout city.	\$4,800
MON-SNS005-SL	Alisal Road Bikeway	Install bike route along Alisal Road south to city limits.	\$6
MON-SNS007-SL	Alvin Drive Bike Lanes	Install bike lanes along Alvin between McKinnon and Natividad.	\$172
MON-SNS014-SL	Bridge Street Bike Lanes	Install bike lanes along entire length of Bridge Street.	\$419
MON-SNS019-SL	Davis Road Bike Path	Install .57 mile bike path.	\$350
MON-SNS046-SL	Reclamation Ditch Bike System	Construct Class I bike path along ditch #1665.	\$3,500
MON-SNS057-SL	Williams Road Bike Lanes	Install Class II bike lanes along entire length.	\$200
MON-SNS063-SL	Boronda Road Class III Bike Lanes	Install Class III bikeway signage.	\$8
MON-SNS064-SL	Calle Del Adobe/West Laurel Drive Bike Lanes	Install Class II bike lanes.	\$156
MON-SNS065-SL	Carr Lake Bikeways	Construct Class I and Class II bikeways.	\$5,000
MON-SNS066-SL	East Alisal Street (Future Street) and Freedom Parkway (Future Street) Bike lanes	Install Class II bike lanes.	\$200
MON-SNS071-SL	John Street Class III Bikeway	Install Class III bikeway signage.	\$5
MON-SNS072-SL	Los Palos Drive Class III Bike Lane	Install Class III bikeway signage.	\$1
MON-SNS073-SL	Market Street Class II Bikeway	Install Class II bikeway signage.	\$1
MON-SNS075-SL	N Maderia/King Street Class III Bikeway	Install Class III bikeway signage.	\$1
MON-SNS076-SL	N Maderia/Saint Edwards Avenue Class III Bikeway	Install Class III bikeway signage.	\$5
MON-SNS077-SL	N Main/Espinosa Road Class II Bike Lane	Install Class II bike lane.	\$5,000
MON-SNS078-SL	Natividad Creek Bike Path	Install new bike path.	\$680

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-SNS080-SL	Rossi Street Extension Class II Bike Lanes	Install Class II bike lanes.	\$175
MON-SNS083-SL	Russell Road Class II Bike Lanes	Install Class II bike lanes.	\$155
MON-SNS084-SL	San Juan Grade Class II Bike Lanes	Install Class II bike lanes.	\$230
MON-SNS086-SL	Station Place (ITC Bridge)	Install bike and ped bridge over railroad.	\$1,500
MON-SNS087-SL	Trevin Avenue Class II Bike Lanes	Install Class II bike lanes.	\$25
MON-SNS089-SL	W Laurel/U.S. 101 Overpass/Adams Street Class III Bikeway	Install Class III bikeway signage.	\$3
MON-SNS129-SL	Street Sidewalk Repair	Annual sidewalk repairs.	\$1,050
MON-SNS131-SL	Downtown Vibrancy Plan	Circulation/parking/pedestrian improvements in Downtown.	\$375
MON-SNS137-SL	East Alisal Street Vibrancy Plan	Circulation/parking/pedestrian improvements on East Alisal Street.	\$2,500
MON-SNS138-SL	Bardin Road ATP	Circulation, SR2S and roundabout.	\$5,430
MON-SNS139-SL	Alvin Drive	Circulation, SR2S, traffic signals and cycle tracks.	\$3,259
MON-SNS140-SL	Linwood Drive	SR2S and bike lanes.	\$700
MON-SNS141-SL	Laurel Drive Sidewalks	Sidewalk <u>and</u> lighting.	\$4,000
MON-SNS162-SL	Laurel Drive Trail	New bike and ped trail connections between Acosta Plaza and soccer fields.	\$3,500
MON-SNS163-SL	Sidewalk Repairs	Sidewalk and tree repairs at 6,000 locations.	\$45,000
MON-SNS164-SL	Rossi - Rico Bike Trail	Bike trail repairs along Rossi Rico Park.	\$400
MON-SOL006-SO	Bicycle Racks and Lockers	Install bicycle racks and lockers.	\$35
MON-SOL043-SO	Pedestrian Lighting	Construct pedestrian lighting along various City streets.	\$900
MON-SOL044-SO	Pinnacles Bike Route	Construct a Class I bike path/Class II bike lanes along Metz Road to encourage bicycle tourism.	\$500
MON-TAMC006-TAMC	Monterey County Bicycle and Pedestrian Improvement Projects	Various bicycle and pedestrian improvement projects throughout Monterey County.	\$12,741
MON-TAMC010-TAMC	Fort Ord Regional Trail and Greenway (FORTAG)	Approximately 30 mile bike and pedestrian access path through the former Fort Ord.	\$40,000
MON-TAMC011-TAMC	Safe Routes to Schools	Countywide Safe Routes to Schools program.	\$20,000

Table 2 Highway Improvements

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-CT011-CT	SR 68 - Commuter Improvements	Widen existing roadway to 4-lanes between existing 4 lane segment at Toro Park and Corral de Tierra Road (MON-68-4.0/15.0).	\$25,555
MON-CT015-CT	SR 1 - Seaside - Sand City	Interchange and related local road improvements in the vicinity of Canyon Del Rey and Fremont Avenues.	\$22,900
MON-CT017-CT	SR 68 - (Holman Hwy - access to Community Hospital)	Widen Holman Highway SR 68 from CHOMP to SR 1 to 4 lanes and make operational improvements at the SR 68/SR 1 EA interchange. (EA 05-44800) PM 3.8/L4.3.	\$26,620
MON-CT022-CT	SR 156 - Corridor Widening Project	Construct new 4 lane highway south of existing alignment, and convert existing highway to frontage road, and construct new at SR 156 and U.S. 101.	\$304,000
MON-CT030-SL	U.S. 101 - Salinas Corridor	Widen U.S. 101 to 6 lanes within the existing right of way at locations where feasible.	\$52,000
MON-CT031-CT	U.S. 101 - South County Frontage Roads	Construct Frontage Roads from Harris Road to Chualar, then to Soledad. (EA 05-OH330)	\$112,000
MON-CT036-CT	SR 156 - Castroville Boulevard Interchange	Construction new interchange for SR 156 and Castroville Boulevard/Blackie Road.	\$30,000
MON-CT044-SL	U.S. 101 - Harris Road Interchange	Construct new Interchange on U.S. 101 at Harris Road (PM 83.71).	\$57,662
MON-CT045-MA	SR 1 - Monterey Road Interchange	Construct new interchange. (PM EB R80.75/R83.27).	\$3,700
MON-GON015-GO	U.S. 101 Gloria Road Interchange	U.S. 101/Gloria Road Interchange Improvements. (EA 05-OP930) PM 68.4/70.4.	\$39,500
MON-GRN008-GR	U.S. 101 - Walnut Avenue Interchange	Relocate and replace existing U.S. 101/Walnut Avenue Interchange and widen to six lanes. (EA 05-OP160) PM 53.4/54.3.	\$28,800
MON-KCY006-CK	U.S. 101 - 1st Street Interchange (Lonoak Street I/C)	Extend San Antonio over railroad tracks from Lonoak to U.S. 101/First Street Interchange. (PM R39.77)	\$32,580
MON-MAR134-MA	SR 1 & Imjin Bridge	Restripe bridge for two WB lanes and one EB lane.	\$26
MON-MAR135-MA	SR 1 & Imjin Bridge	Convert SB off-ramp.	\$2,000
MON-MAR136-MA	SR 1 & Imjin Bridge	Widen NB off-ramp to two lanes.	\$590
MON-MAR137-MA	SR 1 & Imjin Bridge	Widen SB on-ramp to two lanes.	\$500
MON-MAR155-MA	Imjin Parkway at SR 1	Construct new interchange (Caltrans Regional TIP).	\$40,000
MON-MAR156-MA	Del Monte Boulevard at SR 1	Construct new interchange (Caltrans Regional TIP).	\$12,375
MON-MRY028-MY	SR 68 Roundabout at CHOMP	Construct roundabout at Community Hospital of Monterey Peninsula on SR 68.	\$12,000
MON-SOL002-SO	U.S. 101 - North Interchange	Install new interchange north of U.S. 101 and Front Street.	\$17,500
MON-SOL003-SO	U.S. 101 - South Interchange	Install new interchange south of U.S. 101 and Front Street.	\$21,760
MON-SOL014-SO	SR 146 Bypass	Construct to 4 lanes from SR 146 (Metz Road) to Nestles Road. Install Class II bike facility.	\$21,000

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Table 3 Highway Operational, Maintenance and Rehabilitation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-CT040-CT	State Highway Operations and Protection Program (SHOPP)	Unspecified SHOPP projects/3 Categories.	\$615,364
MON-MAR084-MA	SR 1 - Reservation Road	Install new traffic signals PM BR86.48/EB R86.51.	\$2,250
MON-MYC153-UM	SR 68 - Safety and Traffic Flow - Salinas to Monterey	Construct safety, congestion relief and wildlife connectivity projects along SR 68 from Blanco Road to SR 1.	\$52,000
MON-PGV010-PG	SR 68 - Bishop to Sunset	Mobility Improvements including sidewalks, lighting, landscaping and roadways overlay.	\$10,502
MON-SNS122-SL	U.S. 101/Sanborn/Elvee	Highway off-ramp/intersection improvements.	\$3,100
MON-SNS123-SL	U.S. 101/Boronda Improvements	Auxiliary lanes/ramp improvements.	\$960
MON-SNS126-SL	U.S. 101/Kern Street Traffic Signal	Traffic signal or roundabout at U.S. 101/Kern.	\$500
MON-SOLO46-SO	Intersection Improvements at SR 146 (Metz Road) and SR 146 (East Street)	Construct intersection, install roundabout.	\$900
MON-TAMC008-TAMC	Holman Highway 68 Safety & Traffic Flow	Make safety and operational improvements to Holman Highway in Pacific Grove; includes bicycle, pedestrian and traffic safety and ADA improvements.	\$17,300

Table 4 Local Street and Road Improvements

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-FRA003-MA	8th Street	Upgrade/construct 2-lane arterial; Install Class II bike lanes (FORA CIP FO5).	\$3,946
MON-MAR001-MA	Marina - Salinas Corridor	Widen Davis Road to 4 lanes from Blanco Road to Reservation Road; construct new 4 lane bridge over the Salinas River; widen Reservation Road to 4 lanes from Davis Road to existing 4 lane section adjacent to East Garrison at Intergarrison Road; widen Imjin Pkwy to 4 lanes from Reservation Road to Imjin Road, construct new Imjin Parkway interchange at SR 1. Include accommodations for bicyclists, pedestrians and transit; consider high quality transit service along corridor.	\$71,500
MON-MRY005-MY	Del Monte Corridor	Add eastbound lane from El Estero to Sloat Avenue. Intersection improvements to Sloat Avenue and Aguajito Avenue including addition of left turn lanes and signal operations improvements.	\$30,000
MON-SNS011-SL	Boronda - Main Improvements	Construct interchange improvements and widen road by 12' for 200'.	\$462
MON-SNS012-SL	Boronda Road Widening	Widen to 6 lanes from San Juan Grade Road to Williams Road; install Class II bike lanes and fill sidewalk gaps.	\$15,671
MON-SNS029-SL	John Street – U.S. 101	Widen to 4 lanes between Work to Wood Streets with grade separated overpass.	\$8,513
MON-SNS035-SL	Lincoln Avenue Widening	Widen Lincoln to 4 lanes between West Market and Gabilan Gavilan .	\$1,117
MON-SNS037-SL	Main Street (North) Widening	Widen to 6 lanes from Market to Casentini including bicycle and pedestrian improvements.	\$5,060
MON-SNS044-SL	Natividad Road Widening	Widen from 2 to 4 lanes.	\$4,296
MON-SNS048-SL	Romie Lane Widening	Widen from 2 lanes to 4 lanes between S. Main to East of California Street.	\$1,218
MON-SNS050-SL	Russell Road Widening	Widen street from U.S. 101 to San Juan Grade Road.	\$3,078
MON-SNS059-SL	Williams Road Widening	Widen from 2 to 4 lanes.	\$5,500
MON-SNS090-SL	Russell Road Extension	Extend 4 lane arterial.	\$17,557
MON-SNS092-SL	San Juan - Natividad Collector	Construct an east - west 2 lane collector roadway.	\$3,635
MON-SNS093-SL	Independence Boulevard Extension	Extend as 2 lane collector.	\$1,374
MON-SNS094-SL	Hemingway Drive Extension	Construct 2 lane road.	\$2,871
MON-SNS095-SL	Constitution Boulevard Extension	Construct 4 lane street.	\$9,556
MON-SNS096-SL	Sanborn Road Extension	Construct 4 lane arterial.	\$6,895
MON-SNS097-SL	Williams Russell Collector	Construct new north - south connection.	\$8,115
MON-SNS098-SL	Alisal Street Extension	Extend as 2 lane collector street with bike lanes.	\$5,119
MON-SNS099-SL	Moffett Street Extension	Extend as 4 lane collector.	\$3,336
MON-SNS100-SL	Rossi Street Widening	Widen to 4 lanes.	\$1,231
MON-SNS101-SL	Bernal Drive Extension	Extend as 4 lane arterial.	\$6,976
MON-SNS102-SL	Constitution Boulevard Extension	Construct new 2 lane street.	\$3,403
MON-SNS103-SL	Williams Road Widening	Widen from 3 to 4 lanes.	\$2,975
MON-SNS104-SL	Alisal Street Widening	Widen from 2 to 4 lanes.	\$2,908
MON-SNS108-SL	Laurel Drive Widening	Widen to 6 lanes and add left turn channelization west of Constitution.	\$2,161
MON-SNS121-SL	McKinnon Street Extension	Extend 2 lane collector.	\$3,710

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Table 5 Local Street and Road Operational, Maintenance and Rehabilitation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-CAR005-CM	Rio Road Parking Facility	Construct Rio Road off site parking facility with jitney pick up station.	\$20
MON-CAR007-CM	San Carlos Streetscaping	Install streetscaping.	\$155
MON-CAR009-CM	San Carlos Rehabilitation	San Carlos Street between Ocean Avenue and 6th Avenue in Carmel-by-the-Sea. Removing concrete and repaving and rehab/improvements to: curb and gutter, replace storm drain lines and sidewalk.	\$100
MON-CAR010-CM	Mission Street Rehabilitation	Rehabilitate Mission Street including repaving street and curb, gutter and sidewalk improvements.	\$338
MON-CAR011-CM	5th Avenue Rehabilitation	Repave and sidewalk repairs.	\$110
MON-DRO002-DR	Carlton Drive Resurfacing	Resurface Carlton Drive.	\$99
MON-DRO003-DR	Work Avenue Resurfacing	Resurface street.	\$55
MON-FRA004-MA	Patton Parkway (Abrams Road)	Construct a new 2-lane arterial and Class II bike lanes (FORA CIP FO2).	\$732
MON-FRA010-MA	Crescent Court	Extend existing Crescent Court southerly to join proposed Abrams Drive on the former Fort Ord (FORA CIP off-site 8).	\$875
MON-FRA018-SE	Giggling Road	Upgrade/construct new 4-lane arterial (FORA CIP FO7).	\$5,914
MON-FRA023-MA	Salinas Avenue	Construct new 2 lane arterial (FORA CIP FO11).	\$2,930
MON-FRA025-MA	2nd Avenue Phase 2	Construct new arterial road and Class II bike lanes (FORA CIP FO8).	\$2,000
MON-FRA026-MA	2nd Avenue Phase 3	Construct new arterial road and Class II bike lanes (FORA CIP FO8).	\$2,000
MON-FRA027-DR	So. Boundary Road Improvements	Reconstruct street, add sidewalks, bike lanes, street lights, etc.	\$4,162
MON-GON001-GO	5th Street - Fano Road	Install signal improvements.	\$270
MON-GON005-GO	Fano Road	Widen from 4 to 6 lanes and install Class II bike lanes.	\$4,250
MON-GON007-GO	La Gloria Road Widening	Widen road approximately one-half mile.	\$4,228
MON-GON011-GO	Park and Ride Lot	Construct park and ride lot.	\$100
MON-GON014-GO	U.S. 101/5th Street Operations	Operational improvement at 5th Street ramps for U.S. 101 (#ST-01); install roundabouts.	\$7,500
MON-GRN003B-GR	Oak Road Bridge over U.S. 101	Remove and replace existing Oak Avenue bridge.	\$30,000
MON-GRN003-GR	Oak Road Bridge over U.S. 101	Widen bridge for dual left turn lanes.	\$2,000
MON-GRN006-GR	Thorne Road roadway realignment at U.S. 101	Realign Thorn Road and add traffic signal.	\$5,300
MON-GRN007-GR	Traffic Signal Installations	Install traffic signals.	\$350
MON-GRN019-GR	Oak Avenue Pavement Overlay	Overlay street.	\$276
MON-GRN021-GR	Citywide Street Rehabilitation	Repair, overlay, seal coat all City streets.	\$3,000
MON-GRN022B-GR	Pine Avenue Overcrossing at U.S. 101	Construct new bridge over U.S. 101 to improve E-W traffic flow.	\$4,000
MON-KCY003-CK	Bitterwater Road	Reconstruct road.	\$1,500
MON-KCY017-CK	Bypass (Lon Oak connection)	Road and ped/bike construction.	\$2,270
MON-KCY043-CK	Roundabout at U.S. 101/Broadway Street/San Antonio Drive	Install Roundabout at U.S. 101/Broadway Street/San Antonio Drive.	\$5,000
MON-KCY044-CK	Lonoak Railroad Crossing improvements	Railroad crossing improvements.	\$300

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-KCY049-CK	Vivian Street/Haven Street/Carlson Street Repaving	Vivian Street/Haven Street/Carlson Street repaving.	\$500
MON-MAR002-MA	Imjin Parkway - 3rd Avenue Signal or Roundabout	Install new traffic signal or roundabout.	\$1,200
MON-MAR005-MA	2nd Avenue - 3rd Street	Install new traffic signal or roundabout.	\$550
MON-MAR006-MA	2nd Avenue - 8th Street	Install new traffic signal or roundabout.	\$250
MON-MAR007-MA	2nd Avenue - 10th Street	Install new traffic signal or roundabout.	\$250
MON-MAR009-MA	Abdy Way; Cardoza to Healy	Construct new sidewalk and pavement.	\$200
MON-MAR013-MA	Beach Road - Del Monte Boulevard	Construct new roundabout.	\$2,000
MON-MAR018-MA	California Avenue - Reservation Road	Install new traffic signal.	\$250
MON-MAR020-MA	California Avenue Rehab	Construct new sidewalk and pavement.	\$600
MON-MAR022-MA	California Avenue - Reindollar	Install new traffic signal or roundabout.	\$250
MON-MAR025-MA	California Extension - 8th Avenue	Install new traffic signal or roundabout.	\$1,100
MON-MAR026-MA	Cardoza Avenue	Construct new sidewalk and pavement.	\$700
MON-MAR027-MA	Carmel Avenue Rehab	Construct new sidewalk and pavement.	\$1,000
MON-MAR032-MA	De Forest Road	Construct new sidewalk and pavement.	\$500
MON-MAR035-MA	Del Monte Boulevard - Marina Green Drive	Install new traffic signal or roundabout.	\$1,200
MON-MAR037-MA	Del Monte Boulevard Sidewalks	Construct new sidewalk and pavement.	\$300
MON-MAR040-MA	Eucalyptus Street - Reservation to Peninsula	Construct new sidewalk and pavement.	\$600
MON-MAR042-MA	Healy Avenue	Construct new sidewalk and pavement.	\$600
MON-MAR049-MA	Lake Drive Rehab	Construct new sidewalk and pavement.	\$400
MON-MAR050-MA	Lake Drive - Reservation Road	Install new signal.	\$160
MON-MAR051-MA	Marina Drive Rehab	Construct new sidewalk and pavement.	\$600
MON-MAR052-MA	Marina Drive Rehab	Construct new sidewalk and pavement.	\$1,860
MON-MAR054-MA	Michael Drive New Connection	Construct new street.	\$1,860
MON-MAR057-MA	Palm Avenue Rehab	Construct new sidewalk and pavement.	\$300
MON-MAR058-MA	Palm Avenue at TAMC RR	Widen/construct new gates.	\$688
MON-MAR062-MA	Reindollar Avenue Rehab	Construct new sidewalk and pavement.	\$936
MON-MAR077-MA	Salinas Avenue Rehab	Construct new sidewalk and pavement.	\$1,915
MON-MAR079-MA	Salinas Avenue - Reservation Rd New Signal	Install new signal.	\$1,120
MON-MAR080-MA	Seaside Circle - Reservation to East End	Construct new sidewalk and pavement.	\$500
MON-MAR081-MA	Seaside Court	Construct new sidewalk and pavement.	\$500
MON-MAR116-MA	California Avenue	Reconstruct roadway.	\$1,980
MON-MAR118-MA	Del Monte Boulevard	Roadway improvements, sidewalk and utilities.	\$2,347
MON-MAR131-MA	Imjin Road & 8th Street	Construct new roundabout.	\$1,024
MON-MAR132-MA	Imjin Parkway & 4th Avenue	Signalize and widen intersection.	\$500
MON-MAR133-MA	California & 8th Street	Construct new roundabout.	\$1,100
MON-MAR138-MA	Imjin Parkway & California Avenue	Lane configuration improvements or roundabout.	\$2,500
MON-MAR139-MA	Imjin Parkway & Marina Heights Drive	Signalize or roundabout.	\$870
MON-MAR140-MA	4th Avenue & Intergarrison	Signalize or roundabout.	\$675
MON-MAR141-MA	Imjin Parkway & Reservation Road	Lane configuration improvements.	\$1,250
MON-MAR142-MA	Imjin Parkway & 2nd Avenue	Lane configuration improvements.	\$4,307
MON-MAR143-MA	Reservation Road & Del Monte Boulevard	Lane configuration improvements.	\$106

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-MAR145-MA	California Avenue & Marina Heights Drive	Signalize or roundabout.	\$870
MON-MAR146-MA	General Jim Moore & 1st Street	Signalize or roundabout.	\$870
MON-MAR147-MA	Imjin Parkway & Preston Drive	Construct new roundabout.	\$870
MON-MAR148-MA	Melanie Road & Vista Del Camino Road	Regrade intersection.	\$200
MON-MAR150-MA	2nd Avenue Extension	Construct new roadway.	\$9,900
MON-MAR151-MA	Del Monte Boulevard, Sta 42+00 to 48+00	Pavement, sidewalk and drainage improvements.	\$1,856
MON-MAR152-MA	8th Street Reconstruction	Reconstruct roadway.	\$7,000
MON-MAR153-MA	Patton (Abrams) Parkway Extension	Construct new roadway.	\$1,150
MON-MAR154-MA	Imjin Parkway Widening Project	Measure X project to widen Imjin Parkway to 4 lanes from Reservation Road to Imjin Road.	\$20,000
MON-MAR158-MA	Sign Retroreflectivity Program	Citywide sign upgrade.	\$91
MON-MAR159-MA	Pavement Management Program	Citywide roadway maintenance.	\$17,052
MON-MAR160-MA	ADA Transition Program	Citywide sidewalk, ramp, intersection and bus-stop improvements.	\$1,621
MON-MAR164-MA	Reservation Road Traffic Calming	Install traffic calming measures.	\$2,704
MON-MAR166-MA	2nd Avenue Improvements	Restripe to remove Class II bike lanes for 4-lane roadway.	\$92
MON-MAR167-MA	Median Landscape Improvements	Citywide landscaping improvements to roadway medians.	\$250
MON-MAR168-MA	Marina Drive Drainage Improvements	Improve on existing drainage system, regrade roadway.	\$150
MON-MRY003-MY	Del Monte/Aguaquito and Del Monte/El Estero	Signal Improvements.	\$900
MON-MRY006-MY	Fremont - Aguaquito Intersection Improvements	Widen north leg for left turn pocket; modify signal to 8-phase operations; provide median landscaping.	\$800
MON-MRY007-MY	North Fremont Intersection Improvements and Class II Bikeway	Reconstruct intersections, realign roadways, install signals and install Class II bikeway.	\$18,200
MON-MRY008-MY	Lighthouse Corridor Improvements Phase II	Improve traffic circulation on Lighthouse Avenue and Foam Street.	\$3,000
MON-MRY009-MY	Mar Vista and Soledad Storm Drains	Extend storm drains to Mar Vista and Soledad.	\$774
MON-MRY011-MY	Munras Abrego - Webster Improvements	Widen roadway from 36' to 48' curb to curb with improvements on both sides of road.	\$650
MON-MRY017-MY	Munras - Soledad intersection Improvements	Capacity and operational improvements and Class II bikeway.	\$900
MON-MRY018-MY	York Road Improvements	Road rehabilitation, widening, bike lanes and signal installations and modification.	\$6,000
MON-MRY019-MY	Sloat - Mark Thomas Intersection Improvements	New left turn lane and intersection improvements; install bike detection for left-turning bicyclists.	\$700
MON-MRY021-MY	Citywide Street Overlay (Phases 1-13)	Street overlay program phases 1-13.	\$20,000
MON-MRY022-MY	Citywide Street Reconstruction (Phases 1 and 2)	Street reconstruction (Phases 1 and 2).	\$10,000
MON-MRY023-MY	Citywide Street Panel Replacement (Phases 1 and 2)	Street panel replacement (Phases 1 and 2).	\$10,000
MON-MRY024-MY	North Fremont Storm Drain Improvements	Stormdrain improvements.	\$2,500
MON-MRY033-MY	Munras/Eldorado Roundabout	Construct roundabout with bike improvements.	\$5,000

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-MRY034-MY	Citywide Adaptive Signal System	Install adaptive signal control on all arterial streets.	\$2,000
MON-MRY036-MY	Citywide Traffic Signal Safety and Operations	Citywide traffic signal safety and operations.	\$30,000
MON-MYC043-UM	Jolon Road Overlay Safety Improvements	Shoulder widening, & Geometric Improvements, and installation of 39.2 miles of Class II bikeway.	\$58,000
MON-MYC133-UM	Blackie Road Safety Improvements - Phase I	Roadway safety improvements.	\$1,321
MON-MYC134-UM	Blackie Road Safety Improvements - Phase II	Roadway safety improvements.	\$1,455
MON-MYC136-UM	Bridge Barrier Rail Replacement	Replace and rehabilitation of various bridges countywide.	\$500
MON-MYC147-UM	Castroville Improvements/Blackie Road	Construct new road from Castroville Boulevard to Blackie Road.	\$18,000
MON-MYC154-UM	Crazy Horse Canyon Road Improvements	Add passing lanes and construct Class II bike lanes from San Juan Grade Road to U.S. 101.	\$27,900
MON-MYC156-UM	CVMP - Laureles Grade Paved Turnouts and Signs	Paved turnouts and signs.	\$1,538
MON-MYC157-UM	CVMP - Carmel Valley Road between Laureles Grade and Ford Shoulder Widening	Shoulder widening.	\$2,308
MON-MYC159-UM	CVMP - Carmel Valley Road Passing Lanes (Front of September Ranch)	Passing lanes in front of September Ranch.	\$5,734
MON-MYC161-UM	CVMP - Grade Separation at Laureles Grade/Carmel Valley Road	Grade separation.	\$13,538
MON-MYC162-UM	CVMP - Laureles Grade at Carmel Valley Road Roundabout, Signalization, or Widening	Install signal or widen (prior to grade separation).	\$7,890
MON-MYC163-UM	CVMP - Laureles Grade Climbing Lane	Climbing lanes.	\$3,077
MON-MYC164-UM	CVMP - Laureles Grade Shoulder Addition	Shoulder improvements.	\$5,105
MON-MYC165-UM	CVMP - Left-Turn Channelization - W of Ford Drive	Left turn channelization.	\$2,000
MON-MYC166-UM	CVMP - Minor Interchanges	Minor interchanges.	\$5,332
MON-MYC167-UM	CVMP - Sight Distance Improvements at Dorris	Sight distance improvements.	\$2,377
MON-MYC168-UM	Davis Road	Install Class II bikeway.	\$3,193
MON-MYC181-UM	G12 San Miguel Canyon	Operational and capacity improvements, including road widening, turning lanes, signalization and intersection improvements, and bicycle and pedestrian facilities.	\$55,000
MON-MYC188-UM	Gonzales River Road Bridge Superstructure Replace	Bridge superstructure replacement.	\$7,584
MON-MYC191-UM	Harris Road Overlay	Overlay roadway.	\$3,000
MON-MYC200-UM	Johnson Canyon Land - Phase I	Overlay existing roadways: Gloria, Iverson and Johnson Canyon Roads.	\$3,000
MON-MYC202-UM	Johnson Road Bridge	Bridge replacement.	\$1,520
MON-MYC217-UM	Nacimiento Lake Drive Bridge No. 449	Replace current structure with two-lane approx. 300' long by approx. 28' wide bridge with associated retaining walls, approach road and right-of-way.	\$5,047

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-MYC225-UM	Peach Tree Road Bridge #412 Replacement	Replace current structure with two-lane approx. 75' long by approx. 16' wide bridge with associated approach work and right-of-way.	\$2,595
MON-MYC227-UM	Pine Canyon Road Improvements	Add turn lanes and Class II bike lanes on Pine Canyon Road from Pine Meadow Drive to Jolon Road (County Road G14). Construct traffic signal and perform intersection improvements on Pine Canyon Road at Jolon Road.	\$11,000
MON-MYC232-UM	Reservation Road Slip Out	Backfilling slopes (keyed in/stepped), drainage systems, pavement reconstruct, guardrail and erosion control/planting.	\$620
MON-MYC234-UM	Robinson Canyon Road Slip Out	Backfilling slopes (keyed in/stepped), drainage systems, pavement reconstruct and erosion control/planting.	\$815
MON-MYC235-UM	Rogge Road Improvements	Construct traffic signal at the intersection of Rogge Road and San Juan Grade Road.	\$900
MON-MYC238-UM	Salinas Road Improvements	Widen to four Lanes between future Hwy 1 and Salinas Road interchange and existing four-lane section. Widen existing three-lane section of Salinas Road from Werner Road to Elkhorn Road to four lanes. Add Class II bike lanes on Salinas Road from SR 1 to Elkhorn Road. Install traffic signal and construct Intersection Improvements at Salinas Road/Werner Road. Construct traffic signal on Elkhorn Road at Salinas Road. Re-align Salinas Road and Werner Road to intersect Elkhorn Road at a single location with a traffic signal.	\$15,200
MON-MYC247-UM	San Miguel Canyon Road at Castroville Boulevard	Signalization of the intersection, roadway widening and striping improvements.	\$2,652
MON-MYC260-UM	Scenic Road Protection	Protect Scenic Road from erosion due to wind & surf and Carmel River.	\$92
MON-MYC266-UM	Street Rehabilitation/Overlay	Overlay roadways.	\$54,689
MON-MYC290-UM	Countywide Local Bridge Repair and Maintenance	Unspecified countywide local bridge repair and maintenance costs.	<u>\$169,780</u> \$44,520
MON-PGV001-PG	Congress - Sunset Roundabout	Construct a roundabout at Congress and Sunset including ROW, landscaping, curb and paving; make accommodations for bicyclists and pedestrians.	\$2,500
MON-PGV005-PG	Lighthouse Avenue Resurfacing	Resurface street, drainage improvements.	\$700
MON-PGV012-PG	Ocean View Boulevard Resurfacing	Repair and resurface street.	\$3,840
MON-PGV013-PG	Pine Avenue Resurfacing	Repair and resurface street.	\$5,900
MON-PGV014-PG	Miscellaneous Street Improvements - Various Streets	Pavement repair, cross gutter, curb and gutter, sidewalks, traffic striping and signs.	\$400
MON-PGV015-PG	Miscellaneous Drainage Improvements - Various Streets	Storm drain repair/improvements, catch basins, manholes and cross gutters.	\$400
MON-SCY003-SA	California - Playa Signal	Install new traffic signal with bike and ped accommodations.	\$225
MON-SCY005-SA	Sand City Rehab in Old Town Area	Install street lighting, reconstruct streets in Old Town area; design shared streets (Woonerfs).	\$3,500
MON-SCY013-SA	California Avenue Pavement Overlay	Overlay street; install Class II/Class III markings.	\$156
MON-SCY014-SA	Contra Costa Realignment	Realign Contra Costa to at Del Monte.	\$500
MON-SEA005-SE	Fremont - Broadway	Roadway improvements, utility relocation, ADA ramps, landscaping and signal upgrade.	\$387

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-SEA022-SE	2nd Avenue/Seaside Development Parcel	New signal and channelization.	\$200
MON-SEA023-SE	2nd Avenue/1st Street Improvements	New signal and channelization.	\$200
MON-SEA026-SE	Del Monte Boulevard Improvements	Implement channelization improvements at specific intersections and Del Monte rehab.	\$5,000
MON-SEA027-SE	Fremont Boulevard Signal Installation	Install signal interconnect conduit.	\$500
MON-SEA028-SE	West Broadway Avenue Corridor Improvements	Corridor rehabilitation including intersection improvements, bikeways and road rehab.	\$12,400
MON-SEA030-SE	Update and Implement Pavement Management System - Street Maintenance	Roadway improvements to include total reconstruction and overlay.	\$9,000
MON-SEA035-SE	Lightfighter & General Jim Moore Intersection Improvements	Install roundabout.	\$2,500
MON-SNS006-SL	U.S. 101 - Alvin Drive Overpass/Underpass and Bypass	Construct overpass/underpass and 4 lane street structure.	\$12,325
MON-SNS008-SL	Bernal Drive East Improvements	Widen road, construct sidewalk and retaining wall on north side of road; between N. Main and Roasarita Drive.	\$1,647
MON-SNS022-SL	East Salinas	Reconstruct various streets in East Salinas.	\$5,740
MON-SNS024-SL	Elvee Drive	Construct 44' wide culvert and extend two lanes between Work to Elvee.	\$3,600
MON-SNS033-SL	Laurel Drive Intersection Improvements	Intersection improvements.	\$583
MON-SNS040-SL	Martella and Preston Streets	Reconstruction of deteriorated streets.	\$650
MON-SNS041-SL	Maryal Drive Reconstruction	Widen roadway behind Rodeo Grounds (from 36' to 40').	\$1,260
MON-SNS042-SL	Natividad - Laurel Intersection	Widen intersection to add one right turn lane; leave space for through bike lane to left of right turn lane.	\$575
MON-SNS058-SL	Williams Road Median Island	Construct median from E. Alisal to Bardin.	\$982
MON-SNS106-SL	Alisal Street Improvements	Add left turn channelizations at major intersections.	\$33
MON-SNS107-SL	John Street Improvements	Add left turn channelization and eliminate on street parking.	\$766
MON-SNS109-SL	San Juan Grade - Russell Road Intersection Improvements	Install signal.	\$371
MON-SNS111-SL	Boronda Road - Natividad Road Intersection Improvements	Install signal.	\$542
MON-SNS112-SL	Boronda Road - East Constitution Intersection Improvements	Install signal.	\$546
MON-SNS113-SL	Boronda Road - Sanborn Road Intersection Improvements	Install signal.	\$501
MON-SNS114-SL	Boronda Road - Williams Road Intersection Improvements	Install signal.	\$490
MON-SNS115-SL	Natividad Road - Russell Road Intersection Improvements	Install signal.	\$440
MON-SNS116-SL	Sanborn Road - Alisal Street Intersection Improvements	Install signal.	\$218
MON-SNS117-SL	Independence Boulevard - Boronda Road Intersection Improvements	Install signal.	\$534
MON-SNS125-SL	Bardin/Schonberg Roundabout	Roundabout at Bardin Road/Schonberg Parkway.	\$500

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-SNS128-SL	Front Street/Sherwood/Rossi Traffic Signal Coordination	Signal coordination on Front Street/Sherwood Drive.	\$450
MON-SNS142-SL	North Main Street Intersection Improvements	Traffic signal/intersection control.	\$586
MON-SNS143-SL	Laurel Drive/Street Edwards Intersection Improvements	Traffic signal installation, lighting and sidewalks.	\$600
MON-SNS144-SL	Boronda Road Roundabouts	Roundabouts at 4 intersections.	\$10,000
MON-SNS145-SL	W Alisal Complete Streets	Circulation, bike lanes, ped and transit.	\$2,959
MON-SNS146-SL	Lincoln Avenue Complete Streets	Circulation, bike lanes and bus facilities.	\$1,570
MON-SNS147-SL	Sherwood Drive/Sherwood Place Intersection	Traffic signal installation.	\$400
MON-SNS148-SL	Market Street/Merced	Traffic signal installation.	\$400
MON-SNS149-SL	Sanborn Road - Mayfair Intersection	Traffic signal installation.	\$400
MON-SNS150-SL	Alisal Street - Capitol Intersection Improvements	Traffic signal installation.	\$400
MON-SNS151-SL	Alvin Drive - Linwood Intersection Improvements	Traffic signal installation.	\$400
MON-SNS152-SL	Blanco Road/Padre Drive Intersection Improvements	Traffic signal installation.	\$400
MON-SNS153-SL	Williams/Garner Intersection Improvements	Traffic signal installation.	\$400
MON-SNS154-SL	Boronda/Sanborn Intersection Improvements	Traffic signal installation.	\$400
MON-SNS155-SL	Constitution Boulevard/Las Casitas Intersection Improvements	Traffic signal installation.	\$400
MON-SNS156-SL	Blanco Road/San Vicente Intersection Improvements	Traffic signal installation.	\$400
MON-SNS157-SL	Davis Road/Chevron Station Intersection Improvements	Traffic signal installation.	\$400
MON-SNS158-SL	Market/Towt Intersection Improvements	Traffic signal installation.	\$400
MON-SNS159-SL	Market/Eucalyptus Intersection Improvements	Traffic signal installation, lighting and sidewalks.	\$400
MON-SNS160-SL	Traffic Calming Projects	Local traffic calming projects.	\$2,500
MON-SNS161-SL	Natividad/Gabilan Creek Trail	Bike/ped trail repairs.	\$1,100
MON-SNS165-SL	Work Street	Street repairs.	\$1,000
MON-SNS166-SL	Wiren Street	Street repairs.	\$750
MON-SNS167-SL	W Rossi Street	Overlay between N Main and Davis Road.	\$1,250
MON-SNS168-SL	W Laurel Drive	Overlay between N Main and Adams Street.	\$1,000
MON-SNS169-SL	W Lake Street	Overlay between Rico Street to N Main Street.	\$500
MON-SNS170-SL	Homestead Avenue	Overlay between Alisal and Wilson.	\$500
MON-SNS173-SL	Anderson Avenue	Reconstruction (Mercer Way to Skyview Boulevard).	\$250
MON-SNS174-SL	Archer Street	Overlay between Riker to Capitol.	\$750
MON-SNS175-SL	Ashbury Way	Overlay between Adobe Drive to Victor Street.	\$400
MON-SNS176-SL	Bardin Circle	Overlay (Bardin Way to Bardin Way).	\$300
MON-SNS177-SL	Bardin Road	Overlay (Williams Road to Sconberg Parkway).	\$1,000
MON-SNS178-SL	Bardin Way	Overlay (Williams Road to Bardin Circle).	\$500
MON-SNS179-SL	Beacon Hill Drive	Overlay (between Constitution Boulevard to Constitution Boulevard).	\$1,500
MON-SNS180-SL	Beech Street	Overlay (Acosta Boulevard to Garner Avenue).	\$750

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-SNS181-SL	Bellehaven Street	Overlay (Towt Street to Williams Road).	\$750
MON-SNS182-SL	Block Avenue	Overlay (Kip Drive to Parsons Avenue).	\$900
MON-SNS183-SL	Bridge Street	Reconstruction (N Main to Rossi Street).	\$500
MON-SNS184-SL	Brutus Street (N Bulb)	Overlay.	\$200
MON-SNS185-SL	Burke Street	Overlay (between Del Monte Avenue to end).	\$500
MON-SNS186-SL	Burton Avenue	Reconstruct (From Harkins Road to end).	\$1,000
MON-SNS187-SL	California Alley	Reconstruct (From W Alisal to end).	\$1,000
MON-SNS188-SL	Central Avenue	Overlay (from Davis Road to Salinas Street).	\$1,500
MON-SNS189-SL	Chaparral Street	Overlay (from N Main to Natividad).	\$400
MON-SNS190-SL	Cherokee Drive	Overlay (From Alvin Drive to end).	\$400
MON-SNS191-SL	Chinatown Streets	Reconstruction.	\$2,000
MON-SNS192-SL	Circle Drive	Overlay (N Madeira to Oregon Street).	\$600
MON-SNS193-SL	Colusa Place	Overlay (Mendocino Drive to Mendocino Drive).	\$900
MON-SNS194-SL	Constitution Boulevard	Overlay (E Laurel to Independence).	\$1,800
MON-SNS195-SL	Dallas Avenue	Overlay (Garner to Del Monte).	\$500
MON-SNS196-SL	Dayton Street	Reconstruct (Harkins to end).	\$1,000
MON-SNS197-SL	Del Monte Avenue	Street repairs.	\$500
MON-SNS199-SL	Division Street	Street repairs.	\$500
MON-SNS200-SL	E Alisal Street	Street repairs.	\$3,000
MON-SNS201-SL	E Alvin Drive	Street repairs.	\$2,000
MON-SNS202-SL	E Bolivar Street	Street repairs.	\$500
MON-SNS203-SL	E Boronda Road	Street repairs.	\$15,000
MON-SNS204-SL	E Lake Street	Street repairs.	\$1,500
MON-SNS205-SL	Lamar Street	Street repairs.	\$500
MON-SNS206-SL	E Laurel Drive	Street repairs.	\$2,500
MON-SNS207-SL	E Laurel Drive	Street repairs.	\$2,000
MON-SNS208-SL	E Romie Lane	Street repairs.	\$3,000
MON-SNS209-SL	E Rossi Street	Street repairs.	\$100
MON-SNS210-SL	El Dorado Drive	Street repairs.	\$500
MON-SNS211-SL	Elkington Avenue	Street repairs.	\$500
MON-SNS212-SL	Emerald Way	Street repairs.	\$300
MON-SNS213-SL	Garfield Circle	Street repairs.	\$150
MON-SNS214-SL	Garner Avenue	Street repairs.	\$2,600
MON-SNS215-SL	Happ Place	Street repairs.	\$250
MON-SNS216-SL	Harkins Road	Street repairs.	\$3,000
MON-SNS217-SL	Haven Alley	Street repairs.	\$1,000
MON-SNS218-SL	Hebbron Alley	Street repairs.	\$1,000
MON-SNS219-SL	Homestead Avenue	Street repairs.	\$500
MON-SNS220-SL	Independence Boulevard	Street repairs.	\$1,500
MON-SNS221-SL	Jeffrey Avenue	Street repairs.	\$500
MON-SNS222-SL	Kip Drive	Street repairs.	\$500
MON-SNS223-SL	Larkin Street	Street repairs.	\$500
MON-SNS224-SL	Linwood Drive	Street repairs.	\$500
MON-SNS225-SL	Main Street	Street repairs.	\$300
MON-SNS226-SL	Marigold Way	Street repairs.	\$300
MON-SNS227-SL	Mariposa Court	Street repairs.	\$400
MON-SNS228-SL	Maryal Drive	Street repairs.	\$300

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-SNS229-SL	Mae Avenue	Street repairs.	\$300
MON-SNS230-SL	McGowan Circle	Street repairs.	\$300
MON-SNS231-SL	Miami Street	Street repairs.	\$200
MON-SNS232-SL	Navajo Drive	Street repairs.	\$500
MON-SNS233-SL	N Davis Road	Street repairs.	\$3,000
MON-SNS234-SL	N Main Street	Street repairs.	\$2,400
MON-SNS235-SL	N Sanborn Road	Street repairs.	\$1,700
MON-SNS236-SL	Natividad Road	Street repairs.	\$2,000
MON-SNS237-SL	New Street	Reconstruct (W Market to end).	\$500
MON-SNS238-SL	Pajaro Street	Overlay (Market Street to San Miguel).	\$2,000
MON-SNS239-SL	Palma Drive	Overlay (University Avenue to Iverson).	\$500
MON-SNS240-SL	Pearl Alley	Reconstruct (S Pearl to S Hebbbron).	\$500
MON-SNS241-SL	Post Drive	Overlay (N Davis to Calle de Adobe).	\$1,000
MON-SNS242-SL	Prince Place	Overlay (S Hebbbron Avenue to S Hebbbron).	\$500
MON-SNS243-SL	Rider Avenue	Overlay (Gee Street to Williams Road).	\$3,000
MON-SNS244-SL	Riker Street	Overlay (W Blanco Road to Alisal Street).	\$1,500
MON-SNS245-SL	Ramona Avenue	Overlay (E Laurel Drive to Glacier Drive).	\$500
MON-SNS246-SL	S Felice Street	Overlay (E Alisal Street to John).	\$500
MON-SNS247-SL	S Hebbbron Avenue	Overlay (E Alisal to Prince Place).	\$300
MON-SNS248-SL	S Sanborn Road	Overlay (John Street to E Alisal Street).	\$1,700
MON-SNS249-SL	San Benito Street	Overlay (S Madeira to end).	\$400
MON-SNS250-SL	San Miguel Avenue	Overlay (S Main Street to San Mateo Drive).	\$1,500
MON-SNS251-SL	Skyway Boulevard	Overlay (E Alisal to Airport Boulevard).	\$2,000
MON-SNS252-SL	Sucre Court	Overlay (E Lamar to E Lamar).	\$300
MON-SNS253-SL	Terven Avenue	Overlay (S Sanborn Road to Airport Boulevard).	\$1,500
MON-SNS254-SL	Towt Street	Overlay (E Market Street to Mae Street/Morena Way).	\$2,000
MON-SNS255-SL	Trinity Way	Overlay (E Alvin Drive to end).	\$600
MON-SNS256-SL	Tyler Street	Overlay (Rochex to W Curtis).	\$250
MON-SNS257-SL	Vale Street	Reconstruct (West Market Street to end).	\$250
MON-SNS258-SL	Van Buren Avenue	Overlay (Russel to San Juan Grade).	\$500
MON-SNS259-SL	W Blanco Road	Slurry (Luther Way to Padre Drive).	\$500
MON-SOL007-SO	Street Resurfacing & Sidewalk Repair	Apply seal coats and resurface various local streets. Construct missing sidewalk and handicap ramps. Replace broken sidewalk and ramps. Mark bike facilities.	\$3,150
MON-SOL030-SO	Intersection Improvements	Install signal.	\$800
MON-SOL031-SO	Intersection Improvements	Construct intersection and install signal.	\$2,548
MON-SOL032-SO	Intersection Improvements	Construct intersection and install signal.	\$1,721
MON-SOL033-SO	Intersection Improvements	Construct intersection and install signal/roundabout.	\$2,883
MON-SOL034-SO	Intersection Improvements	Construct intersection and install signal.	\$2,120
MON-SOL035-SO	Intersection Improvements	Construct intersection and install signal.	\$2,878
MON-SOL036-SO	Intersection Improvements	Construct intersection and install signal.	\$2,503
MON-SOL037-SO	Intersection Improvements	Construct intersection and install signal.	\$2,119
MON-SOL038-SO	Intersection Improvements	Construct intersection and install signal.	\$2,262
MON-SOL039-SO	Intersection Improvements	Construct intersection and install signal.	\$2,879
MON-SOL040-SO	Intersection Improvements	Construct intersection and install signal.	\$2,583
MON-SOL042-SO	Intersection Improvements	Construct intersection and install signal.	\$324

Table 6 Other Projects

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-MAA002-MAA	Airport Land Use Plan	Update Airport Land Use Plan.	\$150
MON-MAA020-MAA	Taxiway A, B, C, D Lighting and Signage Improvements	Construct Taxiway A, B, C, D lighting and signage improvements.	\$814
MON-MAA021-MAA	Taxiway A, B, D, D Overlay and Markings	Install Taxiway A, B, D, D overlay and markings.	\$680
MON-MDR002-MDR	East Apron Drainage System	Install east apron drainage system.	\$175
MON-MDR003-MDR	East Apron Overlay	Overlay east apron.	\$200
MON-MDR005-MDR	Overlay Runway	Overlay runway.	\$500
MON-MDR006-MDR	Pave Tie Down Apron Area	Pave tie down apron area.	\$250
MON-MDR008-MDR	Airport Lighting and Fencing Replacement	Replace airport lighting and fencing.	\$400
MON-MPA061-MRA	Terminal Complex - Construction (Terminal Building)	Construct terminal building.	\$64,000
MON-MPA062-MRA	Terminal Complex - Construction (Roads & Surface Parking)	Construct roads and surface parking.	\$28,231
MON-TAMC009-TAMC	Habitat Preservation/Advance Mitigation	Countywide habitat preservation/advance mitigation for projects.	\$5,000

Table 7 Transportation Demand Management

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-TAMC005-TAMC	Monterey County 511 Traveler Information and Rideshare/Commute Alternatives	Administer 511 Traveler Information program and rideshare/commute alternative programs for Monterey County.	\$5,250

Table 8 Transit ADA

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-MST014-MST	Mobility Management		\$92,000
MON-MST015-MST	RIDES Bus Replacement		\$16,000
MON-MST017-MST	RIDES Operations		\$106,000
MON-TAMC012-TAMC	Senior & Disabled Transportation	Countywide support for senior & disabled transportation.	\$15,000

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Table 9 Transit Improvements

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-FRA020-MST	Fort Ord Intermodal Centers	Project includes 3 elements: 1. Intermodal Transportation Center at 1st Avenue South of 8th Street 2. Park and Ride Facility at 12th Street and Imjin and 3. Park and Ride Facility at 8th Street and Giggling (FORA CIP T22).	\$4,615
MON-KCY035-CK	Multimodal Transportation Center	UPRR Station with bus, bike, pedestrian and military bus/parking- to/from Ft Hunter Liggett.	\$3,600
MON-MST008-MST	Salinas - Marina Multimodal Corridor	Construct multimodal Bus Rapid Transit Improvements between Salinas and Marina, including a multimodal transit corridor through the former Fort Ord in Marina.	\$60,000
MON-MST011-MST	Salinas Bus Rapid Transit	Construct Bus Rapid Transit improvements along E. Alisal Street.	\$20,000
MON-MST016-MST	Transit Capacity for SR 1/Bus on Shoulder	Construct improvements to accommodate regional MST bus service along SR 1 during peak travel periods.	\$32,000
MON-MST019-MST	Highway 68 Corridor Transit Improvements		\$15,000
MON-MST020-MST	Salinas Bus Rapid Transit	Construct Bus Rapid Transit improvements along North Main Street.	\$20,000
MON-TAMC003-TAMC	Rail Extension to Monterey County	Extends existing rail service from San Jose to Salinas and constructs station improvements in Gilroy, Pajaro, Castroville and Salinas.	\$135,710
MON-TAMC004-TAMC	Amtrak Coast Daylight Rail Service	Establishes once daily Amtrak intercity rail service between downtown San Francisco and downtown Los Angeles with stops in Salinas, Soledad and King City.	\$500

Table 10 Transit Operations

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-MST002-MST	Bus Operations		\$552,481
MON-TAMC013-TAMC	Commuter Bus, Salinas Valley Transit Center(s) & Vanpools	Commuter Bus, Salinas Valley Transit Center(s) & Vanpools.	\$25,000

Table 11 Transit Rehabilitation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-MST001-MST	Bus Rolling Stock		\$25,000
MON-MST003-MST	Bus Station/Stops		\$42,000
MON-MST004-MST	Bus Support Equipment and Facilities/Intelligent Transportation Systems (ITS)		\$20,000
MON-MST005-MST	Communication/Radio Equipment		\$30,000
MON-MST006-MST	Preventative Maintenance		\$21,000
MON-MST007-MST	Safety and Security		\$2,000
MON-MST009-MST	Operations & Maintenance Facilities		\$100,000
MON-MST010-MST	Bus Replacement		\$64,000
MON-MST012-MST	Bus Rehab/Renovate		\$28,400
MON-MST013-MST	Bus Electrification		\$119,600
MON-MST018-MST	South Monterey County Regional Transit Improvements	Increases the frequency of MST Line 23 service between King City and Salinas and constructs improvements along Abbott Street between U.S. 101 and Romie Way in Salinas. Stops in King City, Greenfield, Soledad, Gonzales, Chualar and Salinas.	\$27,500
MON-SNS120-SL	Salinas ITC Station Improvements	Upgrades to passenger terminal and freight buildings.	\$2,300

Table 12 Transportation System Management

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MON-MRY010-MY	Multimodal WAVE ITS	Install advanced traveler info kiosks and related equipment in four buses.	\$670
MON-MRY015-MY	Downtown Signal ITS	Install new signal boxes and opticom signal detectors.	\$500
MON-SEA020-SE	1st Avenue/Lightfighter Drive Improvements	Modify signal and intersection improvements.	\$500

San Benito County

Table 1 Active Transportation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-COG-A57	Safe Routes to Schools Implementation Program	Infrastructure improvements to achieve safer routes to schools for walking and bicycling at R.O. Hardin & Calaveras Elementary Schools.	\$1,126
SB-COH-A20	Sunnyslope Road Bike Lane	Construct Class II bike lane from Cerra Vista to Memorial Drive.	\$21
SB-COH-A23	Ladd Lane Bike Lane	Construct II bike lane from Tres Pinos Road to existing Class II on Ladd Lane.	\$5
SB-COH-A25	Central Avenue Bike Lane	Construct Class II bike lane from Bridge Road to East Street.	\$50
SB-COH-A30	Meridian Street Bike Lane	Construct Class II bike lane from Memorial Drive to McCray Street.	\$32
SB-COH-A60	Complete Streets Project for Nash/Tress Pines/Sunnyslope Roads and McCray Street	Complete street segments include: sidewalks, bike lanes, curb extensions, median islands, narrower travel lanes, roundabouts, etc.	\$6,760
SB-COH-A66	McCray Street Bike Lane	Class II, .61 miles, Hillcrest to Santa Ana Road, Tier No. 2.	\$18
SB-COH-A67	Cerra Vista Bike Lane	Class III, .73 miles, Union Road to Sunnyslope Road.	\$10
SB-COH-A70	Steinbeck Drive Bike Lane	Class III, .10 miles, Line Street to Westside Boulevard, Tier No. 3.	\$1
SB-COH-A71	Meridian Road Bike Lane	Class III, .47 miles, End of Meridian to Memorial Drive, Tier No. 3.	\$6
SB-COH-A72	Bridgevale Road Bike Lane	Class III, .26 miles, from Fourth Street (Previously San Juan Road) to Central Avenue, Tier No. 3.	\$3
SB-COH-A73	Beverly Drive Bike Lane	Class III, .53 miles, Sunnyslope Road to Hillcrest Road, Tier No. 3.	\$7
SB-COH-A79	Westside Boulevard Bike Lane	Class II, .28 miles, between South Street and Jan Avenue, Tier No. 1.	\$5
SB-SBC-A22	Airline Highway Bike Lane	Construct Class I bike lane from Sunset Drive to existing Class I on Airline Highway (Tres Pinos Town).	\$42
SB-SBC-A34	Santa Ana Road/Buena Vista Road/North Street Bike Lane	Construct Class II Bike Lane, 3.97 miles, partially located in the City of Hollister.	\$118
SB-SBC-A63	Union Road Bike Lane	Class III, 3.83 miles, Highway 156 to Cienega Road, Tier No. 3.	\$51
SB-SBC-A65	San Benito River Recreational Trail Phase 1 (Reach 1-3)	Construct a portion of recreational bicycle/pedestrian/equestrian trail along the San Benito River.	\$5,627
SB-SJB-A06	Pedestrian Crosswalk at Intersection of The Alameda & Hwy 156	Install meters, screens and stripe on east side of The Alameda & Highway 156.	\$50
SB-SJB-A11	Third Street Bike Lane	Striping a bike lane on Third Street.	\$10
SB-SJB-A12	First Street Bike Lane	Striping a bike lane on First Street.	\$10
SB-SJB-A13	Fourth Street Bike Lane	Striping a bike lane on Fourth Street.	\$10
SB-SJB-A17	Franklin Street Bike Lane	Class III, .17 miles, 4th Street to South side of San Juan Bautista Historic Park, Tier No. 2.	\$2

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-SJB-A18	4th Street- San Jose Bike Lane	Class III, .16 miles, 4th Street to North side of San Juan Bautista Historic Park, Tier No. 3.	\$2
SB-SJB-A19	San Jose Street - The Alameda Bike Lane	Class III, .54 miles, The Alameda to Monterey Street, Tier No. 3.	\$7
SB-SJB-A20	Second Street Bike Lane	Class III, .14 miles, San Jose Street to Monterey Street, Tier No. 3.	\$2
SB-SJB-A23	1st Street Bike Lane	Class III, .10 miles, Monterey Street to existing Class II on 1st Street, Tier No. 3.	\$1

Table 2 Highway Improvements

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-COG-A54	State Route 25 Corridor Improvements Project	To enhance safety, improve traffic operations, and provide additional capacity to reduce congestion for all transportation modes on Highway 25 between San Felipe Road and the San Benito/Santa Clara County line.	\$135,000
SB-CT-A01	SR 156 Widening - San Juan Bautista to Union Road	Construct a four-lane expressway south of the existing State Route 156 and use the existing SR 156 as the northern frontage road, including a roundabout at Bixby Road.	\$68,339 \$62,849
SB-CT-A17	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	Widen to 4-lane expressway with bicycle lanes.	\$28,214
SB-CT-A44	Highway 25 (4-Lane Widening) – Phase 1	Widen to 4-lane expressway, San Felipe Road to Hudner Lane.	\$62,000
SB-VTA-A01	Highway 101/25 Interchange	New interchange at Highway 101 and Highway 25 in Santa Clara County.	\$185,000
SB-VTA-A02	New State Route 152 Alignment: Environmental Study	Construct new alignment of State Route 152 from State Route 156 to U.S. 101.	\$30,000

Table 3 Highway Operational, Maintenance and Rehabilitation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-CT-A02	Highway 156/Fairview Road Intersection Improvements	Construct new turn lanes at the intersection.	\$6,824
SB-CT-A43	SHOPP Group Lump Sum Project Listing	Varies, grouped project listing, 2018-2040.	\$132,153

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Table 4 Local Street and Road Improvements

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-COH-A11	Union Road (formerly Crestview Drive) Construction	Construct new 2-lane road.	\$11,000
SB-COH-A16	Memorial Drive Extension: Meridian Street to Santa Ana Road	Construct 4-lane road extension with bicycle lanes.	\$3,355
SB-COH-A18	Westside Boulevard Extension	Construct 2-lane road; Nash Road to Southside Road/San Benito Street intersection with bicycle lanes.	\$13,360
SB-COH-A19	North Street (Buena Vista) between College Street and San Benito Street	Construct 2-lane road with bicycle lanes.	\$4,207
SB-COH-A55	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	Construct new 4-lane road and extension with bicycle lanes.	\$13,842
SB-COH-A57	Pacific Way (New Road): San Felipe Road to Memorial Drive	New 2-lane road from San Felipe Road to future Memorial Drive north extension with bicycle lanes.	\$7,412
SB-SBC-A04	Union Road Widening (East): San Benito Street to Highway 25	Widen to 4-lane arterial with bicycle lanes.	\$5,463
SB-SBC-A05	Union Road Widening (West) San Benito Street to Highway 156	Widen to 4-lane arterial with bicycle lanes.	\$15,448
SB-SBC-A09	Fairview Road Widening: McCloskey to SR 25	Widen to 4-lane arterial; construct new bridge south of Santa Ana Valley Road with bicycle lanes.	\$20,790
SB-SBC-A14	San Benito Regional Park Access Road	Construct new 2-lane roadway from Nash Road to San Benito Street.	\$565
SB-SBC-A50	Hospital Road Bridge	Hospital Road over San Benito River, between South Side Road and Cienega Road. Replace lane low water crossing with 2 lane bridge. Bridge No. 00L0026.	\$15,200
SB-SBC-A67	Shore Road Extension	4-Lane Arterial with Class II bike lanes.	\$20,350
SB-SBC-A79	Enterprise Road Extension	Extend Enterprise Road westerly from Southside Road toward Union Road.	\$3,000
SB-SBC-A81	Meridian Street Extension: 185 feet east of Clearview Road to Fairview Road	Construct 4-lane road. Located in the City of Hollister and County with bicycle lanes.	\$9,445
SB-SBC-A82	Flynn Road Extension	San Felipe Road to Memorial Drive north extension. New roadway construction south of McCloskey Road with bicycle lanes.	\$7,709
SB-SJB-A07	Third Street Extension	Constructing Third Street to connect to First Street.	\$400
SB-SJB-A08	Lavanigno Drive Construction	Construction of Lavanigno Drive, split lanes with island in the middle; total 4 lanes.	\$500
SB-SJB-A09	Connect Lang Street to Lang Street to the Alameda	Construct and connect Lang Street; 2 lanes.	\$750
SB-SJB-A14	Reconstruction of Muckelemi Street to Monterey Street	Reconstruction of Muckelemi Street to Monterey adding planting strip median.	\$160

Table 5 Local Street and Road Operational, Maintenance and Rehabilitation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-COH-A13	West Gateway Improvement Project	Streetscape and intersection improvements.	\$4,237
SB-COH-A58	Westside Boulevard & Nash Road Westside Boulevard Extension (Intersection)	New signalization of 2-lane collector south leg (Westside Extension), existing 4-lane north leg with existing 2-lane local; 4 approaches, turning lanes will be added.	\$575
SB-COH-A59	Westside Boulevard Extension (Intersection)	New signalization of new 2-lane collector (Westside Extension) with 2-lane arterial; 4 approaches, turning lanes will be constructed at Westside Boulevard & San Benito Street.	\$500
SB-COH-A61	City of Hollister Local Street & Roadway Maintenance: 2019-2030	System preservation and maintenance.	\$56,930
SB-COH-A62	City of Hollister Local Street & Roadway Maintenance: 2031-2040	System preservation and maintenance.	\$8,449 \$19,086
SB-COH-A63	South Street & Westside Boulevard Intersection	New signalization of 4-lane collector with 2-lane collector; 4 approaches, retain current lane configuration.	\$550
SB-COH-A64	Fourth Street (San Juan Road) & West Street or Monterey Street Intersection	New signalization of 2-lane collector with 2-lane local; 4 approaches, retain current lane configuration with bicycle lanes.	\$400
SB-COH-A65	Memorial Drive & Hillcrest Road Intersection	New signalization of 4-lane arterial with 4-lane arterial, 4 approaches. Existing lane configuration to remain with bicycle lanes.	\$700
SB-COH-A74	Flynn Road & San Felipe Road Intersection	New signalization of 4-lane arterial with 4-lane arterial.	\$800
SB-COH-A75	Memorial Drive & Santa Ana Road Memorial Drive South Extension (Intersection)	New signalization of future 4-lane arterial (Memorial) with non-TIMF widening to 4-lane arterial; 4 approaches, turning lanes will be constructed.	\$800
SB-COH-A76	Memorial Drive South Extension: Meridian Street to Memorial Drive (Intersection)	New signalization of future 4-lane arterial (memorial) with 4-lane arterial; 4 approaches, turning lanes will be constructed.	\$800
SB-COH-A77	Gateway Drive & San Felipe Road Intersection	New signalization of new 2-lane collector with 4-lane arterial; 3 approaches, LTO's exist.	\$525
SB-COH-A78	Rancho Drive & East Nash (Tres Pinos Road) Intersection	New roundabout.	\$700
SB-COH-A80	SB1 RMRA: City of Hollister (2018- 2040)	System preservation and maintenance.	\$18,370 \$13,399
SB-SBC-A51	Y Road Bridge	Y Road over San Benito River replace 2-lane Low-Water Crossing with 2-lane bridge. Bridge No. 00L0069.	\$15,200
SB-SBC-A52	Union Road Bridge	Union Road over San Benito River, East Cienega Road. Replace bridge, no added capacity. Bridge No. 43C0002.	\$24,450
SB-SBC-A53	Panoche Road Bridge (Bridge No. 43C0016)	Panoche Road over Tres Pinos Creek, 6 miles E of SR 25. Scour Countermeasure. Bridge No. 43C0016.	\$3,700
SB-SBC-A54	Panoche Road Bridge (Bridge No. 43C0027)	Panoche Road, over Tres Pinos Creek, 12 miles west Little Panoche Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0027.	\$4,825
SB-SBC-A55	Shore Road Bridge	Shore Road, over Tequisquita Slough Overflow and bridge No. 43C0051, San Felipe Road, over branch of Santa Ana Creek. Replace bridge railings. Bridge No. 43C0012 and 43C0051.	\$329

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-SBC-A56	Rosa Morada Bridge	Rosa Morada Road over Arroyo Dos Picachos, 0.6 Mi E Fairview Road. Replace bridge (no added lane capacity) Bridge No. 43C0041.	\$3,300
SB-SBC-A57	Limekiln Road Bridge	Limekiln Road over Pescadero Creek, 0.1 Mi S Cienega Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0054.	\$2,800
SB-SBC-A58	Rocks Road Bridge	Rock Road over Pinacate Rock Creek, East Little Merrill Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0053.	\$2,540
SB-SBC-A59	Anzar Road Bridge	Anzar Road over San Juan Creek, 0.35 Miles with San Juan Hwy Road. Replace 2-lane with 2-lane bridge (no added capacity) Bridge No. 43C0039.	\$2,870
SB-SBC-A69	Fairview Road & Hillcrest Road Intersection	New signalization of future widening to 4-lane arterial (north & south legs) with future non-TIMF widening to 4-lane arterial (west leg only); 3 approaches. Turning lanes existing on all approaches, SB & NB through lanes will be constructed with Fairview Road widening. TIF	\$600
SB-SBC-A70	Union Road & Fairview Road Intersection	New signalization of future widening to 4-lane arterial (north & south legs) with future new 4-lane arterial (west leg only); 3 approaches. Turning lanes on Fairview Road. Added with Project No. 8; turning lanes on Union Road.	\$655
SB-SBC-A71	Enterprise Road & Airline Highway (SR 25) Intersection	New signalization of future widening to 4-lane arterial (north & south legs) with 2-lane arterial; 4 approaches, EB & WB through lanes will be constructed with Airline Hwy Project No. 5 with bicycle lanes.	\$700
SB-SBC-A73	McCloskey Road & Fairview Road Intersection	New signalization of 4-lane arterial with 2-lane local, 3 approaches. LTO on lanes 3 approaches, RTO on 2 approaches.	\$734
SB-SBC-A74	Meridian Street & Fairview Road Meridian Street Extension (Intersection)	New signalization of 4-lane arterial with 4-lane arterial: 3 approaches, turning lanes exist, through lane on Fairview will be constructed.	\$600
SB-SBC-A75	Fairview Road & Fallon Road Intersection	New signalization of 4 lane arterial with 2-lane collector, 4 approaches. LTO & RTO on all approaches.	\$944
SB-SBC-A77	San Benito County Local Street & Roadway Maintenance: 2019-2030	System preservation and maintenance.	\$124,380
SB-SBC-A78	San Benito County Local Street & Roadway Maintenance: 2031-2040	System preservation and maintenance.	\$5,632 <u>\$6,933</u>
SB-SBC-A83	Fairview Road & Airline Highway/SR 25 Intersection	New signalization of 4-lane arterial (east & west legs) with 4-lane arterial (north leg) & 2-lane (south leg). LTO & RTO existing on all approaches, EB & WB through lanes constructed.	\$850
SB-SBC-A84	SR 156 & Buena Vista Road Intersection	New signalization of new 2-lane collector with 4-lane arterial, LTO on 4 approaches.	\$765
SB-SBC-A86	John Smith Realignment at Fairview Intersection	This project will realign John Smith Road to intersect Fairview Road at St. Benedict Way and add left and right turn lanes into John Smith Road.	\$2,200
SB-SBC-A87	SB1 RMRA: San Benito County (2018-2040)	System preservation and maintenance.	\$48,400 <u>\$38,104</u>

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
<u>SB-SBC-A88</u>	<u>Carr Avenue Bridge Project</u>	<u>Potential bridge replacement on Carr Avenue, 0.23 miles from Carpenteria Road intersection.</u>	<u>\$657</u>
SB-SJB-A01	Roundabout at The Alameda & Fourth Street	Construct a roundabout.	\$300
SB-SJB-A02	Roundabout at Muckelemi Street & Monterey Street	Construct a roundabout.	\$300
SB-SJB-A03	Roundabout at First Street, Old San Juan Hwy & Lavanigno Road	Slight widening/re-paving and construction of roundabout.	\$350
SB-SJB-A04	Roundabout at San Juan- Hollister Road & San Juan Canyon Road	Constructing a roundabout and repaving.	\$200
SB-SJB-A05	Roundabout at Third Street & Donner Street	Striping a roundabout; widening Third Street.	\$100
SB-SJB-A15	City of San Juan Bautista Local Street & Roadway Maintenance: 2019-2030	System preservation and maintenance.	\$677
SB-SJB-A16	City of San Juan Bautista Local Street & Roadway Maintenance: 2031-2040	System preservation and maintenance.	\$573
SB-SJB-A24	SB1 RMRA: City of San Juan Bautista (2018- 2040)	System preservation and maintenance.	\$680 <u>\$946</u>

Table 6 Other Projects

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-COG-A58	COG Planning and Administration	COG and LTA short and long range transportation planning studies. Transportation Development Act (TDA) for COG administration, transit, bicycle & pedestrian facilities.	\$35,200
SB-COH-A40	Hollister Airport Operations & Maintenance	Continued operations and maintenance of the airport.	\$15,632
SB-COH-A41	Hollister Airport Capital Improvements	Capital improvements grouped project list from the Airport Capital Improvement Program.	\$3,476

Table 7 Transportation Demand Management

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-COG-A08	Rideshare Program	Promote the use of alternative modes of transportation.	\$110
SB-COG-A53	Vanpool Program	Provide vehicle lease program, planning and coordination.	\$364

Table 8 Transit Improvements

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-LTA-A38	Express Bus Service to Gilroy - Gavilan	Express bus service from the City of Hollister to Gavilan College.	\$5,020
SB-LTA-A39	Express Bus Service to Gilroy - Caltrain Station	Express bus service from the City of Hollister to Gilroy Caltrain Station.	\$1,674
SB-LTA-A46	Regional Transit Connection to Salinas	Transit connection from City of Hollister to City of Salinas.	\$3,113
SB-LTA-A47	Regional Transit Connection to Watsonville	Transit connection from City of Hollister to City of Watsonville.	\$3,124
SB-LTA-A53	Commuter Rail to Santa Clara County	Commuter rail from Hollister to Gilroy.	\$10,000

Table 9 Transit Operations

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-LTA-A37	General Transit Service Operations	Ongoing operation of fixed route, other transit service and expansion.	\$27,558
SB-LTA-A42	Regional Transit Planning	Planning transit infrastructure, new service and operational improvements.	\$1,084
SB-LTA-A52	Transit Technology & Infrastructure Improvements	Improve transit infrastructure to accommodate operations.	\$1,000

Table 10 Transit Rehabilitation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-LTA-A48	Transit Vehicle Replacements	Replace transit vehicles.	\$851
SB-LTA-A51	Bus Stop Improvement Program	Transit facilities to accommodate regional transit connections to Gilroy, Watsonville and Salinas.	\$2,750

Table 11 Transportation System Management

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SB-COG-A44	Motorist Aid System (SAFE)	Emergency call box program.	\$1,144
SB-COG-A55	Wayfinding Sign Program	Signs that provide direction of vehicles and pedestrians to specific destinations within predefined areas.	\$1,200

Santa Cruz County

Table 1 Active Transportation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
CAP 15SC	Park Avenue Sidewalks	Installation of sidewalks, plus crosswalks at Cabrillo and Washburn to improve access to transit stops. Links Cliffwood Heights neighborhood to Capitola Village. Currently only 4 short segments of sidewalk exist.	\$650
CAP 17SC	Upper Pacific Cove Parking Lot Pedestrian Trail and Depot Park Metro Development	Construct 4 foot wide pedestrian pathway along City owned Upper Pacific Cove Parking lot, adjacent to rail line (680'). Includes new signal for ped crossing over Monterey Avenue. Includes a new metro shelter located and landscaped setting along the rail corridor/Park Avenue. Part of MBSST.	\$310
<u>CAP 18SC</u>	<u>Brommer Street Complete Street Improvements (250' west of 38th Avenue to 41st Avenue)</u>	<u>Construct complete street roadway improvements on Brommer Street to improve access for vehicles, bikes and pedestrians. Pavement reconstruction, install ADA driveways and sidewalks, and reconfigure eastbound approach to 41st Avenue for vehicle access.</u>	<u>\$770</u>
SC-CAP-P03-CAP	Upper Capitola Avenue Improvements	Installation of bike lanes and sidewalks on Capitola Avenue. (Bay Avenue to SR 1) and sidewalks on Hill Street from Bay Avenue to Rosedale Capitola Avenue.	\$1,340
SC-CAP-P04b-CAP	Capitola Village Multimodal Enhancements - Phase 2/3	Multimodal enhancements in Capitola Village along Stockton Avenue, Esplanade, San Jose Avenue & Monterey Avenue. Includes sidewalks, bike lanes, bike lockers, landscaping, improve transit facilities, parking, pavement rehab and drainage.	\$3,100
SC-CAP-P12-CAP	Monterey Avenue Multimodal Improvements	Installation of sidewalks and bike lanes in area near school and parks.	\$360
SC-CAP-P16-CAP	Clares Street Pedestrian Crossing west of 40th Avenue	Construct signalized ped crossing 0.20 miles west of 40th Avenue.	\$250
SC-CAP-P42-CAP	Clares Street Bike Lanes/Sharrows (Capitola Road to 41st Avenue)	Add bike lanes/sharrows to Clares.	\$100
SC-CAP-P43-CAP	Clares Street/41st Avenue Bicycle Intersection Improvement	Bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) at Clares across 41st.	\$10
SC-CAP-P44-CAP	Gross/41st Avenue Bicycle Intersection Improvement	Bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) from Gross E/B to 41st N/B.	\$20
SC-CAP-P46-CAP	40th Avenue (at Deanes Lane) Bike/Ped Connection	40th Avenue N/S bike/pedestrian connection at Deanes Lane.	\$10
SC-CAP-P47-CAP	41st Avenue (Soquel to Portola) Crosswalks	Evaluate and if found necessary, increase number of crosswalks on 41st to closer to every 300 ft.	\$20
SC-CAP-P48-CAP	Capitola Mall (Capitola Road to Clares) Bike Path	Separated bicycle facility through Capitola Mall parking lot to connect 38th Avenue bike lanes and 40th Avenue.	\$50

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CAP-P51-CAP	Citywide Sidewalk Program	Install sidewalks to fill gaps.	\$520
SC-CAP-P52-CAP	Citywide Bike Projects	Bike projects based on needs identified through the Bicycle Plan. These projects are in addition to projects listed individually in the RTP.	\$400
CO 42bSC	Green Valley Road Pedestrian Safety Project	Build 6-foot wide sidewalk with some curb and gutter on NW side of Green Valley Road from Airport Boulevard to Amesti Road (1,800 ft).	\$390
SC-CO-P38-USC	Pajaro River Bike Path System	Construction of a Class I bike path along the levees and a Class II bikeway on Thurwatcher Road and Beach Road.	\$2,500
SC-CO-P41-USC	Countywide Sidewalks	Install sidewalks.	\$7,000
SC-CO-P46a-USC	San Lorenzo Valley Trail: Hwy 9 - Downtown Felton Bike Lanes & Sidewalks	Install sidewalks and bicycle lanes on Hwy 9 through downtown Felton.	\$2,270
SC-CO-P46b-USC	San Lorenzo Valley Trail: Hwy 9 - North Felton Bike Lanes & Sidewalks	Install sidewalk/pedestrian path on west side, shoulder widening to 5' for bicycle lanes from Felton-Empire/Graham Hill Road to Glen Arbor Road, Ben Lomond, including frontage of SLV elementary, middle and high schools. Includes new and replacement bike/ped bridges.	\$7,640
SC-CO-P50-USC	East Cliff Drive Pedestrian Pathway (7th-12th Avenues)	Construct pedestrian pathway on East Cliff.	\$1,760
SC-EA-02-USC	Ecology Action Countywide SRTS Youth Pedestrian and Bicycle Safety Education	Pedestrian and bicycle safety education at local schools.	\$440 \$260
<u>SC-EA-03-USC</u>	<u>Every Day is Bike to Work Day</u>	<u>Pilot bike commuter initiative to increase bike commuting at 6 large employers in Santa Cruz, Live Oak and Watsonville areas; includes bike commute and safety workshops, online tracking apps/systems, support/encouragement.</u>	<u>\$60</u>
SC-RTC-16-RTC	Bike Parking Subsidy Program	Subsidies for bicycle racks and lockers for businesses, schools, government agencies and non-profit organizations are all eligible.	\$210
SC-RTC 27a-RTC	Monterey Bay Sanctuary Scenic Trail Network - Design, Environmental Clearance and Construction	Design, environmental clearance and construction of the 32-mile rail component of the 50+ mile network of bicycle and pedestrian facilities on or near the coast, with the rail trail as the spine and additional spur trails to connect to key destinations.	\$41,500
SC-RTC 27b-RTC	Monterey Bay Sanctuary Scenic Trail Network (Coastal Rail Trail) - Maintenance	Maintenance of the rail trail component of the Monterey Bay Sanctuary Scenic Trail Network.	\$4,800
SC-RTC 27c-RTC	Monterey Bay Sanctuary Scenic Trail Network (Coastal Rail Trail) - Trail Management Program	Coordinate trail implementation as it traverses multiple jurisdictions to ensure uniformity; serve as Project Manager for construction of some segments; handle environmental clearance; coordinate use in respect to other requirements (closures for ag spraying, etc.); solicit ongoing funding and distribute funds to implementing entities through MOUs; coordinate with community initiatives; etc.	\$1,030
RTC 30SC	Hwy 1 Bicycle/Ped Overcrossing at Mar Vista	Construct a bicycle/pedestrian overcrossing of Hwy 1 in vicinity of Mar Vista Drive, providing improved access to Seacliff and Aptos neighborhoods and schools.	\$7,800

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
RTC 32SC	Bicycle Route Signage Countywide	Define routes, develop and install signs directing bicyclists to preferred routes to various destinations countywide.	\$600
SC-RTC-P26-VAR	Countywide Pedestrian Signal Upgrades	Grant program to fund installation of accessible pedestrian equipment with locator tones including rapid flashing beacons and count down times, etc. to facilitate roadway crossings by visually and mobility impaired persons.	\$1,035
SC-RTC-P50-RTC	Countywide Bicycle, Pedestrian and Vehicle Occupancy Counts	Conduct counts to assess mode split over time and assess impact of new facilities.	\$232 \$242
SC-SC-23-SCR	West Cliff Path Minor Widening (David Way Lighthouse to Swanton)	Improve existing path.	\$520
SC 46SC	Branciforte Creek Bike/Ped Crossing	Install a multiuse bicycle/pedestrian bridge over Branciforte Creek and connecting paths to the existing levee paths near San Lorenzo Park and Soquel Avenue.	\$2,830
SC-SC-P09-SCR	Sidewalk Program	Install and maintain sidewalks and access ramps.	\$5,500
SC-SC-P105-SCR	Market Street Sidewalks and Bike Lanes	Completion of sidewalks and bicycle lanes. Includes retaining walls, right-of-way, tree removals and a bridge modification.	\$1,030
SC-SC-P119-SCR	Soquel/Water (Branciforte to Morrissey) Crosswalks	Evaluate and if found necessary implement additional crosswalks on Soquel/Water with consideration for safety, and update crosswalks to more visible pattern (block).	\$150
SC-SC-P123-SCR	Soquel/Branciforte/Water (San Lorenzo River to Branciforte) Bike Lane Treatments	Consider bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed inconsistency and parking conflicts between bicyclists and vehicles.	\$410
SC-SC-P125-SCR	Citywide Safe Routes to School Projects - ATP	Projects to improve pedestrian and bicycle safety near schools.	\$1,404
SC-SC-P126-SCR	Almar Avenue Sidewalks	Fill gaps in sidewalks and access ramps to improve pedestrian safety.	\$200
SC-SC-50-SCR SC-SC-P127-SCR	Pacific Avenue Sidewalk (Front Wharf)	Construct 200' of new sidewalk and crossing on Pacific Avenue between Front Street Second and 55 Front Streets, including installation of a new accessible crosswalk ing at Front and Pacific; 150' bike lane.	\$440 \$318
SC-SC-P22-SCR	Chestnut Street Pathway	Install a Class I bicycle/pedestrian facility to connect the east side of Neary Lagoon Park with the Depot Park path.	\$570
SC-SC-P23-SCR	Delaware Avenue Complete Streets	Fill gaps in bicycle lanes, sidewalks and sidewalk access ramps.	\$150
SC-SC-P29-SCR	Morrissey Boulevard Bike Path over Hwy 1	Install a Class I bicycle and pedestrian facility on freeway overpass.	\$300
SC-SC-P30-SCR	Murray Street to Harbor Path Connection	Install a Class I bicycle/pedestrian facility.	\$210
SC-SC-P35-SCR	San Lorenzo River Levee Path Connection	Install a multi-use bicycle/pedestrian facility connecting the end of the San Lorenzo River Levee path on the eastern side of the river, up East Cliff Drive near Buena Vista Avenue.	\$2,070

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-SC-P47-SCR	Chestnut Street Bike Lanes	Install Class II bike lanes to provide connection from existing bike lanes on Laurel Street and upper Chestnut Street to proposed Class I bike path connections to Bay Street and Pacific Avenue/Beach Street.	\$100
SC-SC-P59-SCR	King Street Bike Facility (entire length)	Install Class II bike lanes on residential collector street which includes some parking and landscape strip removals, and some drainage inlet modifications.	\$2,070
SC-SC-P69-SCR	Seabright Avenue Bike Lanes (Pine-Soquel)	Install Class II bike lanes on arterial street to complete the Seabright Avenue bike lane corridor and connect to bike lane corridor on Soquel Avenue and Murray. Includes removal of some parking and some landscape strips.	\$2,070
SC-SC-P77-SCR	Bay Street Corridor Modifications	Intersection modifications on Bay Street Corridor from Mission Street to Escalona Drive, including widening at the Mission Street northeast corner and widening on Bay. Improve bike lanes and add sidewalks to west side of Bay.	\$970
SC-SV-P05-SCV	Citywide Sidewalk Program	Install sidewalks to fill gaps.	\$2,600
SC-SV-P21-SCV	Lockwood Lane Pedestrian Signal Near Golf Course	Construct a pedestrian signal at unprotected ped crossing on Lockwood Lane.	\$50
<u>SC-SV-P30-SCV</u>	<u>Kings Village Road/Bluebonnet Lane Sidewalk</u>	<u>Construct new, fill gaps, and improve accessibility of sidewalks on both sides of King's Village Road (Mt. Hermon to Bluebonnet) and south side of Bluebonnet Lane (Kings Village to Bean Creek). Approx.0.3mi. Curb ramp upgrades at Mt. Hermon.</u>	<u>\$306</u>
SC-SV-P30A-SCV	Mt. Hermon Road Sidewalk Connections	Add sidewalks to fill gaps in business district.	\$520
SC-SV-P32-SCV	Bluebonnet Lane Bike Lanes	Add bike lanes on Bluebonnet (Bean Creek, through Skypark to Mt. Hermon/Lockwood).	\$150
SC-SV-P35-SCV	Bean Creek Road Sidewalks (SVMS to Blue Bonnet)	Fill gaps in sidewalks on Bean Creek Road.	\$410
SC-SV-P39-SCV	Glenwood Drive Bike Lanes	Widen road to accommodate bike lanes from Scotts Valley High School to City limits.	\$520
SC-SV-P40-SCV	Lockwood Lane Sidewalk and Bike Lanes	Construct bike lanes and add sidewalk on the west side from Mt. Hermon to the City limit.	\$520
SC-SV-P45-SCV	Scotts Valley Town Center Bicycle/Pedestrian Facilities	Bicycle and pedestrian facilities and circulation elements within planned development.	\$4,130
SC-SV-P49-SCV	Mt. Hermon Road and Scotts Valley Drive - Crosswalks	Increase number of crosswalks on Mt. Hermon/Scotts Valley Drive, update crosswalks to block pattern, add pedestrian treatments where necessary at intersections to decrease distance across using refuge islands. Add crosswalks to all sides of intersections.	\$515
SC-SV-P50-SCV	Mt. Hermon/Scotts Valley Intersection Improvements for Bicycle Treatment	Add bicycle treatments at Mt. Hermon/Scotts Valley Drive intersection.	\$10
SC-SV-P53-SCV	Mt. Hermon Road to El Rancho Drive Bike/Ped Connection	New bike/ped connection between Mt. Hermon Road and El Rancho Drive.	\$1,030
SC-SV-P54-SCV	Mt. Hermon Road/Spring Hill Road Pedestrian Intersection Improvements	Improve pedestrian crossing at Spring Hills Drive and Mt. Hermon Road.	\$50

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
TRL 07SC	MBSST (Coastal Rail Trail): Segment 7 (Natural Bridges to Pacific Avenue)	2.1 miles of Monterey Bay Sanctuary Scenic Trail Network (MBSST) Segment 7 along rail line (excluding Moore Creek rail trestle bridge and trail to Natural Bridges Drive).	\$7,400
TRL 18L	MBSST (Coastal Rail Trail): Lee Road, 4,000 feet east to City Slough Trail Connection	Construction of 4,000-foot long pathway parallel to the railroad tracks: twelve-foot width asphalt (hma). A 500 ft long retaining wall up to 3 ft tall with fence near Lee Road. A drainage structure east of Ohlone Parkway to be modified. Connection to Lee Road shall require installation of pathway or sidewalk to link to the existing sidewalk. At grade crossing at Ohlone Parkway and at a spur line located between Lee Road and Highway 1.	\$1,540 \$1,340
TRL 18W	MBSST Rail Trail: Walker Street to City Slough Trail connection	Construction of 2,400 ft pedestrian and bicycle path parallel to the existing railroad tracks and within the rail right-of-way. Also includes public outreach and training to improve bicycle and pedestrian safety.	\$860 \$862
TRL 05SC	MBSST - North Coast Rail Trail	Monterey Bay Sanctuary Scenic Trail Network (MBSST) sections. Ph. 1 Wilder Ranch-Coast Dairies (5.1 mi); ph. 2-Yellow Bank Beach/Panther Beach-Davenport (2.1 mi).	\$20,000
TRL 8-9a	MBSST (Coastal Rail Trail - Segment 8 and 9)	Rail Trail design, environmental clearance and construction along the rail corridor between Pacific Avenue in the City of Santa Cruz to 17th Avenue in Santa Cruz County.	\$32,934
TRL 8a	San Lorenzo River Bike/Ped Path at RR Bridge	Install a multi-use bicycle/pedestrian facility to connect the east end of the Beach Street Pathway with East Cliff Drive at the location of the current railroad bridge over the San Lorenzo River and to connect the east and west banks of the San Lorenzo River Pathway.	\$1,550
SC-UC-P33-UC	UCSC Bicycle Parking Improvements	Install bicycle parking facilities to serve bicycle commuters to the University.	\$520
SC-UC-P38-UC	Pedestrian Directional Map/Wayfinding System	Develop and install signs throughout campus.	\$520
SC-UC-P57-UC	Kresge/Core West Pedestrian Bridge: ADA Upgrades	Modify bridge to enhance ADA access.	\$3,100
SC-UC-P72-UC	Kerr/Porter Road Pedestrian Bridge ADA Upgrades	Modify bridge to improve access.	\$3,100
UCSC 07	Great Meadow Bike Path Safety Improvements	Bike path safety and maintenance improvements. Reconstruct and widen Class 1 bike path, separate pedestrian improvements northbound to minimize conflicts.	\$1,135
SC-VAR-P03-VAR	Bicycle Sharrows	Install sharrows (shared roadway marking) designating areas where bicyclists should ride on streets, especially when bicycle lanes are not available.	\$520
SC-VAR-P05-VAR	Bike-Activated Traffic Signal Program	Provide traffic signal equipment to ensure that the traffic signals will detect bicycles just as cars are detected and ensure that the appropriate traffic signal phase is activated by the bicycles.	\$1,030

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-VAR-P08-VAR	Safe Paths of Travel	Regional program to construct and/or repair pedestrian facilities adjacent to high frequency use origins and destinations, particularly near transit stops.	\$3,100
SC-VAR-P16-VAR	Bike Share	Establish and maintain an urban centered bike share program allowing county residents to access loaner bikes at key locations.	\$5,170
SC-VAR-P27-VAR	Complete Streets Implementation	Additional projects for complete streets implementation that would fall under the Complete Streets Guidelines.	\$10,330
SC-VAR-P29-VAR	Public/Private Partnership Bicycle and Pedestrian Connection Plan	Develop model for assisting local jurisdictions in working with private property owners to allow bicycle and pedestrian access through private property in areas identified for more intensified development in Sustainable Communities Strategy.	\$150
SC-VAR-P31-VAR	Uncontrolled Pedestrian Crossing Improvements	Implement improvements to uncontrolled pedestrian crossing such as painted and/or raised crosswalks, flashing beacons and pedestrian islands.	\$2,570
SC-VAR-P32-VAR	Bicycle Treatments for Intersection improvements (ADD)	Add painted bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike detection and signals), at major intersections.	\$4,130
SC-VAR-P35-VAR	School Complete Streets Projects	Implement ped/bike programs and facilities near schools.	\$10,330
SC-VAR-P39-VAR	Active Transportation Plan	Prepare Active Transportation Plans that address bicycle, pedestrian, safe routes to schools and complete streets facilities within the jurisdictions of Santa Cruz County as well as the Santa Cruz Harbor Port District.	\$2,380
SC-VAR-P44-VAR	Electric Bicycle Commuter Incentive Program	Financial incentives, promotion and/or education to encourage residents to use electric bikes instead of commuting by car.	\$1,000
WAT 41	Sidewalk Infill Harkins Slough Road and Main Street	Harkins Slough: 6 ft wide x 180 ft long sidewalks on south side of Harkins Slough Road and east of Ohlone Pkwy; Main Street: 6 ft wide x 450 ft long sidewalks on north side of Main Street from Pennsylvania Drive—Pacifica Boulevard.	\$210
WAT 44SC	<u>Bicycle Safety Improvements (Various Locations)</u>	<u>Improve existing bicycle facilities by installing new striping, markings and signage in place of the existing and installing new green bike lanes at the approaches on various streets. Work will be done at the following locations: Beach Street from Lee Road to Rodriguez Street (1.42 mi); Bridge Street from Beck Street to East Lake Avenue (1.48 mi); Green Valley Road from Harkins Slough Road to Corralitos Creek Bridge (1.92 mi); Harkins Slough Road/Walker Street from Green Valley Road to Riverside Drive (1.73 mi); Rodriguez Street from Riverside Drive to Main Street (0.92 mi).</u>	<u>\$375</u>
SC-WAT-P36-WAT	Alley Improvements	Repair and reconstruct some alleys.	\$60 \$50
SC-WAT-P42-WAT	Pajaro Valley High School Connector Trail	Install bicycle/pedestrian trail (this trail connects Pajaro Valley High School to Airport Boulevard).	\$710 \$620

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-WAT-P43-WAT	Upper Watsonville Slough Trail	Install bicycle/pedestrian trail.	\$770 \$670
SC-WAT-P46-WAT	Lower Watsonville Slough Trail	Install bicycle/pedestrian trail.	\$770 \$670
SC-WAT-P49-WAT	2nd/Maple Avenue (Lincoln to Walker) Traffic Calming and Greenway	Evaluate and if found necessary, add traffic calming/bicycle traffic priority with wayfinding signage to provide access to MBSST and create low stress grid around downtown.	\$25 \$20
SC-WAT-P50-WAT	5th Street (Lincoln to Walker) - Traffic Calming and Greenway	Evaluate and if found necessary, add traffic calming/bicycle traffic priority with wayfinding signage to provide access to MBSST and create low stress grid around downtown.	\$25 \$20
SC-WAT-P51-WAT	Rodriguez Street (Main Street to Riverside)- Buffered Bike Lane	Evaluate and if found necessary, improve bike lane striping, add buffered lanes on Rodriguez Street to delineate bike lane from vehicle parking and traffic.	\$12 \$10
SC-WAT-P52-WAT	Union/Brennan (Freedom to Riverside) – Sharrows	Evaluate and if found necessary, add sharrows to Union/Brennan.	\$12 \$10
SC-WAT-P53-WAT	Kearney/Rodriguez - Ped Crossing	Evaluate and if found necessary, add pedestrian crossing at Kearney and Rodriguez with traffic calming for access to Radcliffe Elementary.	\$35 \$30
SC-WAT-P54-WAT	Main Street - 3 HAWK Signals	Evaluate and if found necessary, add Hawk signals in 3 locations on Main Street.	\$890 \$770
SC-WAT-P55-WAT	Main/Rodriguez/Union/Brennan (Freedom to Riverside) - Crosswalks	Evaluate and if found necessary, increase the number of crosswalks on Main Street, Rodriguez and Union/Brennan to aim for 300 ft distance between crossings. Update pattern of crosswalks to block pattern.	\$115 \$100
SC-WAT-P57-WAT	East Lake/Madison - Ped Crossing	Evaluate and if feasible, add pedestrian crossing (HAWK signal if ped volume warrants) at E Lake & Madison for better access to Hall Middle School.	\$300 \$260
SC-WAT-P58-WAT	Main Street (Freedom to Riverside) Ped/Bike Enhancements	Evaluate and if feasible improve ped facilities and bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and bike boxes and bicycle priority at intersections on Main Street intersections.	\$890 \$770
SC-WAT-P59-WAT	Downtown Watsonville Universal Streets	Evaluate and if feasible, implement universal streets, which are designed for pedestrians and restrict vehicular access, which facilitate new ped access.	\$600 \$520
SC-WAT-P61-WAT	Freedom Boulevard (Green Valley Road to Davis) Bicycle and Pedestrian Improvements	Evaluate and if feasible, install bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed inconsistency between bicyclists and vehicles. Complete sidewalks, including pedestrian buffer and pedestrian islands at crossings.	\$300 \$260
SC-WAT-P62-WAT	Freedom Boulevard Pedestrian Crossings (Airport to Lincoln)	Evaluate and if feasible, install new and improve existing uncontrolled pedestrian crossings at Roach Road, Davis Avenue, Clifford Lane, Mariposa Avenue, Alta Vista Street, Crestview Drive, Martinelli Street and Marin Street).	\$600 \$520

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-WAT-P65-WAT	Upper Struve Slough Trail	Construction of 450 foot long pedestrian/bicycle path along upper Struve Slough from Green Valley Road to Pennsylvania Drive. The trail shall consist of a twelve-foot wide by one foot deep aggregate base section with the center eight feet covered with a chip seal. Additional improvements include installing a 130-length of modular concrete block retaining wall, reinforcing a 160-foot length of slough embankment with rock slope protection and installing a 175-foot long by eight foot wide boardwalk.	\$530 \$460
SC-WAT-P73-WAT	Main Street Modifications (East Lake Avenue to Freedom Boulevard)	Provide complete streets improvements including but not limited to pedestrian crossings, bicycle facilities, bus stops, parking, sidewalks and traffic management.	\$1,000

Table 2 Highway Improvements

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-RTC-24e-RTC	3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street 3 - Hwy 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	Construct approximately 2.5 miles of auxiliary lanes northbound and southbound between State Park Drive and Park Avenue interchange and the Park Avenue and Bay/Porter interchange. Includes retaining walls, soundwalls and reconstruction of Capitola Avenue overcrossing with wider sidewalks and bike lanes. [Part of Highway 1 CIP project (RTC 24a)]. Construct auxiliary lanes and reconstruct Capitola Avenue overcrossing.	\$73,000 \$33,060
SC-RTC 24f-RTC	2 - Hwy 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Ped Bridge	Construct auxiliary lanes and a bicycle/pedestrian overcrossing of Hwy 1 at Chanticleer Avenue.	\$32,100 \$29,960
SC-RTC 24g-RTC	4 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue	Construct auxiliary lanes.	\$42,350
SC-RTC 24r-RTC	94 - Hwy 1: Northbound Auxiliary Lane from San Andreas Road/Larkin Valley Road to Freedom Boulevard	Construct northbound auxiliary lane.	\$8,800

Table 3 Highway Operational, Maintenance and Rehabilitation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CT-P45-CT	State Highway Preservation (bridge, roadway, roadside)	Various SHOPP projects that address bridge preservation, roadway & roadside preservation and limited mobility improvements.	\$467,163
SC-CT-P46-CT	Collision Reduction & Emergency Projects	Various SHOPP projects that address collision reduction, mandates (including stormwater mandates) and emergency projects.	\$219,714
SC-CT-P47-CT	Minors	Various small SHOPP projects (less than \$1 million) that reduce/enhance maintenance efforts by providing minor operational, pavement rehab, drainage, intersection, electrical upgrades, landscape and barrier improvements.	\$2,580
SC 25SC	Hwy 1/9 Intersection Modifications	Intersection modifications including new turn lanes, bike lanes, shoulders, lighting, sidewalks and access ramps. Includes adding second left-turn lane on Highway 1 southbound to Highway 9 northbound; second northbound through lane and shoulder on northbound Highway 9, from Highway 1 to Fern Street; a right-turn lane and shoulder on northbound Highway 9; through-left turn lane on northbound River Street; replace channelizers on Highway 9 at the intersection of Coral Street; sufficient lane width along the northbound through/left turn lane on Highway 9 from Fern Street to Encinal Street; new sidewalk along the east side of Highway 9 from Fern Street north to Encinal Street; new through/left turn lane on southbound Highway 9; Traffic Signal interconnect to adjacent signals. (Caltrans project ID - 05-46580).	\$7,850
SC-SC-38-SCR	Hwy 1/San Lorenzo Bridge Replacement	Replace the Highway 1 bridge over San Lorenzo River to increase capacity, improve safety and improve seismic stability, from Highway 17 to the Junction of Hwys 1/9. Reduce flooding potential and improve fish passage. Caltrans Project ID 05-OP460.	\$16,320 <u>\$20,000</u>
SC-SC-P81-SCR	Hwy 1/Mission Street at Chestnut/King/Union Intersection Modification	Modify design of existing intersections to add lanes and upgrade the traffic signal operations to add capacity, reduce delay and improve safety. Provide access ramps and bike lanes on King and Mission. Includes traffic signal coordination.	\$4,650

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Table 4 Local Street and Road Operational, Maintenance and Rehabilitation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
CAP 11SC	Clares Street Traffic Calming	Implementation of traffic calming measures: chicanes, center island median, new bus stop and road edge landscape treatments to slow traffic. Construct new safe, accessible ped crossing at 42nd and 46th Avenue.	\$750
CAP 16SC	Bay Avenue/Capitola Avenue Intersection Modifications/Roundabout	Multimodal improvements to intersection; roundabout.	\$1,000
SC-CAP-P05-CAP	Cliff Drive Improvements	Installation of sidewalks, pedestrian crossing and slope stabilization of embankment including seawall.	\$1,550
SC-CAP-P06-CAP	Citywide General Maintenance and Operations	Ongoing maintenance, repair and operation of road/street system within the City limits.	\$40,666
SC-CAP-P07-CAP	Bay Avenue/Hill Street Intersection	Intersection improvements to improve traffic flow; roundabout.	\$210
SC-CAP-P07p-CAP	Stockton Avenue Bridge Rehab	Replace bridge with wider facility that includes standard bike lanes and sidewalks.	\$1,500
SC-CAP-P09-CAP	Park Avenue/Kennedy Drive Improvements	Construct intersection improvements, especially for bikes/peds. May include traffic signal.	\$360
SC-CAP-P17-CAP	Citywide Traffic Calming	Install traffic calming/neighborhood livability improvements.	\$1,450
SC-CAP-P27-CAP	Wheelchair Access Ramps	Install wheelchair access/curb cut ramps on sidewalks citywide.	\$200
SC-CAP-P28-CAP	Monterey Avenue at Depot Hill	Improve vehicle ingress and egress to Depot Hill along Escalona Avenue and improve pedestrian facilities.	\$260
SC-CAP-P29-CAP	Bay Avenue Traffic Calming and Bike/Ped Enhancements	Traffic calming features along Bay Avenue from Highway 1 to Monterey Avenue, including left turn pocket, buffered pedestrian facilities and bicycle treatments.	\$210
SC-CAP-P30-CAP	47th Avenue Traffic Calming and Greenway	Traffic calming and traffic dispersion improvements along 47th Avenue from Capitola Road to Portola Drive and implementation of greenway.	\$100
SC-CAP-P32-CAP	Bay Avenue/Monterey Avenue Intersection Modification	Multimodal improvements to the intersection. Include signalization or roundabout along with pedestrian, bicycle treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and transit access.	\$310
SC-CAP-P34-CAP	Capitola Village Enhancements: Capitola Avenue	Multimodal enhancements along Capitola Avenue.	\$1,030
SC-CAP-P37-CAP	41st Avenue/Capitola Road Intersection Improvements	Widen intersection and reconfigure signal phasing.	\$520
SC-CAP-P38-CAP	40th Avenue/Clares Street Intersection Improvements	Widen intersection and signalize.	\$1,050
SC-CAP-P40-CAP	46th/47th Avenue (Clares to Cliff Drive) Bike Lanes/Traffic Calming	46th/47th from Clares to Portola/Cliff - Add traffic calming and wayfinding signage to connect to Brommer and MBSST.	\$20
SC-CAP-P41-CAP	Brommer/Jade/Topaz Street Bike Lanes/Traffic Calming (Western City Limit on Brommer to 47th Avenue)	Add buffered bike lanes, traffic calming and wayfinding signage and bike/ped priority crossing at 41st Avenue, connecting the two N/S neighborhood greenways.	\$20
SC-CAP-P53-CAP	Capitola Road & 45th Avenue I/S Improvements	Signalization or other LOS improvements.	\$400 \$250

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CAP-P54-CAP	Wharf Road and Stockton Avenue I/S Improvements	Signalization or other LOS improvements.	\$350
SC-CAP-P55-CA	Porter Street and Highway 1 I/S Improvements	Add additional dedicated right turn lane on Porter Street to northbound on ramp.	\$250
SC-CAP-P56-CAP	Monterey Avenue and Park Avenue I/S Improvements	Signalization or other LOS improvements.	\$400
SC-CAP-P57-CAP	Stockton Avenue and Capitola Avenue I/S Improvements	Signalization or other LOS improvements.	\$350 \$200
CO 36SC	State Park Drive/Seacliff Village Improvements	Construct sidewalks, bike lanes, bus turnouts, central plaza, street lighting, EV charging station, parking, landscaping, drainage and roadway overlay in Seacliff core area.	\$3,400 \$2,375
CO 64SC	Aptos Village Plan Improvements	Modifications for ped, bike, bus and auto traffic. Add pedestrian facilities and drainage infrastructure on both sides of Soquel Drive; improve bike lanes; new bike parking; new bus pullout and shelter on north side. Trout Gulch: Replace sidewalks with standard sidewalks on east side, ADA upgrades to west side sidewalks. Install traffic signals at Soquel Drive/Aptos Creek Road & Soquel/Trout Gulch. Left turn lanes on Soquel at new street - Parade Street and at Aptos Creek Road. RR crossing modifications - new crossing arms, concrete panels for vehicle and pedestrian crossings. New RR xing at Parade Street. Phase 1: Trout Gulch Road improvements with traffic signal and upgraded RR crossing at Soquel Drive. Pavement overlay of Soquel Drive (Spreckels to Trout Gulch) and a portion of Aptos Creek Road.	\$4,100
CO 66SC	East Cliff Drive Cape Seal (12th-17th)	Pavement maintenance and asphalt replacement.	\$230
CO 67SC	Empire Grade 2 Layer Seal (SC city limits to 130' N of Heller Drive)	Pavement maintenance and asphalt replacement.	\$340
CO 67BSC	Empire Grade 2 layer Seal (130' north of Heller Drive to 0.79 mi north of Heller)	Pavement maintenance and asphalt replacement.	\$220
CO 68SC	Green Valley Road 3-Layer Seal: Devon Lane to Melody Lane (0.58 mi)	Pavement maintenance and asphalt replacement.	\$270
CO 69SC	Mt. Hermon Road Pavement Preservation: Graham Hill to 1,000' N of Locatelli Lane	Pavement maintenance and asphalt replacement.	\$890
CO 71SC	Bear Creek Road Surface Seal (PM 4.75-PM 7.0)	3-layer slurry seal and restriping to rehabilitate the roadway surface.	\$860
CO 72SC	Capitola Road Slurry Seal (30th-17th Avenues)	Double fiberized slurry seal and restriping to rehabilitate the roadway surface.	\$340
CO 73SC	Cassery Road Bridge Replacement	Replace existing bridge over a tributary of Green Valley Creek near Smith Road intersection.	\$930
CO 74SC	Freedom Boulevard Pavement Preservation (Hwy 1 to Pleasant Valley Road)	Rehabilitate the roadway surface.	\$1,430
CO 76SC	Portola Drive Cape Seal (E. Cliff to 24th Avenue)	Double fiberized slurry seal and restriping to rehabilitate the roadway surface.	\$240
CO 78SC	Summit Road Chip Seal (Soquel San Jose Road - Old SC Highway)	Asphalt digout, chip seal and restriping to rehabilitate the roadway surface.	\$530

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
CO 79 SC	<u>Branciforte Drive Road Recycle & Overlay (PM 2.4 to Granite Creek Road) Branciforte Drive Chip Seal (Granite Creek Road north)</u>	Asphalt digouts, chip seal and restriping of 0.62 miles of Branciforte Drive from Granite Creek to PM 2.4.	\$431 \$197
CO 80 SC	Glen Arbor Road Recycle, Overlay & Chip Seal (SR 9 - Quail Hollow)	Pavement recycling, asphalt overlay, chip seal and restriping 0.52 miles of Glen Arbor Road from Hwy 9 at bridge to Quail Hollow Road.	\$467
CO 81 SC	Granite Creek Road Recycle & Overlay – Part of CO 79B	Pavement recycling, asphalt overlay, and restriping of 1.85 miles of Granite Creek Road from Scotts Valley city limits to PM 0.56.	\$1,100 \$1,038
<u>CO 82 SC</u>	<u>Branciforte Drive Chip Seal Project (Granite Creek Road to SC city limits - 1.91mi)</u>	<u>Roadway rehabilitation: digouts, rubberized chip seal and restriping of a portion of Branciforte Drive.</u>	<u>\$433</u>
<u>CO 83 SC</u>	<u>Highway 17 To Soquel Corridor Chip Seal Project</u>	<u>Roadway rehabilitation: digouts, chip seal, and restriping of Vine Hill Road (Hwy 17 to B40), Branciforte Drive (Vine Hill to PM 0.7), Mt. View Road (B40-N. Rodeo Gulch), N. Rodeo Gulch Road (Mt. View-PM 1.97), Laurel Road (N. Rodeo-Soquel San Jose Road), and Soquel-San Jose Road (Laurel Glen to Dawn Lane) - 9.90 mi.</u>	<u>\$881</u>
<u>CO 84 SC</u>	<u>Hwy 152/Holohan - College Intersection</u>	<u>Intersection capacity enhancements and signal modifications, pedestrian and bicycle safety improvements. Add sidewalks and bicycle lanes on Holohan Road, an additional left-turn lane from Holohan to EB Hwy 152, sidewalk on north side of Hwy 152 from Holohan to Corralitos Creek bridge, adds crosswalks and speed feedback signs.</u>	<u>\$3,150</u>
<u>CO 85 SC</u>	<u>Scotts Valley Area Routes Chip Seal Project</u>	<u>Roadway rehabilitation: digouts, chip seal and restriping Mt. Hermon Road (PM 1.31 to SV city limits), Lockewood Lane (GH-SV city limits) and Graham Hill Road (Sims to Lockewood) - 2.76mi.</u>	<u>\$940</u>
<u>CO 86 SC</u>	<u>Zayante Road Corridor Chip Seal Project</u>	<u>Roadway rehabilitation: digouts, chip seal and restriping East Zayante & Upper E. Zayante from Quail Hollow to SR 35 (up to 9.07mi). Project to be scaled to match available funds.</u>	<u>\$1,025</u>
SC-CO-P02-USC	Airport Boulevard Improvements (City limits to Green Valley Road)	Major rehab, addition of bike lanes, transit facilities, merge lanes, intersection improvements, sidewalks, drainage and landscaping.	\$1,240
SC-CO-P03-USC	Amesti Road Multimodal Improvements (Green Valley to Brown Valley Road)	Roadway rehab and reconstruction, left turn pockets at Green Valley Road, Pioneer Road/Varni Road. Add bike lanes, transit turnouts, sidewalks, merge lanes, landscaping and intersection improvements.	\$600
SC-CO-P04-USC	Bear Creek Road Improvements (Hwy 9 to Hwy 35)	Major rehab, add bike lanes, turnouts, merge lanes and intersection improvements. Also some landscaping and drainage improvements.	\$250
SC-CO-P08-USC	Corralitos Road Rehab and Improvements (Freedom Boulevard to Hames Road)	Major rehab, transit, bike and ped facilities. May also include drainage, merge lanes, landscaping and intersection improvements.	\$620
SC-CO-P09-USC	East Cliff Drive Improvements (32nd Avenue to Harbor)	Roadway rehab, add left turn pockets at 26th and 30th Avenues, fill gaps in bikeways and sidewalks, add transit turnouts, intersection improvements. Some landscaping and drainage improvements.	\$1,500

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CO-P10-USC	Empire Grade Improvements	Road rehab and maintenance, left turn pocket at Felton Empire Road, add bike lanes, transit facilities, some sidewalks, landscaping. Drainage improvements, merge lanes and intersection improvements may also be needed.	\$1,190
SC-CO-P11-USC	Freedom Boulevard Multimodal Improvements (Bonita Drive to City of Watsonville)	Add bike lanes, sidewalks on some segments, transit turnouts, signalization. Left turn pockets at Bowker, Day Valley, White Road, and Corralitos Road. Also includes merge lanes, intersection improvements, landscaping, major rehabilitation and maintenance, drainage improvements.	\$775
SC-CO-P12-USC	Graham Hill Road Multimodal Improvements (City of SC to Hwy 9)	Bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes, traffic signals. Major rehabilitation and maintenance. Drainage improvements. Signal upgrade at SR 9.	\$1,755
SC-CO-P13-USC	Green Valley Road Improvements	Add two-way left turn lanes from Mesa Verde to Pinto Lake on Green Valley Road. Also includes some road rehab and maintenance, bike lanes, sidewalks, transit facilities, landscaping and merge lanes.	\$1,030
SC-CO-P14-USC	La Madrona Drive Improvements (El Rancho Drive to City of Scotts Valley)	Bike lanes, sidewalks, transit turnouts, left turn pockets at Sims Road, Highway 17 and El Rancho Road), merge lanes, and intersection improvements. Also includes major rehabilitation, drainage and maintenance.	\$905
SC-CO-P17-USC	Sims Road Improvements (Graham Hill Road to La Madrona Drive)	Road rehab and maintenance, drainage, intersection improvements, landscaping, add bike, ped and transit facilities.	\$440
SC-CO-P18-USC	Soquel Avenue Improvements (City of SC to Gross Road)	Transit turnouts, two way left turn lanes from Chanticleer to Mattison, merge lanes, signalization and intersection improvements. Signals at Chanticleer and Gross Road. Roadwork: major rehabilitation and maintenance, perhaps drainage improvements. Roadside: sidewalks, landscaping and new transit facilities.	\$3,310
SC-CO-P19-USC	Soquel Drive Improvements (Soquel Avenue to Freedom Boulevard)	Major rehab, merge lanes, intersections improvements, signal coordination, transit turnouts, fill sidewalk and bike facility gaps, some landscaping.	\$1,885
SC-CO-P20-USC	State Park Drive Improvements Phase 2	Transit turnouts, two way left turn, merge lanes, intersection improvements and fill gaps in bike and ped facilities including pedestrian crossing improvements, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals). Plus, major rehabilitation and maintenance, drainage improvements, landscaping.	\$335
SC-CO-P22-USC	Paul Sweet Road Improvements (Soquel Drive to end)	Major road rehab and maintenance. Also adds bike lanes, sidewalks, landscaping. Drainage improvements, merge lanes, and intersection improvements and new transit facilities may also be needed.	\$310
SC-CO-P24-USC	Lockwood Lane Improvements (Graham Hill Road to Scotts Valley limits)	Major road rehab, add bicycle lanes, sidewalks, some transit facilities, landscaping, and intersection improvements.	\$243

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CO-P26a-USC	41st Avenue Improvements Phase 2 (Hwy 1 Interchange to Soquel Drive)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26b-USC	Beach Road Improvements (City limits to Pajaro Dunes)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26d-USC	Brown Valley Road Improvements (Corralitos Road to Redwood Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26e-USC	Buena Vista Road Improvements (San Andreas to Freedom Boulevard)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$825
SC-CO-P26g-USC	Casserly Road Improvements (Hwy 152 to Green Valley Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$208
SC-CO-P26h-USC	Center Avenue/Seacliff Drive Improvements (Broadway to Aptos Beach Drive)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26i-USC	Chanticleer Avenue Improvements (Hwy 1 to Soquel Drive)	Roadway and roadside improvements including bike lanes, sidewalks, drainage and intersection improvements.	\$340
SC-CO-P26j-USC	East Zayante Road Improvements (Lompico Road to just before Summit Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$485
SC-CO-P26k-USC	El Rancho Drive Improvements (Mt. Hermon/Hwy 17 to SC City Limits)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$655
SC-CO-P26l-USC	Eureka Canyon Road Improvements (Hames Road to Buzzard Lagoon Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$655
SC-CO-P26m-USC	Glen Canyon Road Improvements (Branciforte Drive to City of Scotts Valley)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,640
SC-CO-P26n-USC	Glenwood Drive Improvements (Scotts Valley City Limits to State Hwy 17)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$825
SC-CO-P26p-USC	Mattison Lane Improvements (Chanticleer Avenue to Soquel Avenue)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$400
SC-CO-P26q-USC	Mt. Hermon Road Improvements (Lockhart Gulch to Graham Hill Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$825

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CO-P26r-USC	Porter Street Improvements (Soquel Drive to Paper Mill Road)	Roadway and roadside improvements including buffered sidewalks and bicycle treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed inconsistency between bicyclists and vehicles, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26s-USC	Seascape Boulevard Improvements (Sumner Avenue to San Andreas Road)	Roadway improvements and pavement rehabilitation.	\$170
SC-CO-P26u-USC	Summit Road Improvements	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,530
SC-CO-P27a-USC	37th/38th Avenue (Brommer to East Cliff) Multimodal Circulation Improvements and Greenway	Evaluate and if feasible improve vehicle and transit access on 38th Avenue from East Cliff to Brommer and develop greenway on 37th Avenue from East Cliff to Portola. Roadway improvements may include roadway and roadside improvements including sidewalks, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), transit turnouts, left turn pockets, and intersection improvement.	\$570
SC-CO-P27c-USC	Corcoran Avenue Improvements (Alice Street to Felt Street)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$150
SC-CO-P27e-USC	Main Street Improvements (Porter Street to Cherryvale Avenue)	Roadway and roadside improvements on Major Collector including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$1,760
SC-CO-P27f-USC	Mill Street Improvements (entire length)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$360
SC-CO-P27h-USC	Paulsen Road Improvements (Green Valley Road to Whiting Road)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$240
SC-CO-P27i-USC	Pinehurst Drive Improvements (entire length)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$180
SC-CO-P27k-USC	Spreckels Drive Improvements (Soquel Drive to Aptos Beach Drive)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$340
SC-CO-P27l-USC	Winkle Avenue Improvements (entire length from Soquel Drive)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$655
SC-CO-P28a-USC	Bean Creek Road Improvements (Scotts Valley City Limits to Glenwood Drive)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$485

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CO-P28c-USC	Commercial Way Improvements (Mission Drive to Soquel Drive)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$170
SC-CO-P28d-USC	Felton Empire Road Improvements (entire length to State Hwy 9)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$655
SC-CO-P28f-USC	Pine Flat Road Improvements (Bonny Doon Road to Empire Grade Road)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$655
SC-CO-P28g-USC	Soquel-Wharf Road Improvements (Robertson Street to Porter Street)	Roadway and roadside improvements on various Minor Arterials including addition of bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$515
SC-CO-P28h-USC	Thurber Lane Improvements (entire length)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$485
CO-P28i	Varni Road Improvements (Corralitos Road to Amesti Road)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$340
SC-CO-P29e-USC	Maciel Avenue Improvements (Capitola Road to Mattison Lane)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$400
SC-CO-P29f-USC	Paul Minnie Avenue Improvements (Rodríguez Street to Soquel Avenue)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$340
SC-CO-P30d-USC	Cabrillo College Drive Improvements (Park Avenue to Twin Lakes Church)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$240

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CO-P30n-USC	Rio Del Mar Boulevard Improvements (Esplanade to Soquel Drive)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$725
SC-CO-P31g-USC	Opal Cliff Drive Improvements (41st Avenue to Capitola City Limits)	Roadway, roadside and intersection improvements including sidewalks, bike treatments (such as buffered and/or painted bike lanes), designed to accommodate the number of users and link to East Cliff Drive.	\$290
SC-CO-P33d-USC	Harper Street Improvements (entire length-El Dorado Avenue to ECM)	Roadway and roadside improvements on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$310
SC-CO-P35-USC	Countywide General Road Maintenance and Operations	Ongoing maintenance, repair, and operation of road/street system within the unincorporated areas of the county.	\$446,857
SC-CO-P36-USC	Soquel-San Jose Road Improvements (Paper Mill Road to Summit Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$580
SC-CO-P37-USC	Countywide ADA Access Ramps	Construction of handicapped access ramps countywide.	\$620
SC-CO-P62-USC	Soquel Drive Road Improvements (Robertson Street to Daubenbiss)	Roadway and roadside improvements including curb, gutter, sidewalk, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), left turn lanes, intersection improvements and roadway rehabilitation.	\$410
SC-CO-P83-USC	San Lorenzo Way Bridge Replacement Project	The project will consist of completely replacing the existing one lane structure and roadway approaches with a two lane clear span bridge and standard bridge approaches.	\$3,190
SC-CO-P85-USC	Green Valley Road Bridge Replacement Project	The project will consist of completely replacing the existing two lane structure and roadway approaches with a two lane clear span concrete slab bridge and standard bridge approaches.	\$2,110
SC-CO-P88-USC	Either Way Lane Bridge Replacement Project	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane clear span precast voided concrete slab bridge and standard bridge approaches.	\$2,180
SC-CO-P89-USC	Redwood Road Bridge Replacement Project	The project will consist of completely replacing the existing steel army tread way bridge crossing a tributary of Brown's Creek on Redwood Road with a reinforced concrete slab bridge and standard bridge approaches.	\$1,310
SC-CO-P90-USC	Fern Drive at San Lorenzo River Bridge Replacement Project	The project will consist of completely replacing the existing three span single lane structure and roadway approaches with a new two lane clear span reinforced concrete box girder bridge and standard bridge approaches.	\$2,830

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CO-P91-USC	Larkspur Bridge at San Lorenzo River	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane bridge and standard bridge approaches.	\$3,930
SC-CO-P97-USC	Countywide Guardrail	Install guardrail on County roads.	\$15,000
SC-SC-37-SCR	Murray Street Bridge Retrofit	Seismic retrofit of existing Murray Street bridge (36C0108) over Woods Lagoon at harbor and associated approach roadway improvements and replacement of barrier rail. Includes wider bike lanes and sidewalk on ocean side. Include access paths to harbor if eligible.	\$11,440
SC 42SC	Soquel Avenue at Frederick Street Intersection Modifications	Widen to improve eastbound through-lane transition on Soquel Avenue and lengthen right-turn pocket and bicycle lane on Frederick Street Upgrade access ramps.	\$310
SC-SC-48-SCR	Ocean Street Pavement Rehabilitation	Pavement rehabilitation using cold-in-place recycling process; includes new curb ramps, restriping of bicycle lanes and crosswalks.	\$1,030
SC-SC-49-SCR	Water Street Pavement Rehabilitation (N. Branciforte Avenue- Ocean Street)	Pavement rehabilitation of Water Street between North Branciforte Avenue and Ocean Street. Grant Condition: Add bicycle and pedestrian treatments at intersections, especially at Branciforte to reduce conflicts between motorized and non-motorized users.	\$1,453
<u>SC-SC-P07-SCR</u>	<u>River Street Pavement Rehabilitation (Water Street to Potrero Street)</u>	<u>Pavement rehabilitation of River Street between Water Street and Potrero Street. (0.4 mi)</u>	<u>\$1,000</u>
SC-SC-P07-SCR	Citywide Operations and Maintenance	Ongoing maintenance, repair and operation of street system within the City limits.	\$86,249
SC-SC-P100-SCR	Seabright/Murray Traffic Signal Modifications	Remove split phasing on Seabright and add right-turn lane northbound.	\$1,030
SC-SC-P101-SCR	Swift/Delaware Intersection Roundabout or Traffic Signal	Install traffic signal or roundabout at Intersection to improve capacity and safety.	\$500
SC-SC-P104-SCR	Measure H Road Projects	Road rehabilitation and reconstruction projects citywide to address backlog of needs using Measure H sales tax revenues.	\$41,800
SC-SC-P109-SCR	Bay/High Intersection Modification	Install a roundabout or modify the traffic signal to include protected left-turns and new turn lanes. Revise sidewalks, access ramps and bike lanes as appropriate.	\$2,150 \$3,500
SC-SC-P128-SCR	Citywide Street Sweeping	Ongoing street sweeping, funded from City Refuse Enterprise Fund.	\$19,800
SC-SC-P13-SCR	Riverside Avenue/Second Street Intersection Modification	Modify intersection to reduce congestion and improve pedestrian crossing.	\$175
<u>SC-SC-P77-SCR</u>	<u>Bay Street Corridor Modifications</u>	<u>Intersection modifications on Bay Street Corridor from Mission Street to Escalona Drive, including widening at the Mission Street northeast corner and widening on Bay. Improve bike lanes and add sidewalks to west side of Bay.</u>	<u>\$970</u>
SC-SC-P83-SCR	West Cliff/Bay Street Modifications	Signalization at all-way stop controlled intersections.	\$500

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-SC-P86-SCR	Ocean Street Streetscape and Intersection, Plymouth to Water	Implement this phase of the Ocean Street plan and modify Plymouth Street to provide separate turn lanes and through lanes, widen sidewalks, pedestrian islands/bulbouts, transit improvements, street trees, street lighting and medians landscaping improvements. This includes pedestrian and bicycle crossing improvements and detection and connectivity to the pedestrian and bicycle path on the San Lorenzo River and adjacent neighborhoods. Include Gateway treatment.	\$2,000
SC-SC-P90-SCR	High Street/Moore Street Intersection Modification	Add a protected left turn to existing signalized intersection along High Street at city arterial. Project is located in high pedestrian and bicycle use activity area.	\$100
SC-SC-P91-SCR	Shaffer Road Widening and Railroad Crossing	Construction of a new crossing of the Railroad line at Shaffer Road and widening at the southern leg of Shaffer in conjunction with development. Complete sidewalks and bike lanes.	\$1,000
SC-SC-P93-SCR	Beach/Cliff Intersection Signalization	Signalize intersection for pedestrian and train safety.	\$210
SC-SV-27-SCV	Mt. Hermon Road/Scotts Valley Drive/Whispering Pines Drive Intersection Operations Improvement Project	Modify intersection: Extend length of left turn lane from northbound Mt. Hermon Road to eastbound Whispering Pines Drive and evaluate adding a third through lane, construct curb, gutter, sidewalk and curb ramps, modify striping and pavement markings, improve bicycle facilities (green lanes and bike box), resynchronize intersection timing, and repave intersection area.	\$450
SC-SV-28-SCV	Glen Canyon Road/Green Hills Road/S. Navarra Drive Bike Corridor and Roadway Preservation	Repave two roads, add bike lanes and signage. Includes road markings like sharrows and green lane treatments to assist commuters, students, and recreational bikers; and bike/walk education and outreach programs.	\$993 \$1,265
<u>SC-SV-29-SCV</u>	<u>Glenwood Drive Rehabilitation and Bicycle Improvement Project</u>	<u>Pavement rehabilitation of Glenwood Drive (K Street Way to city limits), drainage repair and widen to add bike lanes. (0.58mi)</u>	<u>\$865</u>
SC-SV-P06-SCV	Citywide Access Ramps	Place handicap ramps at various locations.	\$210
SC-SV-P27-SCV	Citywide General Maintenance and Operations	Ongoing maintenance, repairs and operation of road/street system within the City limits.	\$13,459
SC-SV-P28-SCV	Neighborhood Traffic Calming	Citywide traffic calming devices.	\$770
SC-SV-P47-SCV	Mt. Hermon/Scotts Valley - Transit Queue Jump	Evaluate and if found to be beneficial, remove right turn islands at Mt. Hermon Road/Scotts Valley Road to add transit queue jump lanes/signals.	\$620
SC-SV-P51-SCV	Mt. Hermon Road/Town Center Entrance Traffic Signal	Install new traffic signal at the intersection of the future Town Center road that will accommodate increased pedestrian travel. Add a right-turn lane on the westbound approach.	\$130
SC-SV-P52-SCV	Kings Village Road/Town Center Entrance Traffic Signal	Install new traffic signal at the intersection of Kings Village Road and new Town Center entrance (near transit center) with protected pedestrian crossings and transit signal priority.	\$105

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AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-UC-P01-UC	UCSC Main Entrance Improvements	Realign roadway, transit pullout/shelter, relocate bike parking, construct pedestrian path, historic resource analysis.	\$2,070
SC-UC-P59-UC	UCSC Lump Sum Roadway Maintenance	Repaving and rehabilitation of roadways on UCSC campus to maintain existing network.	\$3,100
SC-UC-P66-UC	Transportation-Related Stormwater Management Projects	Retrofitting existing transportation facilities and developing new facilities with new stormwater management techniques.	\$1,030
SC-UC-P68-UC	Parking Management Technology Improvements	Updating existing parking management technologies to allow for more effective management, additional parking management at Coastal Marine Campus and 2300 Delaware site.	\$410
SC-VAR-P13-VAR	Lump Sum Emergency Response Local Roads	Lump sum for repair of local roads damaged in emergency.	\$23,370
SC-VAR-P14-VAR	Lump Sum Bridge Preservation	Painting, barrier rail replacement, low water crossing, rehab and replacement bridges for SHOPP and Highway Bridge Program (HBP).	\$54,500
SC-WAT-O1A-WAT	Hwy 1/Harkins Slough Road Interchange: Bicycle/Pedestrian Bridge	Construction of Pedestrian/Bicycle Bridge over Highway 1. Caltrans Project ID 05-1G490.	\$9,900 \$9,300
SC-WAT 27a-WAT	Main Street (Hwy 152)/Freedom Boulevard Roundabout	Installation of a roundabout to replace the currently signalized intersection with safety considerations for bike/ped Caltrans Project ID - 05-0T150.	\$1,500 1,290
WAT 38SC	Airport Boulevard Improvements (Freedom Boulevard to City Limits)	Road widening to accommodate extension of bicycle lane and portion of travel lane, installation of bus pull out, new sidewalks and curb ramps, refuge island, rectangular flashing beacon, striping and roadway rehab.	\$1,346 \$1,330
WAT 40SC	Airport Boulevard Improvements: Westgate/Larkin to Hanger Way	Reconstruct roadway, install new sidewalk, upgrade curb ramps and driveway crossings, install median islands, modify traffic signals to include additional ped crossing and install rectangular rapid flashing beacon at crosswalk.	\$1,645 \$1,550
WAT 42SC	Green Valley Road Reconstruction (Struve Slough-Freedom Boulevard)	Reconstruct existing roadway and bike lanes, replace asphalt ped path with curb, gutter sidewalk and ADA compliant curb ramps; upgrade signage and loop detectors.	\$1,598 \$1,198
WAT 43SC	Freedom Boulevard Plan Line	Preparation of a plan line for Freedom Boulevard between Green Valley Road and Buena Vista Drive that delineates multimodal modifications supported by the community.	\$160
<u>WAT 45SC</u>	<u>Freedom Boulevard Reconstruction (Alta Vista to Green Valley)</u>	<u>Reconstruct existing roadway and bike lanes, replace asphalt ped path with curb, gutter sidewalk and ADA compliant curb ramps; upgrade signage and loop detectors.</u>	<u>\$2,000</u>
SC-WAT-P04-WAT	Neighborhood Traffic Plan	Plan to identify and address concerns regarding speeding, bicycle and pedestrian access and safety, and other neighborhood traffic issues.	\$115 \$100
SC-WAT-P06-WAT	Citywide General Maintenance and Operations	Ongoing maintenance, repair, and operation of road/street system, including bicycle and pedestrian facilities.	\$41,400 \$51,643

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-WAT-P13-WAT	Neighborhood Traffic Plan Implementation	Address concerns about traffic complaints through education, enforcement and engineering solutions. Install traffic calming devices that do not impede bicyclist access.	\$470 <u>\$410</u>
SC-WAT-P31-WAT	Ohlone Parkway Improvements - Phase 2 (UPRR to West Beach)	Roadway, pedestrian and bicycle facilities.	\$600 <u>\$520</u>
SC-WAT-P35-WAT	Bridge Maintenance	Maintenance of bridges.	\$115 <u>\$100</u>
SC-WAT-P38-WAT	Freedom Boulevard Undergrounding	Underground existing overhead utilities.	<u>\$1,270</u>
SC-WAT-P40-WAT	Main Street Modifications (500 Block: Fifth Street to East Lake Avenue)	Repair, replace and install curb, gutter, and curb ramps; replace and upgrade signage and striping. Evaluate and if feasible, provide bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and buffered sidewalk.	\$710 <u>\$620</u>
SC-WAT-P47-WAT	Main Street Modifications (City Limit to Lake Avenue)	Repave roadway and bike lanes; repair, replace and install curb, gutter, sidewalk and curb ramps; replace and upgrade signage and striping. Evaluate and if feasible, provide bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and buffered sidewalks.	\$1,670 <u>\$1,450</u>
SC-WAT-P68-WAT	Freedom Boulevard (Davis Avenue to Green Valley Road)	Repair, reconstruct and/or upgrade pavement, bike lanes, sidewalks, transit facilities, signage and striping.	\$1,730 <u>\$1,500</u>
SC-WAT-P7-WAT	Freedom Boulevard (Green Valley Road to Buena Vista Drive)	Repair and resurface damaged roadway and bike lanes, replace damaged sidewalks, add pedestrian facilities where none exist.	\$5,000

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Table 5 Other Projects

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-AIR-P01-WAT	Lump Sum Watsonville Municipal Airport Capital Projects	Projects from the Watsonville Airport Capital Improvement Program. Includes new hangars, reconstruction of aviation apron, security features and runway extensions.	\$21,700
SC-AIR-P02-WAT	Watsonville Municipal Airport Operations	Ongoing operations/maintenance.	\$44,000
SC-CO-P96-USC	Capital Improvement Projects Consistent with the Sustainable Santa Cruz County Plan	Construct associated multimodal infrastructure improvements associated with the Sustainable Santa Cruz County Plan.	\$11,000
SC-CT-P09e-CT	Measure D Hwy 9 Corridor Projects	Corridor study is underway to identify need for shoulder widening, turnouts for buses, bicycle and pedestrian improvements and turn lanes at spot locations in San Lorenzo Valley.	\$7,349
SC-CT-P48-CT	Hwy 17 Wildlife Habitat Connectivity	Wildlife crossing.	\$9,198
SC-RTC 03a-RTC	Santa Cruz Branch Rail Line Improvements	Infrastructure preservation for current uses and future transportation purposes.	\$570
RTC 04SC	Planning, Programming & Monitoring (PPM) – SB 45	Development and amendments to state and federally mandated planning and programming documents, monitoring of programmed projects.	\$1,870
SC-RTC-P02a-RTC	Environmental Assessment, Economic and Other Analyses of Options for Rail Corridor	Environmental assessment, economic and other analyses of a possible future public transit system and other transportation options on the rail corridor right-of-way.	\$8,000
SC-RTC-P07-RTC	SCCRTC Administration (TDA)	SCCRTC as Regional Transportation Planning Agency for Santa Cruz County distributes Transportation Development Act Local Transportation Funds and State Assistance Funds for planning, transit, bicycle facilities and programs, pedestrian facilities and programs and specialized transportation in accordance with state law and the unmet transit needs process.	\$14,300
SC-RTC-P08-RTC	SCCRTC Planning	SCCRTC Planning Tasks. Includes public outreach, long and short range planning, interagency coordination.	\$13,750
SC-RTC-P25-VAR	Transit Oriented Development Grant Program	Smart growth grant program to fund TODs that encourage land use and transportation system coordination. May include joint child care/PNR/transit centers.	\$2,570
SC-RTC-P59-RTC	Measure D Administration and Implementation	SCCRTC administration, implementation and oversight of Measure D and the revenues generated from the 2016 Santa Cruz County Transportation Sales Tax - Measure D.	\$16,500
SC-UC-P65-UC	Electric Vehicle Charging Stations	Add additional electrical infrastructure and install electric vehicle charging stations around campus.	\$310
SC-UC-P73-UC	UCSC Parking Operations & Maintenance	Operate and administer the parking operations for UCSC including planning, TDM, marketing and debt service.	\$70,450
SC-VAR-P07-VAR	Transportation System Electrification	Partnership with local gov't agencies, electric vehicle manufactures, businesses, and Ecology Action to establish electric vehicle charging stations for EV's, plug-in hybrids, NEV's, as well as ebikes and scooters.	\$51,650

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-VAR-P10-VAR	Safe Routes to Schools Studies	Studies to assess pedestrian and bicycle safety near schools.	\$210
SC-VAR-P22-VAR	Monterey Bay Electric Vehicle Alliance (MBEVA)	Help facilitate this broad collaboration of PEV advocates, businesses, union labor, manufacturers and public agencies to assist the adoption of PEV's in the Monterey Bay region.	\$200 \$300
SC-VAR-P25-VAR	Planning for Transit Oriented Development for Seniors	Evaluate opportunities for transit oriented development serving seniors including access to medical facilities.	\$80
SC-VAR-P30-VAR	Public/Private Partnership Transit Stops and Pull Outs Plan	Develop model for assisting local jurisdictions in working with businesses to install transit pullouts and shelters on property in areas identified as high quality transit corridors in Sustainable Communities Strategy.	\$150
SC-VAR-P36-VAR	Safety Plan	Develop a safety plan that addresses traffic related injuries and fatalities for all modes of transportation.	\$310
SC-VAR-P38-VAR	Environmental Mitigation Program	Allocate funds to protect, preserve and restore native habitat that construction of transportation projects listed in SCCRTC's RTP could potentially impact.	\$5,680

Table 6 Transportation Demand Management

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CO 50-USC	Santa Cruz County Health Service Agency - Traffic Safety Education	Ongoing education program to decrease the risk and severity of collisions.	\$2,200
SC-RTC 02a-RTC	Cruz511 TDM and Traveler Information	Transportation demand management including centralized traveler information system and ride matching services.	\$2,640
SC-RTC-15-RTC	Vanpool Incentive Program	Assist in start up and retention of vanpools.	\$100
RTC 17SC	Ecology Action Transportation Employer Membership Program	Community organization that promotes alternative commute choices. Work with employers, incentives for travelers to get out of SOVs including: emergency ride home, interest-free bike loans, discounted bus passes.	\$1,135
SC-RTC-26-OTH	Bike To Work/School Program	Countywide education, promotion, and incentive program to actively encourage bicycle commuting and biking to school.	\$1,870 \$1,620
SC-RTC-33-VAR	Cabrillo College TDM Programs	Provide students and employees at all four Cabrillo College campuses with education, promotion, and incentives that support the use of sustainable transportation modes.	\$780
SC-RTC-P48-VAR	Climate Action Transportation Programs	Projects that reduce greenhouse gas emissions through reducing vehicle trips and vehicle miles traveled, increasing fuel efficiency and expanding use of alternatively fueled vehicles. Includes comprehensive outreach and education campaigns, a countywide emergency ride home for those using alternatives and TDM incentive programs.	\$2,330
SC-RTC-P49-RTC	RTC Bikeway Map	Update, print and distribute free SC County Bikeway Map and update GIS files as needed.	\$320

2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-RTC-P53-VAR	TDM Individualized Employer/Multi-unit Housing Program	Implement individualized employer and multiunit housing TDM programs with incentives for existing development.	\$2,325
SC-RTC-P54-RTC	School-Based Mobility/TDM Programs	Student transportation programs aimed at improving health and well being, transportation safety and sustainability and that facilitate mode shift from driving alone in a motor vehicle to active and group transportation.	\$1,100
SC-RTC-P57-RTC	Shared Parking Program	Develop tools to allow adjacent property owners to develop and share parking facilities.	\$50
SC-UC-P61-UC	Traveler Safety Education/Information Programs	Bike/pedestrian safety programs; light and helmet giveaways, safety classes, distracted driver programs, bus etiquette program.	\$100
SC-UC-P63-UC	UCSC Vanpool Program	Maintain, operate and expand upon UCSC vanpool program.	\$8,680
SC-UC-P69-UC	UCSC Commute Counseling Program	Staffing program development to individually market to UCSC affiliates on more sustainable means of travel to campus.	\$3,100
SC-UC-P70-UC	UCSC Commuter Incentive Programs	Provide ongoing support and development of new programs to encourage travel to campus via sustainable modes of travel.	\$1,550
SC-VAR-P06-VAR	Carsharing Program	Program to assist people in sharing a vehicle for occasional use.	\$1,290
SC-VAR-P17-VAR	Eco-Tourism - Sustainable Transportation	Provide sustainable transportation information, incentives and promotions to the estimated one million visitors to Santa Cruz County.	\$515
SC-VAR-P18-VAR	Mission Street/Hwy 1 Bike/Truck Safety Campaign	Partnership with road safety shareholders including Caltrans, UCSC, City of Santa Cruz, Ecology Action, trucking companies and others to improve bike/truck safety along the Mission Street corridor.	\$520
SC-VAR-P19-VAR	School Safety Programs	Bicycle and walking safety education and encouragement programs targeting K-12 schools in Santa Cruz County including Ecology Action's Safe Routes to School and Bike Smart programs.	\$1,910
SC-VAR-P20-VAR	Public Transit Marketing	Initiatives that increase public transit ridership including discount passes, free fare days, commuter clubs and promotional and marketing campaigns.	\$775
SC-VAR-P24-VAR	Countywide Senior Driving Training	Coordinate and enhance current programs that help maturing drivers maintain their driving skills and provides transitional info about driving alternatives.	\$80
SC-VAR-P26-VAR	Park and Ride Lot Development	Upgrade and maintain existing park and ride lots for commuters countywide. Secure additional park and ride lot spaces for motorized vehicles and bicycles.	\$2,260
SC-VAR-P37-VAR	Transportation Demand Management Plan	Collaborate with other organizations to develop a coordinated plan for transportation demand management program implementation for Santa Cruz County.	\$310
VAR 01SC	Santa Cruz County Open Streets	Community events promoting alternatives to driving alone as part of a sustainable, healthy and active life-style.	\$200 \$100

Table 7 Transit ADA

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CTSA-P01-OTH	Countywide Specialized Transportation	Non-ADA mandated paratransit and other specialized transportation service for seniors and people with disabilities.	\$46,000
SC-MTD-02-MTD	ADA Paratransit Vehicle Replacements	Replace buses/vans for ADA paratransit fleet (including Accessible Taxi program).	\$6,000
SC-MTD-P10C-MTD	ADA Paratransit Service - Continuation of Existing Service	Operation & maintenance cost of existing Paratransit service.	\$121,000
SC-MTD-P11-MTD	ADA Service Expansion	Add capacity to meet increased trip demand thru 2040.	<u>\$1,050</u> \$1,054
SC-MTD-P30-MTD	ParaCruz Mobile Data Terminals; Radios	Replace mobile data terminals in vehicles.	\$400
SC-MTD-P51-MTD	ADA Access Improvements	Add or improve ADA accessibility to all bus stops and METRO facilities.	\$350
SC-RTC-P43-OTH	Senior Employment Ride Reimbursement	Reimburse low income seniors for transit expenses to/from employer sites.	\$1,600
SC-UC-P75-UC	Disability Van Service	Operate disability van service.	\$5,450

Table 8 Transit Improvements

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-MTD-P12-MTD	Hwy 17 Express Service Restoration and Expansion	Restore Hwy 17 Express service to FY16 levels, then expand service 2% annually.	<u>\$4,000</u> \$4,234
SC-MTD-P14-MTD	Local Transit Service Restoration and Expansion	Restore local service to FY16 levels, then expand service 2% annually.	<u>\$72,000</u> \$71,861
SC-RTC-P60-RTC	Regional State Transit Assistance Projects	State Transit Assistance (STA) eligible transit projects.	\$33,220
SC-VAR-P45-VAR	West Side Transit Hub	Transfer node near rail corridor at Natural Bridges Drive - may include transit, rideshare, bicycle, bikeshare, pedestrian to provide regional connections to/from other parts of the county and the university.	\$580
SC-VAR-P46-VAR	Live Oak Transit Hub	Transfer node near rail corridor at 17th Avenue - may include transit, rideshare, bicycle, bikeshare, pedestrian to provide regional connections to/from other parts of the county.	\$530
SC-VAR-P47-VAR	Watsonville Transit Hub	Expand transportation mode options at transfer node near rail corridor and current transit center to increase use of transit, rideshare, bicycle, bikeshare, pedestrian to provide regional connections to/from other parts of the county.	\$585

Table 9 Transit Operations

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-MTD-P10-MTD	Local Transit - Continuation of Baseline Service Levels 2019-2040	Operation & maintenance cost of existing local fixed route bus service.	\$836,000 \$741,400
SC-MTD-P10B-MTD	Hwy 17 Express Service - Continuation of Baseline Service Levels	Operation & maintenance cost of existing bus service.	\$99,000 \$83,600
MTD 24SC SC-MTD-P50-MTD	Automatic Vehicle Locator and Automatic Passenger Counter Systems	Automatic Vehicle Locator (AVL), Automatic Passenger Counters and automatic vehicle announcing systems on METRO buses. Provide real time bus arrival/departure displays at bus stops. Necessary IT upgrades and data collection for system operations, security, planning and maintenance. Automatic Vehicle Locator and Automatic Passenger Counter systems on all METRO buses. Real time bus arrival/departure displays at select stops. Necessary IT upgrades.	\$3,200
SC-RTC 36-RTC	Railroad Infrastructure Maintenance and Rehabilitation	Protect, maintain and rehabilitate the railroad infrastructure on the Santa Cruz Branch Rail Line including bridges, track, drainage, culverts, signals, etc.	\$22,410
SC-RTC-P03-RTC	Rail and Trail Corridor Management and Maintenance	Operating expenses for rail line oversight.	\$3,850
SC-RTC-P58-RTC	Real-Time Transit Info	Develop and maintain distribution channel for disseminating real time transit arrival and departure information to Santa Cruz Metro users.	\$220
SC-UC-P23-UC	Transit Vehicles	Ongoing capital acquisition of transit vehicles for on-campus transit and University shuttles.	\$5,170
SC-UC-P62-UC	Bus Tracking and AVL Transit Programs	GPS bus tracking and Automatic Vehicle Locator programs inform travelling population of transit locations so they can make informed mode choices.	\$260
SC-UC-P74-UC	UCSC Transit Service	Operate the on campus shuttle service and Night Owl.	\$68,410
SC-VC-P1-OTH	Volunteer Center Transportation Program	Program providing specialized transportation to seniors and people with disabilities.	\$1,640

Table 10 Transit Rehabilitation

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
MTD 18SC	Replacement Transit Fareboxes, Ticket Vending Machines and Fare System Enhancements	Upgrade GFI Farebox system to enable fare media loading, tracking, registration, interoperability via internet.	\$1,000
SC-MTD-P04-MTD	Metro Bus Replacements	Replace fleet at the end of normal bus lifetime.	\$73,000 \$94,495
SC-MTD-P31-MTD	Bus Rebuild and Maintenance	Rebuild engines; fleet maintenance equipment.	\$5,250 \$5,174
SC-MTD-P32-MTD	Non-Revenue Vehicles	Replace support vehicles.	\$1,200
SC-MTD-P35-MTD	Transit System Technology Improvements	Automated Data Processing software, telephones, portable computers, servers, Customer Information Kiosks, digital ID processing equipment. Maintain and upgrade office software and hardware, bandwidth, web site, phone network, to enhance productivity, customer service and maintain functionality.	\$1,000
SC-MTD-P36-MTD	Metro Facilities Repair/Upgrades	Maintain and upgrade facilities.	\$4,300
SC-MTD-P52-MTD	Bus Stop and Station Improvements	Improve customer access and/or amenities at bus stops; add bus stop pads to preserve pavement.	\$500
SC-UC-P64-UC	Alternative Fuel Fleet Vehicles	Purchase and upgrade fleet vehicles to alt. fueled vehicles (refuse trucks, street sweepers, fleet cars, etc.)	\$500

Table 11 Transportation System Management

AMBAG ID	Project	Project Description/Scope	Total Cost (\$ 000s)
SC-CAP-P50-CAP	Capitola-wide HOV Priority	Evaluate HOV priority at signals and HOV queue bypass.	\$40
SC-CHP-P01-CHP	Hwy 17 Safety Program	Continuation of Highway 17 Safety Program in Santa Cruz County.	\$2,200
SC-MTD-P06-MTD	Transit Technological Improvements	IT software and hardware upgrades for scheduling, customer service, planning systems.	\$2,500
RTC 01SC	Freeway Service Patrol (FSP) on Hwy 1 and Hwy 17	Maintain and expand tow truck patrols on Highways 1 and 17.	\$6,600 \$6,080
SC-RTC-P01-RTC	SAFE: Call Box System Along Hwys	Motorist aid system of telephone call boxes along all highways plus maintenance and upgrades. Call boxes may be used to request assistance or report incidents.	\$5,390
SC-RTC-P51-RTC	Performance Monitoring	Transportation data collection and compilation to monitor performance of transportation system to advance goals/targets.	\$220
SC-SV-P42-SCV	Synchronize Traffic Signals along Mt. Hermon Road	Re-time to coordinate traffic signals along Mt. Hermon Road.	\$100
SC-SV-P46-SCV	Mt. Hermon/King's Village Road - Transit Signal Priority	Transit signal priority at Kings Village Road/Mt. Hermon Road.	\$80
SC-UC-P58-UC	UCSC Traffic Control	Non-traditional traffic control/crossing guard program at key intersections on UCSC campus to improve pedestrian and vehicle safety, reduce conflicts, improve travel times.	\$2,580
SC-VAR-P34-VAR	Transit Priority	Install transit queues at major intersections.	\$2,585
SC-WAT-P56-WAT	Watsonville-wide HOV Priority	Evaluate HOV priority at signals and HOV queue bypass.	\$60 \$50

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Appendix C

Performance Metric Data

Table 1 Performance Metric Data for 2040 MTP/SCS

Description	2015 Existing	2020 No Project	2020 Project (Revenue Constrained)	2035 No Project	2035 Project (Revenue Constrained)	2040 No Project	Alt #2: 2040 Livable Communities	Alt #3: 2040 Maintained Mobility	2040 Project (Revenue Constrained)
Percent of work trips that are 30 minutes or less by mode peak period (percent)									
SOV/Drive alone	84.3%	84.3%	84.5%	84.1%	83.9%	83.9%	84.5%	83.9%	84.0% 84.5%
Shared Ride	84.3%	84.3%	84.5%	84.1%	83.9%	83.9%	84.5%	83.9%	84.0% 84.5%
Transit	13.0%	13.5%	17.0%	13.1%	15.2%	13.0%	15.8%	14.8%	14.8% 15.8%
Average work trip travel time peak period (in minutes)	15.6	15.5	15.5	15.6	15.7	15.7	15.5	15.7	15.7
Percent of jobs within 1/2 mile of a high quality transit stop	21.4%	21.2%	21.2%	20.7%	24.7%	20.6%	25.3%	27.8%	29.6%
Transit trips (include bike and pedestrian trips)	374,215	411,724	389,101	421,261	421,383	430,781	452,215	430,142	429,302 451,991
Congested vehicle miles travelled peak periods (LOS E & F)**	499,064	641,897	641,372	1,069,383	968,326	1,259,191	1,047,818	1,058,873	1,118,524
VMT Total	15,835,910	17,295,814	16,751,191	19,031,439	19,027,718 19,028,461	19,741,921	19,678,332	19,785,172	19,687,508
Monterey County VMT	9,764,441	10,610,567	10,274,595	11,747,637	11,708,338	12,216,546	12,085,405	12,208,821	12,091,679
San Benito County VMT	1,382,599	1,582,485	1,546,333	1,970,316	1,984,193	2,111,029	2,118,397	2,134,329	2,119,312
Santa Cruz County VMT	4,688,871	5,102,762	4,930,263	5,313,487	5,335,930	5,414,346	5,474,530	5,442,022	5,476,518
Daily Vehicle Hours of Delay	32,978	N/A	N/A	N/A	N/A	71,322	N/A	N/A	59,999
Monterey County	15,028	N/A	N/A	N/A	N/A	30,922	N/A	N/A	24,987
Santa Benito County	2,000	N/A	N/A	N/A	N/A	12,309	N/A	N/A	10,632
Santa Cruz County	15,950	N/A	N/A	N/A	N/A	28,101	N/A	N/A	24,380
**FC 2 where VOC is >0.86, and FC 3-7 where VOC is >=0.90 for peak periods N/A = Not Applicable									

2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

Table 2 SB 375 Greenhouse Gas Data

Group	Area	Sub-Area	Cal. Year	Season	Veh_Tech	EMFAC2007 Category	Population	VMT	Trips	CO2_TO TEX	Fuel_GAS	Fuel_DSL	CO ₂ lbs.	Per Capita CO ₂	Population
2015 Existing															
1	AMBAG	All Sub-Areas	2015	Annual	All Vehicles	All Vehicles	334,788.2	11,840,839	2,073,433.4	5,504.5	588.8	3.70	11,009,097	14.43	762,676
2020 No Project															
1	AMBAG	All Sub-Areas	2020	Annual	All Vehicles	All Vehicles	345,267	12,916,955	2,141,967	5,920.1	628.7	5.02	11,840,194	14.96	791,600
2020 Project															
1	AMBAG	All Sub-Areas	2020	Annual	All Vehicles	All Vehicles	330,807	12,377,548	2,052,257	5,661.5	601.2	4.80	11,323,068	14.30	791,600
2035 No Project															
1	AMBAG	All Sub-Areas	2035	Annual	All Vehicles	All Vehicles	395,852	13,625,151	2,458,868	6,142.6	649.1	5.95	12,285,171	14.25	862,200
2035 Project															
1	AMBAG	All Sub-Areas	2035	Annual	All Vehicles	All Vehicles	395,713	13,619,679	2,458,006	6,161.1	651.0	5.97	12,322,253	14.29	862,200
2040 No Project															
1	AMBAG	All Sub-Areas	2040	Annual	All Vehicles	All Vehicles	415,974	14,004,147	2,584,505	6,321.6	667.8	6.16	12,643,187	14.31	883,300
2040 Alt.3 (Maintained Mobility)															
1	AMBAG	All Sub-Areas	2040	Annual	All Vehicles	All Vehicles	417,281	14,048,328	2,592,626	6,355.3	671.4	6.20	12,710,536	14.39	883,300
2040 Alt.2 (Livable Communities)															
1	AMBAG	All Sub-Areas	2040	Annual	All Vehicles	All Vehicles	414,070	13,934,004	2,572,673	6,291.9	664.7	6.14	12,583,873	14.25	883,300
2040 Project															
1	AMBAG	All Sub-Areas	2040	Annual	All Vehicles	All Vehicles	414,328	13,942,733	2,574,277	6,294.9	665.0	6.14	12,589,843	14.25	883,300

Table 3 Full Fleet Greenhouse Gas Data

VMT	Trips	TOG_TOTAL	ROG_TOTAL	CO_TOTEX	NOx_TOTEX	CO2_TOTEX	PM10_TOTAL	PM2_5_TOTAL	SOx_TOTEX	Fuel_GAS	Fuel_DSL	VMT per capita	GHG per capita (lbs)	Population
2015 Existing														
15,835,910	2,789,354	7.39	6.69	56.0	15.1	8,132.3	1.13	0.5634	0.0812	706.3	143.5	20.8	21.3	762,676
2020 No Project														
17,295,814	2,849,312	4.99	4.54	35.3	9.52	7,925.0	1.09	0.4886	0.0787	668.5	153.6	21.8	20.0	791,600
2020 Project														
16,751,191	2,758,980	4.82	4.39	34.1	9.22	7,656.4	1.06	0.4730	0.0760	645.3	148.8	21.2	19.3	791,600
2035 No Project														
19,031,439	3,269,687	2.38	2.18	14.7	3.18	6,248.0	1.11	0.4582	0.0615	460.7	175.1	22.1	14.5	862,200
2035 Project														
19,027,718	3,268,949	2.38	2.18	14.7	3.18	6,261.4	1.11	0.4583	0.0616	462.2	175.0	22.1	14.5	862,200
2040 No Project														
19,741,921	3,444,653	2.04	1.86	12.9	2.93	6,314.6	1.14	0.4689	0.0620	452.0	188.2	22.4	14.3	883,300
2040 Alt.3 (Maintained Mobility)														
19,785,172	3,451,758	2.04	1.86	12.9	2.93	6,337.5	1.15	0.4700	0.0622	453.8	188.7	22.4	14.3	883,300
2040 Alt. 2 (Livable Communities)														
19,678,332	3,434,809	2.03	1.85	12.8	2.91	6,291.3	1.14	0.4673	0.0618	450.4	187.4	22.3	14.2	883,300
2040 Project														
19,687,508	3,436,400	2.03	1.85	12.9	2.91	6,294.1	1.14	0.4675	0.0618	450.6	187.5	22.3	14.3	883,300

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Appendix D

Special Status Species

Special Status Species Known to Occur or with Potential to Occur within Monterey, San Benito, and Santa Cruz Counties

Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CRPR or CDFW	Habitat Requirements
Plants		
<i>Abies bracteata</i> bristlecone fir	None/None G2G3 / S2S3 1B.3	Lower montane coniferous forest, broadleaved upland forest, chaparral, riparian woodland. Rocky sites in Monterey and San Luis Obispo counties. Sometimes serpentine. 150-1465 m.
<i>Acanthomintha lanceolata</i> Santa Clara thorn-mint	None/None G4 / S4 4.2	Chaparral, cismontane woodland, coastal scrub. Shale scree and serpentine. 80-1200 m.
<i>Acanthomintha obovata</i> ssp. <i>cordata</i> heart-leaved thorn-mint	None/None G4T3 / S3 4.2	Cismontane woodland, chaparral, valley and foothill grassland, pinyon-juniper woodland. Heavy adobe-clay soil (probably a Vertisol). Grassy openings in woodland & chaparral. 785-1540 m.
<i>Acanthomintha obovata</i> ssp. <i>obovata</i> San Benito thorn-mint	None/None G4T3T4 / S3S4 4.2	Chaparral, cismontane woodland, valley and foothill grassland. Heavy clay, sometimes alkaline soil, or sometimes serpentine, in grassy openings in blue oak woodland or chaparral. 395-1500 m.
<i>Agrostis blasdalei</i> Blasdale's bent grass	None/None G2 / S2 1B.2	Coastal dunes, coastal bluff scrub, coastal prairie. Sandy or gravelly soil close to rocks; often in nutrient-poor soil with sparse vegetation. 5-365 m.
<i>Agrostis lacuna-vernalis</i> vernal pool bent grass	None/None G1 / S1 1B.1	Vernal pools. In mima mound areas or on the margins of vernal pools. 125-150 m.
<i>Allium hickmanii</i> Hickman's onion	None/None G2 / S2 1B.2	Closed-cone coniferous forest, chaparral, coastal scrub, coastal prairie, cismontane woodland. Sandy loam, damp ground and vernal swales; mostly in grassland though can be associated with chaparral or woodland. 5-200 m.
<i>Allium howellii</i> var. <i>howellii</i> Howell's onion	None/None G3G4T3 / S3 4.3	Valley and foothill grassland. Clay or serpentinite. 50-2200 m.
<i>Allium howellii</i> var. <i>sanbenitense</i> San Benito onion	None/None G3G4T2 / S2 1B.3	Chaparral, valley and foothill grassland. Openings. Clay, often steep slopes. 390-1365 m.
<i>Amorpha californica</i> var. <i>napensis</i> Napa false indigo	None/None G4T2 / S2 1B.2	Broadleaved upland forest, chaparral, cismontane woodland. Openings in forest or woodland or in chaparral. 30-735 m
<i>Amsinckia douglasiana</i> Douglas' fiddleneck	None/None G3 / S3 4.2	Valley and foothill grassland, oak woodland. Monterey shale; dry habitats. 0-1950 m.
<i>Amsinckia furcata</i> forked fiddleneck	None/None G4 / S4 4.2	Cismontane woodland, valley and foothill grassland. Often on shale outcrops in disturbed, rather open sites. Often in gypsum-affected soils. 50-1000 m.

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Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CRPR or CDFW	Habitat Requirements
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	None/None G2G3 / S2S3 1B.2	Cismontane woodland, valley and foothill grassland, coastal bluff scrub. 3-795 m.
<i>Androsace elongata</i> ssp. <i>acuta</i> California androsace	None/None G5?T3T4 / S3S4 4.2	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland, meadows and seeps, pinyon and juniper woodland. Highly localized and often overlooked little plant. 150-1200 m.
<i>Anomobryum julaceum</i> slender silver moss	None/None G5? / S2 4.2	Broadleafed upland forest, lower montane coniferous forest, north coast coniferous forest. Moss which grows on damp rocks and soil; acidic substrates. Usually seen on roadcuts. 100-1000 m.
<i>Antirrhinum ovatum</i> oval-leaved snapdragon	None/None G3 / S3 4.2	Chaparral, cismontane woodland, pinyon-juniper woodland, valley and foothill grassland. From open hillsides to small vernal pools in clay or gypsum soils w/in grassland or woodland. Sites often alkaline. 200-1000 m.
<i>Arabis blepharophylla</i> coast rockcress	None/None G4 / S4 4.3	Broadleafed upland forest, coastal prairie, coastal scrub, coastal bluff scrub. Rocky sites. 3-1100 m.
<i>Arctostaphylos andersonii</i> Anderson's manzanita	None/None G2 / S2 1B.2	Broadleafed upland forest, chaparral, north coast coniferous forest. Open sites, redwood forest. 60-760 m.
<i>Arctostaphylos cruzensis</i> Arroyo de la Cruz manzanita	None/None G1G2 / S1S2 1B.2	Broadleafed upland forest, coastal bluff scrub, closed-cone coniferous forest, chaparral, coastal scrub, & valley and foothill grassland. On sandy soils in several different habitat types from chaparral to coastal scrub to woodland. 5-150 m.
<i>Arctostaphylos edmundsii</i> Little Sur manzanita	None/None G2 / S2 1B.2	Coastal bluff scrub, chaparral. Forming mounds on sandy terraces on ocean bluffs. 30-95 m.
<i>Arctostaphylos gabilanensis</i> Gabilan Mountains manzanita	None/None G1 / S1 1B.2	Chaparral, cismontane woodland. Granitic substrates. 425-670 m.
<i>Arctostaphylos glutinosa</i> Schreiber's manzanita	None/None G1 / S1 1B.2	Closed-cone coniferous forest, chaparral. Mudstone or diatomaceous shale outcrops; often with <i>Pinus attenuata</i> . 170-685 m.
<i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i> Hooker's manzanita	None/None G3T2 / S2 1B.2	Chaparral, coastal scrub, closed-cone coniferous forest, cismontane woodland. Sandy soils, sandy shales, sandstone outcrops. 30-550 m.
<i>Arctostaphylos hooveri</i> Hoover's manzanita	None/None G3 / S3 4.3	Chaparral, broadleafed upland forest, cismontane woodland, lower montane coniferous forest. Rocky sites. 480-1010 m.
<i>Arctostaphylos montereyensis</i> Toro manzanita	None/None G2G3 / S2S3 1B.2	Chaparral, cismontane woodland, coastal scrub. Sandy soil, usually with chaparral associates. 75-735 m.
<i>Arctostaphylos obispoensis</i> Bishop manzanita	None/None G4 / S4 4.3	Closed-cone coniferous forest, cismontane woodland, chaparral Rocky, serpentine sites. 150-1005 m.
<i>Arctostaphylos ohloneana</i> Ohlone manzanita	None/None G1 / S1 1B.1	Coastal scrub, closed cone coniferous forests. Monterey shale. 455-520 m.
<i>Arctostaphylos pajaroensis</i> Pajaro manzanita	None/None G1 / S1 1B.1	Chaparral. Sandy soils. 30-155 m.

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<i>Arctostaphylos pumila</i> sandmat manzanita	None/None G1 / S1 1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal dunes, coastal scrub. On sandy soil with other chaparral associates. 3-210 m.
<i>Arctostaphylos regismontana</i> Kings Mountain manzanita	None/None G2 / S2 1B.2	Broadleaved upland forest, chaparral, north coast coniferous forest. Granitic or sandstone outcrops. 240-705 m.
<i>Arctostaphylos silvicola</i> Bonny Doon manzanita	None/None G1 / S1 1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest. Only known from Zayante (inland marine) sands in Santa Cruz County. 150-520 m.
<i>Arenaria paludicola</i> marsh sandwort	Endangered/Endangered G1 / S1 1B.1	Marshes and swamps. Growing up through dense mats of <i>Typha</i> , <i>Juncus</i> , <i>Scirpus</i> , etc. in freshwater marsh. Sandy soil. 3-170 m.
<i>Aristocapsa insignis</i> Indian Valley spineflower	None/None G2? / S2? 1B.2	Cismontane woodland. Sandy substrates. 180-1060 m.
<i>Aspidotis carlotta-halliae</i> Carlotta Hall's lace fern	None/None G3 / S3 4.2	Chaparral, cismontane woodland. Generally serpentine slopes, crevices, or outcrops. 100-1400 m.
<i>Astragalus clevelandii</i> Cleveland's milk-vetch	None/None G4 / S4 4.3	Chaparral, cismontane woodland, riparian forest. Ultramafic seeps and creeks; sandy stream banks, gravel bars moist in spring, hillside seeps on slopes. 200-1500 m.
<i>Astragalus leucolobus</i> Big Bear Valley woollypod	None/None G2 / S2 1B.2	Lower montane coniferous forest, pebble plain, pinyon and juniper woodland, upper montane coniferous forest. Dry pine woods, gravelly knolls among sagebrush, or stony lake shores in the pine belt. 1460-2895 m.
<i>Astragalus macrodon</i> Salinas milk-vetch	None/None G4 / S4 4.3	Chaparral, cismontane woodland, valley and foothill grassland. Open hillsides, sometimes follows burns, on bare ridges & along draws; shale, sandstone, & serpentine. 250-950 m.
<i>Astragalus nuttallii</i> var. <i>nuttallii</i> ocean bluff milk-vetch	None/None G4T4 / S4 4.2	Coastal bluff scrub, coastal dunes. 3-120 m.
<i>Astragalus rattanii</i> var. <i>jepsonianus</i> Jepson's milk-vetch	None/None G4T3 / S3 1B.2	Cismontane woodland, valley and foothill grassland, chaparral. Commonly on serpentine in grassland or openings in chaparral. 175-1005 m.
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	None/None G2T2 / S2 1B.2	Alkali playa, valley and foothill grassland, vernal pools. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 0-168 m.
<i>Astragalus tener</i> var. <i>titi</i> coastal dunes milk-vetch	Endangered/Endangered G2T1 / S1 1B.1	Coastal bluff scrub, coastal dunes, coastal prairie. Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. 1-45 m.
<i>Atriplex coronata</i> var. <i>coronata</i> crownscale	None/None G4T3 / S3 4.2	Chenopod scrub, valley and foothill grassland, vernal pools. Fine, alkaline soils, and clay soils. 1-590 m.
<i>Baccharis plummerae</i> ssp. <i>glabrata</i> San Simeon baccharis	None/None G3T1 / S1 1B.2	Coastal scrub. In open shrub-grassland associations. 25-485 m.
<i>Benitoa occidentalis</i> western lessingia	None/None G4 / S4 4.3	Cismontane woodland, chaparral, coastal scrub, valley and foothill grassland. On serpentine or clay. 450-1070 m.

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<i>Bryoria spiralifera</i> twisted horsehair lichen	None/None G3 / S1S2 1B.1	North coast coniferous forest. Usually on conifers. 0-30 m.
<i>Calandrinia breweri</i> Brewer's calandrinia	None/None G4 / S4 4.2	Chaparral, coastal scrub. Sandy or loamy soils. Disturbed sites, burns. 10-1200 m.
<i>California macrophylla</i> round-leaved filaree	None/None G3? / S3? 1B.2	Cismontane woodland, valley and foothill grassland. Clay soils. 15-1200 m.
<i>Calochortus clavatus</i> var. <i>clavatus</i> club-haired mariposa-lily	None/None G4T3 / S3 4.3	Chaparral, cismontane woodland, valley and foothill grassland, coastal scrub. Generally on serpentine clay, rocky soils. 75-1300 m.
<i>Calochortus fimbriatus</i> late-flowered mariposa-lily	None/None G3 / S3 1B.3	Chaparral, cismontane woodland, riparian woodland. Dry, open coastal woodland, chaparral; on serpentine. 270-1435 m.
<i>Calochortus umbellatus</i> Oakland star-tulip	None/None G4 / S4 4.2	Chaparral, lower montane coniferous forest, broadleaved upland forest, valley and foothill grassland, cismontane woodland. Often on serpentine. 100-700 m.
<i>Calochortus uniflorus</i> pink star-tulip	None/None G4 / S4 4.2	Coastal scrub, coastal prairie, north coast coniferous forest, meadows and seeps. Seasonally moist meadows, sometimes within coastal scrub, or forested habitats. Usually at low elevations on the coast. 10-1070 m.
<i>Calycadenia micrantha</i> small-flowered calycadenia	None/None G2 / S2 1B.2	Chaparral, valley and foothill grassland, meadows and seeps. Rocky talus or scree; sparsely vegetated areas. occasionally on roadsides; sometimes on serpentine. 435-1405 m.
<i>Calycadenia villosa</i> dwarf calycadenia	None/None G3 / S3 1B.1	Chaparral, cismontane woodland, valley and foothill grassland, meadows and seeps. Open, dry meadows, hillsides, gravelly outwashes. 240-1350 m.
<i>Calyptridium parryi</i> var. <i>hesseae</i> Santa Cruz Mountains pussypaws	None/None G3G4T2 / S2 1B.1	Chaparral, cismontane woodland. Sandy or gravelly openings. 300-1535 m.
<i>Calystegia collina</i> ssp. <i>oxyphylla</i> Mt. Saint Helena morning-glory	None/None G4T3 / S3 4.2	Chaparral, lower montane coniferous forest, valley and foothill grassland. On serpentine barrens, slopes, and hillsides. 280-1010 m.
<i>Calystegia collina</i> ssp. <i>venusta</i> South Coast Range morning-glory	None/None G4T4 / S4 4.3	Chaparral, cismontane woodland, valley and foothill grassland. Most common on serpentine, but also on sedimentary substrate. In open, rocky areas. 425-1490 m.
<i>Camissonia benitensis</i> San Benito evening-primrose	Threatened/None G2 / S2 1B.1	Chaparral, cismontane woodland, valley and foothill grassland. On gravelly serpentine alluvial terraces. 485-1435 m.
<i>Camissoniopsis hardhamiae</i> Hardham's evening-primrose	None/None G2 / S2 1B.2	Chaparral, cismontane woodland. Sandy, decomposed carbonate. 140-945 m.
<i>Campanula californica</i> swamp harebell	None/None G3 / S3 1B.2	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows and seeps, freshwater marsh, north coast coniferous forest. Bogs and marshes in a variety of habitats; uncommon where it occurs. 1-405 m.
<i>Campanula exigua</i> chaparral harebell	None/None G2 / S2 1B.2	Chaparral. Rocky sites, usually on serpentine in chaparral. 90-1375 m.

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<i>Carex comosa</i> bristly sedge	None/None G5 / S2 2B.1	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -5-1620 m.
<i>Carex obispoensis</i> San Luis Obispo sedge	None/None G3? / S3? 1B.2	Closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Usually in transition zone on sand, clay, serpentine, or gabbro. In seeps. 5-845 m.
<i>Carex saliniformis</i> deceiving sedge	None/None G2 / S2 1B.2	Coastal prairie, coastal scrub, meadows and seeps, marshes and swamps (coastal salt). Mesic sites. 3-230 m.
<i>Carlquistia muirii</i> Muir's tarplant	None/None G2 / S2 1B.3	Chaparral, lower montane coniferous forest, upper montane coniferous forest. Crevices of granite ledges and dry sandy soils. 1185-2500 m.
<i>Castilleja ambigua</i> var. <i>ambigua</i> johnny-nip	None/None G4T5 / S4 4.2	Coastal bluff scrub, coastal scrub, coastal prairie, marshes and swamps, valley and foothill grassland, vernal pool margins. 0-435 m.
<i>Castilleja ambigua</i> var. <i>insalutata</i> pink Johnny-nip	None/None G4T2 / S2 1B.1	Coastal bluff scrub, coastal prairie. 0-100 m.
<i>Castilleja latifolia</i> Monterey Coast paintbrush	None/None G4 / S4 4.3	Coastal dunes, coastal scrub, closed-cone coniferous forest, cismontane woodland (openings). Sand dunes, coastal strand and sandy bluffs. 0-185 m.
<i>Caulanthus lemmonii</i> Lemmon's jewelflower	None/None G3 / S3 1B.2	Pinyon and juniper woodland, valley and foothill grassland. 75-1585 m.
<i>Ceanothus rigidus</i> Monterey ceanothus	None/None G4 / S4 4.2	Closed-cone coniferous forest, coastal scrub, chaparral. Sandy hills, flats. 3-550 m.
<i>Centromadia parryi</i> ssp. <i>congdonii</i> Congdon's tarplant	None/None G3T2 / S2 1B.1	Valley and foothill grassland. Alkaline soils, sometimes described as heavy white clay. 0-230 m.
<i>Chlorogalum purpureum</i> var. <i>purpureum</i> Santa Lucia purple amole	Threatened/None G2T2 / S2 1B.1	Chaparral, cismontane woodland, valley and foothill grassland. Often in grassy areas with blue oaks in foothill woodland. Gravelly clay soils. 240-390 m.
<i>Chorizanthe biloba</i> var. <i>immemora</i> Hernandez spineflower	None/None G3T1 / S1 1B.2	Chaparral, cismontane woodland. Usually serpentinite, sometimes clay. 425-1115 m.
<i>Chorizanthe breweri</i> Brewer's spineflower	None/None G3 / S3 1B.3	Chaparral, cismontane woodland, coastal scrub, closed-cone coniferous forest. Rocky or gravelly serpentine sites; usually in barren areas. 45-765 m.
<i>Chorizanthe douglasii</i> Douglas' spineflower	None/None G4 / S4 4.3	Cismontane woodland, lower montane coniferous forest, chaparral, coastal scrub. 55-1600 m.
<i>Chorizanthe minutiflora</i> Fort Ord spineflower	None/None G1 / S1 1B.2	Coastal scrub, chaparral (maritime). Sandy, openings. 55-150 m.
<i>Chorizanthe palmeri</i> Palmer's spineflower	None/None G4? / S4 4.2	Chaparral, cismontane woodland, valley and foothill grassland. Dry, rocky places and hillsides; sometimes on serpentine. 60-945 m.
<i>Chorizanthe pungens</i> var. <i>hartwegiana</i> Ben Lomond spineflower	Endangered/None G2T1 / S1 1B.1	Lower montane coniferous forest. Zayante coarse sands in maritime ponderosa pine sandhills. 105-475 m.

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<i>Chorizanthe pungens</i> var. <i>pungens</i> Monterey spineflower	Threatened/None G2T2 / S2 1B.2	Coastal dunes, chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Sandy soils in coastal dunes or more inland within chaparral or other habitats. 0-170 m.
<i>Chorizanthe rectispina</i> straight-awned spineflower	None/None G2 / S2 1B.3	Chaparral, cismontane woodland, coastal scrub. Often on granite in chaparral. 45-1040 m.
<i>Chorizanthe robusta</i> var. <i>hartwegii</i> Scotts Valley spineflower	Endangered/None G2T1 / S1 1B.1	Meadows, valley and foothill grassland. In grasslands with mudstone and sandstone outcrops. 105-245 m.
<i>Chorizanthe robusta</i> var. <i>robusta</i> robust spineflower	Endangered/None G2T1 / S1 1B.1	Cismontane woodland, coastal dunes, coastal scrub, chaparral. Sandy terraces and bluffs or in loose sand. 9-245 m.
<i>Chorizanthe ventricosa</i> potbellied spineflower	None/None G4 / S4 4.3	Valley and foothill grassland, cismontane woodland. Serpentine. 65-1235 m.
<i>Cirsium occidentale</i> var. <i>compactum</i> compact cobwebby thistle	None/None G3G4T2 / S2 1B.2	Chaparral, coastal dunes, coastal prairie, coastal scrub. On dunes and on clay in chaparral; also in grassland. 5-245 m.
<i>Cirsium scariosum</i> var. <i>loncholepis</i> La Graciosa thistle	Endangered/Threatened G5T1 / S1 1B.1	Coastal dunes, coastal scrub, brackish marshes, valley and foothill grassland, cismontane woodland. Lake edges, riverbanks, other wetlands; often in dune areas. Mesic, sandy sites. 4-220 m.
<i>Clarkia breweri</i> Brewer's clarkia	None/None G4 / S4 4.2	Chaparral, cismontane woodland, coastal scrub. Often found on serpentine. 215-1115 m.
<i>Clarkia concinna</i> ssp. <i>automixa</i> Santa Clara red ribbons	None/None G5?T3 / S3 4.3	Cismontane woodland, chaparral. On slopes and near drainages. 90-1500 m.
<i>Clarkia jolonensis</i> Jolon clarkia	None/None G2 / S2 1B.2	Cismontane woodland, chaparral, coastal scrub, riparian woodland. 10-1280 m.
<i>Clarkia lewisii</i> Lewis' clarkia	None/None G4 / S4 4.3	Coastal scrub, chaparral, cismontane woodland, broadleaved upland forest, closed-cone coniferous forest. 30-610 m.
<i>Clinopodium mimuloides</i> monkey-flower savory	None/None G3 / S3 4.2	North coast coniferous forest, chaparral Streambanks, mesic sites. 305-1800 m.
<i>Collinsia antonina</i> San Antonio collinsia	None/None G2 / S2 1B.2	Chaparral, cismontane woodland. Shale substrates. 280-365 m.
<i>Collinsia multicolor</i> San Francisco collinsia	None/None G2 / S2 1B.2	Closed-cone coniferous forest, coastal scrub. On decomposed shale (mudstone) mixed with humus; sometimes on serpentine. 30-275 m.
<i>Convolvulus simulans</i> small-flowered morning-glory	None/None G4 / S4 4.2	Chaparral, coastal scrub, valley and foothill grassland. Wet clay, serpentine ridges. 30-700 m.
<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i> seaside bird's-beak	None/Endangered G5T2 / S2 1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, coastal dunes. Sandy, often disturbed sites, usually within chaparral or coastal scrub. 30-520 m.

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<i>Corethrogyne leucophylla</i> branching beach aster	None/None G3Q / S3 3.2	Closed-cone coniferous forest, coastal dunes. 3-60 m.
<i>Cryptantha rattanii</i> Rattan's cryptantha	None/None G4 / S4 4.3	Cismontane woodland, valley and foothill grassland, riparian woodland. On steep, south-facing shale talus slopes and canyon bottoms and decomposing talus outcroppings. 245-915 m.
<i>Cypripedium fasciculatum</i> clustered lady's-slipper	None/None G4 / S4 4.2	North Coast coniferous forest, lower montane coniferous forest. In serpentine seeps and moist streambanks. 100-2435 m.
<i>Cypripedium montanum</i> mountain lady's-slipper	None/None G4 / S4 4.2	Lower montane coniferous forest, broadleafed upland forest, cismontane woodland, north coast coniferous forest. On dry, undisturbed slopes. 185-2225 m.
<i>Dacryophyllum falcifolium</i> tear drop moss	None/None G2 / S2 1B.3	North Coast coniferous forest. Limestone substrates and rock outcrops. 50-275 m.
<i>Deinandra halliana</i> Hall's tarplant	None/None G1 / S1 1B.1	Cismontane woodland, chenopod scrub, valley and foothill grassland. Reported from a variety of substrates including clay, sand, and alkaline soils. 155-910 m.
<i>Delphinium californicum</i> ssp. <i>interius</i> Hospital Canyon larkspur	None/None G3T3 / S3 1B.2	Cismontane woodland, chaparral, coastal scrub. In wet, boggy meadows, openings in chaparral and in canyons. 195-1095 m.
<i>Delphinium gypsophilum</i> ssp. <i>parviflorum</i> small-flowered gypsum-loving larkspur	None/None G4T2T3Q / S2S3 3.2	Cismontane woodland, valley and foothill grassland. On clayey soil. 200-350m.
<i>Delphinium hutchinsoniae</i> Hutchinson's larkspur	None/None G2 / S2 1B.2	Broadleafed upland forest, chaparral, coastal prairie, coastal scrub. On semi-shaded, slightly moist slopes, usually west-facing. 15-535 m.
<i>Delphinium recurvatum</i> recurved larkspur	None/None G2? / S2? 1B.2	Chenopod scrub, valley and foothill grassland, cismontane woodland. On alkaline soils; often in valley saltbush or valley chenopod scrub. 3-790 m.
<i>Delphinium umbraculorum</i> umbrella larkspur	None/None G3 / S3 1B.3	Cismontane woodland, chaparral. Mesic sites. 215-2075 m.
<i>Elymus californicus</i> California bottle-brush grass	None/None G4 / S4 4.3	North Coast coniferous forest, cismontane woodland, broadleafed upland forest, riparian woodland. In sandy humus soils. 15-470 m.
<i>Eriastrum hooveri</i> Hoover's eriastrum	Delisted/None G3 / S3 4.2	Chenopod scrub, valley and foothill grassland, pinyon and juniper woodland. On sparsely vegetated alkaline alluvial fans; also in the Temblor Range on sandy soils. 50-915 m.
<i>Eriastrum luteum</i> yellow-flowered eriastrum	None/None G2 / S2 1B.2	Broadleafed upland forest, cismontane woodland, chaparral. On bare sandy decomposed granite slopes. 240-580 m.
<i>Eriastrum virgatum</i> virgate eriastrum	None/None G4 / S4 4.3	Coastal dunes, chaparral, coastal bluff scrub, coastal scrub. Sandy sites. 45-700 m.
<i>Ericameria fasciculata</i> Eastwood's goldenbush	None/None G2 / S2 1B.1	Closed-cone coniferous forest, chaparral (maritime), coastal scrub, coastal dunes. In sandy openings. 30-215 m.

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<i>Eriogonum argillosum</i> clay buckwheat	None/None G3 / S3 4.3	Cismontane woodland. Serpentine or clay soil. 150-800 m.
<i>Eriogonum butterworthianum</i> Butterworth's buckwheat	None/Rare G2 / S2 1B.3	Chaparral, valley and foothill grassland. Dry sandstone outcrops and crevices. 335-715 m.
<i>Eriogonum eastwoodianum</i> Eastwood's buckwheat	None/None G2 / S2 1B.3	Cismontane woodland, valley and foothill grassland. Shale, including diatomaceous shale. 530-1045 m.
<i>Eriogonum elegans</i> elegant wild buckwheat	None/None G3G4 / S3S4 4.3	Cismontane woodland, valley and foothill grassland. Usually in sandy or gravelly substrates; often in washes, sometimes roadsides. 200-1525 m.
<i>Eriogonum heermannii</i> var. <i>occidentale</i> western Heermann's buckwheat	None/None G5T2 / S2 1B.2	Cismontane woodland. Openings. Often on serpentine alluvium or on roadsides; rarely on clay or shale slopes. 410-805 m.
<i>Eriogonum nortonii</i> Pinnacles buckwheat	None/None G2 / S2 1B.3	Chaparral, valley and foothill grassland. Sandy soils; often on recent burns; western Santa Lucias. 90-975 m.
<i>Eriogonum nudum</i> var. <i>decurrens</i> Ben Lomond buckwheat	None/None G5T1 / S1 1B.1	Chaparral, cismontane woodland, lower montane coniferous forest. Ponderosa pine sandhills in Santa Cruz County. 90-235 m.
<i>Eriogonum nudum</i> var. <i>indictum</i> protruding buckwheat	None/None G5T4 / S4 4.2	Chaparral, chenopod scrub, cismontane woodland. Barren slopes; clay, serpentine. 150-1465 m.
<i>Eriogonum temblorense</i> Temblor buckwheat	None/None G2 / S2 1B.2	Valley and foothill grassland. Barren clay or sandstone substrates. 230-840 m.
<i>Eriogonum umbellatum</i> var. <i>bahiiiforme</i> bay buckwheat	None/None G5T3 / S3 4.2	Cismontane woodland, lower montane coniferous forest. Rocky sites; often serpentine. 700-2200 m.
<i>Eriogonum vestitum</i> Idria buckwheat	None/None G3Q / S3 4.3	Valley and foothill grassland. Semi-siliceous diatomaceous shale; barren, clay places. 235-900 m.
<i>Eriophyllum jepsonii</i> Jepson's woolly sunflower	None/None G3 / S3 4.3	Coastal scrub, chaparral, cismontane woodland. Sometimes on serpentine. 200-1025 m.
<i>Eryngium aristulatum</i> var. <i>hooveri</i> Hoover's button-celery	None/None G5T1 / S1 1B.1	Vernal pools. Alkaline depressions, vernal pools, roadside ditches and other wet places near the coast. 1-50 m.
<i>Erysimum amphilum</i> sand-loving wallflower	None/None G2 / S2 1B.2	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 5-130 m.
<i>Erysimum franciscanum</i> San Francisco wallflower	None/None G3 / S3 4.2	Coastal dunes, coastal scrub, chaparral, valley and foothill grassland. Often occurs on serpentine soils or outcrops; sometimes granite. Occasionally on grassy, rocky slopes. 0-550 m.
<i>Erysimum menziesii</i> Menzies' wallflower	Endangered/Endangered G1 / S1 1B.1	Coastal dunes. Localized on dunes and coastal strand. 1-25 m.
<i>Erysimum teretifolium</i> Santa Cruz wallflower	Endangered/Endangered G1 / S1 1B.1	Lower montane coniferous forest, chaparral. Inland marine sands (Zayante coarse sand). 180-515 m.

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<i>Erythranthe hardhamiae</i> Santa Lucia monkeyflower	None/None G1 / S1 1B.1	Chaparral. Sandy soils in openings, sand-filled crevices of sandstone outcrops, sometimes serpentinite. 300-705 m.
<i>Eschscholzia hypocoides</i> San Benito poppy	None/None G4 / S4 4.3	Valley and foothill grassland, chaparral, cismontane woodland. Serpentine clay. 200-1500 m.
<i>Extriplex joaquinana</i> San Joaquin spearscale	None/None G2 / S2 1B.2	Chenopod scrub, alkali meadow, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> , etc. 0-840 m.
<i>Fissidens pauperculus</i> minute pocket moss	None/None G3? / S2 1B.2	North coast coniferous forest. Moss growing on damp soil along the coast. In dry streambeds and on stream banks. 10-1024 m.
<i>Fritillaria agrestis</i> stinkbells	None/None G3 / S3 4.2	Cismontane woodland, chaparral, valley and foothill grassland. Sometimes on serpentinite; mostly found in nonnative grassland or in grassy openings in clay soil. 10-1555 m.
<i>Fritillaria falcata</i> talus fritillary	None/None G2 / S2 1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. On shale, granite, or serpentinite talus. 425-1435 m.
<i>Fritillaria liliacea</i> fragrant fritillary	None/None G2 / S2 1B.2	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland. Often on serpentinite; various soils reported though usually on clay, in grassland. 3-400 m.
<i>Fritillaria ojaiensis</i> Ojai fritillary	None/None G2? / S2? 1B.2	Broadleaved upland forest (mesic), chaparral, lower montane coniferous forest, cismontane woodland. Usually loamy soil. Sometimes on serpentinite; sometimes along roadsides. 225-1000 m.
<i>Fritillaria viridea</i> San Benito fritillary	None/None G2 / S2 1B.2	Chaparral, cismontane woodland. Serpentine slopes. Sometimes on rocky streambanks. 365-1360 m.
<i>Galium andrewsii</i> ssp. <i>gatense</i> serpentine phlox-leaf bedstraw	None/None G5T3 / S3 4.2	Chaparral, cismontane woodland, lower montane coniferous forest. Dry, rocky places in serpentinite soil. 150-1450 m.
<i>Galium californicum</i> ssp. <i>luciense</i> Cone Peak bedstraw	None/None G5T3 / S3 1B.3	Broadleaved upland forest, lower montane coniferous forest, cismontane woodland, chaparral. In forest duff or gravelly talus of pine and oak forest, in partial shade. 400-1525 m.
<i>Galium clementis</i> Santa Lucia bedstraw	None/None G3 / S3 1B.3	Lower montane coniferous forest, upper montane coniferous forest. Forming soft mats in shady rocky patches; on granite or serpentinite; mostly on exposed peaks. 990-1645 m.
<i>Galium cliftonsmithii</i> Santa Barbara bedstraw	None/None G4 / S4 4.3	Cismontane woodland. 200-1220 m.
<i>Galium hardhamiae</i> Hardham's bedstraw	None/None G3 / S3 1B.3	Closed-cone coniferous forest, chaparral. On serpentinite with <i>Cupressus sargentii</i> . 300-930 m.
<i>Gilia tenuiflora</i> ssp. <i>amplifaucalis</i> trumpet-throated gilia	None/None G3G4T3 / S3 4.3	Cismontane woodland, valley and foothill grassland. Sandy soils. 390-900 m.
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> Monterey gilia	Endangered/Threatened G3G4T2 / S2 1B.2	Coastal dunes, coastal scrub, chaparral (maritime), cismontane woodland. Sandy openings in bare, wind-sheltered areas. Often near dune summit or in the hind dunes; two records from Pleistocene inland dunes. 5-245 m.

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<i>Githopsis tenella</i> delicate bluecup	None/None G2 / S2 1B.3	Chaparral, cismontane woodland. Mesic sites. Sometimes on serpentine. 455-1830 m.
<i>Grimmia torenii</i> Toren's grimmia	None/None G2 / S2 1B.3	Cismontane woodland, lower montane coniferous forest, chaparral. Openings, rocky, boulder and rock walls, carbonate, volcanic. 325-1160 m.
<i>Grimmia vaginulata</i> vaginulate grimmia	None/None G2G3 / S1 1B.1	Chaparral. Openings; rocky, boulder and rock walls, carbonate. 685-1135 m.
<i>Grindelia hirsutula</i> var. <i>maritima</i> San Francisco gumplant	None/None G5T1Q / S1 3.2	Coastal scrub, coastal bluff scrub, valley and foothill grassland. Sandy or serpentine slopes, sea bluffs. 15-305 m.
<i>Hesperevax caulescens</i> hogwallow starfish	None/None G3 / S3 4.2	Valley and foothill grassland, vernal pools. Clay soils; mesic sites. 0-505 m.
<i>Hesperevax sparsiflora</i> var. <i>brevifolia</i> short-leaved evax	None/None G4T3 / S2 1B.2	Coastal bluff scrub, coastal dunes, coastal prairie. Sandy bluffs and flats. 0-215 m.
<i>Hesperocyparis abramsiana</i> var. <i>abramsiana</i> Santa Cruz cypress	Threatened/Endangered G1T1 / S1 1B.2	Chaparral, closed-cone coniferous forest, lower montane coniferous forest. Restricted to the Santa Cruz Mountains, on sandstone & granitic-derived soils; often w/ <i>Pinus attenuata</i> , redwoods. 300-1085 m.
<i>Hesperocyparis goveniana</i> Gowen cypress	Threatened/None G1 / S1 1B.2	Closed-cone coniferous forest, chaparral. Coastal terraces; usually in sandy soils; sometimes with Monterey pine, bishop pine. 100-125 m.
<i>Hesperocyparis macrocarpa</i> Monterey cypress	None/None G1 / S1 1B.2	Closed-cone coniferous forest. Granitic soils. 10-20 m.
<i>Hoita strobilina</i> Loma Prieta hoita	None/None G2 / S2 1B.1	Chaparral, cismontane woodland, riparian woodland. Serpentine; mesic sites. 60-975 m.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	Threatened/Endangered G1 / S1 1B.1	Coastal prairie, coastal scrub, valley and foothill grassland. Light, sandy soil or sandy clay; often with nonnatives. 10-220 m.
<i>Hordeum intercedens</i> vernal barley	None/None G3G4 / S3S4 3.2	Valley and foothill grassland, vernal pools, coastal dunes, coastal scrub. Vernal pools, dry, saline streambeds, alkaline flats. 5-1000 m.
<i>Horkelia cuneata</i> var. <i>sericea</i> Kellogg's horkelia	None/None G4T1? / S1? 1B.1	Closed-cone coniferous forest, coastal scrub, coastal dunes, chaparral. Old dunes, coastal sandhills; openings. Sandy or gravelly soils. 5-430 m.
<i>Horkelia marinensis</i> Point Reyes horkelia	None/None G2 / S2 1B.2	Coastal dunes, coastal prairie, coastal scrub. Sandy flats and dunes near coast; in grassland or scrub plant communities. 2-775 m.
<i>Horkelia yadonii</i> Santa Lucia horkelia	None/None G3 / S3 4.2	Meadows, chaparral, cismontane woodland, broadleafed upland forest, riparian woodland. Sandy meadow edges, seasonal streambeds. Granitic soils. 300-1900 m.
<i>Hosackia gracilis</i> harlequin lotus	None/None G4 / S3 4.2	Broadleafed upland forest, coast bluff scrub, coast prairie, cismontane woodland, coastal scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps, north coast coniferous forest, valley and foothill grassland. Wetlands and roadsides. 0-700 m.

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<i>Iris longipetala</i> coast iris	None/None G3 / S3 4.2	Coastal prairie, lower montane coniferous forest, meadows and seeps. Mesic sites, heavy soils. 0-600 m.
<i>Isocoma menziesii</i> var. <i>diabolica</i> Satan's goldenbush	None/None G3G5T3 / S3 4.2	Cismontane woodland. 15-400 m.
<i>Juncus luciensis</i> Santa Lucia dwarf rush	None/None G3 / S3 1B.2	Vernal pools, meadows and seeps, lower montane coniferous forest, chaparral, Great Basin scrub. Vernal pools, ephemeral drainages, wet meadow habitats and streamsides. 300-2040 m.
<i>Lagophylla diabolensis</i> Diablo Range hare-leaf	None/None G2 / S2 1B.2	Cismontane woodland, valley and foothill grassland. Clay. 365-1070 m.
<i>Lagophylla dichotoma</i> forked hare-leaf	None/None G2 / S2 1B.1	Cismontane woodland, valley and foothill grassland. Sometimes clay. 190-335 m.
<i>Lasthenia californica</i> ssp. <i>macrantha</i> perennial goldfields	None/None G3T2 / S2 1B.2	Coastal bluff scrub, coastal dunes, coastal scrub. 5-185 m.
<i>Lasthenia conjugens</i> Contra Costa goldfields	Endangered/None G1 / S1 1B.1	Valley and foothill grassland, vernal pools, alkaline playas, cismontane woodland. Vernal pools, swales, low depressions, in open grassy areas. 1-450 m.
<i>Lasthenia ferrisiae</i> Ferris' goldfields	None/None G3 / S3 4.2	Vernal pools. Alkaline, clay soils. 20-700 m.
<i>Lasthenia leptalea</i> Salinas Valley goldfields	None/None G3 / S3 4.3	Cismontane woodland, valley and foothill grassland. 60-1065 m.
<i>Layia carnosa</i> beach layia	Endangered/Endangered G2 / S2 1B.1	Coastal dunes, coastal scrub. On sparsely vegetated, semi-stabilized dunes, usually behind foredunes. 0-30 m.
<i>Layia discoidea</i> rayless layia	None/None G2 / S2 1B.1	Chaparral, cismontane woodland, lower montane coniferous forest. On serpentine alluvium and serpentine talus. 790-1585 m.
<i>Layia heterotricha</i> pale-yellow layia	None/None G2 / S2 1B.1	Cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Alkaline or clay soils; open areas. 90-1800 m.
<i>Layia munzii</i> Munz's tidy-tips	None/None G2 / S2 1B.2	Chenopod scrub, valley and foothill grassland. Hillsides, in white-grey alkaline clay soils, w/grasses and chenopod scrub associates. 45-765 m.
<i>Legenere limosa</i> legenere	None/None G2 / S2 1B.1	Vernal pools. In beds of vernal pools. 1-880 m.
<i>Lepidium jaredii</i> ssp. <i>album</i> Panoche pepper-grass	None/None G2T2T3 / S2S3 1B.2	Valley and foothill grassland. White or grey clay lenses on steep slopes; incidental in alluvial fans and washes. Clay and gypsum-rich soils. 65-915 m.
<i>Leptosiphon ambiguus</i> serpentine leptosiphon	None/None G4 / S4 4.2	Cismontane woodland, coastal scrub, valley and foothill grassland (margin with chaparral). Grassy areas on serpentine soil. 120-1130 m.

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<i>Leptosiphon grandiflorus</i> large-flowered leptosiphon	None/None G3 / S3 4.2	Coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland. Open, grassy flats, generally sandy soil. 5-1200 m.
<i>Lessingia hololeuca</i> woolly-headed lessingia	None/None G3? / S3? 3	Coastal scrub, lower montane coniferous forest, valley and foothill grassland, broadleaved upland forest. Clay, serpentine; roadsides, fields. 15-305 m.
<i>Lessingia tenuis</i> spring lessingia	None/None G4 / S4 4.3	Chaparral, cismontane woodland, lower montane coniferous forest. Openings. 300-2150 m.
<i>Lilium rubescens</i> redwood lily	None/None G3 / S3 4.2	Chaparral, lower montane coniferous forest, broadleaved upland forest, upper montane coniferous forest, north coast coniferous forest. Sometimes on serpentine. 30-1910 m.
<i>Lomatium parvifolium</i> small-leaved lomatium	None/None G4 / S4 4.2	Closed-cone coniferous forest, chaparral, coastal scrub, riparian woodland. On serpentine. 20-700 m.
<i>Lupinus albifrons</i> var. <i>abramsii</i> Abrams' lupine	None/None G5T3?Q / S3? 3.2	Lower montane coniferous forest, broadleaved upland forest, chaparral, coastal scrub, valley and foothill grassland. Open woods; 125-2000 m.
<i>Lupinus cervinus</i> Santa Lucia lupine	None/None G3 / S3 4.3	Lower montane coniferous forest, broadleaved upland forest. Dry, rocky slopes in pine woods in semi-shade; on ridges, peaks, & upper canyon slopes; responds well to fires. 305-1370 m.
<i>Lupinus tidestromii</i> Tidestrom's lupine	Endangered/Endangered G1 / S1 1B.1	Coastal dunes. Partially stabilized dunes, immediately near the ocean. 4-25 m.
<i>Madia radiata</i> showy golden madia	None/None G2 / S2 1B.1	Valley and foothill grassland, cismontane woodland. Mostly on adobe clay in grassland or among shrubs. 75-1220 m.
<i>Malacothamnus abbottii</i> Abbott's bush-mallow	None/None G1 / S1 1B.1	Riparian scrub. Among willows near rivers and along roadsides. 135-490 m.
<i>Malacothamnus aboriginum</i> Indian Valley bush-mallow	None/None G3 / S3 1B.2	Cismontane woodland, chaparral. Granitic outcrops and sandy bare soil, often in disturbed soils. 150-1130 m.
<i>Malacothamnus arcuatus</i> arcuate bush-mallow	None/None G2Q / S2 1B.2	Chaparral, cismontane woodland. Gravelly alluvium. 1-735 m.
<i>Malacothamnus davidsonii</i> Davidson's bush-mallow	None/None G2 / S2 1B.2	Coastal scrub, riparian woodland, chaparral, cismontane woodland. Sandy washes. 150-1525 m.
<i>Malacothamnus jonesii</i> Jones' bush-mallow	None/None G4 / S4 4.3	Chaparral, cismontane woodland. 160-825 m.
<i>Malacothamnus palmeri</i> var. <i>involutratus</i> Carmel Valley bush-mallow	None/None G3T2Q / S2 1B.2	Cismontane woodland, chaparral, coastal scrub. Talus hilltops and slopes, sometimes on serpentine. Fire dependent. 5-520 m.
<i>Malacothamnus palmeri</i> var. <i>lucianus</i> Arroyo Seco bush-mallow	None/None G3T1Q / S1 1B.2	Chaparral, cismontane woodland, meadows and seeps. Gravel banks and sandstone rocks on west-facing slopes in full sun. 10-825 m.

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<i>Malacothamnus palmeri</i> var. <i>palmeri</i> Santa Lucia bush-mallow	None/None G3T2Q / S2 1B.2	Chaparral. Dry rocky slopes, mostly near summits, but occasionally extending down canyons to the sea. 60-360 m.
<i>Malacothrix phaeocarpa</i> dusky-fruited malacothrix	None/None G4 / S4 4.3	Closed-cone coniferous forest, chaparral. Openings, burned, or disturbed areas. 100-1400 m.
<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i> Carmel Valley malacothrix	None/None G5T2 / S2 1B.2	Chaparral, coastal scrub. Rock outcrops or steep rocky roadcuts. 25-1220 m.
<i>Meconella oregana</i> Oregon meconella	None/None G2G3 / S2 1B.1	Coastal prairie, coastal scrub. Open, moist places. 60-640 m.
<i>Micropus amphibolus</i> Mt. Diablo cottonweed	None/None G3G4 / S3S4 3.2	Valley and foothill grassland, cismontane woodland, chaparral, broadleaved upland forest. Bare, grassy or rocky slopes. 45-825 m.
<i>Microseris paludosa</i> marsh microseris	None/None G2 / S2 1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. 3-610 m.
<i>Microseris sylvatica</i> sylvan microseris	None/None G4 / S4 4.2	Chaparral, cismontane woodland, Great Basin scrub, pinyon-juniper woodland, valley and foothill grassland. 45-1500 m.
<i>Mielichhoferia elongata</i> elongate copper moss	None/None G5 / S4 4.3	Cismontane woodland. Moss growing on very acidic, metamorphic rock or substrate; usually in higher portions in fens. Often on substrates naturally enriched with heavy metals (e.g. copper). 500-1300 m.
<i>Mimulus rattanii</i> ssp. <i>decurtatus</i> Santa Cruz County monkeyflower	None/None G4T1T3Q / S1S3 4.2	Chaparral, lower montane coniferous forest. Gravelly sites at margins of vegetation. 400-500 m.
<i>Mimulus subsecundus</i> one-sided monkeyflower	None/None G3G4Q / S3S4 4.3	Lower montane coniferous forest. One site states: "on rock talus outcrop, south-facing slope, in herbaceous community. 450-915 m.
<i>Monardella antonina</i> ssp. <i>antonina</i> San Antonio Hills monardella	None/None G4T1T3Q / S1S3 3	Cismontane woodland, chaparral. 320-1000 m.
<i>Monardella antonina</i> ssp. <i>benitensis</i> San Benito monardella	None/None G4T3 / S3 4.3	Chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Serpentine barrens. 500-1570 m.
<i>Monardella palmeri</i> Palmer's monardella	None/None G2 / S2 1B.2	Cismontane woodland, chaparral. On serpentine, often found associated with Sargent cypress forests. 90-945 m.
<i>Monardella sinuata</i> ssp. <i>nigrescens</i> northern curly-leaved monardella	None/None G3T2 / S2 1B.2	Coastal dunes, coastal scrub, chaparral, lower montane coniferous forest. Sandy soils. 10-245 m.
<i>Monolopia congdonii</i> San Joaquin woollythreads	Endangered/None G2 / S2 1B.2	Chenopod scrub, valley and foothill grassland. Alkaline or loamy plains; sandy soils, often with grasses and within chenopod scrub. 55-840 m.
<i>Monolopia gracilens</i> woodland woollythreads	None/None G3 / S3 1B.2	Chaparral, valley and foothill grassland, cismontane woodland, broadleaved upland forest, North Coast coniferous forest. Grassy sites, in openings; sandy to rocky soils. Often seen on serpentine after burns, but may have only weak affinity to serpentine. 120-975 m.

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<i>Mucronea californica</i> California spineflower	None/None G3 / S3 4.2	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland. Sandy soil. 0-1400 m.
<i>Navarretia cotulifolia</i> cotula navarretia	None/None G4 / S4 4.2	Chaparral, cismontane woodland, valley and foothill grassland. Adobe soils. 4-1830 m.
<i>Navarretia nigelliformis</i> ssp. <i>nigelliformis</i> adobe navarretia	None/None G4T3 / S3 4.2	Valley and foothill grassland, vernal pools. Clay soils; sometimes on serpentine. 100-1000 m.
<i>Navarretia nigelliformis</i> ssp. <i>radians</i> shining navarretia	None/None G4T2 / S2 1B.2	Cismontane woodland, valley and foothill grassland, vernal pools. Apparently in grassland, and not necessarily in vernal pools. 60-975 m.
<i>Navarretia prostrata</i> prostrate vernal pool navarretia	None/None G2 / S2 1B.1	Coastal scrub, valley and foothill grassland, vernal pools, meadows and seeps. Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 3-1235 m.
<i>Nemacladus secundiflorus</i> var. <i>robbinsii</i> Robbins' nemacladus	None/None G3T2 / S2 1B.2	Chaparral, valley and foothill grassland. Dry, sandy or gravelly slopes. 350-1700 m.
<i>Nemacladus secundiflorus</i> var. <i>secundiflorus</i> large-flowered nemacladus	None/None G3T3? / S3? 4.3	Chaparral, valley and foothill grassland. Dry, sandy to gravelly flats and slopes. 200-2000 m.
<i>Ophioglossum californicum</i> California adder's-tongue	None/None G4 / S4 4.2	Chaparral, vernal pool areas, valley and foothill grassland. Grassy pastures, vernal pool margins, chaparral. Mesic sites. 60-525 m.
<i>Orthotrichum kellmanii</i> Kellman's bristle moss	None/None G2 / S2 1B.2	Chaparral, cismontane woodland. Sandstone outcrops with high calcium concentrations from eroded boulders out of non-calcareous sandstone bedrock. Rock outcrops in small openings within dense chaparral with overstory of scattered <i>Pinus attenuata</i> . 343-685 m.
<i>Pedicularis dudleyi</i> Dudley's lousewort	None/Rare G2 / S2 1B.2	Chaparral, cismontane woodland, North Coast coniferous forest, valley and foothill grassland. Deep shady woods of older coast redwood forests; also in maritime chaparral. 60-330 m.
<i>Penstemon rattanii</i> var. <i>kleei</i> Santa Cruz Mountains beardtongue	None/None G4T2 / S2 1B.2	Chaparral, lower montane coniferous forest, north coast coniferous forest. Sandy shale slopes; sometimes in the transition between forest and chaparral. 400-1100 m.
<i>Pentachaeta bellidiflora</i> white-rayed pentachaeta	Endangered/Endangered G1 / S1 1B.1	Valley and foothill grassland, cismontane woodland. Open dry rocky slopes and grassy areas, often on soils derived from serpentine bedrock. 35-610 m.
<i>Pentachaeta exilis</i> ssp. <i>aeolica</i> San Benito pentachaeta	None/None G5T2 / S2 1B.2	Cismontane woodland, valley and foothill grassland. Grassy areas. 365-855 m.
<i>Pentachaeta fragilis</i> fragile pentachaeta	None/None G3 / S3 4.3	Chaparral, lower montane coniferous forest. Sandy soils. 45-2100 m.
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i> California Gairdner's yampah	None/None G5T4 / S4 4.2	Broadleaved upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools. Adobe flats or grasslands, wet meadows and vernal pools, under <i>Pinus radiata</i> along the coast; mesic sites. 0-610 m.
<i>Perideridia pringlei</i> adobe yampah	None/None G4 / S4 4.3	Chaparral, cismontane woodland, pinyon and juniper woodland, coastal scrub. Serpentine, clay soils. Grassland hillsides; seasonally wet sites. 300-1800 m.

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<i>Phacelia phacelioides</i> Mt. Diablo phacelia	None/None G2 / S2 1B.2	Chaparral, cismontane woodland. Adjacent to trails, on rock outcrops and talus slopes; sometimes on serpentine. 605-1345 m.
<i>Phacelia ramosissima</i> var. <i>australitoralis</i> south coast branching phacelia	None/None G5?T3 / S3 3.2	Chaparral, coastal scrub, coastal dunes, coastal salt marsh. Sandy, sometimes rocky sites. 5-300 m.
<i>Pinus radiata</i> Monterey pine	None/None G1 / S1 1B.1	Closed-cone coniferous forest, cismontane woodland. Three primary stands are native to California. Dry bluffs and slopes. 60-125 m.
<i>Piperia candida</i> white-flowered rein orchid	None/None G3 / S3 1B.2	North Coast coniferous forest, lower montane coniferous forest, broadleaved upland forest. Sometimes on serpentine. Forest duff, mossy banks, rock outcrops, and muskeg. 45-1615 m.
<i>Piperia leptopetala</i> narrow-petaled rein orchid	None/None G4 / S4 4.3	Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest. 380-2225 m.
<i>Piperia michaelii</i> Michael's rein orchid	None/None G3 / S3 4.2	Coastal bluff scrub, coastal scrub, cismontane woodland, chaparral, closed-cone coniferous forest, lower montane coniferous forest. Mudstone and humus, generally dry sites. 3-915 m.
<i>Piperia yadonii</i> Yadon's rein orchid	Endangered/None G1 / S1 1B.1	Closed-cone coniferous forest, chaparral, coastal bluff scrub. On sandstone and sandy soil, but poorly drained and often dry. 10-505 m.
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> Choris' popcornflower	None/None G3T2Q / S2 1B.2	Chaparral, coastal scrub, coastal prairie. Mesic sites. 15-160 m.
<i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i> Hickman's popcornflower	None/None G3T3Q / S3 4.2	Closed-cone coniferous forest, chaparral, coastal scrub, marshes and swamps, vernal pools. 15-185 m.
<i>Plagiobothrys diffusus</i> San Francisco popcornflower	None/Endangered G1Q / S1 1B.1	Valley and foothill grassland, coastal prairie. Historically from grassy slopes with marine influence. 45-360 m.
<i>Plagiobothrys glaber</i> hairless popcornflower	None/None GH / SH 1A	Meadows and seeps, marshes and swamps. Coastal salt marshes and alkaline meadows. 5-125 m.
<i>Plagiobothrys uncinatus</i> hooked popcornflower	None/None G2 / S2 1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Sandstone outcrops and canyon sides; often in burned or disturbed areas. 210-855 m.
<i>Plagiobryoides vinosula</i> wine-colored tufa moss	None/None G3G4 / S2 4.2	Cismontane woodland, meadows and seeps, Mojavean desert scrub, pinyon and juniper woodland, riparian woodland. Usually granitic rock or granitic soil along seeps and streams, sometimes clay. 30-1735 m.
<i>Pogogyne clareana</i> Santa Lucia mint	None/Endangered G2 / S2 1B.2	Chaparral, cismontane woodland, riparian woodland. In intermittent streams; in moist sandy soil. 325-505 m.
<i>Polygonum hickmanii</i> Scotts Valley polygonum	Endangered/Endangered G1 / S1 1B.1	Valley and foothill grassland. Purisima sandstone or mudstone with a thin soil layer; vernal moist due to runoff. 210-230 m.
<i>Potentilla hickmanii</i> Hickman's cinquefoil	Endangered/Endangered G1 / S1 1B.1	Coastal bluff scrub, closed-cone coniferous forest, meadows and seeps, marshes and swamps. Freshwater marshes, seeps, and small streams in open or forested areas along the coast. 5-125 m.

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<i>Puccinellia simplex</i> California alkali grass	None/None G3 / S2 1B.2	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernal mesic. Sinks, flats, and lake margins. 1-915 m.
<i>Ramalina thrausta</i> angel's hair lichen	None/None G5 / S2? 2B.1	North coast coniferous forest. On dead twigs and other lichens. 75-430 m.
<i>Ranunculus lobbii</i> Lobb's aquatic buttercup	None/None G4 / S3 4.2	Cismontane woodland, valley and foothill grassland, vernal pools, north coast coniferous forest. Mesic sites. 15-470 m.
<i>Ribes sericeum</i> Santa Lucia gooseberry	None/None G4? / S4? 4.3	North coast coniferous forest, coastal bluff scrub, broadleaved upland forest. Along streams in redwood forests and on the coastal slopes of the Santa Lucia Mtns. 305-1220 m.
<i>Rosa pinetorum</i> pine rose	None/None G2 / S2 1B.2	Closed-cone coniferous forest, cismontane woodland. 5-1090 m.
<i>Sanicula hoffmannii</i> Hoffmann's sanicle	None/None G3 / S3 4.3	Broadleaved upland forest, coastal scrub, coastal bluff scrub, chaparral, cismontane woodland, lower montane coniferous forest. Cool slopes in deep soil, often in moist shaded serpentine soils, or in clay soils. 30-300 m.
<i>Sanicula maritima</i> adobe sanicle	None/Rare G2 / S2 1B.1	Meadows and seeps, valley and foothill grassland, chaparral, coastal prairie. Moist clay or ultramafic soils. 30-240 m.
<i>Senecio aphanactis</i> chaparral ragwort	None/None G3 / S2 2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-855 m.
<i>Senecio astephanus</i> San Gabriel ragwort	None/None G3 / S3 4.3	Chaparral, coastal bluff scrub. Rocky slopes. 400-1500 m.
<i>Sidalcea hickmanii</i> ssp. <i>hickmanii</i> Hickman's checkerbloom	None/None G3T2 / S2 1B.3	Chaparral. Grassy openings in chaparral, and on dry ridges. 335-1200 m.
<i>Sidalcea malachroides</i> maple-leaved checkerbloom	None/None G3 / S3 4.2	Broadleaved upland forest, coastal prairie, coastal scrub, north coast coniferous forest, riparian forest. Woodlands and clearings near coast; often in disturbed areas. 0-730 m.
<i>Silene verecunda</i> ssp. <i>verecunda</i> San Francisco campion	None/None G5T2 / S2 1B.2	Coastal scrub, valley and foothill grassland, coastal bluff scrub, chaparral, coastal prairie. Often on mudstone or shale; one site on serpentine. 30-645 m.
<i>Solidago guiradonis</i> Guirado's goldenrod	None/None G3G4 / S3S4 4.3	Cismontane woodland, valley and foothill grassland. Near streams or seeps in asbestos-laden soils; serpentine. 600-1370 m.
<i>Stebbinsoseris decipiens</i> Santa Cruz microseris	None/None G2 / S2 1B.2	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Open areas in loose or disturbed soil, usually derived from sandstone, shale or serpentine, on seaward slopes. 90-750 m.
<i>Streptanthus albidus</i> ssp. <i>peramoenus</i> most beautiful jewelflower	None/None G2T2 / S2 1B.2	Chaparral, valley and foothill grassland, cismontane woodland. Serpentine outcrops, on ridges and slopes. 95-1000 m.
<i>Stylocline masonii</i> Mason's neststraw	None/None G1 / S1 1B.1	Chenopod scrub, pinyon and juniper woodland. Sandy washes. 100-1200 m.

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<i>Syntrichopappus lemmonii</i> Lemmon's syntrichopappus	None/None G4 / S4 4.3	Chaparral, Joshua tree woodland, pinyon and juniper woodland. Decomposed granite; sandy or gravelly soils. 500-1830 m.
<i>Systemotheca vortriedei</i> Vortriede's spineflower	None/None G3 / S3 4.3	Cismontane woodland, chaparral. Sandy or serpentine soils. 500-1600 m.
<i>Texosporium sancti-jacobi</i> woven-spored lichen	None/None G3 / S1 3	Chaparral. Open sites; in California with <i>Adenostoma fasciculatum</i> , <i>Eriogonum</i> , <i>Selaginella</i> . At Pinnacles, on small mammal pellets. 290-660 m.
<i>Tortula californica</i> California screw moss	None/None G2G3 / S2S3 1B.2	Chenopod scrub, valley and foothill grassland. Moss growing on sandy soil. 10-1460 m.
<i>Toxicoscordion fontanum</i> marsh zigadenus	None/None G3 / S3 4.2	Chaparral, cismontane woodland, lower montane coniferous forest, meadows and seeps, marshes and swamps. Vernally moist or marshy areas; often on serpentine areas. 15-1000 m.
<i>Trichostema rubisepalum</i> Hernandez bluecurls	None/None G4 / S4 4.3	Broadleafed upland forest, chaparral, cismontane woodland, lower montane woodland, vernal pools. Volcanic and serpentine substrates. 300-1435 m.
<i>Trifolium buckwestiorum</i> Santa Cruz clover	None/None G2 / S2 1B.1	Coastal prairie, broadleafed upland forest, cismontane woodland. Moist grassland. Gravelly margins. 30-550 m.
<i>Trifolium hydrophilum</i> saline clover	None/None G2 / S2 1B.2	Marshes and swamps, valley and foothill grassland, vernal pools. Mesic, alkaline sites. 1-335 m.
<i>Trifolium polyodon</i> Pacific Grove clover	None/Rare G1 / S1 1B.1	Closed-cone coniferous forest, meadows and seeps, coastal prairie, valley and foothill grassland. Along small springs and seeps in grassy openings. 5-260 m.
<i>Trifolium trichocalyx</i> Monterey clover	Endangered/Endangered G1 / S1 1B.1	Closed-cone coniferous forest. Openings, burned areas, and roadsides. Sandy soils. 60-210 m.
<i>Triteleia ixioides</i> ssp. <i>cookii</i> Cook's triteleia	None/None G5T2T3 / S2S3 1B.3	Cismontane woodland, closed-cone coniferous forest. Streamsides, wet ravines; on serpentine and in serpentine seeps. Sometimes near cypresses. 120-735 m.
<i>Triteleia lugens</i> dark-mouthed triteleia	None/None G4? / S4? 4.3	Broadleafed upland forest, chaparral, lower montane coniferous forest, coastal scrub. 100-1000 m.
<i>Tropidocarpum capparideum</i> caper-fruited tropidocarpum	None/None G1 / S1 1B.1	Valley and foothill grassland. Alkaline clay. 0-360 m.
<i>Usnea longissima</i> Methuselah's beard lichen	None/None G4 / S4 4.2	North coast coniferous forest, broadleafed upland forest. Grows in the "redwood zone" on tree branches of a variety of trees, including big leaf maple, oaks, ash, Douglas-fir, and bay. 45-1465 m in California.
Birds		
<i>Accipiter cooperii</i> Cooper's hawk	None/None G5 / S4 WL	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.
<i>Accipiter striatus</i> sharp-shinned hawk	None/None G5 / S4 WL	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes with plucking perches are critical requirements. Nests usually within 275 ft of water.

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<i>Agelaius tricolor</i> tricolored blackbird	None/Candidate Endangered G2G3 / S1S2 SSC	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.
<i>Aquila chrysaetos</i> golden eagle	None/None G5 / S3 FP, WL	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
<i>Ardea herodias</i> great blue heron	None/None G5 / S4	Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.
<i>Asio flammeus</i> short-eared owl	None/None G5 / S3 SSC	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.
<i>Asio otus</i> long-eared owl	None/None G5 / S3? SSC	Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land, productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.
<i>Athene cunicularia</i> burrowing owl	None/None G4 / S3 SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.
<i>Brachyramphus marmoratus</i> marbled murrelet	Threatened/Endangered G3G4 / S1	Feeds near-shore; nests inland along coast from Eureka to Oregon border and from Half Moon Bay to Santa Cruz. Nests in old-growth redwood-dominated forests, up to six miles inland, often in Douglas-fir.
<i>Buteo regalis</i> ferruginous hawk	None/None G4 / S3S4 WL	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.
<i>Buteo swainsoni</i> Swainson's hawk	None/Threatened G5 / S3	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, & agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.
<i>Charadrius alexandrinus nivosus</i> western snowy plover	Threatened/None G3T3 / S2S3 SSC	Sandy beaches, salt pond levees & shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.
<i>Charadrius montanus</i> mountain plover	None/None G3 / S2S3 SSC	Short grasslands, freshly plowed fields, newly sprouting grain fields, & sometimes sod farms. Short vegetation, bare ground, and flat topography. Prefers grazed areas and areas with burrowing rodents.
<i>Circus cyaneus</i> northern harrier	None/None G5 / S3 SSC	Coastal salt & freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	Threatened/Endangered G5T2T3 / S1	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.

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<i>Cypseloides niger</i> black swift	None/None G4 / S2 SSC	Coastal belt of Santa Cruz and Monterey counties; central & southern Sierra Nevada; San Bernardino & San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.
<i>Elanus leucurus</i> white-tailed kite	None/None G5 / S3S4 FP	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.
<i>Eremophila alpestris actia</i> California horned lark	None/None G5T4Q / S4 WL	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.
<i>Falco columbarius</i> merlin	None/None G5 / S3S4 WL	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands & deserts, farms & ranches. Clumps of trees or windbreaks are required for roosting in open country.
<i>Falco mexicanus</i> prairie falcon	None/None G5 / S4 WL	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.
<i>Falco peregrinus anatum</i> American peregrine falcon	Delisted/Delisted G4T4 / S3S4 FP	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.
<i>Fratercula cirrhata</i> tufted puffin	None/None G5 / S1S2 SSC	Open-ocean bird; nests along the coast on islands, islets, or (rarely) mainland cliffs. Requires sod or earth into which the birds can burrow, on island cliffs or grassy island slopes.
<i>Geothlypis trichas sinuosa</i> saltmarsh common yellowthroat	None/None G5T3 / S3 SSC	Resident of the San Francisco Bay region, in fresh and salt water marshes. Requires thick, continuous cover down to water surface for foraging; tall grasses, tule patches, willows for nesting.
<i>Gymnogyps californianus</i> California condor	Endangered/Endangered G1 / S1 FP	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost/nest.
<i>Haliaeetus leucocephalus</i> bald eagle	Delisted/Endangered G5 / S3 FP	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.
<i>Icteria virens</i> yellow-breasted chat	None/None G5 / S3 SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 ft of ground.
<i>Lanius ludovicianus</i> loggerhead shrike	None/None G4 / S4 SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub & washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.
<i>Laterallus jamaicensis coturniculus</i> California black rail	None/Threatened G3G4T1 / S1 FP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.
<i>Pandion haliaetus</i> osprey	None/None G5 / S4 WL	Ocean shore, bays, freshwater lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.

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<i>Pelecanus occidentalis californicus</i> California brown pelican	Delisted/Delisted G4T3 / S3 FP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.
<i>Phalacrocorax auritus</i> double-crested cormorant	None/None G5 / S4 WL	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.
<i>Progne subis</i> purple martin	None/None G5 / S3 SSC	Inhabits woodlands, low elevation coniferous forest of Douglas-fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly; also in human-made structures. Nest often located in tall, isolated tree/snag.
<i>Rallus obsoletus obsoletus</i> California Ridgway's rail	Endangered/Endangered G5T1 / S1 FP	Salt water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed, but feeds away from cover on invertebrates from mud-bottomed sloughs.
<i>Riparia riparia</i> bank swallow	None/Threatened G5 / S2	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.
<i>Setophaga petechia</i> yellow warbler	None/None G5 / S3S4 SSC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.
<i>Vireo bellii pusillus</i> least Bell's vireo	Endangered/Endangered G5T2 / S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.
Insects		
<i>Adela oplerella</i> Opler's longhorn moth	None/None G2 / S2	From Marin County and the Oakland area on the inner coast ranges south to Santa Clara County. One record from Santa Cruz County. All but Santa Cruz site is on serpentine grassland. Larvae feed on <i>Platystemon californicus</i> .
<i>Bombus caliginosus</i> obscure bumble bee	None/None G4? / S1S2	Coastal areas from Santa Barbara county to north to Washington state. Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.
<i>Bombus crotchii</i> Crotch bumble bee	None/None G3G4 / S1S2	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.
<i>Bombus occidentalis</i> western bumble bee	None/None G2G3 / S1	Once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.
<i>Chrysis tularensis</i> Tulare cuckoo wasp	None/None G1G2 / S1S2	
<i>Cicindela hirticollis gravida</i> sandy beach tiger beetle	None/None G5T2 / S2	Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.

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<i>Cicindela ohlone</i> Ohlone tiger beetle	Endangered/None G1 / S1	Remnant native grasslands with California oatgrass & purple needlegrass in Santa Cruz County. Substrate is poorly-drained clay or sandy clay soil over bedrock of Santa Cruz mudstone.
<i>Coelus globosus</i> globose dune beetle	None/None G1G2 / S1S2	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.
<i>Coelus gracilis</i> San Joaquin dune beetle	None/None G1 / S1	Inhabits fossil dunes along the western edge of San Joaquin Valley; extirpated from Antioch Dunes (type locality). Inhabits sites containing sandy substrates.
<i>Danaus plexippus pop. 1</i> monarch - California overwintering population	None/None G4T2T3 / S2S3	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby.
<i>Euphilotes enoptes smithi</i> Smith's blue butterfly	Endangered/None G5T1T2 / S1S2	Most commonly associated with coastal dunes & coastal sage scrub plant communities in Monterey & Santa Cruz counties. Hostplant: <i>Eriogonum latifolium</i> and <i>Eriogonum parvifolium</i> are utilized as both larval and adult foodplants.
<i>Euphydryas editha bayensis</i> Bay checkerspot butterfly	Threatened/None G5T1 / S1	Restricted to native grasslands on outcrops of serpentine soil in the vicinity of San Francisco Bay. <i>Plantago erecta</i> is the primary host plant; <i>Orthocarpus densiflorus</i> & <i>O. purpurescens</i> are the secondary host plants.
<i>Idiostatus kathleenae</i> Pinnacles shieldback katydid	None/None G1G2 / S1S2	Known only from Pinnacles National Monument.
<i>Lytta moesta</i> moestan blister beetle	None/None G2 / S2	Central California.
<i>Lytta morrisoni</i> Morrison's blister beetle	None/None G1G2 / S1S2	Inhabitant of the southern Central Valley of California.
<i>Optioservus canus</i> Pinnacles optioservus riffle beetle	None/None G1 / S1	Aquatic. Found on rocks and in gravel of riffles in cool, swift, clear streams.
<i>Philanthus nasalis</i> Antioch specid wasp	None/None G1 / S1	Previously known only from Antioch Dunes, in Contra Costa Co. Now known only from the inland sandhills in Santa Cruz Co.
<i>Polyphylla barbata</i> Mount Hermon (=barbate) June beetle	Endangered/None G1 / S1	Known only from sand hills in vicinity of Mt. Hermon, Santa Cruz County.
<i>Protodufourea wasbaueri</i> Wasbauer's protodufourea bee	None/None G1 / S1	Chaparral and desert scrub. Nests in the ground. Oligolectic on <i>Emmenanthe</i> sp., a plant that blooms in profusion after fires, then declines.
<i>Speyeria adiate adiate</i> unsilvered fritillary	None/None G1G2T1 / S1	Occurs in openings in redwood and coniferous forests, oak woodlands, chaparral.
<i>Trimerotropis infantilis</i> Zayante band-winged grasshopper	Endangered/None G1 / S1	Isolated sandstone deposits in the Santa Cruz Mountains (the Zayante Sand Hills ecosystem) Mostly on sand parkland habitat but also in areas with well-developed ground cover & in sparse chaparral with grass.

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Amphibians		
<i>Ambystoma californiense</i> California tiger salamander	Threatened/Threatened G2G3 / S2S3 WL	Central Valley DPS federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.
<i>Ambystoma macrodactylum croceum</i> Santa Cruz long-toed salamander	Endangered/Endangered G5T1T2 / S1S2 FP	Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey counties. Aquatic larvae prefer shallow (<12 inches) water, using clumps of vegetation or debris for cover. Adults use mammal burrows.
<i>Anaxyrus californicus</i> arroyo toad	Endangered/None G2G3 / S2S3 SSC	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, etc. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.
<i>Aneides niger</i> Santa Cruz black salamander	None/None G3 / S3 SSC	Mixed deciduous and coniferous woodlands and coastal grasslands in San Mateo, Santa Cruz, and Santa Clara counties. Adults found under rocks, talus, and damp woody debris.
<i>Dicamptodon ensatus</i> California giant salamander	None/None G3 / S2S3 SSC	Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County. Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.
<i>Rana boylei</i> foothill yellow-legged frog	None/Candidate Threatened G3 / S3 SSC	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.
<i>Rana draytonii</i> California red-legged frog	Threatened/None G2G3 / S2S3 SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.
<i>Spea hammondi</i> western spadefoot	None/None G3 / S3 SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.
<i>Taricha torosa</i> Coast Range newt	None/None G4 / S4 SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats & will migrate over 1 km to breed in ponds, reservoirs & slow moving streams.
Mammals		
<i>Ammospermophilus nelsoni</i> Nelson's antelope squirrel	None/Threatened G2 / S2S3	Western San Joaquin Valley from 200-1200 ft elev. On dry, sparsely vegetated loam soils. Dig burrows or use k-rat burrows. Need widely scattered shrubs, forbs and grasses in broken terrain with gullies and washes.
<i>Antrozous pallidus</i> pallid bat	None/None G5 / S3 SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	None/None G3G4 / S2 SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.

Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CRPR or CDFW	Habitat Requirements
<i>Dipodomys ingens</i> giant kangaroo rat	Endangered/Endangered G1G2 / S1S2	Annual grasslands on the western side of the San Joaquin Valley, marginal habitat in alkali scrub. Need level terrain and sandy loam soils for burrowing.
<i>Dipodomys venustus elephantinus</i> big-eared kangaroo rat	None/None G4T2 / S2 SSC	Chaparral-covered slopes of the southern part of the Gabilan Range, in the vicinity of the Pinnacles. Forages under shrubs & in the open. Burrows for cover and for nesting.
<i>Dipodomys venustus venustus</i> Santa Cruz kangaroo rat	None/None G4T1 / S1	Silverleaf manzanita mixed chaparral in the Zayante Sand Hills ecosystem of the Santa Cruz Mountains. Needs soft, well-drained sand.
<i>Eumops perotis californicus</i> western mastiff bat	None/None G5T4 / S3S4 SSC	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.
<i>Lasiurus blossevillii</i> western red bat	None/None G5 / S3 SSC	Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.
<i>Lasiurus cinereus</i> hoary bat	None/None G5 / S4	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
<i>Myotis ciliolabrum</i> western small-footed myotis	None/None G5 / S3	Wide range of habitats mostly arid wooded & brushy uplands near water. Seeks cover in caves, buildings, mines, and crevices. Prefers open stands in forests and woodlands. Requires drinking water. Feeds on a wide variety of small flying insects.
<i>Myotis evotis</i> long-eared myotis	None/None G5 / S3	Found in all brush, woodland and forest habitats from sea level to about 9000 ft. Prefers coniferous woodlands and forests. Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.
<i>Myotis thysanodes</i> fringed myotis	None/None G4 / S3	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood & hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.
<i>Myotis yumanensis</i> Yuma myotis	None/None G5 / S4	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.
<i>Neotoma fuscipes annectens</i> San Francisco dusky-footed woodrat	None/None G5T2T3 / S2S3 SSC	Forest habitats of moderate canopy & moderate to dense understory. May prefer chaparral & redwood habitats. Constructs nests of shredded grass, leaves & other material. May be limited by availability of nest-building materials.
<i>Neotoma macrotis luciana</i> Monterey dusky-footed woodrat	None/None G5T3 / S3 SSC	Forest habitats of moderate canopy and moderate to dense understory. Also in chaparral habitats. Nests constructed of grass, leaves, sticks, feathers, etc. Population may be limited by availability of nest materials.
<i>Onychomys torridus tularensis</i> Tulare grasshopper mouse	None/None G5T1T2 / S1S2 SSC	Hot, arid valleys and scrub deserts in the southern San Joaquin Valley. Diet almost exclusively composed of arthropods, therefore needs abundant supply of insects.
<i>Perognathus inornatus psammophilus</i> Salinas pocket mouse	None/None G4T2? / S1 SSC	Annual grassland and desert shrub communities in the Salinas Valley. Fine-textured, sandy, friable soils. Burrows for cover and nesting.

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Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CRPR or CDFW	Habitat Requirements
<i>Reithrodontomys megalotis distichlis</i> Salinas harvest mouse	None/None G5T1 / S1	Known only from the Monterey Bay region. Occurs in fresh and brackish water wetlands and probably in the adjacent uplands around the mouth of the Salinas River.
<i>Taxidea taxus</i> American badger	None/None G5 / S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.
<i>Vulpes macrotis mutica</i> San Joaquin kit fox	Endangered/Threatened G4T2 / S2	Annual grasslands or grassy open stages with scattered shrubby vegetation. Need loose-textured sandy soils for burrowing, and suitable prey base.
Reptiles		
<i>Anniella pulchra</i> northern California legless lizard	None/None G3 / S3 SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.
<i>Arizona elegans occidentalis</i> California glossy snake	None/None G5T2 / S2 SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.
<i>Emys marmorata</i> western pond turtle	None/None G3G4 / S3 SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.
<i>Gambelia sila</i> blunt-nosed leopard lizard	Endangered/Endangered G1 / S1 FP	Resident of sparsely vegetated alkali and desert scrub habitats, in areas of low topographic relief. Seeks cover in mammal burrows, under shrubs or structures such as fence posts; they do not excavate their own burrows.
<i>Masticophis flagellum ruddocki</i> San Joaquin coachwhip	None/None G5T2T3 / S2? SSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Needs mammal burrows for refuge and oviposition sites.
<i>Phrynosoma blainvillii</i> coast horned lizard	None/None G3G4 / S3S4 SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.
<i>Thamnophis hammondi</i> two-striped gartersnake	None/None G4 / S3S4 SSC	Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.
<i>Thamnophis sirtalis tetrataenia</i> San Francisco gartersnake	Endangered/Endangered G5T2Q / S2 FP	Vicinity of freshwater marshes, ponds and slow-moving streams in San Mateo County and extreme northern Santa Cruz County. Prefers dense cover and water depths of at least one foot. Upland areas near water are also very important.
Crustaceans		
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	Threatened/None G3 / S3	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.

Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CRPR or CDFW	Habitat Requirements
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	Endangered/None G4 / S3S4	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.
<i>Linderiella occidentalis</i> California linderiella	None/None G2G3 / S2S3	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.
<i>Stygobromus mackenziei</i> Mackenzie's Cave amphipod	None/None G1 / S1	Known only from Empire Cave (type locality), a metamorphosed limestone cave subject to intermittent flooding.
Arachnids		
<i>Calicina arida</i> San Benito harvestman	None/None G1 / S1	Known only from the type locality, Panoche Road, San Benito County. Found on serpentine rocks
<i>Calileptoneta ubicki</i> Ubick's leptonetid spider	None/None G1 / S1	Known only from the type locality, Arroyo Seco, Monterey County.
<i>Fissilicreagris imperialis</i> Empire Cave pseudoscorpion	None/None G1 / S1	Known only from Empire Cave in Santa Cruz County.
<i>Hubbardia idria</i> Idria short-tailed whipscorpion	None/None G1 / S1	Known only from the type locality, 2.9 km SW of Idria, San Benito County. Serpentine endemic.
<i>Hubbardia secoensis</i> Arroyo Seco short-tailed whipscorpion	None/None G1 / S1	Known only from the type locality, Arroyo Seco, Monterey County.
<i>Meta dolloff</i> Dolloff Cave spider	None/None G1 / S1	Known from caves in the Santa Cruz area. This species is an orb-weaver and occurs from the cave mouth into deep twilight.
<i>Neochthonius imperialis</i> Empire Cave pseudoscorpion	None/None G1 / S1	Known only from Empire Cave, Santa Cruz County. Found under rocks and wood in the dark to twilight zones of the cave.
<i>Socalchemmis monterey</i> Monterey socalchemmis spider	None/None G1 / S1	Known from only two localities in Monterey Co.: Los Padres NF; Arroyo Seco (type locality) and Cone Peak Trail.
Fish		
<i>Eucyclogobius newberryi</i> tidewater goby	Endangered/None G3 / S3 SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need fairly still but not stagnant water and high oxygen levels.
<i>Oncorhynchus kisutch</i> coho salmon - central California coast ESU	Endangered/Endangered G4 / S2?	Federal listing = pops between Punta Gorda & San Lorenzo River. State listing = pops south of Punta Gorda. Require beds of loose, silt-free, coarse gravel for spawning. Also need cover, cool water & sufficient dissolved oxygen.
<i>Oncorhynchus mykiss irideus</i> steelhead - south-central California coast DPS	Threatened/None G5T2Q / S2	Federal listing refers to runs in coastal basins from the Pajaro River south to, but not including, the Santa Maria River.

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Scientific Name Common Name	Status Fed/State ESA Global Rank/State Rank CRPR or CDFW	Habitat Requirements
<i>Oncorhynchus mykiss irideus</i> steelhead - central California coast DPS	Threatened/None G5T2T3Q / S2S3	From Russian River, south to Soquel Creek and to, but not including, Pajaro River. Also San Francisco and San Pablo Bay basins.
<i>Spirinchus thaleichthys</i> longfin smelt	Candidate/Threatened G5 / S1 SSC	Euryhaline, nektonic & anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely freshwater to almost pure seawater.
<i>Thaleichthys pacificus</i> eulachon	Threatened/None G5 / S3	Found in Klamath River, Mad River, Redwood Creek, and in small numbers in Smith River and Humboldt Bay tributaries. Spawn in lower reaches of coastal rivers with moderate water velocities and bottom of pea-sized gravel, sand, and woody debris.
Mollusks		
<i>Helminthoglypta sequoicola</i> <i>consors</i> redwood shoulderband	None/None G2T1 / S1	Known only from south slope of San Juan Grade, near Foot, 8 miles NW of Salinas.
<i>Margaritifera falcata</i> western pearlshell	None/None G4G5 / S1S2	Aquatic. Prefers lower velocity waters.
<i>Tryonia imitator</i> mimic tryonia (=California brackishwater snail)	None/None G2 / S2	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.

FT = Federally Threatened SE = State Endangered
 FC = Federal Candidate Species ST = State Threatened
 FE = Federally Endangered SR = State Rare
 FS = Federally Sensitive SS = State Sensitive
 DL = Delisted

G-Rank/S-Rank = Global Rank and State Rank as per NatureServe and CDFW's CNDDDB RareFind5
 SSC = CDFW Species of Special Concern FP = Fully Protected

CRPR (California Rare Plant Rank):
 1A=Presumed Extinct in California
 1B=Rare, Threatened, or Endangered in California and elsewhere
 2=Rare, Threatened, or Endangered in California, but more common elsewhere
 3=Need more information (a Review List)
 4=Plants of Limited Distribution (a Watch List)

CRPR Threat Code Extension:
 .1=Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
 .2=Fairly endangered in California (20-80% occurrences threatened)
 .3=Not very endangered in California (<20% of occurrences threatened)

Sources: CNDDDB (CDFW, 2017b); USFWS (2017b), CDFW Special Animals List (2017). CDFW Special Plants List (2017) and CNPS Rare Plant Inventory (2017)

Appendix E

AB 52 Consultation

JUL 06 2015

Ohlone/Costanoan-Esselen Nation



*Previously acknowledged as
The San Carlos Band of
Mission Indians
The Monterey Band
And also known as
O.C.E.N. or Esselen Nation
P.O. Box 1301
Monterey, CA 93942*

www.ohlonecostanoanesselelnation.org.

June 28, 2015

Association of Monterey Bay Area
Governments
445 Reservation Road, Suite G
Marine, CA 93933-0838

Re: California Environmental Quality Act Public Resources Code section 21080.3, subd. (b) Request for Formal Notification of Proposed Projects within the Ohlone/Costanoan-Esselen Nation's Geographic Area of Traditional and Cultural Affiliation.

Saleki Atsa,

As of the date of this letter, in accordance with Public Resources Code Section 21080.3.1, subd. (b), Ohlone/Costanoan-Esselen Nation, which is traditionally and culturally affiliated with a geographic area within your agency's geographic area of jurisdiction, requests formal notice of and information on proposed projects for which your agency will serve as a lead agency under the California Environmental Quality Act (CEQA), Public Resources Code section 210000 et seq.

Pursuant to Public Resources Code section 21080.3.1, subd. (b), and until further notice, we hereby designate the following person as the tribe's lead contact person for purposes of receiving notices of proposed projects from your agency:

Name: Louise J. Miranda Ramirez
Title: OCEN Tribal Chairwoman
Address: P.O. Box 1301
Monterey, CA 93942
Phone/Fax Number: (408) 629-5189
Cell Phone: (408) 661-2486
Email: ramirez.louise@yahoo.com

We request that all notices be sent via certified U.S. Mail with return receipt. Following receipt and review of the information your agency provides, within the 30-day period proscribed by Public Resources Code section 21080.3.1, subd. (d), the Ohlone/Costanoan-Esselen Nation may request consultation, as defined by Public Resources Code section 21080.3.1, subd. (b), pursuant to Public Resources Code section 21080.3.2 to mitigate any project impacts a specific project may cause to tribal cultural resources.

If you have any questions or need additional information, please contact our lead contact person listed above.

Nimasianexelpasaleki, Sincerely

Louise J. Miranda Ramirez
OCEN Tribal Chairwoman
2653 McLaughlin Ave.
San Jose, CA 95121

Cc: Native American Heritage Commission
OCEN Tribal Council



December 21, 2015

Louise J. Miranda Ramirez
OCEN Tribal Chairwoman
P.O. Box 1301
Monterey, CA 93942

Re: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 OF 2014).
Formal Notification of Project Undertaking, and Notification of Consultation Opportunity,
pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Ms. Ramirez:

AMBAG will be undertaking preparation of the 2040 Metropolitan Transportation
Plan/Sustainable Communities Strategy (MTP/SCS), and will serve as the 2040 MTP/SCS EIR lead
agency.

Attached is the Notice of Preparation for the 2040 MTP/SCS EIR, which includes a description of
the proposed project, a map showing the project location, and the name of our project point of
contact, pursuant to PRC § 21080.3.1 (d).

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request
consultation, in writing, with AMBAG.

Very Respectfully,

Heather Adamson
Director of Planning



Notice of Preparation for an Environmental Impact Report

2040 Metropolitan Transportation Plan/Sustainable Communities Strategy 2040 Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

Notice is hereby given that the Association of Monterey Bay Area Governments (AMBAG) will be the lead agency in partnership with the Council of San Benito County Governments (SBtCOG), the Santa Cruz County Regional Transportation Commission (SCCRTC) and the Transportation Agency for Monterey County (TAMC) for the preparation of an Environmental Impact Report for the 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). In addition, SBtCOG, SCCRTC and TAMC will be the lead agencies for the development of the 2040 Regional Transportation Plan (RTP) for San Benito County, 2040 RTP for Santa Cruz County and 2040 RTP for Monterey County, respectively. The 2040 MTP/SCS is the metropolitan long-range transportation plan for the three counties and will compile transportation projects and programs included in the County RTPs.

Pursuant to section 15082 of the California Environmental Quality Act (CEQA), AMBAG is soliciting views from your agency as to the scope and content of the environmental information to be included in the EIR. AMBAG also will accept written comments concerning the scope and content of the EIR from interested persons and organizations concerned with the project. The Draft EIR will be a Program EIR. A Program EIR is an EIR that may be prepared on a series of actions that can be characterized as one large project and acts as the first tier of environmental review. The EIR will serve as the EIR for the AMBAG 2040 MTP/SCS and as the EIR for the Regional Transportation Plans prepared by the RTPAs for San Benito, Santa Cruz and Monterey counties.

The project description, location, environmental review requirements and probable environmental issues to be addressed in the EIR are discussed below. An Initial Study is not attached (as allowed by State CEQA Guidelines Section 15060(d)).

Mail comments to Heather Adamson at AMBAG, **445 Reservation Road, Suite G, Marina, California 93933** or e-mail comments to hadamson@ambag.org no later than **January 29, 2016**.

For more information, visit www.ambag.org or call (831) 883-3750.

AMBAG will host a series of EIR Scoping Meetings. The purpose of the meetings is to solicit input on the scope and content of the environmental analysis that will be included in the Draft EIR, to inform the public about the 2040 MTP/SCS and to solicit public input on the 2040 MTP/SCS. The date, time and location of the meetings are as follows:

- **In San Benito County on January 11, 2016** from 6:00 PM to 7:30 PM at the County of San Benito Board of Supervisors Chambers, 481 Fourth Street, Hollister, CA
- **In Santa Cruz County on January 27, 2016** from 6:30 PM to 8:00 PM at the Aptos Library, 7695 Soquel Drive, Aptos, CA
- **In Monterey County on January 28, 2016** from 6:00 PM to 7:30 PM at the Cesar Chavez Library, 615 Williams Road, Salinas, CA

PROJECT DESCRIPTION AND SCOPE OF ENVIRONMENTAL ANALYSIS

Project Title

2040 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

Project Location

The geographical extent of the proposed 2040 MTP/SCS includes San Benito, Santa Cruz and Monterey counties, and all incorporated cities and unincorporated areas contained therein. Capital improvement projects identified in the 2040 MTP/SCS are located on state highways, rail lines, county and city roads, and locally owned streets, as well as on airport property and transit district property. The geographical extent for each RTPA's Regional Transportation Plan is the boundary for each respective county, including its incorporated and unincorporated areas.

Project Description

As the MPO for the tri-county region of Monterey, San Benito and Santa Cruz counties, AMBAG is charged with developing a 2040 MTP/SCS. The 2040 MTP/SCS is the metropolitan long-range transportation plan for Monterey, San Benito and Santa Cruz counties. The Council of San Benito County Governments (SBtCOG), the Santa Cruz County Regional Transportation Commission (SCCRTC) and the Transportation Agency for Monterey County (TAMC) are the state-designated Regional Transportation Planning Agencies (RTPAs) for San Benito, Santa Cruz and Monterey counties, respectively. Each RTPA prepares a county-level long-range Regional Transportation Plan, which will be evaluated in this EIR. The 2040 MTP/SCS is used to guide the development of the Regional and Federal Transportation Improvement Programs, as well as other transportation programming documents and plans. The MTP outlines the region's goals and policies for meeting current and future mobility needs, providing a foundation for transportation decisions by local, regional and State officials that are ultimately aimed at achieving a coordinated and balanced transportation system. The 2040 MTP/SCS sets forth actions, programs and projects to address these needs consistent with adopted policies and goals. The 2040 MTP/SCS also documents the financial resources needed to implement the plan. The EIR will serve as the Program EIR for the AMBAG 2040 MTP/SCS as well as for the Regional Transportation Plans prepared by the RTPAs for San Benito, Santa Cruz and Monterey counties.

The Sustainable Communities and Climate Protection Act of 2008 (SB 375, Steinberg) enhances California's ability to reach its AB 32 greenhouse gas emissions reduction goals by promoting coordinated planning with the goal of creating more sustainable communities. SB 375 mandates regional greenhouse gas emission reduction targets for passenger vehicles. Pursuant to SB 375, the California Air Resources Board (CARB) established and will update targets for 2020 and 2035 for each region covered by one of the State's 18 metropolitan planning organizations (MPOs). AMBAG, as the regional MPO, must prepare a SCS intended to meet regional greenhouse gas reduction targets through integrated land use, housing and transportation planning. AMBAG is currently preparing the 2040 MTP/SCS for the region.

If the targets established by CARB cannot be feasibly met, AMBAG will prepare an Alternative Planning Strategy (APS) to show how the targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

The transportation component of the SCS will include the network of road and transit networks, non-motorized transportation and transportation strategies and policies. Furthermore, SB 375 requires that the SCS identify general land uses, residential densities and building intensities as well as areas to house future residents (see California Government Code Section 65080(b)(2)(B) for the full list of SB

375 requirements).

The Regional Transportation Plans for the Counties of San Benito, Santa Cruz and Monterey are developed for each of the counties to provide a sound basis for the allocation of state and federal transportation funds to transportation projects within each county over a long-range timeframe through 2040. The RTPs will address all forms of transportation and includes the priorities and actions embodied in the plans prepared by each of the county's cities and unincorporated areas. The RTPs (as well as the 2040 MTP/SCS) will follow guidelines established by the State of California's Transportation Commission (CTC) to describe the transportation issues and needs facing each county; identify goals and policies for how each county will meet its needs; identify the amount of money that will be available for needed projects; and include a list of prioritized transportation projects to serve each county's long-term needs within the projected "budget" of transportation revenues with consideration towards environmental impacts, land use and special transportation needs.

Probable Environmental Effects to be Addressed in the EIR

The 2040 MTP/SCS/RTPs EIR will analyze the plans' impacts on the physical environment and identify mitigation measures to avoid or substantially lessen significant environmental effects. It also will be an informational document intended to inform public decisionmakers, interested agencies and the general public about the potential environmental effects of a project.

AMBAG with input from the RTPAs for San Benito, Santa Cruz and Monterey Counties is currently reviewing SCS scenarios to assess how future land use and transportation changes could 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 CARB. Following public review and input, the AMBAG Board of Directors will select a preferred SCS scenario to serve as the EIR proposed project. The EIR will evaluate the environmental effects of the preferred SCS scenario in detail.

The impact categories listed below have been preliminarily identified for analysis in the 2040 MTP/SCS EIR.

- Aesthetics/Visual Resources
- Agricultural Resources
- Air Quality and Health Impacts/Risks
- Biological Resources
- Climate Change/Greenhouse Gases
- Cultural and Historic Resources
- Energy
- Geology/Soils
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use
- Mineral Resources
- Noise
- Population and Housing
- Recreation
- Traffic and Circulation
- Utilities/Regional Water Supply

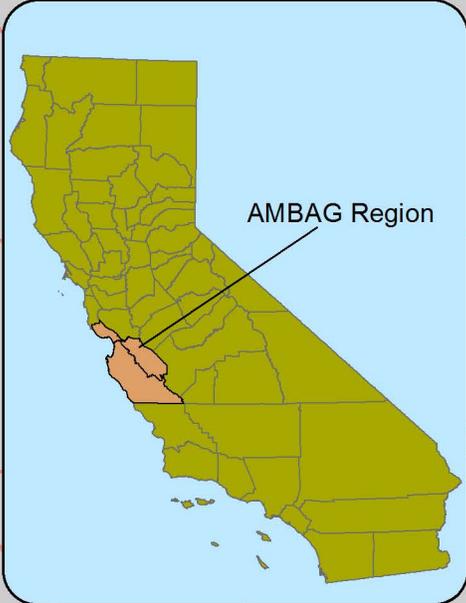
The EIR also will address cumulative impacts, growth inducing impacts and other issues required by CEQA.

Preliminary 2040 MTP/SCS Alternatives

In addition, the EIR also will evaluate the environmental impacts of alternative scenarios. The analysis of alternatives will focus on various land use and transportation scenarios that make different assumptions regarding the combinations of future land uses and transportation system improvements. The following preliminary MTP/SCS project alternatives may be addressed in the EIR:

- **No Project Alternative** – The No Project Alternative is required by CEQA. For this EIR, the No Project Alternative will be defined as a land use based on existing land use plans and a transportation network comprised of committed transportation projects.
- **Intensified Land Use Alternative** – The Intensified Land Use Distribution Alternative will analyze a more compact land use pattern that further concentrates the forecasted population and employment growth in areas identified for more intensified use. The transportation network will be modified to accommodate this projected concentration of future growth.

2040 MTP/SCS Location Map



- Highways
- Rail
- Jurisdictions



Ohlone/Costanoan-Esselen Nation



Previously acknowledged as
The San Carlos Band of
Mission Indians
The Monterey Band
And also known as
O.C.E.N. or Esselen Nation
P.O. Box 1301
Monterey, CA 93942

www.ohlonecostanoanesselenation.org

January 17, 2016

re: AMBAG, 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy

Saleki Atsa,

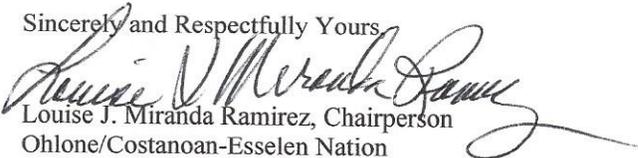
Ohlone/Costanoan-Esselen Nation is an historically documented previously recognized tribe. OCEN is the legal tribal government representative for over 600 enrolled members of Esselen, Carmeleno, Monterey Band, Rumsen, Chalon, Soledad Mission, San Carlos Mission and/or Costanoan Mission Indian descent. Though other indigenous people may have lived in the area, the area is the indigenous homeland of our people. Included with this letter please find a territorial map by Taylor 1856; Levy 1973; and Milliken 1990, indentifying Tribal areas.

Ohlone/Costanoan-Esselen Nation objects to all excavation in known cultural lands, even when they are described as previously disturbed, and of no significant archaeological value. Please be advised that it is our first priority that our ancestor's remains be protected and undisturbed. We desire that all sacred burial items be left with our ancestors on site or where they are discovered. All cultural items returned to Ohlone/Costanoan-Esselen Nation. We ask for the respect that is afforded all of our current day deceased, by no other word these burial sites are cemeteries, respect for our ancestors as you would expect respect for your deceased family members in today's cemeteries. **Our definition of respect is no disturbance.**

OCEN's Tribal leadership desires to be provided with archaeological reports/surveys, including subsurface testing, and presence/absence testing. OCEN request to be included in mitigation and recovery programs, reburial of any of our ancestral remains, placement of all cultural items, and that a Native American Monitor of Ohlone/Costanoan-Esselen Nation, approved by the OCEN Tribal Council be used within our aboriginal territory.

We request consultation on projects affecting our aboriginal homelands. We look forward to hearing more information about this project; please feel free to contact me at (408) 629-5189. Nimasianexelpasaleki. Thank you for your attention to this matter.

Sincerely and Respectfully Yours,


Louise J. Miranda Ramirez, Chairperson
Ohlone/Costanoan-Esselen Nation
(408) 629-5189

Cc: OCEN Tribal Council

Note: attached map has been excluded from the EIR appendix to maintain confidentiality

MAY 17 2016



TORRES MARTINEZ DESERT CAHUILLA INDIANS

P.O. Box 1160

Thermal, CA 92274

(760) 397-0300 – FAX (760) 397-8146

May 9, 2016

To whom it may concern:

Re: California Environmental Quality Act Public Resources Code section 21080.3, subd. (b) ; California Assembly Bill 52, Request for Formal Notification of Proposed Projects within your jurisdiction that is traditionally and culturally affiliated with the Torres Martinez Desert Cahuilla Indians.

The purpose of this letter is to request formal notification of proposed projects within your jurisdiction that is traditionally and culturally affiliated with the Torres Martinez Desert Cahuilla Indians, in accordance with Public Resources Code Section 21080.3.1, subd. (b). As of the date of this letter, you have been formally notified that the boundaries of your local government's jurisdiction fall within the area that is traditionally and culturally affiliated with the Torres Martinez Desert Cahuilla Indians. Additionally, Torres Martinez Desert Cahuilla Indians has created specific requests and formal procedures in accordance with California Assembly Bill 52:

- Formal notice of and information on proposed projects for which your agency will serve as a lead agency under the California Environmental Quality Act (CEQA), Public Resources Code section 21000 et seq. Pursuant to Public Resources Code section 21080.3.1, subd. (b) shall be sent to Torres Martinez Desert Cahuilla Indians
- Within 14 days of determining that an application for a project is complete or of a decision by your agency to undertake a project, a lead agency must provide formal notification to Cultural Monitoring Coordinator, Michael Mirelez, who is the designated contact and tribal representative for the traditionally and culturally affiliated Torres Martinez Desert Cahuilla Indians regarding notifications pertaining to California Assembly Bill 52

Contact Information:

Michael Mirelez

Cultural Resource Coordinator

Torres Martinez Desert Cahuilla Indians

Address: P.O. Box 1160 Thermal, CA 92274

Office: 760-397-0300 ext:1213

Cell: 760-399-0022

Email: mmirelez@tmdci.org

This notice shall consist of a formal written letter that includes:

- A description of the proposed project
 - The project's location
 - The lead agency contact information
 - A clear and definitive statement that the tribe has 30 day to request consultation
 - An Aerial Photo of the project Area
 - Copies of the CHRIS Archaeological Record Search
- Once the Torres Martinez Desert Cahuilla Indians has received the notification, we will respond within 30 days as to whether we wish to initiate consultation as prescribed by Public Resources Code section 21080.3.1, subd. (d), the Torres Martinez Desert Cahuilla Indians, may request consultation, as defined by Public Resources Code section 21080.3.1, subd. (b), pursuant to Public Resources Code section 21080.3.2 to mitigate any project impacts a specific project may cause to tribal cultural resources.
- The lead agency shall begin the consultation process within 30 days of receiving the Torres Martinez Desert Cahuilla Indians request for consultation and prior to the release of a negative declaration, mitigated negative declaration, or environmental impact statement.
- Once a review of inadvertent discoveries has been completed by the Cultural Resource Director, all information will then be transferred to the Torres Martinez Desert Cahuilla Indians Tribal Council for a final decision and directive.

Sincerely,

Michael Mirelez
Cultural Resource Coordinator
Torres Martinez Desert Cahuilla Indians



June 13, 2016

Michael Mirelez
Cultural Resource Coordinator
Torres Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

Re: Tribal Cultural Resources under the California Environmental Quality Act, AB 52 OF 2014).
Formal Notification of Project Undertaking, and Notification of Consultation Opportunity,
pursuant to Public Resources Code § 21080.3.1 (hereafter PRC).

Dear Mr. Mirelez:

AMBAG will be undertaking preparation of the 2040 Metropolitan Transportation
Plan/Sustainable Communities Strategy (MTP/SCS), and will serve as the 2040 MTP/SCS EIR lead
agency.

Attached is the Notice of Preparation for the 2040 MTP/SCS EIR, which includes a description of
the proposed project, a map showing the project location, and the name of our project point of
contact, pursuant to PRC § 21080.3.1 (d).

Pursuant to PRC § 21080.3.1 (b), you have 30 days from the receipt of this letter to request
consultation, in writing, with AMBAG.

Very Respectfully,

Heather Adamson
Director of Planning



Notice of Preparation for an Environmental Impact Report

2040 Metropolitan Transportation Plan/Sustainable Communities Strategy 2040 Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

Notice is hereby given that the Association of Monterey Bay Area Governments (AMBAG) will be the lead agency in partnership with the Council of San Benito County Governments (SBtCOG), the Santa Cruz County Regional Transportation Commission (SCCRTC) and the Transportation Agency for Monterey County (TAMC) for the preparation of an Environmental Impact Report for the 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). In addition, SBtCOG, SCCRTC and TAMC will be the lead agencies for the development of the 2040 Regional Transportation Plan (RTP) for San Benito County, 2040 RTP for Santa Cruz County and 2040 RTP for Monterey County, respectively. The 2040 MTP/SCS is the metropolitan long-range transportation plan for the three counties and will compile transportation projects and programs included in the County RTPs.

Pursuant to section 15082 of the California Environmental Quality Act (CEQA), AMBAG is soliciting views from your agency as to the scope and content of the environmental information to be included in the EIR. AMBAG also will accept written comments concerning the scope and content of the EIR from interested persons and organizations concerned with the project. The Draft EIR will be a Program EIR. A Program EIR is an EIR that may be prepared on a series of actions that can be characterized as one large project and acts as the first tier of environmental review. The EIR will serve as the EIR for the AMBAG 2040 MTP/SCS and as the EIR for the Regional Transportation Plans prepared by the RTPAs for San Benito, Santa Cruz and Monterey counties.

The project description, location, environmental review requirements and probable environmental issues to be addressed in the EIR are discussed below. An Initial Study is not attached (as allowed by State CEQA Guidelines Section 15060(d)).

Mail comments to Heather Adamson at AMBAG, **445 Reservation Road, Suite G, Marina, California 93933** or e-mail comments to hadamson@ambag.org no later than **January 29, 2016**.

For more information, visit www.ambag.org or call (831) 883-3750.

AMBAG will host a series of EIR Scoping Meetings. The purpose of the meetings is to solicit input on the scope and content of the environmental analysis that will be included in the Draft EIR, to inform the public about the 2040 MTP/SCS and to solicit public input on the 2040 MTP/SCS. The date, time and location of the meetings are as follows:

- **In San Benito County on January 11, 2016** from 6:00 PM to 7:30 PM at the County of San Benito Board of Supervisors Chambers, 481 Fourth Street, Hollister, CA
- **In Santa Cruz County on January 27, 2016** from 6:30 PM to 8:00 PM at the Aptos Library, 7695 Soquel Drive, Aptos, CA
- **In Monterey County on January 28, 2016** from 6:00 PM to 7:30 PM at the Cesar Chavez Library, 615 Williams Road, Salinas, CA

PROJECT DESCRIPTION AND SCOPE OF ENVIRONMENTAL ANALYSIS

Project Title

2040 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

Project Location

The geographical extent of the proposed 2040 MTP/SCS includes San Benito, Santa Cruz and Monterey counties, and all incorporated cities and unincorporated areas contained therein. Capital improvement projects identified in the 2040 MTP/SCS are located on state highways, rail lines, county and city roads, and locally owned streets, as well as on airport property and transit district property. The geographical extent for each RTPA's Regional Transportation Plan is the boundary for each respective county, including its incorporated and unincorporated areas.

Project Description

As the MPO for the tri-county region of Monterey, San Benito and Santa Cruz counties, AMBAG is charged with developing a 2040 MTP/SCS. The 2040 MTP/SCS is the metropolitan long-range transportation plan for Monterey, San Benito and Santa Cruz counties. The Council of San Benito County Governments (SBtCOG), the Santa Cruz County Regional Transportation Commission (SCCRTC) and the Transportation Agency for Monterey County (TAMC) are the state-designated Regional Transportation Planning Agencies (RTPAs) for San Benito, Santa Cruz and Monterey counties, respectively. Each RTPA prepares a county-level long-range Regional Transportation Plan, which will be evaluated in this EIR. The 2040 MTP/SCS is used to guide the development of the Regional and Federal Transportation Improvement Programs, as well as other transportation programming documents and plans. The MTP outlines the region's goals and policies for meeting current and future mobility needs, providing a foundation for transportation decisions by local, regional and State officials that are ultimately aimed at achieving a coordinated and balanced transportation system. The 2040 MTP/SCS sets forth actions, programs and projects to address these needs consistent with adopted policies and goals. The 2040 MTP/SCS also documents the financial resources needed to implement the plan. The EIR will serve as the Program EIR for the AMBAG 2040 MTP/SCS as well as for the Regional Transportation Plans prepared by the RTPAs for San Benito, Santa Cruz and Monterey counties.

The Sustainable Communities and Climate Protection Act of 2008 (SB 375, Steinberg) enhances California's ability to reach its AB 32 greenhouse gas emissions reduction goals by promoting coordinated planning with the goal of creating more sustainable communities. SB 375 mandates regional greenhouse gas emission reduction targets for passenger vehicles. Pursuant to SB 375, the California Air Resources Board (CARB) established and will update targets for 2020 and 2035 for each region covered by one of the State's 18 metropolitan planning organizations (MPOs). AMBAG, as the regional MPO, must prepare a SCS intended to meet regional greenhouse gas reduction targets through integrated land use, housing and transportation planning. AMBAG is currently preparing the 2040 MTP/SCS for the region.

If the targets established by CARB cannot be feasibly met, AMBAG will prepare an Alternative Planning Strategy (APS) to show how the targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

The transportation component of the SCS will include the network of road and transit networks, non-motorized transportation and transportation strategies and policies. Furthermore, SB 375 requires that the SCS identify general land uses, residential densities and building intensities as well as areas to house future residents (see California Government Code Section 65080(b)(2)(B) for the full list of SB

375 requirements).

The Regional Transportation Plans for the Counties of San Benito, Santa Cruz and Monterey are developed for each of the counties to provide a sound basis for the allocation of state and federal transportation funds to transportation projects within each county over a long-range timeframe through 2040. The RTPs will address all forms of transportation and includes the priorities and actions embodied in the plans prepared by each of the county's cities and unincorporated areas. The RTPs (as well as the 2040 MTP/SCS) will follow guidelines established by the State of California's Transportation Commission (CTC) to describe the transportation issues and needs facing each county; identify goals and policies for how each county will meet its needs; identify the amount of money that will be available for needed projects; and include a list of prioritized transportation projects to serve each county's long-term needs within the projected "budget" of transportation revenues with consideration towards environmental impacts, land use and special transportation needs.

Probable Environmental Effects to be Addressed in the EIR

The 2040 MTP/SCS/RTPs EIR will analyze the plans' impacts on the physical environment and identify mitigation measures to avoid or substantially lessen significant environmental effects. It also will be an informational document intended to inform public decisionmakers, interested agencies and the general public about the potential environmental effects of a project.

AMBAG with input from the RTPAs for San Benito, Santa Cruz and Monterey Counties is currently reviewing SCS scenarios to assess how future land use and transportation changes could 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 CARB. Following public review and input, the AMBAG Board of Directors will select a preferred SCS scenario to serve as the EIR proposed project. The EIR will evaluate the environmental effects of the preferred SCS scenario in detail.

The impact categories listed below have been preliminarily identified for analysis in the 2040 MTP/SCS EIR.

- Aesthetics/Visual Resources
- Agricultural Resources
- Air Quality and Health Impacts/Risks
- Biological Resources
- Climate Change/Greenhouse Gases
- Cultural and Historic Resources
- Energy
- Geology/Soils
- Hazards and Hazardous Materials
- Hydrology/Water Quality
- Land Use
- Mineral Resources
- Noise
- Population and Housing
- Recreation
- Traffic and Circulation
- Utilities/Regional Water Supply

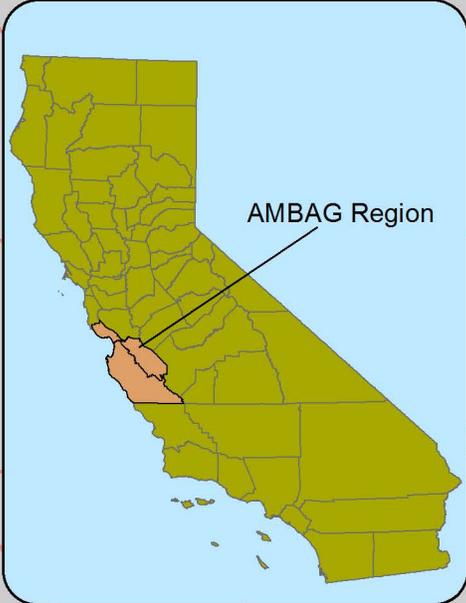
The EIR also will address cumulative impacts, growth inducing impacts and other issues required by CEQA.

Preliminary 2040 MTP/SCS Alternatives

In addition, the EIR also will evaluate the environmental impacts of alternative scenarios. The analysis of alternatives will focus on various land use and transportation scenarios that make different assumptions regarding the combinations of future land uses and transportation system improvements. The following preliminary MTP/SCS project alternatives may be addressed in the EIR:

- **No Project Alternative** – The No Project Alternative is required by CEQA. For this EIR, the No Project Alternative will be defined as a land use based on existing land use plans and a transportation network comprised of committed transportation projects.
- **Intensified Land Use Alternative** – The Intensified Land Use Distribution Alternative will analyze a more compact land use pattern that further concentrates the forecasted population and employment growth in areas identified for more intensified use. The transportation network will be modified to accommodate this projected concentration of future growth.

2040 MTP/SCS Location Map



- Highways
- Rail
- Jurisdictions



Appendix F

Response to Comments

1 AMBAG 2040 MTP/SCS Final EIR: Response to Comments

This Response to Comments (RTC) document provides a response to public and agency comments received by the Association of Monterey Bay Area Governments (AMBAG) on the Draft Environmental Impact Report (EIR) for the 2040 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS). AMBAG received 13 comment letters on the Draft EIR and additional comments were provided verbally at a public hearing on the Draft EIR on January 30, 2018. Verbal comments specific to the Draft EIR were not provided during the other four public hearings on the Draft EIR, which occurred on January 10, January 11, January 22 and January 24, 2018.

1.1 Organization of Comment Letters and Responses

This section presents a list of comment letters and other comments received during the public review period and describes the organization of the letters and comments that are provided in Section 1.2, *Comments and Responses*, of this document. The 13 letters are presented in the following order: state public agencies (2), regional and local public agencies (4), private groups and organizations (1) and individuals (6). Each comment letter has been numbered sequentially and each separate issue raised by the commenter has been assigned a number. The responses to each comment identify first the number of the comment letter and then the number assigned to each issue. For example, Response 1.2 indicates that the response is for the second issue raised in comment Letter 1.

Letter Number and Commenter	Agency/ Group/ Organization	Page Number
State Public Agencies		
1. Susan Craig, Central Coast District Manager	California Coastal Commission	F-3
2. Kelly McClendon, Senior Transportation Planner	California Department of Transportation	F-17
Regional and Local Public Agencies		
3. David Frisbey, Planning and Air Monitoring Manager	Monterey Bay Air Resources District	F-30
4. Tara Hullinger, Advance Planning Manager	City of Salinas	F-34
5. Kate McKenna, AICP, Executive Officer	LAFCO of Monterey County	F-47
6. Kathy Molloy Previsich, Planning Director	County of Santa Cruz	F-57
Private Groups and Organizations		
7. Rick Longinotti, Co-Chair	Campaign for Sensible Transportation	F-60
Individuals		
8. Jennifer Coile, AICP	Public	F-77
9. Brett Garrett	Public	F-81
10. Jack Nelson	Public	F-83
11. Becky Steinbruner	Public	F-88

Letter Number and Commenter	Agency/ Group/ Organization	Page Number
12. Becky Steinbruner	Public	F-92
13. Becky Steinbruner	Public	F-101
14. Lee Otter	Public	F-103
15. Pauline Seals	Santa Cruz Climate Action Network	F-105
16. Becky Steinbruner	Public	F-108

Comments on the Draft EIR were provided verbally by three people at the public hearing held on January 30, 2018. Verbal comments on the Draft EIR were not provided during the other four public hearings on the Draft EIR, which occurred on January 10, January 11, January 22 and January 24, 2018. Transcriptions of these verbal comments and responses are provided in Section 1.2, *Comment and Responses*, following the comment letters and response to comment letters. Similar to comment letters, each verbal comment has been numbered sequentially, continuing numbering used for comment letters, in alphabetical order based on the last name of the speaker. Each separate issue raised by the commenter has been assigned a number. Verbal comments are shown as comments 14 through 16 in the table above.

1.2 Comments and Responses

Written responses to each comment letter and public hearing comment received on the Draft EIR are provided in this section. All letters received during the public review period on the Draft EIR are provided in their entirety. Similarly, transcriptions of the verbal comments provided at the public hearing are also provided.

Please note that text within individual letters that has not been numbered does not specifically raise significant environmental issues and/or does not relate directly to the adequacy of the information or analysis within the Draft EIR and therefore no response is required, per *State CEQA Guidelines* Section 15088.

Where revisions or changes to the Draft EIR text are called for in response to a comment, the page and paragraph are set forth, followed by the appropriate revision. Added text has been indicated with underlined text. Text deleted from the Draft EIR has been shown in ~~striketrough~~. Page numbers correspond to the page numbers of the Draft EIR. When mitigation measure language has been changed, it has been changed in both the text on the stated Draft EIR page, as well as the summary table (Table 2) in the Executive Summary of the Draft EIR.

CALIFORNIA COASTAL COMMISSION

CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV



February 5, 2018

Association of Monterey Bay Area Governments (AMBAG), c/o
State Clearinghouse
P.O. Box 3044
Sacramento, CA 95812-3044

Comments: draft 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy and
Regional Transportation Plans, and Draft EIR (SCH#2015121080)

Dear AMBAG Directors and staff:

California Coastal Commission staff appreciates the opportunity to comment on the draft 2040
Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans
(2040 MTP/SCS), and the companion DEIR. We applaud the level of planning and support for non-
automotive transportation alternatives that the 2040 MTP/SCS represents. The overall goals of
protecting and improving the Monterey Bay region’s transportation system in an environmentally
sensitive fashion are consistent with numerous California Coastal Act policies, including Coastal Act
Policy Section 30252 regarding non-automotive transportation alternatives.

We strongly support the overall approach of developing an area-wide, long-range transportation plan for
the entire Monterey Bay region. The 2040 MTP/SCS aims to maintain and enhance the mature
transportation systems that already exist in the region. As such, this system establishes the framework for
future development throughout the region—including the Coastal Zone (CZ). Please note that while the
CZ typically is only a few thousand feet (or less) wide in already-urbanized areas, it extends up to 5
miles inland within the more rural areas of the 2040 MTP’s geographical scope (i.e., along the Big Sur
Coast, in the Elkhorn Slough watersheds, and in northern Santa Cruz County).

1.1

And, because it will affect the content of the Regional Transportation Plan (RTP) for each county, and
the budget allocations for future transportation projects, adoption of an effective MTP/SCS is of
particular strategic importance. Noting that future development will impact the entire region’s
watersheds, and the ability of the public to access the coast from inland locations, our comments are
directed at the entirety of the 2040 MTP planning area (not the Coastal Zone alone).

General comments: Coastal Act requirements. Pursuant to the California Coastal Act, all development in
California’s Coastal Zone is subject to a Coastal Development Permit (CDP). The region’s two coastal
counties, and most of its coastal cities (all but Pacific Grove and Monterey) have Coastal Commission-

1.2

certified Local Coastal Programs (LCPs) and issue the necessary CDP's within their jurisdictions. The certified LCP and the public access policies of the Coastal Act (seaward of the first public road) serve as the standard of review for all new CZ development projects, including transportation projects.

In certain instances, the Coastal Commission itself will need to act on a proposed project. Examples of such projects include those located where there is no certified LCP; those within the Commission's retained CDP jurisdiction (such as State lands, existing and filled wetlands, etc.); local CDPs that have been appealed; or, where local governments have requested Coastal Commission review of projects that overlap jurisdictional boundaries. The Commission also directly reviews certain federal projects, pursuant to its responsibilities under the federal Coastal Zone Management Act of 1972.

In most cases, the cornerstone of each local government's LCP is its general plan and zoning, prepared in accordance with this State's General Plan Law (and subsequent acts, including the Coastal Act and SB 375 concerning greenhouse gases (GHGs)). The 2040 MTP/SCS anticipates future transportation needs, based on existing and projected future development in accordance with local government General Plans within and outside the region's Coastal Zone. This in turn establishes which projects will receive transportation funding, as administered through each county's Regional Transportation Plan and implementing Regional Transportation Improvement Plan (RTIP).

For each transportation improvement project, the overall structure of the 2040 MTP/SCS DEIR appears to call for 1) identification of applicable impacts, per CEQA; and, 2) application of appropriate mitigation measures, as listed in the draft 2040 MTP/SCS DEIR document (in a very general way). Overall, we believe rigorous implementation of this approach can (potentially) provide for conformance with corresponding Coastal Act policies such as those pertaining to environmentally sensitive habitats; scenic resources; air quality (now including GHGs, per Air Resources Board); minimizing energy use; protection of agricultural lands and water quality; and, mitigation of archaeological and paleontological impacts.

1.2

Developing projects that will succeed in receiving necessary CDPs relies on consultation with local government and Coastal Commission staff—especially with respect to issues not explicitly addressed by CEQA. Examples of such issues include: recreational and scenic qualities, public access opportunities, coastal trail continuity, planned retreat or other adaptation to anticipated climate change impacts, and protection of coastal agricultural lands if not otherwise addressed by the CEQA process.

Recommendation: the 2040 MTP/SCS should explicitly encourage every agency proposing transportation project(s) within or impacting the Coastal Zone, to proactively contact and coordinate with Coastal Commission and local government LCP staff—as early as possible in the project cycle. The purposes of such early coordination are to:

- Identify applicable LCP and Coastal Act policies, opportunities and constraints, *before* the project design is finalized;
- Develop reasonable alternatives for meeting the identified transportation need, for consideration during the environmental review process;
- Avoid unnecessary delays in the permitting process, especially through collaboration with local governments, and by insuring that necessary environmental studies concurrently address both Coastal Act and CEQA requirements, simultaneously; and,
- Identify appropriate, feasible mitigation measures, if there are unavoidable impacts.

1.2

General comment: coastal watershed and wildfire vulnerability context. Protection of coastal water quality is an important Coastal Act issue. All of the region’s watersheds—including San Benito County’s Pajaro River watershed—provide freshwater inflows to Monterey Bay National Marine Sanctuary, habitat for critical wildlife (e.g., migratory steelhead), and sand replenishment to our coastlines. Further, protection of these watersheds is critical for both agriculture and domestic water supply, either directly through impoundment/diversion or indirectly through recharge of the aquifer. During drought, water supply is especially important for community resiliency. We believe that the future availability of water resources will likely be the main determinant of the location and limits of further development. Today’s local zoning and projected maximum total buildout will likely have to be adjusted accordingly. This in turn will affect projected needs for transportation infrastructure.

Therefore, we now need to question those land use policies that facilitate residential subdivision and development in areas that lack adequate future water supplies, and in areas especially vulnerable to wildland fires, flooding and other hazards. In short, such residential development is generally an incompatible use in such resource-constrained and high-hazard environments—and, where it must be allowed, densities should be minimized, mitigation measures made mandatory, and transportation system demand projections adjusted accordingly.

1.3

In sum, the Coastal Act (and good land use planning) dictates not that new development be halted, but instead shifted to those places best able to accommodate it (per Coastal Act Section 30250). This means that to promote sustainable communities within the MTP/SCS planning area, new density should be directed *away* from areas prone to wildland fire, floodplains, low-lying areas vulnerable to sea level rise (SLR), bluff edges exposed to shoreline retreat, wetlands, coastal dunes and other environmentally sensitive habitat areas (Coastal Act Sections 30231, 30233, 30240, 30253). The most productive agricultural lands and aquifer recharge areas should be protected as well (Coastal Act Sections 30231, 30241-30242). If these constraints are combined with water supply limitations, it is likely that future

development patterns will differ significantly—and transportation demand and facilities will need to shift accordingly (Coastal Act Sections 30250, 30254).

Recommendation: the 2040 MTP/SCS should emphasize the need for regularly updating the regional transportation demand analyses, to map and rigorously take into account the above-cited constraints (sensitive habitats, hazards, SLR, water supply, agriculture). Because it is the agency with the broadest overall regional perspective, this role may be most appropriate for AMBAG. Each regional transportation agency, and affected local jurisdictions will then be in a position to update their respective land use and transportation plans accordingly.

1.3

General comments: coastal public access context. The California Coastal Act mandates that maximum opportunities for public access to the coast shall be provided, subject to several common sense considerations (Calif. Public Resources Code Sec. 30210-30214 *et seq.*) In Sec. 30254, the Legislature further instructs that the rural sections of State Highway Route 1 remain in a scenic, two-lane configuration.

One of the best-known public access features of the region is the partially complete Monterey Bay Sanctuary Scenic Trail (MBSST), part of the California Coastal Trail (CCT) network. The MBSST is envisioned to eventually provide for both a bikeway and a pedestrian route, between Pacific Grove and Davenport. The 2040 MTP/SCS, we believe, represents a highly appropriate opportunity to prioritize completion of the MBSST, as well as connecting CCT segments. To the extent that it will encourage walking and bicycles as preferred commute modes, this will help communities meet their GHG goals consistent with SB 375 (and Coastal Act Sec. 30253 regarding air quality, minimizing energy consumption, and vehicle miles traveled). As a matter of public policy, completion of the MBSST/CCT will be an asset for both public recreation and public health, for our region’s tourism economy and for supporting sustainable communities.

1.4

Now, how does the public actually reach the coast? The majority of visitors from outside the Coastal Zone (CZ) get to the beach or coastal trail trailheads by automobile. Within the geographical scope of the 2040 MTP/SCS, the majority of coastwise State Highway Route 1 (SR1) either forms the Coastal Zone boundary, or falls entirely within the CZ. As such, it comprises the prime mode for the public to move *along* the coast, and to access coastal trail trailheads. SR1 is especially indispensable for access to beaches, aquaria, scenic vantage points, and supporting visitor services of every kind. Accordingly, it is existential for our tourism-oriented economies.

But, of at least equal importance, is the ability of the public to get *to* their coast. Understood in this way, the functions of U.S. Hwy. 101, SR68, SR183, SR129, SR152, SR156 and SR17, as well as local

arterials such as San Miguel Canyon Road and San Andreas Road, take on a much larger importance. Each of these roadways lie within the scope of the 2040 MTP/SCS.

In addition, the region’s rail corridors—including Amtrak’s Coast Line, as well as the dormant Monterey Branch Line (MBL) and limited use Santa Cruz Branch Line (SCBL)—are considered valuable supplements to the roadway system. This applies to rail’s capacity to move freight as well as people. It has been posited that every rail car can move the same tonnage as four highway big rigs (CSX website; SCCRTC hearing of 1/18/2018). Therefore, to the extent that a functioning rail freight system exists, it proportionately can protect the capacity of the roadway system for *all* users. Thus, rail lines can represent an economical, GHG-efficient mode for certain types of freight movement—and, for getting the public *to* the coast (and home again).

Recommendation: the 2040 MTP/SCS should clearly indicate that:

- the MBSST/CCT are (non-motorized) components of the regional transportation system and should be given funding priority as such;
- the role of SR1 as the region’s premier coastwise public access route be explicitly recognized;
- the designation of the Big Sur Coast segment of SR1 as both a State Scenic Highway and a National Scenic Byway be emphasized, and that it be maintained in accordance with the recommendations ratified by all agencies that participated in the development of the Coast Highway Management Plan (CHMP)(c.2002). CHMP signatories included, among others, the lead agency Caltrans, the Federal Highway Administration, the California Coastal Commission, TAMC, and Monterey County;
- the rural sections of SR1 must remain in a scenic 2-lane configuration, pursuant to Coastal Act Section 30254; and,
- public access from inland areas to the coast is facilitated by the region’s many State Highway routes, local arterials, transit services (including Amtrak Thruway buses), and rail—potentially including the MBL and SCBL; therefore, each transportation improvement project providing access to the coast should be evaluated accordingly, and priority given to those projects that best provide for public access, both locally and regionally.

1.4

Timeline and climate change context. One limiting factor for the MTP/SCS is its chronological horizon of 2040. The obvious “elephant in the room” is that projected sea level rise (SLR) and other anticipated climate change impacts (e.g., more frequent large floods, shoreline retreat, drought, etc.) will take their most severe toll well beyond the planning horizon of 2040. Yet, the transportation system pattern that we

1.5

approve and fund prior to 2040 will, as history demonstrates, establish a template for development far into the future.

Some of the more credible scientific projections predict up to 1 to 2 meters (approx. 3-6 ft.) of SLR for the California central coast region by 2100—thus, only a 1-2 ft. rise by the MTP end point of 2040. Not much of a concern for the 2040 MTP, if all climate change impacts suddenly halt at that point in time. But, the same credible projections show that climate change will most likely be in full acceleration mode by that time, particularly as it may be exacerbated by methane and other GHG releases from melting ocean floor and permafrost areas. Eventual full melting of the West Antarctic and Greenland icecaps, plus thermal expansion of the ocean, could over some centuries yield something on the order of ten times the SLR predicted for 2100.

We realize scenarios for conditions in 2100 are outside of the planning horizon of this draft 2040 plan. However, the extremely long-term planning requirements for transportation and other infrastructure calls on public agencies to begin taking future conditions into account. Thus, we believe the MTP/SCS should recognize and incorporate policies essential for longer-range climate change adaptation, especially SLR adaptation. This could prove very beneficial for the region as many funding sources at the State and Federal level are calling for the incorporation of climate resilient infrastructure designs.

1.5

In addition, specific additions to the draft 2040 MTP/SCS are accordingly suggested below:

Recommendation: the 2040 MTP/SCS would benefit, we believe, by including a specific list of potential transportation system vulnerabilities, and examples of Central Coast transportation facilities that will need to adapt in order to remain resilient to expected climate change phenomena. Expected planning-level geotechnical problems include but are not confined to increased stream and tidal flooding; large and small landslide instabilities; accelerated mass wasting (especially persistent rockfall); and shoreline erosion/retreat, due to SLR and increased storm intensity. These are already partially touched upon by the MTP, but amplification would be helpful for identifying future vulnerabilities, locations needing site-specific planning, and future funding for corrective projects. Including a preliminary list of “hot spots” within the transportation system based on the many climate change/SLR vulnerability assessments occurring throughout the region would benefit the initiation of the long term planning horizon needs for infrastructure projects.

Rail lines: suggested additional treatment in the 2040 MTP/SCS text. Improvement and better use of the region’s rail corridors could be amplified in the MTP/SCS. In particular, consideration should be given to the role that at least some of the region’s rail corridors might play in meeting Coastal Act policies promoting mass transit and the minimization of energy use, along with SB 375 requirements regarding minimization of GHG impacts. We also foresee a need for thoughtful advance planning for rail facilities’

1.6

adaptation to sea level rise impacts, beyond 2040. Accordingly, consistent with our earlier comments on the California State Rail Plan (CSRP), we recommend that the following rail-related topics receive specific treatment and priority in the MTP/SCS:

- High Speed Rail (HSR) & Coast Daylight. The proposed *HSR* alignment only barely grazes the northeasterly corner of AMBAG’s MTP/SCS planning area. Nonetheless, both the *HSR* and the revived *Coast Daylight* service (as described in the CSRP) will provide important non-automotive transportation alternatives for travel between San Francisco and Los Angeles. We believe the MTP/SCS would benefit from noting the advantages of these two new services in terms of protecting the capacity of coastal Highways 1 and 101, for both economic mobility and recreational travel. Sufficient highway capacity infers less need for future highway widening and the associated (potential) environmental impacts on critical wetland habitats and beach areas along the coast.
- Coast Daylight service. For the revived *Coast Daylight* service, the MTP/SCS should note that by providing non-automotive transportation alternatives northbound from the Monterey Peninsula (connecting at the new Castroville station), and southbound from Santa Cruz County (connecting at the proposed new Watsonville/Pajaro station), these service improvements will support preservation of the SR 1 Moss Landing segment as a scenic rural byway consistent with Legislative direction in Coastal Act Section 30254. However, over the long run, SLR is likely to inundate the existing, low-lying UPRR alignment through the midline of Elkhorn Slough. Major adaptive measures will be needed and the opportunities and challenges for these measures should begin to be identified now.
- Capital Corridor extension. Likewise, for TAMC’s proposed *Capital Corridor* extension from San Jose to Salinas, the MTP/SCS should note that by providing non-automotive transportation alternatives northbound from the Monterey Peninsula (connecting at the new Castroville station), it will support preservation of the SR 1 Moss Landing segment as a scenic rural byway consistent with Legislative direction in Coastal Act Section 30254—as well as potentially relieving some congestion on SR156 through the Elkhorn Slough System watershed, northeasterly from Castroville. Within Elkhorn Slough, over the long run, the UPRR tracks or alignment will need to be adapted to expected SLR, as for the extended *Coast Daylight* service discussed above.
- Santa Cruz Branch Line (SCBL). This 32-mile line was recently acquired by the Santa Cruz County Regional Transportation Commission (SCCRTC). The MTP/SCS should expand its discussion of this corridor for maximizing its ability to enhance public access in light of the

1.6

above-referenced Coastal Act objectives, including as appropriate for coastal lateral access (as a strand of the MBSST), commuting, and freight transportation.

- Santa Cruz, Big Trees & Pacific Railway. The MTP/SCS appropriately includes a discussion of the existing freight and passenger excursion train operation that extends from Felton (Roaring Camp) through the scenic San Lorenzo River gorge, connecting to the SCBL at the Santa Cruz Beach Boardwalk. Although shown on the draft CSRP map of short line freight operations (draft CSRP Exhibit 6.2), there is no accompanying discussion. We note that the MTP corrects this oversight, at least for regional planning purposes.
- Monterey Branch Line (MBL). On p.2-11 of the draft 2040 MTP/SCS, under “Commuter and Light Rail,” the status and potential future role(s) of the SCBL are already addressed. However, there is no comparable discussion for TAMC’s MBL. And, both the SCBL and MBL are omitted from Figures 2-2 and 4-4: 2040 Regional Transit Network (although shown on Figure 2-4 Goods Movement System). One specific concern that may warrant identification in the MTP is the classic 5-span steel truss bridge across the Salinas River estuary. It appears to be abandoned, unpainted, rusting in place. But, it represents valuable existing, difficult-to-replace infrastructure. If not maintained, it may have to be replaced when restored rail, fixed guideway and/or MBSST bikeway connections eventually become available. We recommend discussion in the MTP document, and direction to assure that future planning options are not prejudiced through failure to preserve potentially reusable facilities.

1.6

Suggested enhancements to the 2040 MTP/SCS DEIR text (mitigation section). Mindful of the above Coastal Act and climate change considerations, and in support of this system-level planning effort, we offer the following suggestions for the DEIR document’s mitigation section:

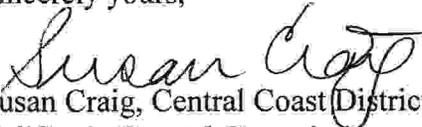
- p.22, GEO-3(b) Hillside Stability Evaluation. Add: *In addition, along the Big Sur Coast and at Waddell Bluffs, mega-landslides and/or ongoing perennial rockfall causes massive instabilities and periodic closures of State Highway Route 1 (SR1). To sustain a functional coastwise transportation system over the long run, the strategies identified in the Big Sur Coast Highway Management Plan (CHMP) should be observed wherever appropriate. Applicable CHMP measures, and examples of each, include (but are not limited to): adaptation to the fluid landform (e.g., Mud Cr. Slide); separation of the highway from the moving landform (e.g., the Rainrocks rockshed, Pitkins Curve bridge, Pfeiffer Gulch bridge, Devil’s Slide tunnel); and temporary or permanent rockfall catchments (e.g., Cow Cliffs rock net, Waddell Bluff berm).*

1.7

- p.24, GHG-5 Sea Level Rise Adaptation. Add, after first sentence regarding location of transportation facility structures relative to sea level rise inundation: “...at least during project life.” Also, add: *Each transportation project located along or near the coast shall be planned to avoid hazards during its design life or to have adaptive management options to contend with expected climate change impacts over the design life period. Planned retreat may be the most practical solution for low capital investment projects that are located where there is room for feasible realignment in response to sea level rise or shoreline erosion (e.g., a coastal trail segment that can be pulled back from an eroding bluff edge). In such cases, the identified retreat alignment should be protected through dedication of conditional easement or other measures that will assure its availability when and if needed. In contrast, it may not be feasible to progressively retreat or raise certain rigid, high capital investment structures such as highway bridges. Accordingly, such transportation facilities should be adaptively designed—in such a way as to address expected sea level rise during at least the design life of the structure.* 1.8
- p.26, HAZ-6 Wildland Fire Risk Reduction. In addition to the MTP/SCS’s directing new development away from important agricultural lands, floodplains and other high risk hazard areas, we suggest add: *Avoid introducing new or expanded development such as residential subdivisions, schools and hospitals into fire-prone, fire-controlled ecologies (e.g., indigenous Monterey pine forest, Santa Cruz sand hills/Knobcone pine forest, coastal maritime chaparral). Adjust transportation demand projections to account for shifted future development locations, accordingly.* 1.9

Conclusion. We hope you find the foregoing comments helpful, and invite further discussion of the issues raised. It is evident from the draft 2040 MTP/SCS that we share many mutual goals, and we are eager to resolve any points where differences may arise. Future opportunities to coordinate our coastal planning efforts with AMBAG’s regional planning outlook are welcomed. Please do not hesitate to contact our office if you have any questions.

Sincerely yours,


Susan Craig, Central Coast District Manager
California Coastal Commission

Cc:
California Dept. of Transportation (Caltrans), Dist.5
Monterey County Planning Dept.
Santa Cruz County Planning Dept.
Transportation Agency for Monterey County (TAMC)

Cc (con't):
Santa Cruz County Regional Transportation Commission (SCCRTC)
City of Carmel
City of Monterey
City of Pacific Grove
City of Seaside
City of Sand City
City of Marina
City of Watsonville
City of Capitola
City of Santa Cruz

Letter 1

COMMENTER: Susan Craig, Central Coast District Manager, California Coastal Commission

DATE: February 5, 2018

Response 1.1

The commenter states approval and support for the development of the 2040 MTP/SCS in general. This comment is noted and does not require further response or revisions to the Draft EIR.

Response 1.2

The commenter summarizes the regulatory requirements of the Coastal Development Permit and the Local Coastal Programs in the region. The commenter states that for projects requiring a Coastal Development Permit, success will rely on early consultation with local government and Coastal Commission staff. The commenter states that the 2040 MTP/SCS should explicitly encourage every agency proposing transportation project(s) within or impacting the Coastal Zone to proactively contact and coordinate with Coastal Commission and local government staff. This comment pertains to the 2040 MTP/SCS and not the Draft EIR. This comment is noted and does not require further response or revisions to the Draft EIR. Responses to comments pertaining to the 2040 MTP/SCS are provided in Appendix K of the 2040 MTP/SCS.

Response 1.3

The commenter summarizes the importance of protecting water quality and planning development in areas with adequate water supplies and away from hazards, such as wildfires and flooding. The commenter states that the 2040 MTP/SCS should emphasize the need for regularly updating the regional transportation demand analyses, to map and rigorously take into account development constraints. This comment pertains to the 2040 MTP/SCS and not the Draft EIR. This comment is noted and does not require further response or revisions to the Draft EIR. Responses to comments pertaining to the 2040 MTP/SCS are provided in Appendix K of the 2040 MTP/SCS. Briefly, as stated therein, AMBAG recently received a grant from Caltrans as part of the SB 1 Adaptation Planning Grant Program for the Central Coast Highway 1 area from Castroville to the Santa Cruz County line. The project will identify climate change impacts and related risks to multimodal transportation infrastructure in the project area. The study will then identify a suite of transportation and adaptation scenarios to remedy the identified climate-related vulnerabilities and evaluate the proposed adaptation approaches, including the economic impact of each of the identified adaptation approaches. The study is expected to be completed in Spring 2020 and study results will be incorporated into the next update of the MTP/SCS.

Although this comment pertains to the 2040 MTP/SCS, it should be noted, however, that the Draft EIR analyzes potential impacts related to the issues raised in the comment. Impact W-2 on pages 336-338 of the Draft EIR addresses water supply impacts. Impact B-2 on page 197 of the Draft EIR provides an analysis of potential impacts on wetlands. Impact GHG-5 on pages 286 and 287 of the Draft EIR provides an analysis of impacts related to sea level rise and associated coastal flooding. Impact GEO-2 on pages 260 and 261 of the Draft EIR provides an analysis of potential impacts related to soil erosion. Section 4.10, *Hydrology and Water Quality*, which begins on page 315 of the Draft EIR, also addresses impacts related to soil erosion, as well as potential flooding hazards. Impacts related to wildland fire hazards are analyzed in Impact HAZ-9 on pages 309 through 311 of

the Draft EIR. It should additionally be noted that the MTP/SCS is updated every four years and the underlying latest planning assumptions in the SCS include local General Plans, which are required to address the issues raised in this comment.

Response 1.4

The commenter states the importance of the road network for public access to the coast, as well as trails in the region. The commenter states that railways in the region may protect the capacity of the roadways for all users. The commenter states that scenic qualities of Highway 1 should be preserved. The commenter requests that the 2040 MTP/SCS clearly indicate these points. This comment pertains to the 2040 MTP/SCS and not the Draft EIR. This comment is noted and does not require further response or revisions to the Draft EIR. Responses to comments pertaining to the 2040 MTP/SCS are provided in Appendix K of the 2040 MTP/SCS. Briefly, as stated therein, the 2040 MTP/SCS recognizes the scenic nature of the Big Sur Coast segment of Highway 1 and maintains rural sections of Highway 1 in a scenic two-lane configuration. A discussion of the region's passenger and freight rail is included in Chapter 2 of the 2040 MTP/SCS. Additionally, potential impacts related to designated State scenic highways are analyzed in Impact AES-1 on pages 95 through 97 of the Draft EIR.

Response 1.5

The commenter states that global climate change and sea level rise may impact the projects in the 2040 MTP/SCS, especially beyond the 2040 planning horizon. The commenter recommends that the MTP/SCS recognize and incorporate policies essential for longer-range climate change adaptation, especially sea level rise adaptation. The commenter further recommends that the 2040 MTP/SCS include a specific list of transportation system facilities that would be potentially vulnerable to sea level rise and would need to adapt in order to remain resilient. This comment pertains to the 2040 MTP/SCS and not the Draft EIR. This comment is noted and does not require further response or revisions to the Draft EIR. However, note that pages 268-270 of the Draft EIR summarize the projected future impacts of climate change and Impact GHG-5 on pages 286 and 287 of the Draft EIR provides an analysis of impacts and recommends mitigation measures related to sea level rise and associated coastal flooding.

Responses to comments pertaining to the 2040 MTP/SCS are provided in Appendix K of the 2040 MTP/SCS. Briefly, as stated therein, AMBAG recently received a grant from Caltrans as part of the SB 1 Adaptation Planning Grant Program for the Central Coast Highway 1 area from Castroville to the Santa Cruz County line. The project will identify climate change impacts and related risks to multimodal transportation infrastructure in the project area. The study will then identify a suite of transportation and adaptation scenarios to remedy the identified climate-related vulnerabilities and evaluate the proposed adaptation approaches, including the economic impact of each of the identified adaptation approaches. The study is expected to be completed in Spring 2020 and study results will be incorporated into the next update of the MTP/SCS.

Response 1.6

The commenter states that improvements to and better use of the region's rail corridors could be amplified in the 2040 MTP/SCS. The commenter provides a list of rail-related topics that they recommend receive specific treatment in the 2040 MTP/SCS. This comment pertains to the 2040 MTP/SCS and not the Draft EIR. This comment is noted and does not require further response or revisions to the Draft EIR.

Responses to comments pertaining to the 2040 MTP/SCS are provided in Appendix K of the 2040 MTP/SCS. Briefly, as stated therein, Chapter 2 of the 2040 MTP/SCS discusses passenger and freight rail and the 2040 MTP/SCS includes several of the rail projects mentioned in the comment.

Response 1.7

The commenter provides language pertaining to the Big Sur Coast Highway Management Plan and requests that it be added to mitigation measure GEO-3(b), Hillside Stability Evaluation, in the Draft EIR. In response to this comment, page 263 of the Draft EIR has been revised as follows:

GEO-3(b) Hillside Stability Evaluation

If a 2040 MTP/SCS 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. In addition, to sustain a functional long-term transportation system along the coast, the strategies identified in Caltrans' 2004 Big Sur Coast Highway Management Plan shall be implemented where appropriate and when feasible. Applicable Big Sur Coast Highway Management Plan measures may include, but are not limited to: adaptation to the fluid landform; separation of the highway from the moving landform; and, temporary or permanent rockfall catchments.

Response 1.8

The commenter provides additional language pertaining to mitigating the impacts of sea level rise and requests that it be added to mitigation measure GHG-5, Sea Level Rise Adaptation, in the Draft EIR. The commenter recommends the addition of the language "...at least during the project life" to this measure. Mitigating beyond the anticipated life of the proposed project is unwarranted because impacts to operational transportation facilities would no longer occur. Mitigation measure GHG-5, on page 287, contains sea level adaptation practices very similar to the remaining recommendations provided by the commenter. For example, the commenter states that the mitigation should require transportation projects to have adaptive management options to contend with expected climate change impacts. Mitigation measure GHG-5 already contains language similar to commenter's language: "...the implementing agency shall incorporate appropriate adaptation strategies to minimize hazards associated with sea level rise, such that project structures and other critical facilities would be located outside of an identified sea level rise inundation area..." Therefore, it is unnecessary to incorporate adaptive management language provided by the commenter into mitigation measure GHG-5 because it would be duplicative.

Response 1.9

The commenter requests that Draft EIR mitigation measure HAZ-6, Wildland Fire Risk Reduction, be revised to include measures to avoid introducing new or expanded development such as residential subdivisions, schools and hospitals into fire-prone, fire-controlled ecologies. In response to this comment, pages 310 and 311 of the Draft EIR have been revised as follows:

HAZ-6 Wildland Fire Risk Reduction

If an individual project included in the 2040 MTP/SCS is located within the wildland-urban interface or areas favorable for wildland fires such that project-specific CEQA analysis finds a significant risk of loss, injury or death from fire, 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:

- Avoid introducing new or expanded development such as residential subdivisions, schools and hospitals into fire-prone, fire-controlled ecologies (e.g., indigenous Monterey pine forest, Santa Cruz sand hills/knobcone pine forest, coastal maritime chaparral).
- Require adherence to the local hazards mitigation plan, as well as the local general plan policies and programs aimed at reducing the risk of wildland fires through land use compatibility, training, sustainable development, brush management, public outreach and service standards for fire departments.
- Encourage the use of fire-resistant vegetation native to the AMBAG region and/or the local microclimate of the project site; and discourage the use of fire-prone species especially non-native, invasive species such as pampas grass or giant reed.
- 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 wildland fires 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.

DEPARTMENT OF TRANSPORTATION

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*Making Conservation.
a California Way of life.*

February 5, 2018

Maura Twomey, Executive Director
Association of Monterey Bay Area Governments (AMBAG)
24580 Silver Cloud Court
Monterey, CA 93940

**DRAFT 2040 METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE
COMMUNITIES STRATEGY AND DRAFT ENVIRONMENTAL IMPACT REPORT,
ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS**

Dear Ms. Twomey:

Thank you for the opportunity to review your agency's draft Moving Forward Monterey Bay 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and draft Environmental Impact Report (DEIR). We highly regard our partnership with the Association of Monterey Bay Area Governments (AMBAG) in strategically planning, financing, and achieving long-term goals for transportation in the region. Caltrans supports a MTP/SCS that is consistent with state and federal planning priorities intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety.

Caltrans values the continuing, cooperative, and comprehensive partnership with AMBAG in integrating regional and state processes for planning the region's transportation system. Your agency continues to be a leader in improving the ability to evaluate transportation policies and performance of that system through modeling by accounting for interregional trips which are critical in planning for system capacity.

Lastly, we commend AMBAG for producing an excellent plan addressing existing and future transportation needs in the Monterey Bay Area as well as land use, housing needs, supporting multi-modal options, greenhouse gas emission reduction, and improving overall transportation system efficiencies.

Please note our additional detailed comments are included in a separate attachment. If you have any questions, please contact me at (805)-549-3510 or kelly.mcclendon@dot.ca.gov

Sincerely,

A handwritten signature in blue ink, appearing to read "Kelly McClendon".

Kelly McClendon
Senior Transportation Planner

Attachment

Detailed Comments by Caltrans Draft AMBAG (MTP/SCS) 2040

General Comments:

- Caltrans commends the work of AMBAG staff on developing its draft MTP/SCS 2040. The document appears comprehensive, thorough and well organized. The high level of involvement that staff has coordinated with the public and stakeholder agencies, including Caltrans, is appreciated. This includes coordinating with the RTPAs in the region to develop a comprehensive plan, illustrative maps that depict complex information in a simple format, and a glossary that helps facilitate comprehension for public consumption.
- Caltrans also commends AMBAG for its extensive public outreach, including its GIS interactive web mapping and web site information on the draft MTP/SCS.
- For future MTP/SCS updates, AMBAG may want to consider forming a citizen's technical advisory committee with varied representation from such groups as chambers of commerce, agriculture, freight, residential homeowner's associations and other commercial and private industries. These groups would provide a different perspective than those from traditional governmental transportation agencies.
- The draft includes excellent documentation on public outreach activities in Appendix D.

2.1

Specific Comments:

Chapter 2:

- Page 2-12, under the "Bicycle Network" section it only discusses bicycle classification in terms of Class I, Class II and Class III. Please update this section to recognize that there are now four types of bikeways that includes Class IV which is a separated bikeway or cycle track. Instead of introducing this by stating that the "Bike lanes in the region are classified in three categories:..." it may be more clear to state that "There are four recognized bikeway classifications that include the following:" since a bike lane is more aligned with Class II specifically. Moreover the classification system does not necessarily define or correspond with bicycle traffic patterns.
- Page 2-13, Does Figure 2-3 reflect the existing and proposed Regional Bicycle Network to be reached by 2040? Or does the map reflect what only is existing now? Please clarify. Also, it is challenging to distinguish the color difference

between the green line for Class III and black lines for roads and freeways. A more contrasting color is recommended.

- Page 2-14, in the “Complete Streets” section, is it possible to discuss the State’s role in implementing Complete Streets as it relates to the State Highway System in the region. Specifically, the California State Bicycle and Pedestrian Plan, *Toward an Active California* lays out foundational policies and actions that Caltrans and its partner agencies will take to achieve the department’s ambitious statewide goals to double walking and triple bicycling trips by 2020. This is relevant to bicycle and pedestrian issues and needs on, across, and adjacent to the State Highway System within this region. More information about the plan can be accessed at: <http://www.goactiveca.org/>
- Would it be possible to add a section that discusses Park and Ride in the region? This includes existing and proposed park and ride lots and the plan for park and ride improvements moving into the future. Perhaps a park and ride map would be beneficial as well.
- Primary Air-Carrier airports with annual enplanements over 10,000 are *required* to have an Airport Ground Access Improvement Program per Government Code 65081.1. The Monterey Regional Airport is the only airport with 10,000 or more enplanements, and therefore requires AMBAG to complete an Airport Ground Access Improvement Program per Government Code 65081. 1. It is noted that although the MTP specifically states, "...TAMC *will develop* this program in coordination with AMBAG," there is no date of completion projected. Has this process started? It is strongly recommended that AMBAG staff to review the link to California Law and Government Code 650801.1. <https://law.justia.com/codes/california/2011/gov/title-7/65080-65086.5/65081.1/> there are portions of this required plan provided in further paragraphs, although not a completed plan.

2.1

Chapter 6:

- Chapter 6 (Public Participation) should include Title VI information regarding public outreach efforts. See pages 74-80 of the California Transportation Commission’s 2017 *Regional Transportation Plan Guidelines for Metropolitan Planning Organizations*. Go to: <http://catc.ca.gov/programs/rtp/docs/rtp-2017-guidelines-mpos-011817.pdf>

Appendices:

Appendix J: Regional Transportation Plan Checklist for MPOs:

General

- Pursuant to 23 CFR 450.324(b), the RTP shall include both long-range and short-range strategies/actions. Please provide more detail for the short-range strategies that will be used to help meet the long-range goals and requirements of this plan by 2040.
- Item (h): Please add page number 4-38 to checklist.

Consultation/Cooperation

- Item (i) (ii) Appendix D: mentions a timely notice was included in regards to the comment period but does not show the press releases, flyers, or dates of the notice. We recommend providing a table with the dates, times, and outcomes from the comment period. Please add this information to the RTP pursuant to 23 CFR 450.316(a).
- Item (viii): Please discuss whether or not an additional opportunity for public comment was necessary. Please add this information to the RTP pursuant to 23 CFR 450.316(a).
- Item 1 (x): Please discuss the effectiveness of the procedures and strategies utilized in order to measure and ensure full participation during the comment period. Please add this information to the RTP pursuant to 23 CFR 450.316(a).
- Item 8: There is no indication of the comment period duration within the cited pages on the checklist. Please add this information to the RTP pursuant to 23 CFR 450.316(a) and 23 CFR 450.316(a)(i).

2.1

Title VI and Environmental Justice

- Item 1: Please add page numbers 5-6, 5-8, and 5-10 to checklist.

Modal Discussion

- Item 5: Please add page number 2-12 to checklist
- Item 7: Please change the page number provided to page 2-14.

Programming/Operations

- The list of projects in Appendix C does not make it clear which projects are unconstrained and constrained. Please provide a clear delineation of which projects are part of the constrained and unconstrained lists.

Financial

- Item 4: The lists cited for financially constrained projects are unclear and too generalized. Please provide more detail pursuant to Government Code 65080 (4)(a).
- Item 7: There is no explicit mention of consistency between the RTP and ITIP. Please provide a statement regarding consistency pursuant to the 2016 STIP Guidelines Section 33.
- Item 8: There is no explicit mention of consistency between the RTP and RTIP. Please provide a statement regarding consistency pursuant to the 2016 STIP Guidelines Section 19.

Environmental

- Item 1: Please add EIR Document page number to checklist.
- Item 4: Please add EIR Document page number to checklist.

2.1

Detailed Comments by Caltrans
Draft 2040 MTP/SCS and RTPs for Monterey, San Benito, and Santa Cruz
Counties
Draft Environmental Impact Report
SCH#2015121080

Chapter 4.4 Biological Resources, a. Terrestrial Vegetation Communities beginning page 163

General comment:

Make sure the scientific names for the plant species are current throughout. For example Herbaceous Habitats pg. 169: purple needlegrass was reclassified. Replace *Nassella pulchra* with *Stipa pulchra*.

2.2

e. Wildlife Movement Corridors, pg. 182

Would be helpful if a general map of the corridor locations is included with this discussion.

2.3

Mitigation Measures, starting pg. 191

B-1 (e) Endangered/Threatened Animal Species Avoidance and Compensatory Mitigation pg. 192-193

Mitigation requirements can vary with the project scope and species, on site mitigation that includes a restoration plan should also be an option.

2.4

B-1(f) Endangered/Threatened Animal Species Avoidance and Compensatory Mitigation pg. 193-194

2nd bullet pg. 193. The type of fencing required for a particular species may not be “orange construction fencing”. The description for the fencing should be generic and simply state that Environmental Sensitive Area fencing shall be installed.

3rd bullet pg. 193. Although April to October 31 is a typical work window in aquatic habitats, this is a programmatic EIR and project specific measures can be different. Would be more appropriate to state that work shall be completed during the dry season typically between April 1 and October 31.

2.5

5th bullet pg. 194. States: No equipment shall be permitted to enter wetted portions of any affected drainage. It is common for projects to require dewatering, which may require some type of equipment in the drainage.

B-1(g) Non-Listed Special Status Animal Species Avoidance and Minimization pg. 194 - 195

3rd bullet pg. 195. Discussion on bats.

Although the measures outlined are appropriate, presence/absence surveys for bats should be conducted early in project development during the environmental document/biological study phase of the project. The measures would need to be identified in the construction contract prior to the contract going out for bid, especially the 2nd and 3rd measure.

2.6

In addition, the second recommendation for providing alternative roosts combined with the third recommendation would need to be implemented long before construction begins to allow the bats time to leave the area or learn to use the alternative roosts. That could be as much as a year prior to construction for the alternative roosts.

Significance after Mitigation, pg. 196, starting with 4th sentence.

Document States:

“However, there are no state or federal statutes that provide protection to other sensitive plant and wildlife species such as candidate species, plant species determined to be rare by the CNPS or wildlife species classified as California Species of Special Concern. No additional feasible mitigation measures are available to reduce impacts on other sensitive species. Therefore, it cannot be guaranteed that all future project-level impacts to special status species can be mitigated to a less than significant level for all species and impacts would remain significant.”

2.7

Comment:

Since CEQA and NEPA require analysis of impacts to sensitive species as well as listed species, the conclusions are somewhat misleading. Although it is true that it cannot be guaranteed that all future project-level impacts to special status species including listed species can be mitigated to less than significant, the avoidance and minimization measures that are outlined for listed species to reduce impacts to less than significant also apply to candidate species, rare CNPS, and California Species of Special Concern.

B-3 (c) Construction Best Management Practices to Minimize Disruption to Wildlife, pg 203

2nd bullet restricting construction to daylight hours is not always possible depending on the location and traffic conditions. Should rephrase to state that when feasible construction will be limited to daylight hours.

2.8

Since BMPs for fencing measures can vary for species and location, references for the literature for those measures should be included.

2.9

Letter 2

COMMENTER: Kelly McClendon, Senior Transportation Planner, California Department of Transportation

DATE: February 5, 2018

Response 2.1

The commenter provides a list of comments pertaining to the 2040 MTP/SCS. This comment pertains to the 2040 MTP/SCS and not the Draft EIR, and does not raise significant environmental issues. This comment is noted and does not require further response or revisions to the Draft EIR. Please refer to Appendix K of the 2040 MTP/SCS for responses to comments pertaining to the 2040 MTP/SCS.

Response 2.2

The commenter states that the most current scientific names for plant species should be used throughout the discussion of terrestrial vegetation communities in Section 4.4, *Biological Resources*, of the Draft EIR.

In response to this comment, the following page of the Draft EIR has been revised as follows:

Page 169:

Herbaceous Habitats

These habitats are generally comprised of areas dominated by grasses and other non-woody species. The majority of this habitat in Monterey, San Benito and Santa Cruz counties is comprised of non-native grasslands (Figure 15, Figure 16 and Figure 17). Native perennial grasslands, which are dominated by perennial bunch grasses, such as purple needlegrass (~~*Nassella pulchra*~~ *Stipa pulchra*), were historically abundant within Monterey, San Benito and Santa Cruz counties but are now currently patchy in distribution statewide. The following are descriptions of the grass and herb-dominated habitats that occur within three miles of construction projects outlined in the 2040 MTP/SCS.

Response 2.3

The commenter requests that a figure be added to the Draft EIR that shows the location of the wildlife movement corridors referred to in the discussion of wildlife movement corridors in Section 4.4, *Biological Resources*, of the Draft EIR.

As described on page 183 of the Draft EIR, mountainous regions in the AMBAG region may support wildlife movement on a regional scale, and riparian corridors and waterways may provide more local-scale opportunities for wildlife movement. Riparian corridors and waterways within the AMBAG region are too plentiful to depict on a figure, and even if it were feasible to produce such a figure, it would not be necessary to support the programmatic evaluation of wildlife movement impacts in the Draft EIR. Page 183 also describes three essential connectivity areas identified by the California Department of Wildlife within the region. In accordance with CEQA, project-level effects on wildlife movement corridors will be evaluated during project-level environmental review of land development and transportation projects included in the 2040 MTP/SCS.

Response 2.4

The commenter requests that mitigation measure B-1(e) be revised to include the option of a restoration plan for project-specific mitigation. Mitigation measure B-1(e) on pages 192 and 193 of the Draft EIR requires a qualified biologist to prepare a Habitat Mitigation and Monitoring Plan (HMMP) to ensure the success of on- and/or off-site mitigation sites. As described in mitigation measure B-1(e), the HMMP shall determine if the conservation site has the restoration needs to function as a successful mitigation site. Because mitigation measure B-1(e) already requires an HMMP, and the restoration plan would be duplicative of the contents of an HMMP, revisions to the Draft EIR in response to this comment would not be necessary.

Response 2.5

The commenter requests minor modifications to mitigation measure B-1(f) pertaining to construction fencing, construction season dates, and the operation of vehicles within waterways. In response to this comment, the following pages of the Draft EIR have been revised as follows:

Pages 193 and 194:

B-1(f) Endangered/Threatened Species Avoidance and Minimization During Construction

The following measures shall be applied to aquatic and terrestrial species, where appropriate. Implementing agencies shall select from these measures as appropriate depending on site conditions, the species with potential for occurrence and the results of the biological resources screening and assessment (measure B-1[a]).

- Pre-construction surveys for federal and/or state listed species with potential to occur shall be conducted where suitable habitat is present by a qualified biologist not more than 48 hours prior to the start of construction activities. The survey area shall include the proposed disturbance area and all proposed ingress/egress routes, plus a 100-foot buffer. If any life stage of federal and/or state listed species is found within the survey area, the appropriate measures in the BO or Habitat Conservation Plan (HCP)/Incidental Take Permit (ITP) issued by the USFWS/NMFS (relevant to federal listed species) and/or the ITP issued by the CDFW (relevant to state listed species) shall be implemented; or if such guidance is not in place for the activity, the qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. The results of the pre-construction surveys shall be submitted to the implementing agency for review and approval prior to start of construction.
- 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 Environmental Sensitive Area ~~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 during the dry season, typically between April 1 and October 31, 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 qualified 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 of the CDFW and/or USFWS/NMFS or as outlined in project permits, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are begin fully implemented.

- No endangered/threatened species shall be captured and relocated without authorization from the CDFW and/or USFWS/NMFS.
- If pumps are used for dewatering activities, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system.
- 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. At that point, a qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. Alternatively, the appropriate measures shall be implemented in accordance with the BO or HCP/ITP issued by the USFWS (relevant to federal listed species) and/or the ITP issued by the CDFW (relevant to state listed species) and work can then continue as guided by those documents and the agencies as appropriate.
- All vehicle maintenance/fueling/staging shall occur not less than 100 feet 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 other than equipment necessary to conduct approved dewatering activities required for project construction.
- All equipment operating within streambeds (restricted to conditions in which water is not present) 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.
- At the end of each work day, excavations shall be secured with cover or a ramp shall be provided to prevent wildlife entrapment.
- All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.

Response 2.6

The commenter requests that mitigation measure B-1(g) be revised to require pre-construction surveys for special-status bat species more than 30 days in advance of commencement of construction. The commenter suggests that conducting surveys within 30 days of construction would not allow sufficient time to implement additional bat protection measures listed in mitigation measure B-1(g), including establishing alternative roost sites and installation of bat exclusion devices.

Conducting surveys earlier than 30 days prior to the start of project construction would allow time for bats to take roost or inhabit the project site between the survey date and the planned construction start date. These bats would therefore not be observed or found during surveys, and would potentially be at risk of unintentional impacts from construction activities. Additionally,

guidance from CDFW¹ recommends conducting bat surveys no more than 14 days prior to the start of construction. Conducting the surveys long before construction, as suggested in the comment, would be increasingly inconsistent with the CDFW guidance.

Bat protection measures outlined in mitigation measure B-1(g) include postponing construction within 250 feet of a maternity colony; installation of alternative roosts such as bat boxes; and installation of exclusion devices. Such measures would not require more than 30 days to implement, should they be required. Bat Conservation International states that when exclusion devices are installed, the devices should remain in place for a minimum of seven days to ensure that all bats have vacated the roost and cannot regain access.² Therefore, these devices would not need to be installed long before construction, but instead within approximately seven days of construction.

Response 2.7

The commenter states that the significance after mitigation discussion for Impact B-1, on page 196 of the Draft EIR, is somewhat misleading in describing that statutes do not provide protection to sensitive species that are not considered special-status species, such as candidate species, plant species determined to be rare by the CNPS or wildlife species classified as California Species of Special Concern. The commenter states that CEQA and NEPA extends to all sensitive species, and mitigation measures that apply to special-status species in the Draft EIR would also apply to these sensitive species.

The commenter is correct that the CEQA thresholds of significance in the Draft EIR include project effects on “rare” species, which extends beyond federal and state listed endangered species. Several mitigation measures for Impact B-1 apply to these species. For example, mitigation measure B-1(g), Non-Listed Special Status Animal Species Avoidance and Minimization, outlines measures to reduce impacts to non-listed special status animal species. In addition, mitigation measure B-1(h) requires preconstruction surveys for nesting birds, including non-listed species.

The discussion of significance after mitigation on page 196 of Draft EIR states that compliance with the required measures would reduce impacts to special status species and their habitat to less than significant level. It further explains that there are federal and/or state statutes that prohibit the take of protected species, which includes federal and state listed species, state rare plants and fully protected species. When these statutes are considered in combination with the mitigation measures for Impact B-1 – which mitigate impacts to non-special status species - impacts would be less than significant. Revisions to the Draft EIR are therefore not necessary in response to this comment.

Response 2.8

The commenter requests that mitigation measure B-3(c) be revised to allow for night-time construction when site or project conditions make daylight construction infeasible. In response to this comment, the following page of the Draft EIR has been revised as follows:

Pages 203:

¹ California Department of Fish and Wildlife (CDFW). 2013. Appendix I CDFW’s Conservation Measures for Biological Resources that may be Affected by Program-level Actions. Available at: <http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=73979>

² Bat Conservation International. 2014. *Exclusion Guidelines*. Available at: <http://www.batcon.org/pdfs/binb/ExcludersGuidelines2014.pdf>

B-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.
- Whenever feasible, 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.

Response 2.9

The commenter requests that the Draft EIR include references to data and literature sources that describe the various types of fencing measures that could be used to prevent disruption of wildlife movement and connectivity.

The 2040 MTP/SCS contains many projects that would be implemented throughout Santa Cruz, San Benito and Monterey counties. These projects would occur in varying habitat types, terrain and site conditions. Considering the variability and site-specific conditions that could be encountered, many different types of fence designs could be developed and implemented to reduce impacts on wildlife movement. It is not necessary to narrow the design to fences described in literature at this programmatic level of environmental review. Rather, fencing design and requirements should be designed at project-level review, generally consistent with mitigation measure B-3(a) on page 202 of the Draft EIR.

February 5, 2018

Heather Adamson
AMBAG
24580 Silver Cloud Ct.
Monterey, CA 93940

Email: hadamson@ambag.org

Re: Draft EIR for the 2040 MTP/SCS and RTPs for Monterey, San Benito and Santa Cruz Counties

Dear Ms. Adamson:

Thank you for providing the Monterey Bay Air Resources District (Air District) with the opportunity to comment on the Draft EIR for the 2040 MTP/SCS. We found that the document adequately addressed the issues identified in the comments the Air District submitted during the comment period for the NOP. However, we do have some additional comments: 3.1

Mitigation Measure AQ-3, Project-Level PM10 Emissions Reduction, Page 153

One of the mitigation measures for excessive PM10 emissions is to provide funding through the Air District's Carl Moyer Memorial Grant Program. While this program does reduce quantifiable emissions, a specific program could be developed to provide emissions offsets specific to transportation and land use projects. The Air District requests that AMBAG work with the Air District to initiate an offset emission reduction program. Please contact David Frisbey, Planning and Air Monitoring Manager, at the Air District office at (831) 647-9411 or dfrisbey@mbard.org for assistance in developing an offset program. 3.2

Mitigation Measure GHG-1, Construction GHG Reduction Measures, Page 280

This section suggests the use of diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy duty diesel engines. Please make this measure consistent with Mitigation Measure AQ-2(b) Diesel Equipment Emissions Standards on page 151 which recommends the use of Tier 4 certified engines to the maximum extent feasible. 3.3

In addition to the comments on the Draft EIR, the Air District has the following general comments on the MTP and the Counties' RTPs:

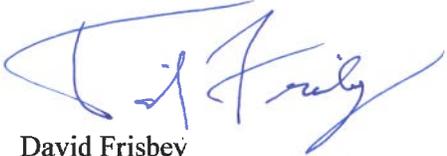
- A major hurdle to completing transportation projects is inadequate funding. In the long term, the limited completion of projects will result in more congestion and increased emissions. Unfortunately, many of the transportation projects are focused on maintaining and expanding existing road networks and not enough on active transportation. The Air District suggests that active transportation projects have a higher priority in scheduling and funding. 3.4
- Prioritize the use of roundabouts at new intersections and adaptive signal control at existing intersections.
- Since much of the areas' congestion is due to people traveling in single occupancy vehicles, a higher priority needs to be given to transportation projects that focus on the reduction of vehicle miles traveled.
- Expand the development of projects electrifying the medium to heavy-duty truck fleets as they are a significant source of regional emissions.
- Emphasize a transition away from fossil fuels for bus and para-transit fleets in the region.

- Promote guidelines for developing regional, County and municipal and codes to support the development of electric vehicle infrastructure.
- Consider development around emerging technologies such as connectivity, autonomous vehicles, carsharing programs and fleet modernization. Discuss the expansion of these technologies and their impact on traffic congestion.

3.4

Please let me know if you have any questions. I can be reached at (831) 647-9418 ext. 234 or dfrisbey@mbard.org.

Best Regards,



David Frisbey
Planning and Air Monitoring Manager

cc: Alan Romero, Hanna Muegge, Chris Duymich

Letter 3

COMMENTER: David Frisbey, Planning and Air Monitoring Manager, Monterey Bay Air Resources District

DATE: February 5, 2018

Response 3.1

The commenter states that the Draft EIR adequately addresses the issues that they identified in response to the Notice of Preparation of the Draft EIR. This comment is noted.

Response 3.2

The commenter states that with regard to Draft EIR mitigation measure AQ-3, a specific program could be developed to provide PM₁₀ emissions offsets specific to transportation and land use projects. The commenter requests that AMBAG work with the Monterey Bay Air Resources District (MBARD) to initiate this type of program.

As shown in Table 12 on page 152 of the Draft EIR, land use emissions would account for the majority of PM₁₀ emissions (approximately 98 percent) under implementation of the 2040 MTP/SCS. Local governments are the main agencies responsible for mitigation of the impacts of land use plans and projects that implement the SCS, and AMBAG has no concurrent authority to mitigate the impacts of land use plans and projects, including PM₁₀ emissions impacts, as described on page 81 of the Draft EIR. Therefore, the suggested mitigation measure would not be effective for AMBAG to adopt or include in the Draft EIR because AMBAG has no concurrent authority to require local governments in the region to implement or adopt the mitigation measure. However, AMBAG supports efforts to reduce PM₁₀ emissions in the region and would consider assisting MBARD with development of a program described in the comment, as needed, should MBARD decide to develop such a program.

Response 3.3

The commenter states that Draft EIR mitigation measure AQ-2(b) recommends the use of Tier 4 certified engines to the maximum extent possible. The commenter requests that Draft EIR mitigation measure GHG-1 be made consistent with mitigation measure AQ-2(b). In response to this comment, the following pages of the Draft EIR have been revised as follows:

Pages 280 and 281:

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 NOX 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:

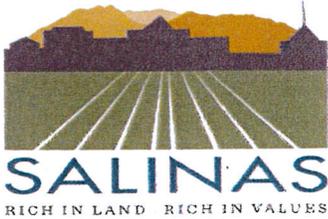
- Use of diesel construction equipment meeting CARB's Tier 24 certified engines wherever feasible for or cleaner off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation. Where the use Tier 4 engines is not feasible, Tier 3 certified engines shall be used; where Tier 3 engines 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; and Use of materials sources from local suppliers; and
- Recycling of at least 50 percent of construction waste materials.

Response 3.4

The commenter provides a list of recommendations for the 2040 MTP/SCS. This comment pertains to the 2040 MTP/SCS and not the Draft EIR. This comment is noted and does not require further response or revisions to the Draft EIR.

Responses to comments pertaining to the 2040 MTP/SCS are provided in Appendix K of the 2040 MTP/SCS. Briefly, as stated therein, recommendations provided in this comment are generally either included in the 2040 MTP/SCS or pertain to areas or subjects that AMBAG continues to study and evaluate and incorporate into updates to the MTP/SCS as appropriate.



City of Salinas

COMMUNITY DEVELOPMENT DEPARTMENT

65 W. Alisal Street, 2nd Floor • Salinas, California 93901
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February 5, 2018

Ms. Heather Adamson
Director of Planning
AMBAG
24580 Silver Cloud Court
Monterey, CA 93940

RE: Draft Environmental Impact Report - 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy

Dear Ms. Adamson:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Report (DEIR) for the 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy. The City has the following comments:

1. **Overall Comment on North of Boronda Future Growth Area (FGA):** Please confirm that the EIR analysis includes the “North of Boronda Future Growth Area” which is located within the existing City limits of Salinas. The DEIR analysis should also address the 2007 “Final Supplement – General Plan Final Program EIR” (FSEIR) that covers the Sphere of Influence and Annexation of the North of Boronda FGA. The annexation covered 2,388 gross acres with approximately 12,000 units and 4 million square feet of non-residential uses. 4.1

2. **Additional City Documents in compliance with the California Environmental Quality Act (CEQA):** Chapter 8 (References and Preparers) of the DEIR, page 488 lists only one reference for the City of Salinas: “2002 General Plan”. It should also include the General Plan 2002 FEIR, which was consulted to prepare this DEIR, and the General Plan 2007 FSEIR, which addressed Greenhouse Gases citywide. There are other additional City documents including the Housing Element 2015-2023 (and MND) in 2015, and the Economic Development Element (and EIR) of the General Plan in 2017, which should also be included. Additionally, these documents should be mentioned in the background discussion of the City-County General Plans on page 369. 4.2

3. **DEIR Mitigations and Project Specific Mitigations:** The Executive Summary of the DEIR states on page 5: “Transportation project implementing agencies can and should implement these measures. For land use projects implementing the 2040 MTP/SCS, cities and counties in the AMBAG region can and should implement these measures, where relevant. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.” We also noted that there are many topics, which describe mitigations and then state: “Project-specific environmental documents may adjust these 4.3

mitigation measures as necessary to respond to site-specific conditions.” Some of the sections where this language is noted include:

- 4.1 Aesthetics/Visual Resources (page 100)
- 4.2 Agriculture and Forestry Resources (page 122)
- 4.3 Air Quality and Health Impacts/Risks (page 156)
- 4.4 Biological Resources (B-3 on page 202)
- 4.5 Cultural and Historic Resources (pages 222, 224, 225)
- 4.7 Geology and Soils (page 260)
- 4.8 Greenhouse Gas Emissions/Climate Change (pages 280,285,287)
- 4.9 Hazards and Hazardous Materials (page 307, 310)
- 4.10 Hydrology and Water Quality (page 337)
- 4.12 Noise (page 378)
- 4.14 Transportation and Circulation (page 415)

4.3

However, there are other DEIR Mitigations that appear to be compulsory with no flexibility for project-specific adjustments. This appears to be the case (for example) with the mitigations proposed for Biological Resources (pages 191-200, especially riparian habitat) and BMP during construction (on page 200). We understood that none of the mitigations would be compulsory for jurisdictions and therefore would request clarification if this is the case or not. We would also request that the applicability of the mitigation measures to individual jurisdictions be addressed in each of the mitigation sections in a consistent manner.

4. Specific Comments:

Page	Topic	Comment/Question
38	1.2.1.1 Streamlining under SB 375	Please include the definitions of “major transit stop” and “high-quality transit corridor.”
48	FAST Act requirements of planning process	“requires that the planning process include public ports and private transportation providers” Should this include Monterey AirBus, Silicon Valley employer buses in Santa Cruz County?
62	2.4 Transportation Program – Rail Projects	MST and County Express connections to Caltrain are not mentioned (compare this to page 360 and page 396).
74	Programs supported by AMBAG and partner agencies	8. “Regional Ecological Framework Project” – Please clarify what this project is.
78	Regional Transportation System – Monterey County	No mention of the Amtrak station in Salinas or the MST service (Line 55) to Caltrain in Gilroy and Diridon Station in San Jose, which also services Amtrak and Megabus

4.4

4.5

4.6

4.7

4.8

226	4.5 Cultural and Historic Resources – CR-3 Paleontological Resources Impact Minimization	“The implementing agency of a 2040 MTP/SCS project involving ground disturbing activities (including grading, trenching, foundation work and other excavations) shall retain a qualified paleontologist, defined as a paleontologist who meets the Society of Vertebrate Paleontology (SVP) standards for Qualified Professional Paleontologist (SVP 2010).” No citation in the references. The document title is “Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources” authored by the SVP Impact Mitigation Guidelines Revision Committee. Date of 2010 is correct.	4.9
349	Land Use: Salinas General Plan	No mention of 2007 North of Boronda FGA Sphere of Influence Amendment and Annexation or 2015 - 2023 Housing Element. Should also include the City’s Economic Development Element, approved in December 2017.	4.10
386	Table 45: Forecasted AMBAG Population Growth 2015-2040	Suggest adding a column to the right of the “Percentage Change: Units Change (2015-2040)” to help communicate the magnitude of changes. For example, Del Rey Oaks is going to increase 80%, however, that is 1,332 units vs. Salinas which will increase 16%, but that is 25,113 units.	4.11
394	State Highway 183	Please revise as follows: “Bernal <u>Drive</u> /North Main Street.”	4.12
396	Public Transit Systems	“MST also provides service to the Watsonville Transit Center in Santa Cruz county and the Gilroy Caltrain station in Santa Clara county.” Line 55 also provides service to the San Jose Diridon rail station (Amtrak, Caltrain, Megabus).	4.13
397	Transit/Taxi services	Should include discussion of private services such as Uber.	4.14
399	Bicycle Facilities	Class IV bikeways are mentioned as a Caltrans classification. Are there any proposed in the region? (Are new classifications created after local bikeway master plans are adopted?)	4.15
400	Transportation Demand Management	No mention of employer shuttles (e.g. CHOMP).	4.16
400	Intermodal Transportation	Are all-public transportation buses equipped with bicycle racks? If not, this issue should be addressed.	4.17

411	Table 50- Percentage of Commuter Trips by Mode Within 30 Minutes – Peak period	Percentages are unclear. It looks as if “Drive Alone” and “Carpool” are the same category and “Active Transportation” may make up the remaining percentage. Please clarify.
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4.18

Again, thank you for the opportunity to review and comment on this document. Please feel free to contact me directly with any questions you may have or to further discuss the comments in this letter.

Sincerely,



Tara Hullinger
Advanced Planning Manager

Cc: Megan Hunter

Letter 4

COMMENTER: Tara Hullinger, Advanced Planning Manager, City of Salinas

DATE: February 5, 2018

Response 4.1

The commenter requests confirmation that the analysis in the Draft EIR includes the “North of Boronda Future Growth Area” in the City of Salinas. The commenter also states that the Draft EIR analysis should address the 2007 Final Supplemental-General Plan Final Program EIR that was prepared for annexation of the future growth area.

As stated on pages 4 to 6 of the 2040 MTP/SCS, the SCS assumed that the AMBAG Regional Growth Forecast (three county total) is a constraint (fixed upper limit) to the amount of total development in the region and the majority of growth is restricted to the Spheres of Influence of any given city. All growth in the SCS is consistent with General Plans and was based on direction from jurisdiction planning staff. Therefore, the SCS and Draft EIR address impacts associated with the 2007 sphere of influence and annexation of the North of Boronda Future Growth Area.

Response 4.2

The commenter states that Section 8, *References and Preparers*, of the Draft EIR should include the City of Salinas 2002 General Plan EIR, 2007 Final Supplemental-General Plan Final Program EIR, Housing Element 2015-2023 and associated 2015 MND, and the Economic Development Element and EIR that was added to the City of Salinas General Plan in 2017. The commenter also states that these documents should be mentioned in the discussion of the City and County General Plans on page 369 of the Draft EIR.

In response to this comment, Section 8, *References and Preparers*, of the Draft EIR has been revised to incorporate citations for aforementioned documents. Specifically, page 488 in Section 8 of the Draft EIR has been revised as follows:

Salinas, City of. 2002a. *City of Salinas General Plan*. Retrieved on August 16, 2017, from https://www.cityofsalinas.org/sites/default/files/departments_files/community_development_files/general_plan_files/generalplan.pdf.

Salinas, City of. 2002b. *Final Environmental Impact Report: Salinas General Plan. August 2002.*

Salinas, City of. 2007. *Final Supplement for the Salinas General Plan Final Program EIR. SCH No. 2007031055. November 19, 2007.*

Salinas, City of. 2015a. *2015-2023 Housing Element Initial Study-Negative Declaration. SCH No. 2015101111. December 2015.*

Salinas, City of. 2015b. *City of Salinas 2015-2023 Housing Element. December 15, 2015.*

Salinas, City of. 2017. *City of Salinas General Plan Economic Development Element: Draft Volume I: Element. September 2017.*

Page 369 of the Draft EIR provides a discussion of the typical groundborne vibrations caused by construction equipment, and does not describe City or County General Plans. However, a discussion of the City and County General Plans in the region is provided on pages 347 through 351 of the Draft

EIR. The City of Salinas General Plan, specifically, is described on page 349. Therefore, in response to this comment, page 349 of the Draft EIR has been revised as follows:

City of Salinas General Plan

The City of Salinas General Plan (City of Salinas, 2002a) was adopted in 2002. Since the last comprehensive update in 1988, the city grew substantially and is now the largest city in Monterey County. The major focus of this General Plan is how to protect valuable agricultural resources while promoting a diversified economy. This General Plan includes the following elements: Land Use, Community Design, Housing, Conservation/Open Space, Circulation, Safety and Noise (City of Salinas, 2002a). To plan for and manage future growth, the General Plan identified areas primarily to the north and east of Salinas, currently outside of the city's boundaries, as the "Future Growth Area." The City of Salinas subsequently amended its Sphere of Influence boundary and annexed the Future Growth Area. The *Final Supplement for the Salinas General Plan Final Program EIR* (City of Salinas, 2007), was prepared to evaluate the proposed Sphere of Influence amendment and annexation. The document also addresses city-wide GHG emissions and global climate change.

Pursuant to State requirements, the General Plan Housing Element is periodically updated. The current Housing Element, *City of Salinas 2015-2023 Housing Element* (City of Salinas, 2015b), was adopted on December 15, 2015. The *2015-2023 Housing Element Initial Study-Negative Declaration* (City of Salinas, 2015a), was prepared to evaluate the update to the Housing Element. The city also approved an Economic Development Element in 2017 (City of Salinas, 2017).

Response 4.3

The commenter states that the Draft EIR presents some mitigation measures, such as biological resources mitigation measures beginning on Draft EIR page 191, as compulsory with no flexibility for project-specific adjustments by the implementing agency or local jurisdictions. The commenter states that it was their understanding all mitigation measures in the Draft EIR would be non-compulsory for local jurisdictions implementing projects, and requests clarification if this understanding is accurate. The commenter also requests that the applicability of mitigation measures to local jurisdictions be presented consistently throughout the Draft EIR.

The mitigation measures are presented for applicable impacts to the resources and issue areas throughout Section 4, *Environmental Impact Analysis*, of the Draft EIR. For each impact with mitigation measures provided, the mitigation measures are prefaced with a discussion of the applicability of the mitigation measure with regard to cities and counties in the AMBAG region. In each instance, including biological mitigation measures starting on page 191 of the Draft EIR, the mitigation measure preface states that cities and counties in the AMBAG region "can and should" implement the mitigation measures, where relevant. In each instance, including biological mitigation measures starting on page 191 of the Draft EIR, the mitigation measure introduction states that project-specific environmental documents may adjust the mitigation measures as necessary to respond to site-specific conditions. Therefore, because the Draft EIR consistently presents mitigation measures throughout as "non-compulsory" recommendations for cities and counties in the AMBAG region that "can and should" be implemented, and states that mitigation measures may be adjusted, revisions to the Draft EIR are not necessary.

Response 4.4

The commenter requests that definitions for “major transit stop” and “high quality transit stop” be added to the discussion of streamlining under SB 375 on page 38 of the Draft EIR. In response to this comment, page 38 of the DEIR has been revised as follows to include definitions for “high quality transit corridor” and “major transit stop”:

1.3.1.1 Streamlining Under SB 375

SB 375 provides streamlining benefits for Transit Priority Projects (TPP) and certain mixed use projects. (See PRC Sections 21155 et seq.) For details, see the Governor’s Office of Planning and Research’s flow charts on SB 375 streamlining (Governor’s Office of Planning and Research 2011). A TPP is a project that meets all of the criteria summarized below. For the purposes of this EIR, geographic areas that meet the TPP requirements are referred to as Transit Priority Areas (TPAs).

- Consistent with the general land use designation, density, building intensity and applicable policies specified for the project area in the SCS;
- Located within half a mile of a major transit stop or high-quality transit corridor;
- Comprised of at least 50 percent residential use based on total building square footage, or as little as 26 percent residential use if the project has a floor area ratio of not less than 0.75; and
- Built out with a minimum of 20 dwelling units per acre (PRC § 21155).

A major transit stop is defined in Section 21064.3 of California Public Resources Code as a site with an existing rail station or the intersection of two or more major bus routes with a 15 minute headway during peak morning and afternoon commute periods. SB 375 defines a high quality transit corridor as a corridor that contains transit service with 15 minute frequencies during peak period.

Response 4.5

The commenter asks if the summary of the Fixing America’s Surface Transportation (FAST) Act on page 48 of the Draft EIR should also include private transportation providers, such as Monterey AirBus and Silicon Valley employer buses in Santa Cruz County.

The FAST Act does apply to certain private providers of transportation, including intercity bus operators and employer-based commuting programs. Therefore, the transportation planning requirements of FAST Act do include Monterey AirBus and Silicon Valley employer buses in Santa Cruz County. However, as the summary on page 48 of the Draft EIR is a general overview of the regulation and not intended to list every private transportation provider in the region, revisions to the Draft EIR are not necessary.

Response 4.6

The commenter states that Section 2.4, *2040 MTP/SCS Transportation Projects*, of the Draft EIR does not describe the Monterey-Salinas Transit (MST) and San Benito County Express connections to Caltrain in the discussion of rail projects.

Section 2.4, *2040 MTP/SCS Transportation Projects*, provides a generalized summary of the types of transportation projects comprising the MTP, and is not intended to provide an exhaustive list of

each project included in the 2040 MTP/SCS. A full list of projects by type and jurisdiction is provided in Appendix B of the Draft EIR.

Response 4.7

The commenter requests clarification regarding the Regional Ecological Framework Project referenced on page 74 of the Draft EIR.

The Regional Ecological Framework Project is a project that produces a series of maps identifying sensitive resource areas near planned regional transportation projects in the Monterey Bay Area Region (AMBAG, n.d.).³ The maps allow transportation agencies in the region to identify sensitive resources and develop mitigation early in the project planning process. Additional information on the Regional Ecological Framework Project can be found on page 4-32 of the 2040 MTP/SCS.

Response 4.8

The commenter states that Section 3.3, *Regional Transportation System*, of the Draft EIR does not describe the Amtrak station in Salinas or the MST service to Caltrain in Gilroy or the Diridon Station in San Jose.

The Amtrak station in Salinas is discussed in the fifth paragraph of Section 3.3, *Regional Transportation System*, on page 78 of the Draft EIR. Specifically, this paragraph includes the following sentence: “Amtrak provides rail services twice daily via a station stop in Salinas.”

Page 78 of the Draft EIR has been revised as follows to describe MST service to stations in Gilroy and San Jose:

Both passenger and freight rail service are available in Monterey County. Amtrak provides rail services twice daily via a station stop in Salinas. Four freight stations are located at Castroville, Gonzales, Salinas and Watsonville Junction (Pajaro Community Area). Public transit services are provided by Monterey-Salinas Transit (MST) and Greyhound Lines. MST is a publicly owned and operated system providing service to the greater Monterey and Salinas areas with routes serving Carmel Valley and unincorporated areas in northern Monterey County. Additionally, MST provides service to some locations in Santa Clara County, including the Caltrain Station in the City of Gilroy and the Diridon Train Station in the City of San Jose, as well as the Watsonville Transit Center in Santa Cruz County. Greyhound provides intercity passenger service between Monterey Peninsula cities, Salinas and Salinas Valley cities, as well as destinations across California and nationally.

Response 4.9

The commenter states that page 226 of the Draft EIR contains in-text citation of “(SVP, 2010)” which is not included in Section 8.1, *References*, of the Draft EIR. The commenter also states that 2010 is not the correct date of publication.

The in-text citation refers to the Society of Vertebrate Paleontology’s (SVP) Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. This document was published in 2010. Therefore, revisions to the Draft pertaining to the date of citation are not necessary. However, in response to this comment, page 491 has been revised as follows to add the reference for the SVP document:

³ Association of Monterey Bay Area Governments (AMBAG). n.d. *Monterey Bay Area Sensitive Resource Mapping Project Final Report*. Available at: <http://ambag.org/programs/Planning/MontereyBaySensitiveResourceMappingFinal.pdf>

Skowronek, Russell K. 1998. Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California. *Ethnohistory* 45: 675-708.

Society of Vertebrate Paleontology (SVP). 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Available at http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx

Soledad, City of. 2005. City of Soledad General Plan. Retrieved on August 16, 2017, from <http://www.cityofsoledad.com/DocumentCenter/Home/View/223>.

Response 4.10

The commenter states that the 2007 Final Supplemental-General Plan Final Program EIR, Housing Element 2015-2023 and associated 2015 MND, and the Economic Development Element should be mentioned in the discussion of the City and County General Plans on page 349 of the Draft EIR. As noted in Response 4.2, reference to these documents has been added to Section 8, *References and Preparers*.

Response 4.11

The commenter requests that Table 45 of the Draft EIR be revised to include a column showing the population projection as the difference between the 2040 population and the 2015 population.

Table 45, on page 386 of the Draft EIR, shows the forecasted AMBAG population growth between 2015 and 2040 for cities and unincorporated areas of the counties in the AMBAG region. The table includes a column showing 2015 population, a column showing 2020 population, and a column showing 2040 population, as well as a column showing the percent change in population between 2015 and 2040 columns. In response to this comment, Table 45, on page 386 of the Draft EIR, has been revised as follows:

Table 45 Forecasted AMBAG Population Growth 2015-2040

Jurisdiction	2015	2020	2040	Population Change (2015-2040)	Percent Change (2015-2040)
Monterey County	432,637	448,211	501,751	69,114	16%
Carmel-by-the-Sea	3,824	3,833	3,876	52	1%
Del Rey Oaks	1,655	1,949	2,987	1,332	80%
Gonzales	8,411	8,827	18,756	10,345	123%
Greenfield	16,947	18,192	22,327	5,380	32%
King City	14,008	14,957	16,063	2,055	15%
Marina	20,496	23,470	30,510	10,014	49%
Monterey	28,576	28,726	30,976	2,400	8%
Pacific Grove	15,251	15,349	16,138	887	6%
Salinas	159,486	166,303	184,599	25,113	16%
Sand City	376	544	1,494	1,118	297%
Seaside	34,185	34,301	37,802	3,617	11%
Soledad	24,809	26,399	29,805	4,996	20%
Unincorporated County Territory	104,613	105,361	106,418	1,805	2%
San Benito County	56,445	62,242	74,668	18,223	32%
Hollister	36,291	39,862	46,222	9,931	27%
San Juan Bautista	1,846	2,020	2,251	405	22%
Unincorporated County Territory	18,308	20,360	26,195	7,887	43%
Santa Cruz County	273,594	281,147	306,881	33,287	12%
Capitola	10,087	10,194	10,809	722	7%
Santa Cruz	63,830	68,381	82,266	18,436	29%
Scotts Valley	12,073	12,145	12,418	345	3%
Watsonville	52,562	53,536	59,743	7,181	14%
Unincorporated County Territory	135,042	136,891	141,645	6,603	5%
AMBAG Total	762,676	791,600	883,300	120,624	16%

Source: AMBAG's Draft 2018 Regional Growth Forecast.

Response 4.12

The commenter requests that a reference to Bernal Drive on page 394 of the Draft EIR be revised to include the word "Drive." In response to this comment, page 394 of the Draft EIR has been revised as follows:

Highway 183 is a rural two-lane highway connecting Castroville and Salinas. In Castroville, Highway 183 is also known as Merritt Street and begins at an at-grade interchange with Highway 1. The highway is congested between Highway 1 to Davis Road in the City of Salinas, particularly during commute hours on weekdays. It also experiences high rates of agricultural truck traffic movement. In the City of Salinas, the highway becomes two four-lane divided

arterials on Market and North Main Streets. Highway 183 terminates at the U.S. Highway 101 on-ramp south of Bernal Drive/North Main Street.

Response 4.13

The commenter states that description of public transit service on page 396 of the Draft EIR does not mention the MST service to the Diridon rail station in San Jose. In response to this comment, page 396 of the Draft EIR has been revised as follows:

Monterey-Salinas Transit (MST) provides fixed route transit service in Monterey County. The fixed route service includes 56 routes and consists of a fleet of 123 vehicles, mostly buses (MST, 2017a). MST bus stations are located in the cities of Carmel-by-the-Sea, Del Rey Oaks, Greenfield, Gonzales, King City, Marina, Monterey, Pacific Grove, Salinas, Seaside and Soledad, as well as the community of Chualar. MST also provides public transit service in areas of unincorporated Monterey County, including the communities of Castroville, Pajaro, Prunedale, Moss Landing, Toro Park, Carmel Valley, Carmel Highlands and Big Sur. To assist inter-regional connections, MST also provides service to the Watsonville Transit Center in Santa Cruz County and the Gilroy Caltrain station and Diridon Train Station in the City of San Jose in Santa Clara County. MST had 4.41 million passenger trips on its fixed route system in Fiscal Year 2016 (MST, 2016).

Additionally, this comment is similar to comment 4.8. Please see Response 4.8, which pertains to service to the Diridon Train Station in the City of San Jose.

Response 4.14

The commenter states that Section 4.14, Transportation and Circulation, of the Draft EIR should include a discussion of private transportation services, such as Uber. In response to this comment, page 400 of the Draft EIR has been revised as follows:

Ridesharing

Rideshare programs help reduce congestion and improve traffic flow. AMBAG, with grant assistance from the Monterey Bay Air Resources District (MBARD), has successfully implemented a subsidized vanpool program, which reduced vehicles trips associated with agricultural activities and production in the region. Rideshare and carpool programs exist throughout Monterey Bay to facilitate ridesharing. Private rideshare transportation companies, such as Uber and Lyft, are also available transportation options in the AMBAG region.

Response 4.15

The commenter states that the Draft EIR describes the four bikeway classifications used by Caltrans and asks if Class IV bikeways are proposed in the AMBAG region. The commenter asks if new bikeway classifications are created after local bikeway master plans are adopted.

Pages 398 and 399 of the Draft EIR provide a brief summary of the four types of bikeway classifications used by Caltrans, but do not assert that all four types are present or proposed in the AMBAG region. The projects included in the proposed 2040 MTP/SCS include Class I, II and III bikeways, but not Class IV bikeways. Adoption of a local bikeway master plan does not create new Caltrans bikeway classifications.

Response 4.16

The commenter states that the Transportation Demand Management/Transportation System Management section of the Draft EIR does not mention employer shuttles, such as Community Hospital of the Monterey Peninsula (CHOMP). In response to this comment, page 400 of the Draft EIR has been revised as follows:

Preferential Transit/Carpool Treatment/Electric Vehicle Charging

Methods employed by local jurisdictions to encourage people to reduce their use of single-occupant vehicles include: preferential parking for carpools and vanpools; subsidized transit passes; use of agency vans for vanpooling; and provision of an on-site transportation coordinator. Regional transit agencies strive to ensure that the major developments within their service areas are transit accessible and that transit stops are located to promote transit use. Some employers in the region, such as the Community Hospital of the Monterey Peninsula, have implemented employee shuttle programs.

Response 4.17

The commenter asks if all public buses in the region are equipped with bicycle racks, and states that if not, the Draft EIR should address this issue.

The Draft EIR evaluates the potential impacts of the proposed 2040 MTP/SCS, including the projects and land use envisioned in the plan. The 2040 MTP/SCS does not include projects involving the installation of bicycle racks on buses. Therefore, an analysis of the possible issues regarding whether public buses in the region are equipped with bicycle racks need not have been discussed in the Draft EIR, and revisions to the Draft EIR are not necessary. Please note that public transit providers do accommodate bicycles on buses. The buses in the Monterey-Salinas Transit (MST) vehicle fleet includes bicycle racks capable of carrying two bicycles, and capacity for two additional bicycles in the interior of the bus, space provided (MST, 2017).⁴ The San Benito County Express provides bicycle racks on all of its buses (San Benito County Express, 2015).⁵ The Santa Cruz Metropolitan Transit District (METRO) provides bicycle racks with capacity for three bicycles on all of its buses (Santa Cruz METRO, 2018).⁶ Additionally, it should be noted that the 2040 MTP/SCS recognizes the importance of bicycle racks in transit use. Page 2-10 of the 2040 MTP/SCS states that “Good intermodal connections, such as convenient park-and-ride locations, on-board bike racks, secure bicycle parking, safe and pleasant access routes and shortcuts can enhance the appeal of both non-motorized and transit modes.”

Response 4.18

The commenter requests clarification of the trip percentages presented in Table 50 of the Draft EIR. The commenter states that it appears “Drive Alone” and “Carpool” are grouped and “Active Transportation” makes up the remaining percentage.

⁴ Monterey-Salinas Transit (MST). 2017. *Transit Tips*. Retrieved on March 21, 2018, from <https://mst.org/riders-guide/how-to-ride/transit-tips/>

⁵ San Benito County Express. 2015. *County Express Tips for Riding*. Retrieved on March 21, 2018, from <http://www.sanbenitocountyexpress.org/ridingtips.html>

⁶ Santa Cruz Metropolitan Transit District (METRO). 2018. *Bikes & Buses*. Retrieved on March 21, 2018, from <https://www.scmttd.com/en/riders-guide/bikes-and-buses>

Table 50, on page 411 of the Draft EIR, does not present the percentage of the combined total of commuters that drive alone, commuters that carpool and commuters that take transit with commute times of 30 minutes or less during peak hour. Therefore, when the percentage of each of these is added, the total percentage does not and should not add to 100 percent. Instead, to evaluate 2040 MTP/SCS impacts, Table 50 presents the percentage of commuter trips that are less than 30 minutes during peak hour by each type of commuter mode under three scenarios. For example, Table 50 indicates that 84.3 percent of commuters that drive alone in 2015 had commute times of 30 minutes or less. This equates to 15.7 percent (100 minus 84.3) that had commutes lengthier than 30 minutes.

LAFCO of Monterey County

LOCAL AGENCY FORMATION COMMISSION OF MONTEREY COUNTY

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January 22, 2018

Heather Adamson, Director of Planning
Association of Monterey Bay Area Governments (AMBAG)
445 Reservation Road, Suite G
Marina, CA 93933

RE: Draft 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties and Associated Draft Environmental Impact Report (EIR)

Dear Heather,

Thank you for this opportunity to comment on the Draft Environmental Impact Report for the 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties. Since 2013, LAFCO has provided comments on the different iterations of the 2035 Metropolitan Transportation Plan/Sustainable Communities Strategy. Two main concerns were highlighted at that time: (1) Consideration of cities' adopted Spheres of Influence, and (2) Evaluation of the plan's consistency with relevant sections of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH Act) and LAFCO of Monterey County's adopted Policies and Procedures.

5.1

It appears that the Draft EIR for the 2040 Plan addresses LAFCO's original comments, which are attached for reference, and considers the cities' sphere boundaries and CKH Act in its analysis. Therefore, LAFCO staff has no additional comments at this time.

We appreciate the opportunity to provide comments. Please continue to keep us informed throughout your process. I would be happy to meet with you and your staff for more detailed discussions.

Sincerely,

Kate McKenna, AICP
Executive Officer

Attachments: LAFCO 2014 and 2013 Comment Letters

LAFCO of Monterey County

LOCAL AGENCY FORMATION COMMISSION OF MONTEREY COUNTY

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March 28, 2014

Heather Adamson, AICP, Principal Planner
Association of Monterey Bay Area Governments
445 Reservation Road, Suite G
Marina, CA 93933

RE: Draft 2035 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and Associated Draft Environmental Impact Report (EIR)

Dear Ms. Adamson,

Thank you for this opportunity to comment on the Draft 2035 Metropolitan Transportation Plan/Sustainable Communities Strategy and associated Draft Environmental Impact Report.

This letter is a follow-up to LAFCO's September 4, 2013 letter commenting on AMBAG's Notice of Preparation of the Draft EIR for the MTP/SCS. That letter anticipated that additional, specific comments would be submitted during the circulation period for the Draft EIR. Two main comments were addressed in the September 2013 letter: (1) Pursuant to SB 375, the MTP/SCS must consider cities' adopted Spheres of Influence, and therefore the final SCS scenario should only include development that takes place wholly within cities' adopted Spheres of Influence, and (2) the plan's EIR should evaluate the plan's consistency with relevant sections of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, and LAFCO of Monterey County's adopted *Policies and Procedures*. A copy of our September 2013 comment letter, including relevant policies and procedures, is attached for reference.

The Commission has reviewed the Draft MTP/SCS and Draft EIR distributed in February 2014. It appears that the draft documents do not address our original comments provided by LAFCO in September 2013. Therefore, we respectfully request AMBAG to revise the draft documents to adequately address our comments as restated below.

Commission Authority

LAFCO of Monterey County is a Responsible Agency under the California Environmental Quality Act (CEQA), with regulatory authority for future local

government boundary and service applications in the study area. It is in this role that the Commission provided comments on the Notice of Preparation last September and is now commenting on the February 2014 drafts of the MTP/SCS and associated EIR. Please refer to the "Commission Authority" section of LAFCO's September 2013 comment letter for a full description of LAFCO's role and legislative authority as they relate to AMBAG's MTP/SCS planning process.

Comment No. 1: The Sustainable Communities Strategy Must Consider Adopted Spheres of Influence

Senate Bill 375, the legislation directing preparation of a Sustainable Communities Strategy, requires that *"In preparing a sustainable communities strategy, the metropolitan planning organization shall consider spheres of influence that have been adopted by the local agency formation commission within its region"* [Government Code Section 65080(b)(2)(G)].

The February 2014 Draft SCS (page 4-3) states that *"In summary, under SB 375, an SCS must: Identify existing and future land use patterns, identify transportation needs and the planned transportation network, consider statutory housing goals and objectives, identify areas to accommodate long-term housing needs, identify areas to accommodate 8-year housing needs, consider resource areas and farmland, and comply with federal law for developing a MTP."*

LAFCO agrees with these listed requirements. However, this list is incomplete as it does not clearly identify cities' adopted spheres of influence as a factor that has been taken into consideration during development of the SCS scenario. The February 2014 Draft SCS appears to make no mention of spheres of influence anywhere in the document. In addition, the document's maps and figures (e.g. Figure 4-10: 2035 Land Use Pattern Monterey County) do not show spheres of influence, and give no indication as to whether cities' adopted spheres of influence were taken into consideration when developing the forecasted amounts and types of development.

LAFCO therefore reiterates its request, as expressed in our September 2013 comment letter, that the 2014 Final SCS *"only include scenarios in which future development takes place wholly within the cities' adopted Spheres of Influence."* The document should clearly demonstrate and explain how cities' adopted spheres of influence have been factored into the scenario planning process.

Comment No. 2: The Draft and Final EIR Should Evaluate Consistency with the Cortese-Knox-Hertzberg Act and Adopted LAFCO Policies and Procedures.

LAFCO's September 2013 comment letter stated: *"As discussed in the Project Description Comments above, the EIR should analyze a preferred SCS scenario that relies on adopted Spheres of Influence. In addition, the EIR should evaluate the proposed project, as well as project alternatives in the EIR, for consistency with all relevant sections of the Cortese-Knox-Hertzberg Act and LAFCO Policies and Procedures. Listed below are some of the local LAFCO policies that should be addressed in this consistency analysis."* The letter listed eight key LAFCO policy subject areas.

The February 2014 Draft SCS (Section 2.6, Relationship with Other Plans and Programs, page 2-24) states *"The 2035 MTP/SCS and the RTPs prepared by the Monterey, San Benito, and Santa Cruz RTPAs has been evaluated for consistency with the goals, policies and objectives currently being implemented by municipal and county planning agencies within the region as well as the*

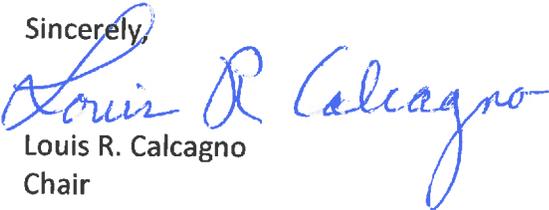
LAFCO Comments on the AMBAG 2014 MTP/SCS and DEIR

Local Area Formation Commissions (LAFCO) for Monterey, San Benito, and Santa Cruz County. This discussion is provided in Section 5.0, Land Use Consistency Analysis.”

However, Section 5.0 in the Draft EIR provided to LAFCO appears to include no references to LAFCO of Monterey County or to LAFCO’s adopted Policies and Procedures. Therefore, LAFCO requests that this section be revised to include a consistency analysis of the Cortese-Knox-Hertzberg Act and LAFCO policies cited in our September 2013 letter.

We appreciate this opportunity to provide comments on the Draft 2014 MTP/SCS and Draft EIR. Please continue to keep us informed throughout AMBAG’s processes. LAFCO’s Executive Officer, Kate McKenna, would be pleased to meet with AMBAG staff and consultants for more detailed discussions.

Sincerely,

A handwritten signature in blue ink that reads "Louis R. Calcagno". The signature is written in a cursive style with a large, looping initial "L".

Louis R. Calcagno
Chair

Attachment:

LAFCO Comment Letter (Re- Notice of Preparation for the 2014 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) Environmental Impact Report) dated September 4, 2013

LAFCO *of Monterey County*

LOCAL AGENCY FORMATION COMMISSION OF MONTEREY COUNTY

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September 4, 2013

Heather Adamson, AICP, Principal Planner
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445 Reservation Road, Suite G
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RE: Notice of Preparation for the 2014 Metropolitan Transportation Plan/
Sustainable Communities Strategy (MTP/SCS) Environmental Impact
Report (EIR)

Dear Heather,

This letter is a follow-up to my July 24, 2013 letter to you commenting on the subject Notice of Preparation, and contains the official comments of the Local Agency Formation Commission of Monterey County (LAFCO). LAFCO is a CEQA Responsible Agency, with regulatory authority for future local government boundary and service applications in the study area. It is in this role that the Commission is commenting on the Notice of Preparation.

On behalf of the Commission, I would like to first of all thank you for your informative presentation at the August 26th LAFCO meeting. Also at that meeting, the Commission authorized my initial comment letter with certain changes as reflected in this letter. While LAFCO's comments pertain to the five scenarios outlined in the Notice of Preparation, we understand that AMBAG has subsequently narrowed its intended analysis to two "hybrid" scenarios. AMBAG's refinement process does not affect the substance of our comments.

COMMISSION AUTHORITY

Pursuant to the California Environmental Quality Act, LAFCO serves as a Responsible Agency with regard to the subject Notice of Preparation. A Responsible Agency is defined as any public agency, other than the lead agency, which has the responsibility for approving the project where more than one public agency is involved. As a Responsible Agency, LAFCO is available to the lead agency (AMBAG) for early consultation on a project to provide guidance on applicable issues and requirements.

LAFCO Comments on the AMBAG 2014 MTP/SCS

LAFCO's statutory authority to regulate local government boundaries and services is derived from the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code section 56000, et seq.) as amended. Among the purposes of the Local Agency Formation Commission are discouraging urban sprawl, preserving open space and prime agricultural lands, efficiently providing government services, and encouraging the orderly formation, growth and development of local agencies based upon local conditions and circumstances (Government Code section 56301).

The Cortese-Knox-Hertzberg Act further provides that "In order to carry out its purposes and responsibilities for planning and shaping the logical and orderly development and coordination of local governmental agencies to advantageously provide for the present and future needs of the county and its communities, *the [LAFCO] commission shall develop and determine the sphere of influence of each local governmental agency within the county and enact policies designed to promote the logical and orderly development of areas within the sphere* (Government Code section 56425a; emphasis added).

The 2014 Metropolitan Transportation Plan, and its Sustainable Communities Strategy component, may provide a basis for future regional decisions including transportation planning and funding; local land use decisions, patterns and forms enabled by regional transportation plans; and water, sewer and other public service infrastructure that are necessary to support those land uses. Many of these local decisions will involve action by LAFCO.

As such, there are direct links between the current AMBAG planning process and the legislative authority of LAFCO to study and regulate local government boundaries and services. Links between sustainable community strategies and spheres of influence are further emphasized in Senate Bill (SB) 375. The law requires that "*In preparing a sustainable communities strategy, the metropolitan planning organization shall consider spheres of influence that have been adopted by the local agency formation commission within its region*" [Government Code Section 65080(b)(2)(G)]. SB 375 aims to reduce per-capita vehicle miles traveled and related greenhouse gases through preparation of coordinated land use and transportation plans.

COMMENTS ON PROJECT DESCRIPTION

It is our understanding that there is no specific project description, maps or figures to comment on at this time. The Notice of Preparation describes several different planning scenarios relating to land use, transportation and greenhouse gas emission targets. It does not identify any one project as the preferred scenario for analysis in the Environmental Impact Report (EIR). We understand that AMBAG has recently narrowed its analysis to two hybrid scenarios, and will analyze one or both of the hybrid scenarios in the Draft Environmental Impact Report.

LAFCO comments on the Project Description are as follows:

1. Please anticipate that LAFCO will submit additional, specific comments during the circulation period for the Draft EIR.

2. Pursuant to the California Government Code, the SCS preferred planning scenario and all alternative scenarios to be analyzed in the EIR should be designed to reflect only the adopted Spheres of Influence for each city. This methodology would be consistent with the final methodology used in AMBAG's recent Regional Blueprint Planning Process, and supported by LAFCO of Monterey County. This recommendation is also consistent with input provided by LAFCO representatives participating in AMBAG's Planning Directors Group and Regional Advisory Committee for the 2014 MTP/SCS process. We continue to recommend that AMBAG's study of potential SCS scenarios, and final selection of a preferred scenario, only include scenarios in which future development takes place wholly within the cities' adopted Spheres of Influence. The statutory basis for this comment is the requirement of SB 375 that the metropolitan planning organization shall consider Spheres of Influence that have been adopted by the local agency formation commissions within its region [Government Code Section 65080(b)(2)(G)].

COMMENTS ON POTENTIAL ENVIRONMENTAL EFFECTS

As authorized by the Cortese-Knox-Hertzberg Act, LAFCO of Monterey County has adopted local "*Policies and Procedures Relating to Spheres of Influence and Changes of Organization and Reorganization.*" In considering applications for local government boundaries or services, LAFCO considers both the State law and the adopted local policies and procedures. The State law and local policies are available on the LAFCO website at <http://www.monterey.lafco.ca.gov/>. The local policies are attached to this letter for ease of reference.

The Cortese-Knox-Hertzberg Act and LAFCO's *Policies and Procedures* are germane to the Notice of Preparation. The proposed MTP/SCS project will result in outcomes or recommendations whose implementation would require LAFCO consideration or approvals (such as annexations or Sphere of Influence amendments) in the future. Cities, independent special districts, dependent special districts, the County of Monterey and regional agencies within Monterey County may rely on the EIR analysis for the MTP/SCS as a basis for their own plans and actions. LAFCO will be requested to consider applications for Spheres of Influence, boundaries and services, and to prepare municipal service reviews and other required studies for cities, special districts and the County of Monterey.

As discussed in the Project Description Comments above, the EIR should analyze a preferred SCS scenario that relies on adopted Spheres of Influence. In addition, the EIR should evaluate the proposed project, as well as project alternatives in the EIR, for consistency with all relevant sections of the Cortese-Knox-Hertzberg Act and LAFCO *Policies and Procedures*. Listed below are some of the local LAFCO policies that should be addressed in this consistency analysis:

1. "LAFCO intends that its Sphere of Influence determinations will serve as a master plan for the future organization of local governments within the County. The spheres shall be used to discourage urban sprawl; limit proliferation of local governmental agencies; encourage efficiency, economy and orderly changes in local government; promote compact, community centered urban development; and minimize adverse impacts on lands classified as prime agriculture." [LAFCO *Policies and Procedures*, section C.II.1]

LAFCO Comments on the AMBAG 2014 MTP/SCS

We note that all cities, independent special districts and dependent special districts in Monterey County have adopted Spheres of Influence. The spheres are often tied to the capability to provide public services. AMBAG's long-range planning processes and the current EIR should analyze not only the potential environmental effects of future urban development within the adopted Spheres of Influence of cities, but also the effect of that development on the ability of special districts that provide a wide range of municipal services. If the final 2014 MTP/SCS encourages future urban development outside of the cities' adopted Spheres of Influence, the resulting "ripple effect" of such development could adversely impact the ability of special districts to efficiently provide public services.

2. "LAFCO shall discourage proposals that would have adverse financial impacts on the provision of governmental services or would create a relatively low revenue base in relationship to the cost of affected services. Applications shall describe related service and financial impacts (including revenues and expenditures) on the County, cities, and/or special districts and provide feasible measures which would mitigate such adverse impacts." [LAFCO *Policies and Procedures*, section D.VII.1]
3. "LAFCO discourages proposals which will facilitate development that is not in the public interest due to topography, isolation from existing developments, premature intrusion of urban-type developments into a predominantly agricultural area, or other pertinent economic or social reason." [LAFCO *Policies and Procedures*, section D.VII.6]
4. "LAFCO, in furtherance of its objectives of preserving prime agricultural land, containing urban sprawl, and in providing a reasonable assurance of a city/district's ability to provide services shall consider the appropriateness of phasing annexation proposals which include territory that is not within a city/district's urban service area and has an expected build-out over a period longer than five to seven years." [LAFCO *Policies and Procedures*, section D.VIII.1]
5. "It is the policy of LAFCO to encourage and to seek to provide for planned, well-ordered, efficient urban development pattern while at the same time remaining cognizant of the need to give appropriate consideration to the preservation of open space and agricultural land within such patterns." [LAFCO *Policies and Procedures*, section D.IX.1]
6. "For annexations and Sphere of Influence applications, Monterey County LAFCO shall consider as part of its decision whether the city in which the annexation or Sphere of Influence amendment is proposed has included certain goals, policies, and objectives into its General Plan that encourage mixed uses, mixed densities, and development patterns that will result in increased efficiency of land use, and that encourages and provides planned, well-ordered, efficient urban development patterns." [LAFCO *Policies and Procedures*, section D.XIII.1]
7. Regarding potential impacts to agricultural lands:
 - "A Proposal must discuss how it balances the State interest in the preservation of open space and prime agricultural land against the need for orderly development." [LAFCO *Policies and Procedures*, section E.II.1]

LAFCO Comments on the AMBAG 2014 MTP/SCS

- “A Proposal must discuss its effect on maintaining the physical and economic integrity of agricultural lands.” [LAFCO *Policies and Procedures*, section E.II.2]
 - “A Proposal must discuss whether it could reasonably be expected to induce, facilitate, or lead to the conversion of existing open-space land to uses other than open-space uses.” [LAFCO *Policies and Procedures*, section E.II.3]
8. Regarding jobs and housing:
- “Proposals must demonstrate through both quantitative and qualitative methods the relationship between the Proposal and the surplus or deficiency of local and county-wide housing supply and demand, and employment availability and creation.” [LAFCO *Policies and Procedures*, section F.II]
 - “Additionally, the Proposal must demonstrate how its pattern of land use and transportation complements local and regional objectives and goals for the improvement of air quality and reduction of greenhouse gas (GHG) emissions and local vehicle miles traveled (VMT), *including the importance of efficient movement of goods and commuter traffic.*” [LAFCO *Policies and Procedures*, section F.II; additional Commission comments are noted in *italics*].

We appreciate this opportunity to provide comments on the Notice of Preparation, and thank you again for the courtesy of your presentation. I would be pleased to meet with AMBAG staff and consultants for more detailed discussions.

Sincerely,



Kate McKenna, AICP
Executive Officer

Attachment: *LAFCO Policies and Procedures Relating to Spheres of Influence and Changes of Organization and Reorganization*, as Adopted by the Local Agency Formation Commission of Monterey County, February 25, 2013

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Letter 5

COMMENTER: Kate McKenna, AICP, Executive Officer, Local Agency Formation Commission of Monterey County

DATE: January 22, 2018

Response 5.1

The commenter states that the Draft EIR addresses comments previously submitted on the 2035 MTP/SCS EIR. The commenter provides copies of their prior comment letters. This comment is noted and does not require further response or revisions to the Draft EIR.



COUNTY OF SANTA CRUZ

PLANNING DEPARTMENT

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KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

February 13, 2018

Association of Monterey Bay Area Governments
 P.O. Box 2453
 Seaside, CA 93955
 Attn: Heather Adamson, Director of Planning

SUBJECT: Comments on the Draft EIR for the 2040 MTP/SCS and RTPs for Monterey, San Benito and Santa Cruz Counties

Dear Ms. Adamson,

Thank you for the opportunity to review and comment on the 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy Draft Environmental Impact Report (DEIR). Based on our review of the DEIR, the County of Santa Cruz Planning Department is providing the following comments and suggestions for your consideration.

The population of Santa Cruz County has doubled in the past 30 years and is projected in the proposed AMBAG growth forecast to continue growing through 2040, though at a modest rate. This population growth, in addition to growth in tourism and coastal travel, has exacerbated traffic congestion on Highway 1, which is now heavily congested during morning and evening commute times. Spill over traffic onto local streets contributes to congestion in much of the network. Operational improvements have been made to Highway 1 within the project corridor, but no capacity enhancements. Traffic data compiled for the Tier I project in 2009 estimated the average daily traffic volume on Highway 1 within the project limits to be as high as 104,000 vehicles (both directions combined) (SCCRTC, 2015).

The proposed plan does not improve congestion or reverse the existing trend of increasing congestion.

- Regarding daily vehicle hours of delay, Table 48 on page 410 shows an increase of 53 percent in vehicle delay for Santa Cruz County with project by 2040. We note that Santa Cruz County has greater vehicle hours of delay than Monterey County, with 60 percent less population as per the 2010 census. Page 411, Table 50, indicates that a 30 minute trip in 2015 would take 55 minutes in 2040.
- Regarding Vehicle Miles Travelled (VMT), Table 513, Page 415, shows that the daily VMT for Santa Cruz County would be worse in 2040 with the 2040 MTP/SCS than without it. The same would occur for San Benito County. (The reasoning that an increase in public transit fleets would be the cause does not apply to Santa Cruz County since only operations and maintenance transit improvements are proposed.)

There is additional data documenting worsening conditions throughout the document and, as stated on Page 412, *“Nonetheless, the daily hours of vehicle delay, total peak period CVMT and the percentage of commuter work trips exceeding 30 minutes in passenger vehicles would still increase in 2040*

6.1

compared to the existing 2015 conditions. No feasible additional mitigation measures have been identified that would further reduce these metrics.”

The analysis concludes that Transportation impacts T-1 and T-5, regarding transportation congestion and VMT, are significant and unavoidable.

Because many segments along Highway 1 in Santa Cruz County currently operate at LOS E or F during peak hours, trips added to those segments during peak hours would result in a significant impact that cannot currently be mitigated. The impacts that cannot be mitigated include the spillover impacts on local roadways and intersections. Currently, Caltrans has no impact fee in place to help mitigate traffic impacts on Highway 1 in Santa Cruz County. These conditions affect how individual development projects that contribute trips to these failing segments and intersections are analyzed pursuant to CEQA.

The County of Santa Cruz Planning Department therefore suggests that the statement of overriding considerations that must be adopted by AMBAG specify each of the impacted segments of the highway, as well as any other roadways and intersections that are impacted by the congestion. The statement of overriding considerations should include, in addition to Highway 1 segments from Freedom Boulevard to the Highway 17 interchange:

- Highway 1/17 interchange
- Highway 1/Soquel Drive/Soquel Avenue/Commercial Way interchange
- Highway 1/41st Avenue interchange
- Highway 1/Bay Avenue/Porter Street interchange
- Soquel Avenue from southbound ramps at Highway 1 to Gross Road
- Soquel Drive/Porter Street
- Porter Street between Soquel Wharf Road and Dawn lane;
- Soquel Wharf Road
- Park Avenue from Highway 1 to Soquel Drive ;
- Soquel Drive from Soquel Avenue to Freedom Boulevard
- Rio Del Mar Boulevard at Soquel Drive;
- Highway 9 / Graham Hill Rd.

Thank you for the opportunity to comment. If you have any questions, please contact Paia Levine paia.levine@santacruzcounty.us or Todd Sexauer of my staff at (831) 454-3511 or at todd.sexauer@santacruzcounty.us.

Sincerely,

Kathy Molloy Previsich
Planning Director

6.1

Letter 6

COMMENTER: Kathy Molloy Previsich, Planning Director, County of Santa Cruz

DATE: February 13, 2018

Response 6.1

This comment letter was submitted on February 13, 2018, after the close of the public review and comment period for the Draft EIR. Although a response is not required for comments submitted after the closing date (*State CEQA Guidelines* Section 15088(a)), AMBAG has elected to accept and respond to this comment.

The commenter observes that population and traffic congestion in Santa Cruz County continues to increase. The commenter cites numerous sections of the Draft EIR that point toward increased population growth and unavoidable traffic delays in Santa Cruz County in the future, and correctly notes that the findings for Impacts T-1 and T-5 in the Draft EIR are significant and unavoidable. The commenter suggests that the statement of overriding considerations that must be adopted by AMBAG specify each of the impacted segments of the Highway 1, as well as any other roadways and intersections that are impacted by the congestion.

Additionally, this comment addresses potential impacts to specific segments of Highway 1. As described on page 4 of the Draft EIR, the analysis presents a programmatic assessment of the potential impacts of the proposed 2040 MTP/SCS, focusing on the entire set of activities and programs contained in the proposed 2040 MTP/SCS. Individual transportation project impacts, such as impacts specific to particular segments of Highway 1, are not addressed in detail; rather the focus of the Draft EIR is on the entire program of activities, in the aggregate. This approach to program-level analysis is consistent with *State CEQA Guidelines* Section 15168's requirements for Program EIRs. When a Program EIR's activities are implemented in many locations, site-specific assessments are not required. *Center for Biological Diversity v. Department of Fish and Wildlife* (2015) 234 Cal.App. 4th 214, 237. Please also see Response 7.2 regarding the level of detail included in the Draft EIR.

Further, it would not be appropriate to include significant and unavoidable impacts in the statement of overriding considerations that were not included in the EIR and its CEQA findings of fact. A statement of overriding considerations is required before a lead agency approves a project which will result in those significant unavoidable environmental impacts "which are identified in the Final EIR." *State CEQA Guidelines* Section 15093. Thus the statement of overriding considerations for the 2040 MTP/SCS would properly override significant unavoidable Impacts T-1 and T-5 identified in the EIR, but not segment-specific impacts on Highway 1 since these are not identified in the EIR.



Comments on the AMBAG Draft EIR for Sustainable Communities Strategy/Metropolitan Transportation Plan

February 3, 2018

Heather Adamson, Director of Planning
AMBAG

Dear Ms. Adamson,

The comments below question whether the AMBAG region will meet its per capita GHG reduction targets set by the California Air Resources Board. Of particular note is the Draft's lack of analysis of the impact of added roadway capacity projects (Comment 1) and induced travel (Comment 2). We note that the Highway 1 auxiliary lanes project should not be included in the MTP/SCS without environmental review.

Comment 4 notes the Draft EIR's conclusion that the MTP/SCS will contribute an insignificant amount to future reductions in greenhouse gas emissions. This suggests that the MTP/SCS is inadequate to meet the intent and requirements of SB 375 and needs to be revised.

The Draft acknowledges that the MTP/SCS conflicts with the state's ability to meet GHG reduction targets set by AB 32 and SB 32. This is further reason to revise the MTP/SCS in order to comply with these important state mandates. (Comment 3)

Thank you in advance for responding to the comments.

Rick Longinotti, Co-chair, Campaign for Sensible Transportation

Comment 1: The Draft should analyze the impact of road expansion projects on greenhouse emissions. The impacts of the Highway 1 auxiliary lane project should either be evaluated by the AMBAG EIR or removed from the MTP/SCS pending an environmental review of the project.

Studies show that increases in VMT result from increases in roadway capacity. These increases may be considerable. However, the Draft does not evaluate roadway widening projects for GHG emissions. Appendix F-10 notes:

Added Roadway Capacity

The model is appropriately sensitive during traffic assignment for roadway widening projects in terms of route selection. The influence of roadway capacity on trip generation, distribution, mode choice, and GHG emission were not evaluated.

7.1

7.2



Academic studies have investigated the ratio of increased VMT to expanded roads. The ratio of VMT to additional lane-miles is known as elasticity. Duranton and Turner¹ estimated a long-term elasticity of approximately 1.0 for Interstate highways and major roadways within metropolitan areas. This means that adding a lane in each direction to a 4 lane highway (50% increase in lane-miles) will result in a 50% increase in VMT.

Since there are significant highway expansions included in the MTP², omitting the impact of these expansions on VMT and greenhouse gas emissions means the following conclusion from Impact GHG-2 is not reliable:

Impact GHG-2: IMPLEMENTATION OF THE 2040 MTP/SCS WOULD NOT RESULT IN A SIGNIFICANT INCREASE IN TOTAL GHG EMISSIONS FROM MOBILE AND LAND USE SOURCES COMPARED TO 2015 BASELINE CONDITIONS.

7.2

The Highway 1 auxiliary lanes project in the Santa Cruz Regional Transportation Plan has not been evaluated for its impact on vehicle miles traveled or greenhouse gas emissions. There is a Draft EIR for Highway 1 projects that evaluates a “TDM Alternative” that includes the auxiliary lane project. However, there is no way to extract from the Hwy 1 EIR the impacts of the 4 miles of auxiliary lanes independent of the TDM Alternative. The impacts of the auxiliary lane project should either be evaluated by the AMBAG EIR or removed from the MTP/SCS pending an environmental review of the project.

Comment 2: AMBAG’s Regional Travel Demand Model (RTDM) should include the effects of induced travel.

California’s SB 743 requires environmental review to account for induced travel effects in analysis of roadway capacity expansion projects. Although the regulations under SB 743 are under development and are not yet binding on this Draft EIR, the fact that the Draft EIR does not take into account induced travel means that VMT estimates of the Draft are likely to be underestimated. Again, the conclusion of Impact GHG-2 is not reliable.

7.3

The Draft reports, “the AMBAG RTDM does not specifically evaluate induced travel from the perspective of longer trips, changes in mode choice, route changes or newly generated induced trips...”³

This statement indicates that the RTDM does not include items 1,2,3,4,6 of the following list that Milam, et al⁴, developed for evaluating a model’s ability to account for induced travel:

7.4

1. Newly generated trips. Does the model contain a feedback process by which person-trip generation is influenced by travel time estimates informed by network modifications (i.e., does trip generation vary with the level of roadway congestion)?

¹ Duranton, G., and M. Turner. The Fundamental Law of Road Congestion: Evidence from US Cities. American

² adding additional travel lanes to Highway 101 near Salinas; adding auxiliary lanes to Highway 1 in Santa Cruz County

³ P 410

⁴ Milam, et al: “Closing the Induced Vehicle Travel Gap Between Research and Practice”

Article in Transportation Research Record Journal of the Transportation Research Board · January 2017



- 2. Longer trips. Does the model contain a feedback process by which trip distribution is influenced by changes in travel time? Is this influence limited by trip length patterns estimated for the calibration year? 7.5
- 3. Modal split. Does the model contain a mode choice process by which modal split is influenced by changes in travel time by mode? 7.6
- 4. Route diversions. Does the model contain a trip assignment process by which route choice is influenced by changes in travel time? This effect may not change the amount of overall travel, but it can be important for accurately forecasting location-specific traffic volumes for use in traffic operations analysis. 7.7
- 5. Time-of-day shifts. Does the model contain a temporal process by which departure time is influenced by changes in travel time? This effect is related to travel changes between time periods, not to the amount of overall travel; however, this effect can be important for accurately forecasting peak period traffic volumes for use in traffic operations analysis. 7.8
- 6. Land use development pattern shifts. Does the model contain a process by which long-term land use patterns are influenced by changes in accessibility and travel time? 7.9

The Draft argues that induced travel effects on an entire region are minimal:

“At the regional level, induced traffic would be a smaller share of total traffic growth, because only trips diverted from other regions, plus substitutions between transportation and other goods, make up the induced share.”

This statement is not supportable by factual evidence.

- Duranton and Turner conclude that increased household trips and increased commercial trips play a very large role in induced travel effects, particularly where existing levels of congestion are high. Congestion can influence household decisions to work from home or to have goods delivered rather than go out shopping. 7.10
- Proposed highway expansions could have a significant impact on decisions resulting in trips diverted from other regions. Drivers who consult their phone apps decide on a route based on levels of congestion. A driver from the Bay Area to Monterey will decide whether to use Highway 17 to get to Highway 1 or to use Highway 101 through Santa Clara County based on traffic congestion.
- Milam et al note that population and employment growth in an entire metropolitan area can be accelerated due to roadway capacity expansion.

“Population and employment growth forecasts used in regional transportation plans should not be fixed. Instead, the forecasts would depend on the amount of roadway capacity expansion. Further, the location of capacity expansion projects would influence both the regional and project-scale allocation of population and employment growth.”⁵
The Regional Traffic Demand Model does not take into account the impact of road expansion projects on population and employment.

Comment 3: Conflict with the state’s greenhouse reduction goals CAN be avoided.

Impact GHG-4 reads:

HOWEVER, THE 2040 MTP/SCS WOULD CONFLICT WITH THE STATE’S ABILITY TO ACHIEVE THE AB 32, SB 32 AND EO-S-3-05 GHG REDUCTION GOALS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE. 7.11

⁵ Ibid, p 14



If non-compliance with state law is “unavoidable”, then the MTP/SCS is deficient. The Plans ought to be designed to meet state goals for GHG reduction. This means that alternatives to the MTP/SCS need to be designed to bring the Plans into conformity with state law. For example, the MTP/SCS needs to eliminate projects that will increase GHG’s such as the highway widening projects in Santa Cruz County and Monterey County.

7.11

Comment 4: The Metropolitan Transportation Plan and Sustainable Communities Strategy are deficient because they do not reduce greenhouse gases beyond the “no project” alternative.

Table 32 in the Draft EIR estimates a 5.14% reduction in greenhouse gas emissions from land use and transportation in 2040 from the 2015 baseline year under the MTP/SCS scenario. The estimate for GHG emissions reduction under the “no project” scenario is a virtually identical 5.05%

7.12

This means that the MTP/SCS contributes almost nothing to the reduction in greenhouse gases.

What is the explanation for the anticipated GHG reduction by 2040? Is it due to increased fuel efficiency rather than the land use and transportation policy of the MTP/SCS? If so, the reliance on fuel efficient vehicles to achieve GHG reductions is in conflict with the legislative intent of SB 375:

Section 1c) Greenhouse gas emissions from automobiles and light trucks can be substantially reduced by new vehicle technology and by the increased use of low carbon fuel. However, even taking these measures into account, it will be necessary to achieve significant additional greenhouse gas reductions from changed land use patterns and improved transportation.

7.13

According to a California Air Resources Board staff report, “It is important to note that the current SB 375 program does not allow MPOs to take credit for State programs that improve vehicle emission standards, changes in fuel composition, and other State measures that will reduce GHG emissions to demonstrate achievement of their regional targets. (Government Code Section 65080(b)(2)(A)(iii))

Without an explanation for the anticipated reductions in GHG emissions by 2040, it is impossible to understand whether the AMBAG region is meeting its targets for per capita GHG reduction. Please clarify how the per capita targets would be achieved through land use and transportation measures.

Comment 5: More measures to mitigate the greenhouse gas impact should be proposed.

The Draft EIR proposes as mitigation measures:

- GHG-4: Project-Level Energy Consumption and Water Use Reduction
- T-5: Project-Level VMT Analysis and Reduction

However, the Draft acknowledges that both these measures “cannot be guaranteed on a project-by-project basis”. Mitigation measure GHG-4 is flawed since lower energy consumption and water use reduction are already a part of the climate action plans of several jurisdictions, and would not qualify as *additional* mitigations for GHG’s from transportation. We note that “additionality” is an accepted state criterion for determining the bona fides of ghg offset measures.

7.14



The Draft concludes that, “No additional feasible mitigation measures are available that would reduce emissions to trajectories consistent with AB, 32, SB 32 and EO S-3-05 GHG reduction goals.”

The EIR should propose other mitigation measures such as:

1. Extending Mitigation Measure T-5 to transportation projects, rather than just land use projects.
2. Requiring that all transportation measures shall result in a decrease in vehicle miles traveled.

7.14

Comment 6: The EIR should account for vehicle travel through the region.

The traffic model removes “through travel and half of Internal-External and External-Internal travel.”⁶

If all regions were to adopt the policy of not counting the VMT from through travel, the emissions from through travel will not be accounted for anywhere. The EIR should correct this omission by counting through travel. Highway expansion can affect decisions by travelers through the region whether to take Highway 101 or Highway 5, or travel by air or train.

7.15

Comment 7: There needs to be environmental review of the supposed safety benefit and traffic flow benefit of adding auxiliary lanes to Highway 1 from Santa Cruz to Aptos. The Santa Cruz County RTP describes the rationale for the auxiliary lane project:

“The 2040 RTP includes three new auxiliary lanes projects (Soquel to 41st Ave, Bay/Porter to Park Ave, and Park Ave to State Park Drive), funded by Measure D, that are expected to smooth traffic flow and improve safety by extending the distance available for merging.”⁷

There has been no environmental review of the impacts of the auxiliary lane project included in the 2040 MTP/SCS. However, the Draft EIR on Highway 1 projects (2015) found no safety benefits and only “very slight” improvement in traffic congestion resulting from the *TSM Alternative*, which included the auxiliary lanes proposed by the current RTP:

7.16

- “The total accident rates overall and by segment in 2035 under the Tier I Corridor TSM Alternative would be the same as the accident rates for the No Build Alternative.”⁸
- Building the TSM Alternative “would result in a very slight improvement in traffic congestion when compared to the No Build Alternative”.⁹

Since the safety and congestion relief objectives of the auxiliary lane project are not achievable, the current Draft EIR should report this and propose alternatives to the auxiliary lanes project.

⁶ P 279

⁷ p 6-3

⁸ page 2.1.5-17

⁹ page 2.1.5-16



Comment 8 The Santa Cruz Regional Transportation Plan needs to prioritize active transportation investments in order to redress a history of social inequality in transportation that manifests in a high rate of injuries.

One of AMBAG’s goals is “Social Equity. Provide an equitable level of transportation services to all segments of the population.” The Santa Cruz Regional Transportation Plan needs to do more to correct for past investment priorities that privileged vehicle travel over other modes.

According to the Community Traffic Safety Coalition’s 2017 report on Traffic Violence, “54% of fatal or serious injury crashes occur on 6% of our streets. More than half of these streets are in low income neighborhoods.” 26% of serious injuries and fatalities are suffered by bicyclists and pedestrians. Watsonville tops a list of 103 California cities in the rate of injuries to pedestrians under 15. Santa Cruz is near the top in injuries to bicyclists.

These injuries are due in part to a history of transportation funding that has prioritized vehicle mobility at the expense of pedestrian and bicycle safety. It would take years of priority funding to make our streets safer for bicycles and pedestrians. However, the current Santa Cruz Regional Transportation Plan fails to make this a priority, with just 12% of available funding earmarked for bicycle and pedestrian projects.

7.17

Letter 7

COMMENTER: Rick Longinotti, Co-Chair, Campaign for Sensible Transportation

DATE: February 3, 2018

Response 7.1

The commenter provides an introductory discussion that briefly summarizes the key comments and issues raised in their letter. This comment is noted and detailed responses to each of the comments provided in the letter are provided below, in Responses 7.2 through Response 7.17.

Response 7.2

The commenter states that the Draft EIR should analyze the impact of road expansion projects on GHG emissions. The commenter recommends that impacts of the Highway 1 auxiliary lane project should either be evaluated by the AMBAG EIR or removed from the MTP/SCS pending an environmental review of the project. The commenter states that studies show that increases in VMT result from increases in roadway capacity, and these increases may be considerable. The commenter asserts that the Draft EIR does not evaluate roadway widening projects for GHG emissions.

This comment pertains to the potential impacts of specific projects included in the 2040 MTP/SCS project lists. As described on page 4 of the Draft EIR, the analysis presents a programmatic assessment of the potential impacts of the proposed 2040 MTP/SCS, focusing on the entire set of projects and programs contained in the proposed 2040 MTP/SCS. Individual transportation project impacts are not addressed in detail; rather the focus of the Draft EIR is on the entire program of projects, in the aggregate.

Section 15168 of the *State CEQA Guidelines* defines a program EIR as an EIR that addresses “a series of actions that can be characterized as one large project and are related either:

- (1) Geographically;
- (2) As logical parts in the chain on contemplated actions;
- (3) In connection with the 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 impacts which can be mitigated in similar ways.”

Here, the proposed 2040 MTP/SCS is a long-term, regional-scale plan covering the entire area of Monterey, San Benito and Santa Cruz counties through 2040. Accordingly, the Draft EIR analyzes the proposed 2040 MTP/SCS at a programmatic level, as described on page 4 of the Draft EIR.

Program EIRs, such as the Draft EIR, are an example of the process of “tiering.” Section 15385 of the *State CEQA Guidelines* defines tiering as “coverage of general matters in broader EIRs (such as on general plans or policy statements) with subsequent narrower EIRs or ultimately site-specific EIRs incorporating by reference the general discussions and concentrating solely on the issues specific to the EIR subsequently prepared...” In addressing the appropriate amount of detail required at different stages in the tiering process, the *State CEQA Guidelines* state that “[w]here a lead agency is

using the tiering process in connection with an EIR for a large-scale planning approval, such as a general plan or component thereof..., the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepares a future environmental document in connection with a project of a more limited geographic scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand” (*State CEQA Guidelines* Section 15152(c)).

As explained by the Supreme Court, “[t]iering is properly used to defer analysis of environmental impacts and mitigation measures to later phases when the impacts or mitigation measures are not determined by the first-tier approval decision but are specific to the later phases.” *In re Bay-Delta* (2008) 43 Cal.4th 1143, 1169-1170. “Under CEQA’s tiering principles, it is proper for a lead agency to use its discretion to focus a first-tier EIR on only the general plan or program, leaving project-level details to subsequent EIR’s when specific projects are being considered.” *Id.*, at 1174-1175.

Consistent with these provisions of CEQA, the Draft EIR does not evaluate project-specific impacts of individual project components. Under *State CEQA Guidelines* Section 15168, implementing agencies are required to determine whether project-specific impacts require additional analysis in subsequent second-tier CEQA documents, as described on page 37 of the Draft EIR. Therefore, the project-level impacts, including GHG emissions and VMT impacts, of capacity-expanding projects, such as projects that would add auxiliary lanes to Highway 1 and lanes to Highway 101, would be evaluated in a future project-level environmental review. The inclusion of projects in the 2040 MTP/SCS does not necessarily mean that the projects would be approved and implemented. Approval of a particular project, such as a project adding auxiliary lanes to Highway 1, will depend on the project-level analysis, findings and if applicable, statement of overriding considerations. Therefore, revisions to the Draft EIR are not necessary, and AMBAG need not remove the Highway 1 auxiliary lanes project from the 2040 MTP/SCS pending a project-specific environmental review as requested by the commenter.

Please also see Response 7.3 regarding how the Draft EIR adequately addresses the issue of induced travel and resulting VMT and GHG impacts, from roadway expansion projects in general.

Response 7.3

The commenter states that because the AMBAG Regional Transportation Demand Model (RTDM) does not account for induced travel, the VMT estimates presented in the Draft EIR are likely underestimated and findings for Impact GHG-2 are unreliable.

As stated on page 409 of the Draft EIR, AMBAG acknowledges that the 2040 MTP/SCS projects that would expand highway capacity, such as adding additional travel lanes to Highway 101 near Salinas, may induce travel. As described on page 410 of the Draft EIR, although the AMBAG RTDM does not specifically quantify induced travel, at the regional level the effects of induced travel may be negligible compared to the overall amount of travel. This statement is supported by the Federal Highway Administration’s “HERS-ST Highway Economic Requirements System - State Version: Technical Report - Appendix B: Induced Traffic and Induced Demand,” as cited on page 410 of the Draft EIR. The technical report states that if the demand is for a single facility, then induced traffic will appear large relative to previous volumes, because most of the change in trips will be from diverted trips. At the regional level, induced travel would be a smaller share of total traffic growth, because only trips diverted from other regions, plus substitutions between transportation and other goods, make up the induced share.” In other words, at the regional level, induced travel is a smaller percentage of traffic growth because the vehicles constituting the induced travel on a particular facility in the region may constitute trips that have been diverted from other roadways in the

region, and therefore would not be “new” induced VMT. Because induced VMT would likely be minimal on a regional level, the GHG emissions associated with any induced VMT would also be minimal. Therefore, the Draft EIR’s quantitative estimates of VMT impacts (Impacts T-1 and T-5) and GHG emissions impacts (Impacts GHG-2 and GHG-3) are reasonably accurate, and there would be no need to re-examine the Draft EIR’s significance conclusions for these impacts. Please refer to Appendix F of the 2040 MTP/SCS for technical documentation pertaining to RTDM.

Response 7.4

The commenter asserts that statements in the Draft EIR suggest that RTDM does not include six parameters listed in a study by Milam, Birnbaum, Ganson, Handy and Walters (2017)⁷ that were developed for evaluating a model’s ability to account for induced travel. The commenter asks if the AMBAG RTDM accounts for parameter 1 on the list pertaining to newly generated trips.

The AMBAG RTDM does account for parameter 1 listed in the Milam et al. study (2017) in the trip generation module, which was estimated directly from the California Households Travel Survey (CHTS)⁸ to a high level of confidence.

Response 7.5

The commenter asks if the AMBAG RTDM accounts for parameter 2 on the list developed by Milam et al. (2017), which pertains trip length influences on trip distribution.

The AMBAG RTDM does account for parameter 2 listed in the Milam et al. study (2017). To account for the vehicle trip length parameter, the AMBAG RTDM utilizes a feedback mechanism that considers peak and off-peak travel times in the trip distribution stage. These parameters are calibrated based on the observed trip lengths from the CHTS in the case of the AMBAG RTDM.

Response 7.6

The commenter asks if the AMBAG RTDM accounts for parameter 3 on the list developed by Milam et al. (2017), which pertains to the influences of travel time on modal split.

The AMBAG RTDM mode choice model is sensitive to travel time by mode and by time of day. It is also sensitive to other travel costs, such as fare and transit accessibility and urban/rural form considerations. Therefore, the AMBAG RTDM does account for parameter 3 on the list developed by Milam et al. (2017).

Response 7.7

The commenter asks if the AMBAG RTDM accounts for parameter 4 on the list developed by Milam et al. (2017), which pertains to the influences of travel time on route choices.

The AMBAG RTDM utilizes a multi-class assignment based on the User Equilibrium premise to model trip assignment. From a route choice perspective, this method is sensitive to roadway geometrics, travel time and other calibration parameters. The origin-destination matrix that is assigned is sensitive to changes in travel time through the feedback mechanism. Therefore, the AMBAG RTDM does account for parameter 4 on the list developed by Milam et al. (2017).

⁷ Milam, R.T., M. Birnbaum, C. Ganson, S. Handy, & J. Waters. Closing the Induced Vehicle Travel Gap Between Research and Practice. Transportation Research Record: Journal of the Transportation Board, No. 2653, 2017, pp. 10-16.

⁸ California Department of Transportation (Caltrans). 2010-2012 California Household Travel Survey Final Report. Available at: http://www.dot.ca.gov/hq/tpp/offices/omsp/statewide_travel_analysis/Files/CHTS_Final_Report_June_2013.pdf

Response 7.8

The commenter asks if the AMBAG RTDM accounts for parameter 5 on the list developed by Milam et al. (2017), which pertains to the influences of travel time on travel departure timing.

The AMBAG RTDM is sensitive to changes in the land use development patterns and is being tested in model sensitivity testing, as conducted by AMBAG's consultant, Fehr & Peers. Therefore, the AMBAG RTDM does account for parameter 5 on the list developed by Milam et al. (2017).

Response 7.9

The commenter asks if the AMBAG RTDM accounts for parameter 6 on the list developed by Milam et al. (2017), which pertains to the influences of travel time and accessibility on long-term land use patterns.

AMBAG implemented an employment-driven forecast model for the first time in the 2014 forecast and contracted with the Population Reference Bureau (PRB) to test and apply the model again for the 2018 Regional Growth Forecast (RGF). To ensure the reliability of the population projections, PRB compared the employment driven model results with results from a cohort-component forecast, a growth trend forecast and the most recent forecast published by the California Department of Finance (DOF). All four models resulted in similar population growth trends. As a result of these reliability tests, AMBAG and PRB chose to implement the employment-driven model again for the 2018 RGF. The regional forecast figures – for population, jobs and housing - were accepted by the AMBAG Board of Directors at an April 13, 2016, meeting and authorized staff to use for the development of the 2040 MTP/SCS. For further details on Monterey Bay Area RGF methodology please refer to the Appendix A of the 2040 MTP/SCS. AMBAG's RGF process also includes local jurisdictions' plans and additional inputs received from all local jurisdictions (i.e., Planning Directors). AMBAG held over 100 meetings with local officials to receive their inputs on the regional growth forecast. Therefore, the AMBAG RTDM does account for parameter 6 on the list developed by Milam et al. (2017).

Response 7.10

The commenter asserts that statements in the Draft EIR suggesting that induced travel effects in the entire AMBAG region are minimal is not supported by factual evidence. The commenter cites studies by Durantón and Turner (2011)⁹ and Milam et al. (2017) as support for this assertion. The commenter also states that highway expansions could have a significant impact on decisions resulting in trips diverted from other regions, and provides an example scenario involving route selection for a commuter trip from the San Francisco Bay to Monterey. Additionally, the commenter states that the Regional Traffic Demand Model does not take into account the impact of road expansion projects on population and employment, as instructed in the Milan et al. study (2017).

The study by Durantón and Turner (2011) focused research on the effects of increased road capacity on induced travel in metropolitan areas and cities, specifically U.S. Census Bureau Metropolitan Statistical Areas. The Durantón and Turner research was not conducted at the county level or Metropolitan Planning Organization (MPO) level, such as the AMBAG region. Milam et al. (2017, p. 16) specifically notes that additional research is needed to evaluate the Durantón and Turner study at the MPO or county level. According to Milam et al. (2017, p. 16), "at a minimum, induced vehicle

⁹ Durantón, G., and M. Turner. The Fundamental Law of Road Congestion: Evidence from U.S. Cities. *American Economic Review*, Vol. 101, No. 6, 2011, pp. 2616-2652.

travel effects should be acknowledged and discussed for capacity expansion projects that will reduce travel times. Acknowledgment should disclose any limitations related to the forecasting that may have not been sensitive to induced vehicle travel effects and how those effects could influence the analysis results. This effort could include a qualitative discussion or even simple elasticity-based estimates of VMT levels derived from the project's lane-mile changes. This recommendation applies to regional and project scale analysis." The Draft EIR does provide such a qualitative discussion.

State CEQA Guidelines Section 15151 allows for disagreement among experts when assessing environmental impacts of a proposed project and recommends that the EIR summarize the main points of disagreement; the preceding responses provide this summary regarding the appropriate approach for the Draft EIR's consideration of induced travel. CEQA case law gives lead agencies considerable discretion in the choice among differing expert opinions and studies, such as the induced demand studies relied upon in the 2040 MTP/SCS Draft EIR. Generally see CEB, *Practice under the California Environmental Quality Act* (2d. Ed.), Section 1.35. A lead agency may accept the environmental conclusions reached by the experts that prepared the EIR even though others may disagree with the underlying data, analysis or conclusions (see *Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 408). Discrepancies in results arising from different methods for assessing environmental issues do not undermine the validity of the EIR analysis as long as a reasonable explanation supporting the EIR analysis is provided (see *Planning & Conserv. League v. Castaic Lake Water Agency* (2009) 180 Cal.App.4th 210, 243). The existence of differing opinions arising from the same pool of information is not a basis for finding the EIR to be inadequate; when approving an EIR, an agency need not correctly resolve a dispute among experts about the accuracy of the EIR's environmental forecasts (see *Eureka Citizens for Responsible Gov't v. City of Eureka* (2007) 147 Cal.App.4th 357 and *California Oak Found. v. City of Santa Clarita* (2005) 133 Cal.App.4th 1219, 1243).

Although the Draft EIR and AMBAG's RTDM do not specifically use approaches provided in the Durant and Turner study (2011) or Milam et al. study (2017), the Draft EIR generally adheres to the minimum recommendations of the Milam et al. study describe above. As described on page 409 of the Draft EIR acknowledges that the 2040 MTP/SCS contains projects that may induce travel. Page 410 of the Draft EIR discloses limitations to the modeling and forecasting that are not sensitive to induced vehicle travel. Finally, page 410 of the Draft EIR also provides a qualitative discussion of how, at a regional level, induced VMT would likely be minimal, based on documentation published by the Federal Highway Administration (see Response 7.3).

The example scenario provided in the comment envisions drivers travelling between the San Francisco Bay Area and Monterey deciding whether to travel on Highway 17 or Highway 101, based on levels of traffic congestion reported on traffic applications for cellular phones (i.e., phone apps). Both Highway 17 and Highway 101 occur within the AMBAG region, and travel on either one would generate VMT in the region. Therefore, if a driver were to choose to travel on Highway 17 instead of Highway 101, based on traffic congestion reported on phone apps, the VMT generated by such travel would be diverted from one roadway to the other, and would not be entirely new VMT. While one highway may be shorter route to Monterey than the other, and require fewer miles of travel, the difference would be minimal on the regional level because the majority of the VMT generated by the trip would occur regardless of the route selection. This is consistent with Federal Highway Administration documentation mentioned above, which states that at the regional level, induced travel is a smaller percentage of traffic growth because the vehicles constituting the induced travel on a particular facility in the region may constitute trips that have been diverted from other roadways in the region, and therefore would not be "new" induced VMT (see Response 7.3).

The Milam et al. study (2017) does not definitively conclude that regional population and employment growth forecasts should not be fixed. Instead the Milam et al. study (2017, p. 14) states that the findings of the Duranton and Turner study (2011) suggest that population and employment growth forecasts used in regional transportation plans should not be fixed. As stated above, the study by Duranton and Turner (2011) focused research at the level of U.S. Census Bureau Metropolitan Statistical Areas, as opposed to the MPO level, such as the AMBAG region. Therefore, the findings of the Duranton and Turner study (2011) or the recommendations of the Milam et al based on the findings of Duranton and Turner need not be relied upon as controlling for the 2040 MTP/SCS and its EIR, which are for the entire AMBAG region. See Response 7.9 for substantial evidence supporting the accuracy of the 2040 MTP/SCS Regional Growth Forecast.

Response 7.11

The commenter cites an excerpt of Impact GHG-4 of the Draft EIR stating that the 2040 MTP/SCS would conflict with the State’s ability to achieve the AB 32, SB 32 and EO-S-3-05 GHG reduction goals. The commenter states that alternatives to the 2040 MTP/SCS that would conform to these State goals should be considered. The commenter suggests an alternative that would eliminate highway widening projects in Santa Cruz County and Monterey County.

The comment asserts that alternatives to the MTP/SCS need to be designed to bring the MTP/SCS “into conformity with state law.” By preparing an MTP/SCS that meets SB 375 passenger vehicle GHG reduction targets, AMBAG is complying with its applicable legal requirements to help reduce GHG emissions. There is no legal requirement that the AMBAG region’s MTP/SCS achieve GHG emission reductions proportional to State reductions called for by AB 32, SB 32 and EO-S-3-05. CARB’s 2017 Scoping Plan presents the State’s strategy to achieve these State GHG reduction goals, and does not call for proportional reductions in each region.

Nevertheless, it is not possible for AMBAG to develop a feasible alternative to the proposed 2040 MTP/SCS that would achieve theoretical regional reductions in total GHG emission proportional to the State GHG reductions goals of AB 32, SB 32 and EO-S-3-05. As shown in Table 32 on page 282 of the Draft EIR, about 55% of the MTP/SCS GHG emissions in the AMBAG region in 2040 would be from land use. As discussed in Section 1.2.2(a) and on page 281 of the Draft EIR, land use emissions were estimated based on extrapolation of the emissions inventories from the cities and counties with climate action plans (CAPs). AMBAG’s SCS must be based on these latest planning assumptions. SB 375 specifically provides that nothing in SB 375 supersedes the land use authority of cities and counties, and that cities and counties are not required to change their land use plans and policies, including general plans, to be consistent with an RTP/SCS (Government Code §65080(b)(2)(K)). Local governments are the main agencies responsible for mitigation of the impacts of land use plans and projects that implement the SCS, and AMBAG has no concurrent authority to mitigate the impacts of land use plans and projects, including GHG emissions impacts, as described on page 81 of the Draft EIR.

The remaining 45% of the MTP/SCS 2040 GHG emissions shown in Table 32 are attributable to on-road motor vehicles. The MTP/SCS includes feasible land use and transportation strategies intended to reduce mobile source GHG emissions, and the EIR includes Mitigation Measure T-5, which presents project-level mitigation measures to further reduce VMT and associated mobile source GHG emissions. However, as recognized on page 416 of the Draft EIR, implementation of project-level VMT-reducing measures – such as mixed uses and TOD –may not be feasible and cannot be guaranteed on a project-by-project basis. Additionally, it is unlikely that an increase in daily VMT

above existing conditions could be fully avoided in 2040 by EIR mitigation measures or alternatives, due to factors unrelated to discretionary approvals, such as population growth in the region.

Implementation of an MTP/SCS alternative that substantially reduces mobile source GHG emissions is considered infeasible because such an alternative would likely require major changes in land use policies, parking policies, transit funding, road pricing and vehicle fuels and technology that are beyond AMBAG's ability to implement. For example, CARB's 2017 Scoping Plan (page 76) recognizes that most of the GHG reductions for the transportation sector needed to achieve State GHG reduction goals will come from State actions related to vehicle technologies and low carbon fuels, and that even for VMT reduction alone, there is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 GHG reduction goals.

The commenter's suggested alternative to eliminate road widening projects from the 2040 MTP/SCS would not achieve consistency with the GHG reduction goals of AB 32, SB 32 and EO-S-3-05. Page 409 of the Draft EIR acknowledges that projects that would expand highway capacity, such as adding additional travel lanes, may induce travel. Induced travel would generate GHG emissions. However, as described above in Response 7.3, the induced travel and associated GHG emissions from road widening projects would be minimal on a regional level. As described above, the GHG emissions in 2040 are a combination of land use emissions (55%) and on-road emissions (45%). Because this suggested alternative would not reduce land use emissions, and only minimally reduce on-road emissions, significant impacts related to conflicts with the State's ability to achieve GHG reductions goals of AB 32, SB 32 and EO-S-3-05 would not be avoided.

Pursuant to Section 15126.6 of the *State CEQA Guidelines*, an EIR shall 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. Because the suggested alternative would not eliminate any significant effects of the 2040 MTP/SCS, because the Draft EIR provides a reasonable range of alternatives, the suggested alternative need not be added to the Draft EIR.

In addition, the suggested alternative need not be added to the Draft EIR because it presents an alternative to individual components of the MTP/SCS, rather than to the proposed MTP/SCS as a whole. An EIR is not required to consider alternatives to individual project components, but instead should consider alternatives to the project as a whole. *See California Oak Foundation v. Regents of University of California* (2010) 188 Cal.App.4th 227, 276-277.

Response 7.12

The commenter summarizes GHG reduction estimates presented in Table 32 of the Draft EIR and notes very little difference between the 2040 MTP/SCS and the no project alternative. The commenter states that this means the 2040 MTP/SCS has a negligible contribution toward reducing GHG emissions.

No revisions to the Draft EIR are required because this comment pertains to the effectiveness of the 2040 MTP/SCS rather than the adequacy of the EIR analysis. It should be noted, however, that the 2040 MTP/SCS includes alternative transportation projects and land use patterns that would reduce GHG emissions, as well as transportation projects that would reduce congestion and on-road emissions compared to conditions in 2040 without the 2040 MTP/SCS. The Draft EIR also includes mitigation measures, that when implemented, would further reduce the GHG emissions shown in Table 32 for the 2040 MTP/SCS. For example, mitigation measure GHG-4 on page 285 of the Draft EIR states that cities and counties should implement energy-reducing measures for new residential

and commercial development projects, which would reduce GHG emissions. Also, the EIR on pages 415 and 416 includes Mitigation Measure T-5, which presents project-level mitigation measures to reduce VMT that would also reduce associated mobile source GHG emissions.

Response 7.13

The commenter states that findings in the Draft EIR that the 2040 MTP/SCS would achieve per capita GHG reduction targets must not rely on State programs that improve vehicle emission standards, changes in fuel composition and other State measures that reduce GHG emissions. The commenter requests additional clarification on how the per capita GHG emissions targets of SB 375 would be achieved.

As described in Impact GHG-3 on pages 282 and 283 of the Draft EIR, implementation of the 2040 MTP/SCS would be consistent with the AMBAG's SB 375 GHG reduction targets of zero percent in 2020 and five percent in 2035. These projections do not account for any additional measures from the current SB 32 Scoping Plan to further reduce passenger vehicle GHG emissions and are, therefore, conservative.

The per capita GHG reductions presented on page 282 and 283 of the Draft EIR do not rely on State programs that improve vehicle emission standards, changes in fuel composition and other State measures that reduce GHG emissions. As described on pages 278 and 279 of the Draft EIR, to determine whether the 2040 MTP/SCS would allow AMBAG 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 analysis, emission factors were generated using the SB 375 template in EMFAC, which deactivates Advanced Clean Cars (Pavley) and Low Carbon Fuel Standards. In addition, the following three off-model adjustments were made to adjust the VMT from passenger vehicles based on the projects included in the 2040 MTP/SCS:

- Removal of through travel and half of Internal-External and External-Internal travel.
- Adjustments for "off-model" projects and programs included in AMBAG's 2040 MTP/SCS (i.e., Transportation Demand Management [TDM] and Transportation System Management [TSM] Strategies, increase in work at home employees, additional efforts for zero emission vehicle (ZEV) infrastructure and active transportation).
- Accounting for transit service enhancements.

The above off-model techniques were based on academic literature reviews, collaboration with other MPOs and consultation with CARB's transportation and land-use related policies (CARB, 2017).¹⁰ Off-model adjustments were computed for 2020 and 2035 since these factors cannot be modelled and have significant effects on VMT reduction, which is used to assess whether the 2040 MTP/SCS would allow the region to meet AMBAG's SB 375 reduction targets.

Additionally, please refer to the "Methodology to Estimate Performance Measures" section in Appendix G to the 2040 MTP/SCS, which describes the methodology used to calculate the regional performance measures. In summary, the per capita GHG emissions presented in the Draft EIR did not factor in State programs that improve vehicle emission standards, changes in fuel composition, or other State measures that reduce GHG emissions.

¹⁰ California Air Resources Board (CARB). 2017. Senate Bill 375 – Research on Impacts of Transportation and Land-Use Related Policies. Available at: <https://arb.ca.gov/cc/sb375/policies/policies.htm>

Response 7.14

The commenter states that the Draft EIR should provide more mitigation measures to reduce GHG impacts, and that mitigation measure GHG-4 is flawed because it requires measures already included as part of the climate action plans of several jurisdictions in the AMBAG region. The commenter suggests that additional mitigation measures could include extending mitigation measure T-5 to apply to transportation projects, in addition to land use projects. The commenter also suggests that additional mitigation measures could include requiring all transportation measures to decrease VMT.

Mitigation measure GHG-4, on page 285 of the Draft EIR, includes measures for reducing emissions related to energy and water consumption. Although some of these measures may be included in the existing climate action plans of some jurisdictions in the region, as the commenter states, they are not included in all climate action plans within the region. Additionally, some jurisdictions within the region have not yet adopted climate action plans. Therefore, mitigation measure GHG-4 is not redundant or flawed, and is an effective approach for reducing GHG emissions, particularly in jurisdictions without an adopted climate action plan.

Mitigation measure T-5, on pages 415 and 416 of the Draft EIR, states that implementing agencies should evaluate VMT as part of project-specific CEQA review and discretionary approval decisions for land use projects. Where project-level significant impacts are identified, implementing agencies should identify and implement measures that reduce VMT. In response to this comment, pages 415 and 416 of the Draft EIR have been revised as follows:

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects that would increase the capacity of a roadway. For land use projects under their jurisdiction, the cities and counties in the AMBAG region can and should implement the following mitigation measure. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

T-5 Project-Level VMT Analysis and Reduction

Transportation project sponsor agencies shall evaluate transportation projects that involve increasing roadway capacity for their potential to increase VMT. Where project-level increases are found to be potentially significant, implementing agencies shall identify and implement measures that reduce VMT. Examples of measures that reduce the VMT associated with increases in roadway capacity include tolling new lanes to encourage carpools and fund transit improvements; converting existing general purpose lanes to high occupancy vehicle lanes; and implementing or funding off-site travel demand management.

Implementing agencies shall evaluate VMT as part of project-specific CEQA review and discretionary approval decisions for land use projects. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce VMT. Examples of measures that reduce VMT include infill development, mixed use and transit oriented development, complete street programs, reduced parking requirements, and providing alternative transportation facilities, such as bike lanes and transit stops.

Implementing Agencies

Implementing agencies for transportation projects include RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects include cities and counties.

Response 7.15

The commenter states that the analysis in the Draft EIR should account for vehicle travel through the region.

The California Air Resources Board relies on a variety of specific information sources to help inform the sensitivity analysis of the evaluation of an MPO's traffic model. The information from these sources can be compared to the results of MPO's sensitivity analyses to determine if the modeled results fall within a range of expected outcomes. Among these sources is the *Recommendations of the Regional Targets Advisory Committee (RTAC) Pursuant to Senate Bill 375, September 2009* (Regional Targets Advisory Committee, 2009)¹¹. The final RTAC report, which the California Air Resources Board relies on to inform the sensitivity of traffic modelling, states that an MPO should not be responsible for through trips because the MPO's ability to affect emissions from these trips is unclear. The final RTAC report states that an MPO should take responsibility for half of the trip that has either an origin in one MPO region and a destination within another MPO region, because either region has an equal opportunity to affect the emissions from trips that regularly cross over their shared boundary. Therefore, consistent with the California Air Resources Board guidance for traffic model sensitivity, AMBAG's Regional Travel Demand Model removes through trips and half of Internal-External and External-Internal trips. Because the Draft EIR utilizes modeling from the Regional Travel Demand Model for its analysis, and the Regional Travel Demand Model is consistent with California Air Resources Board guidance, revisions to the Draft EIR are not necessary.

Response 7.16

The commenter states that there needs to be an environmental review of the traffic safety and circulation improvements of adding auxiliary lanes to Highway 1 between the City of Santa Cruz and community of Aptos. The commenter cites a 2015 EIR for Highway 1 projects that found slight to no safety and circulation benefits from an alternative that included auxiliary lanes on Highway 1. The commenter also states that the 2040 MTP/SCS Draft EIR should report the findings of the 2015 EIR and propose alternatives to the auxiliary lanes project.

This comment pertains to the potential impacts of specific projects included in the 2040 MTP/SCS project list. This comment is similar to comment 7.2. Please see Response 7.2, above. As described therein, the analysis in the Draft EIR presents a programmatic assessment of the potential impacts of the proposed 2040 MTP/SCS, focusing on the entire set of projects and programs contained in the proposed 2040 MTP/SCS. Individual transportation project impacts are not addressed in detail; rather, as a Program EIR, the focus of the Draft EIR is on the entire program of projects, in the aggregate. Project-level impacts, including projects that would add auxiliary lanes to Highway 1, would be evaluated in a future project-level environmental review.

Related to Response 7.2, the inclusion of projects in the 2040 MTP/SCS does not necessarily mean that the projects would be approved or implemented. Approval of a particular project, such as a project adding auxiliary lanes to Highway 1, will depend on the project-level analysis, findings and if

¹¹ Regional Targets Advisory Committee. 2009. *Recommendations of the Regional Targets Advisory Committee (RTAC) Pursuant to Senate Bill 375, September 2009*. Available at: <https://www.arb.ca.gov/cc/sb375/rtac/report/092909/finalreport.pdf>

applicable, Statement of Overriding Considerations. Consistent with Response 7.2, this comment is noted, but revisions to the Draft EIR are not necessary.

Response 7.17

The commenter states that the Santa Cruz Regional Transportation Plan should prioritize active transportation investments in order to address a history of social inequality in transportation that manifests in a high rate of injuries. The comment does not provide evidence to support the assertion that there is a history of social inequality in transportation manifesting in high injury rates in Santa Cruz County. Nonetheless, the 2040 Santa Cruz Regional Transportation Plan includes active transportation projects as well as safety improvements. For example, the Highway 1/Harkins Slough Road Interchange: Bicycle/Pedestrian Bridge project (RTP ID: WAT 01A) calls for construction of a new bridge over Highway 1 for pedestrians and cyclists, thereby eliminating potential safety hazards of a surface-level crossing of Highway 1. Another example is the Beach/Cliff Intersection Signalization project (RTP ID: SC-P93), which would improve pedestrian safety by installing a traffic signal. Yet another example is the Civic Center Drive Bike Lanes project (RTP ID: SV-P33) that would add bike lanes to narrow road in the City of Scotts Valley, thereby increasing the safety of cyclists using this route.



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 PLANNING • GRANTS • PROJECT MANAGEMENT

February 5, 2018

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Re: 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans

Comments on the Draft Environmental Impact Report for the MTP/SCS

Page	Topic	Comment/Question	
61	Active Transportation Projects in the 2040 MTP/SCS Transportation Projects	San Benito River Recreational Trail is listed but is not shown on any maps	8.1
62	Transit ADA	“No transit ADA projects are proposed for San Benito County.” Why not? The demographics likely show an increase in elderly and disabled.	8.2
399	Bikeways in San Benito County	The description overlooks the Class I from central Tres Pinos north to Tres Pinos School. The description of the Class II bikeway in San Juan Bautista is incorrect – it extends for two miles on both sides of the road from northern city limit to Anzar High School.	8.3
438	“AMBAG’s regional efforts to assist local jurisdictions in aligning local land use policies with the proposed 2040 MTP/SCS....Examples include, but are not limited to...funding transit, bicycle and pedestrian infrastructure that supports the increased use of alternative modes...”	Why doesn’t AMBAG promote bicycle parking facilities, bicycle safety education, and support low cost helmet programs? Marin County found that nearly 30% of their morning peak hour traffic was caused by parents driving kids to school because they didn’t believe there were safe routes for their children to ride bikes.	8.4



JENNIFER N. M. COILE, AICP

PLANNING • GRANTS • PROJECT MANAGEMENT

	<p>Strategy to reduce vehicle miles travelled by single occupancy vehicles</p>	<p>In San Benito County, the land use patterns with distribution of jobs and housing is committed and will likely not significantly change by 2040 to significant densities and locations that will promote transit or make significant service feasible. The single most effective way to reduce VMT among San Benito County residents would be to promote carpooling/ridesharing as they commute to work, primarily outside of the County. Invest in technology upgrades for matching services to synch up schedules and nearby locations that may be in different zip codes. The rideshare support program must include guaranteed ride home vouchers for emergencies, perhaps using Uber-type services instead of taxis.</p>
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8.5

Comments on the MTP/SCS

Page	Topic	Comment/Question
2-19	Hollister Municipal Airport	Cal FIRE Air Attack base is located at the Airport
4-19	Fig 4-4. Regional Transit Network	Hard to read...does it show County Express Bus from Hollister to Gilroy?
2-20 to 23	Goods Movement	No mention of widening of the 156 to facilitate goods movement from Salinas Valley/Pajaro Valley to State Highway 5.
Appendix A, page 42	Regional Growth Forecast	"San Benito's population growth slowed to four percent between 2000 and 2010. The trend of the 1990s was reversed. Hollister grew by only one percent while San Juan Bautista increased by 20 percent." Hollister had a moratorium on building permits imposed by the State 2003-2008, then the recession.

8.6

Sincerely,

Jennifer N. M. Coile

Jennifer N. M. Coile, AICP 1982-2012

Letter 8

COMMENTER: Jennifer N. M. Coile, AICP

DATE: February 5, 2018

Response 8.1

The commenter states that the Draft EIR does not include a figure showing the location of the San Benito River Recreational Trail project. In response to this comment, Figure 5, MTP Projects in San Benito County, on page 67 of the Draft EIR has been revised to show the approximate location of phase 1 of the San Benito River Recreational Trail project. Other phases of the project are not included in the 2040 MTP/SCS.

Response 8.2

The commenter asks why the Draft EIR does not include Americans with Disabilities Act projects for San Benito County.

This comment pertains to the types of projects included in the 2040 MTP/SCS, specifically the projects in San Benito County. The projects included in the MTP/SCS are submitted by local jurisdictions and transit operators through the regional transportation planning agencies. The projects for San Benito County may include components for Americans with Disabilities Act (ADA) improvements, but ADA improvements are not evaluated individually. Therefore, the Draft EIR does not analyze ADA projects in San Benito County, but rather projects that may include ADA components.

Response 8.3

The commenter states that the description of existing San Benito County bikeways on page 399 of the Draft EIR does not mention a Class I bikeway near Tres Pinos School and inaccurately describes a Class II bikeway in San Juan Bautista. In response to this comment, page 399 of the Draft EIR has been revised as follows:

San Benito County

San Benito County has approximately 193 miles of bikeways (AMBAG, 2014c). Bicycle facilities in San Benito County are generally concentrated in and around Hollister. A Class I bikeway is located approximately parallel with State Highway 25 from near the southern limits of Hollister to near the center of the city, north of Rancho San Justo Park. Class II bikeways are provided on several streets in Hollister, including State Highway 25 Bypass, Westside Boulevard, Southside Road and Union Road. A Class I bikeway extends between Tres Pinos School and the community of Tres Pinos, south of the City of Hollister. Within the City of San Juan Bautista, a short section of San Juan Highway is in the northern part of town has designated bike lanes. Additionally, Class II bike lanes extend north of San Juan Bautista to Anzar High School on either side of San Juan Highway. The Juan Bautista de Anza National Historic Trail traverses San Juan Bautista and the western part of the county.

Response 8.4

The commenter asks why AMBAG does not promote bicycle parking facilities, bicycle safety education and low-cost helmet programs. The commenter describes a study from Marin County that found nearly 30 percent of morning peak hour traffic was due to parents driving kids to school because there were assumed to be no safe bike routes to school.

This comment pertains to AMBAG programs, and not to the analysis or findings of the Draft EIR. Therefore, revisions to the Draft EIR are not necessary. Although the 2040 MTP/SCS does not include low-cost helmet projects, it does include projects that promote safe routes to school and bicycle parking facilities (i.e., bicycle lockers). For example, the Safe Routes to Schools Implementation Program project in San Benito County (AMBAG ID: SB-COG-A57) would improve infrastructure to achieve safer walking and bicycling routes to R.O. Hardin and Calaveras Elementary Schools. The Ecology Action Countywide SRTS Youth Pedestrian and Bicycle Safety Education project in Santa Cruz County (AMBAG ID: SC-EA-02-USC) would implement pedestrian and bicycle safety education at local schools. The Capitola Village Multimodal Enhancements – Phase 2/3 project in Santa Cruz County (AMBAG ID: SC-CAP-P04b-CAP) would involve constructing bicycle improvements along four streets, including the installation of bicycle lockers. The Bike Parking Subsidy Program project in Santa Cruz County (AMBAG ID: SC-RTC-16-RTC) would provide subsidies to schools, government agencies and non-profit organizations to install bicycle racks and bicycle lockers.

Response 8.5

The commenter expresses an opinion that land use patterns in San Benito County are unlikely to substantially change by 2040, and the most effective way to reduce VMT among San Benito County residents would be to promote carpooling/ridesharing for work commutes, with guaranteed ride-home vouchers and possibly using Uber-type services instead of taxis.

This comment does not pertain to the Draft EIR analysis or findings, and instead expresses an opinion regarding how AMBAG should prioritize VMT reduction projects in San Benito County. Therefore, revisions to the Draft EIR are not necessary. However, private rideshare services, such as Uber and Lyft, are already available in many areas of the AMBAG region. Additionally, the proposed 2040 MTP/SCS includes projects that promote rideshare and commute alternatives. For example, the San Benito County Rideshare Program project (AMBAG ID: SB-COG-A08) would promote the use of alternative modes of transportation. The San Benito County Vanpool Program project (AMBAG ID: SB-COG-A53) would provide a vehicle lease program, planning and coordination for vanpool transportation.

Response 8.6

The commenter provides a list of comments specifically for the 2040 MTP/SCS. This comment pertains to the 2040 MTP/SCS and not the Draft EIR, and is therefore not responded to herein. Refer to Appendix K to the 2040 MTP/SCS for responses to comments pertaining to the 2040 MTP/SCS.

Heather Adamson

From: Ana Flores on behalf of info
Sent: Monday, February 05, 2018 1:55 PM
To: Heather Adamson
Subject: FW: Response to EIR for 2040 MTP / SCS

From: Brett Garrett [REDACTED]
Sent: Monday, February 05, 2018 12:11 PM
To: info
Subject: Response to EIR for 2040 MTP / SCS

Dear AMBAG members,

The EIR should propose an alternative project based on implementing Personal Rapid Transit in our larger cities and, where practical, connecting our cities.

Personal Rapid Transit consists of podcars providing on-demand service on dedicated guideways, typically elevated above traffic. This technology has profound benefits including improved safety, elimination of emissions (if solar-powered), and a very convenient form of transportation.

Personal Rapid Transit technology must be included as an alternative, *because it would dramatically reduce many of the “Significant and Unavoidable Impacts”* listed on page 449 of the draft EIR document. For example,

AQ-3, GHG-4: PRT reduces PM10 and GHG emissions because it can be solar-powered transportation. *This is critical*, given that page 282 of the draft EIR shows the existing Metropolitan Transportation Plan provides almost no reduction in carbon emissions, compared to the “no-build” alternative.

B-1, B-2, B-3: PRT has minimal effects on plants, animals, sensitive habitats, and wildlife movements, because it is an elevated system with very little infrastructure on the ground.

CR-1, CR-2, CR-3: PRT has minimal effects on historical, archeological, and paleontological resources, because it is an elevated system with very little infrastructure on the ground.

E-2: PRT can be built with its own energy-producing infrastructure (solar panels).

N-1, N-2, N-3, N-4: PRT uses electric podcars that are essentially silent with very little vibration.

T-1, T-2: PRT provides a much more convenient and time-efficient form of public transportation, dramatically reducing the miles traveled in other vehicles.

Please include innovative alternative technology, such as Personal Rapid Transit, in the EIR.

Sincerely,

Brett Garrett
190 Walnut Ave #307
Santa Cruz, CA 95060

9.1

Letter 9

COMMENTER: Brett Garrett

DATE: February 5, 2018

Response 9.1

The commenter states that the Draft EIR should include an alternative based on Personal Rapid Transit in the region's larger cities, and where practical, connecting cities.¹² The commenter states that a Personal Rapid Transit alternative would avoid many of the significant and unavoidable impacts identified in the Draft EIR for the 2040 MTP/SCS.

To be legally adequate under federal transportation law and SB 375, the 2040 MTP/SCS is required to address transit projects, highway projects and a sustainable land use pattern. All three components are integrated into the fundamental project objectives described in the Draft EIR Section 2.1 (page 50). When a large-scale program contains multiple, interrelated objectives, an alternative that does not meet all of those objectives may be excluded from detailed analysis (see *In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1162–1168). An EIR must discuss alternatives to a project in its entirety but is not required to discuss alternatives to each particular component of a project (see *California Oak Foundation v. Regents of University of California* (2010) 188 Cal.App.4th 227, 276-277). Therefore, an alternative to the 2040 MTP/SCS that would address only highway transportation with replacement of vehicle travel for Personal Rapid Transit is not required by CEQA.

Additionally, Personal Rapid Transit is not considered a feasible alternative to the 2040 MTP/SCS due to its low capacity. Personal Rapid Transit is more suited for small geographic areas with limited ridership, such as airport and campus transportation venues where a limited amount of guideway and number of stops/stations is required. However, cities such as Santa Cruz and Monterey are substantially larger than airports and college campuses and would require substantial amounts of guideway and stops for access to all neighborhoods and areas of the city. The amount of Personal Rapid Transit guideway that would be required for access to the various areas of the cities in the AMBAG region, especially larger cities as the commenter suggests, would not be feasible to implement. Section 15126.6 of the *State CEQA Guidelines* state that consideration of infeasible alternatives is not required in an EIR. Therefore, revisions to the Draft EIR are not necessary.

However, note that the 2040 MTP/SCS includes some projects with technological improvements. For example, the Multimodal WAVE ITS project in Monterey County would install advanced traveller information kiosks and related equipment in four MST buses. Another example is the Bus Tracking and AVL Transit Programs project in Santa Cruz County, which would install GPS bus tracking and Automatic Vehicle Locator programs to inform travellers of transit locations to allow them to make informed mode choices.

¹² As defined by the commenter, Personal Rapid Transit consists of podcars providing on-demand service on dedicated guideways, typically elevated above traffic.

Heather Adamson

From: Jack Nelson [REDACTED]
Sent: Monday, February 05, 2018 11:33 PM
To: draft2040RTP@sccrtc.org; Heather Adamson
Subject: RTP, MTP+SCS, and Draft EIR comments

February 5, 2018

Dear agency leaders, staff, and consultants,

Thank you for this opportunity to comment on these draft documents: Santa Cruz County Regional Transportation Plan 2040, AMBAG Metropolitan Transportation Plan + Sustainable Communities Strategy, and the related Draft Environmental Impact Report.

To spare tomorrow’s world from catastrophic climate change, and to consciously plan livable communities, all human society must act boldly now to get off fossil fuels. We must transform, away from the intensive energy demand inherent in an auto-centric transportation system.

10.1

It is not enough to nibble around the edges with some limited, timid transportation tweaks to encourage more sustainable travel modes. Not enough, when the centerpiece transportation planning program remains continuing investments serving individual automobile-based transportation that contributes substantially and steadily to destroying the stability of our planetary life support systems, climate in particular.

The selection of a project alternative that the Draft EIR states plainly does not follow State of California law, including 2016’s SB 32, comes close to an acknowledgement that agency leaders, agency staff, and assisting consultants together were somehow not able to devise a better project alternative than the damaging one recommended to go forward. The Draft EIR acknowledges in Impact GHG-4 that, quote, “THE 2040 MTP/SCS WOULD CONFLICT WITH THE STATE’S ABILITY TO ACHIEVE THE AB 32, SB 32 AND EO-S-3-05 GHG REDUCTION GOALS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.”

10.2

Translated, the preceding statement in the Draft EIR admits the MTP, RTPs, and Draft EIR settle on a transportation scheme that does not do its part to save our common future from climate change.

Why do these plans not instead propose an alternative transportation plan that would work comprehensively to transform transportation systems and resulting land uses to a far more sustainable system?

10.3

Are these draft documents ultimately concluding that destroying the future is just inevitable due to politics, inertia, and lack of vision? I don’t accept such an outcome, and you should not either.

10.4

To understand the Draft EIR sentence quoted above, I observe that California Senate Bill 32 (SB 32), signed into law by Governor Brown on September 8, 2016, requires a 40% cut in greenhouse gas emissions (relative to 1990 levels) by the year 2030. While the California Air Resources Board may have not yet adopted an explicit schedule of more stringent, ongoing regional GHG reduction targets, is it not obvious, as well as morally imperative, that a long range transportation plan must act now in good faith to achieve the results called for by SB 32, in just the next twelve years to 2030?

10.5

Sincerely,

Jack Nelson

Land Use Planner and Environmental Planner (County of Santa Cruz, retired)

Chair, Sierra Club Transportation Committee, Santa Cruz Group (speaking as an individual)

PS: I concur with, and support the separate comments on the Draft EIR lately submitted (approx. Feb 1 – 5th) from the Campaign for Sensible Transportation.

10.6

Letter 10

COMMENTER: Jack Nelson

DATE: February 5, 2018

Response 10.1

The commenter expresses an opinion that society must move away from automobile-based transportation if future generations are to be spared catastrophic climate change, and that limited tweaks to the transportation system will be insufficient. Climate change related impacts are addressed in Section 4.8, *Greenhouse Gas Emissions/Climate Change*, of the Draft EIR. This comment primarily pertains to societal values regarding transportation choices and climate change, and does not raise significant environmental issues related to the Draft EIR analysis or findings. Therefore, this comment is noted and does not require further response or revisions to the Draft EIR.

Response 10.2

The commenter quotes an excerpt of Impact GHG-4 of the Draft EIR regarding significant and unavoidable impacts related to conflicts with the State’s ability to achieve greenhouse gas (GHG) reduction goals. The commenter suggests that these findings acknowledge that an alternative with fewer GHG emissions and climate change impacts could not be developed, and the 2040 MTP/SCS does not contribute to preventing future climate change impacts.

As discussed in Response 7.4, by preparing an MTP/SCS that meets SB 375 passenger vehicle GHG reduction targets, AMBAG is complying with its applicable legal requirements to help reduce GHG emissions. There is no legal requirement that the AMBAG region’s MTP/SCS achieve GHG emission reductions proportional to State reductions called for by AB 32, SB 32 and EO-S-3-05. CARB’s 2017 Scoping Plan presents the State’s strategy to achieve these State GHG reduction goals, and does not call for proportional reductions in each region.

While the proposed 2040 MTP/SCS would have a significant and unavoidable impact related to potential conflicts with AB 32, SB 32 and EO-S-3-05 GHG reduction goals, as described in Impact GHG-4, it would reduce per capita GHG emissions in the region, as described on page 283 of the Draft EIR. A reduction in per capita emissions would contribute toward reducing the impacts of global climate change.

Response 10.3

The commenter asks why the plans do not propose an alternative transportation plan that would work to transform transportation systems and resulting land uses to a more sustainable system.

The commenter refers to “plans”, which is assumed to mean the proposed 2040 MTP/SCS and Regional Transportation Plans (RTPs), when taken in context with prior comments in the comment letter. Therefore, this comment appears to pertain to the 2040 MTP/SCS and RTPs and not the Draft EIR. However, Section 7 of the Draft EIR, *Alternatives*, includes an analysis of three alternatives to the proposed 2040 MTP/SCS. As described on pages 452 and 453 of the Draft EIR, these alternatives include: 1) Alternative 1: No Project Alternative; 2) Alternative 2: Liveable Communities Alternative; and 3) Alternative 3: Maintained Mobility Alternative. Table 54 of the Draft EIR, on page 473, shows that Alternative 2 would result in fewer GHG emissions and climate change impacts compared to

the proposed 2040 MTP/SCS. However, as described on page 471 of the Draft EIR, implementation of Alternative 2 may not be feasible because AMBAG does not have land use authority and cannot require local agencies to change their land use designations that are required for Alternative 2. Additionally, similar to the proposed 2040 MTP/SCS, the GHG emissions and climate change impacts under Alternative 2 would also be significant and unavoidable and require the same mitigation measures as the 2040 MTP/SCS, as described on page 462 of the Draft EIR.

The commenter does not suggest a specific feasible alternative that should have been included in the Draft EIR that would comprehensively “transform transportation systems and resulting land uses to a far more sustainable system,” so a more specific response to this suggestion is not possible. However, please see Response 7.4 for an explanation as to why an MTP/SCS alternative that would achieve deep regional reductions in GHG emissions consistent with State GHG reduction goals is infeasible for AMBAG to implement.

Response 10.4

The comment asks whether these “draft documents ultimately concluding that destroying the future is just inevitable” due to various factors. The commenter refers to “draft documents”, which is assumed to mean the proposed 2040 MTP/SCS, Santa Cruz RTP and Draft EIR, when taken in context with the comment letter in its entirety. The documents do not contain the general conclusion suggested by the comment. The comment does not raise a specific significant environmental issue, so a more specific response is not possible. However, Impact GHG-4, on pages 284 through 286 of the Draft EIR, was found to be significant and unavoidable because the 2040 MTP/SCS would conflict with the State’s ability to achieve the GHG reductions goals of AB 32, SB 32 and EO-S-3-05. However, the Draft EIR provides mitigation measures to reduce impacts related to GHG emissions and climate change to the extent feasible, per State CEQA Guidelines. Additionally, as described in Impact GHG-3 on pages 282 and 283 of the Draft EIR, implementation of the 2040 MTP/SCS would be consistent with AMBAG’s SB 375 GHG reduction targets of zero percent change in 2020 and five percent increase in 2035. These projections do not account for any additional measures from the current SB 32 Scoping Plan to further reduce passenger vehicle GHG emissions and are, therefore, conservative. As such, the 2040 MTP/SCS would contribute to an overall reduction in per capita passenger vehicle-related GHG emissions. Therefore, revisions to the Draft EIR are not necessary.

Response 10.5

The commenter states that although the California Air Resources Board has yet to adopt regional GHG reduction targets pursuant with SB 32, a long-range transportation plan should act in good faith to achieve the SB 32 reduction goals. Impact GHG-4 on pages 284 through 286 of the Draft EIR discuss the potential for the 2040 MTP/SCS to conflict with the State’s ability to achieve SB 32 2030 GHG reduction goals, and concludes that it does. As explained in Response 7.11, there is no legal requirement that the AMBAG region’s MTP/SCS achieve GHG emission reductions proportional to State reductions called for by SB 32. Nevertheless, as explained in Response 7.11, it is not possible for AMBAG or the RTPAs to develop a feasible alternative to the proposed 2040 MTP/SCS that would achieve theoretical regional reductions in total GHG emission proportional to the State GHG reductions goals of SB 32.

Response 10.6

The commenter states concurrence with and support for the comments on the Draft EIR submitted by the Campaign for Sensible Transportation. This comment is noted. Please refer to the responses to letter 7, which is the comment letter submitted by the Campaign for Sensible Transportation.

Heather Adamson

From: Becky Steinbruner
Sent: Monday, February 05, 2018 4:59 PM
To: Heather Adamson
Cc: Yesenia Parra; Becky Steinbruner
Subject: Comment on AMBAG MTP/SCS Draft 2040 EIR

Dear Ms. Adamson,
I could not find a link on the AMBAG website for direct comment submission regarding the 2040 Moving Monterey Bay Forward Draft 2040 Plan or the MTP/SCS Draft 2040 Plan. I am sending my comments to you and ask that you forward them to the appropriate person. I am copying Ms. Parra and trust that these comments will also be directed to the Santa Cruz Regional Transportation Commission as written communication for consideration at the next Commission meeting.

11.1

Thank you very much for making the loaded flash drives with all reports and documentation available at the January 30 Open House and Public Hearing. I was able to review the material successfully from my home computer system and therefore was not restricted to visiting the public library.

Thank you very much. Please acknowledge that you have received my message.
Sincerely,
Becky Steinbruner

COMMENTS:

Executive Summary:

1) On Page. 4, it states "This is a programmatic EIR" and not intended to address site-specific impacts of individual projects (many of which are not yet defined). However, this Report is a first-tier EIR and will allow individual land use (including mixed-use, residential, transit) projects that are consistent with the Report to proceed as "Opportunity Areas" and qualify for CEQA streamlining. I oppose this method of seemingly reducing the public process on future land use projects within the various jurisdictions covered by this first-tier EIR.

11.2

2) Although the Summary states that "AMBAG has no jurisdiction over land use regulation, the EIR for the MTP/SCS will outline how to require mitigation measures that can be enacted in a manner to ensure CEQA streamlining by implementing agencies for qualifying projects, per SB 375 and other laws." I find this deceitful. AMBAG claims on one hand to have no authority yet determines significance of impacts associated with local projects and sets all mitigation requirements for projects within the jurisdictions. Local government agencies repeatedly cite reports such as this to the public as to why projects must occur in a certain manner or indeed, why they occur at all.

11.3

3) Historic Resources

Santa Cruz County government prefers to demolish historic and cultural resources and cannot be trusted to uphold the levels of mitigation and protection in the MTP/SCS

11.4

4) Water Resources

I want to point out that there is a void in the EIR regarding the San Lorenzo River and Soquel Creek, as well as North Coast streams (pre-1914 water rights)

11.5

I am submitting this now, to meet the 5pm deadline, but will continue in a separate message and ask that it also be included.

Sincerely,
Becky Steinbruner

Letter 11

COMMENTER: Becky Steinbruner

DATE: February 5, 2018

Response 11.1

The commenter notes that they were unable to find a link for comment submission online, and as an alternative, provided their comments via email. The commenter asks that the submission of their comments be acknowledged. This comment does not pertain to the analyses or conclusions of the Draft EIR, and revisions are not required. However, this written response is provided to acknowledge receipt of the commenter's submittal.

Response 11.2

The commenter disapproves that the Draft EIR has been prepared to allow future qualifying projects to streamline their environmental review because it seemingly reduces opportunities for public involvement on future land use projects.

As described on page 35 of the Draft EIR, the Draft EIR has been prepared to allow qualifying projects to streamline their environmental review pursuant to Senate Bill (SB) 375. As described on page 38 of the Draft EIR, SB 375 provides streamlining benefits for Transit Priority Projects (TPP) and certain mixed use projects. TPPs that meet a detailed list of criteria set forth in Public Resources Code (PRC) Section 21155.1 are termed Sustainable Communities Projects and are statutorily exempt from CEQA. A TPP that does not qualify for the statutory exemption may be eligible to comply with CEQA using a Sustainable Communities Environmental Assessment or a TPP EIR, both of which would be subject to a public review and comment period. Therefore, CEQA streamlining would not necessarily reduce public involvement, depending on the type of project and project-specific impacts. Also, CEQA streamlining would not preclude the public notice and hearing requirements established by State planning and zoning law

Nonetheless, the process, protocol, requirements and regulations related to CEQA streamlining established under SB 375 were previously enacted by the State, separate from the proposed 2040 MTP/SCS and Draft EIR. Therefore, this comment pertains to State regulations and does not raise a significant environmental issue related to the Draft EIR.

Response 11.3

The commenter asserts that the Draft EIR mischaracterizes AMBAG's jurisdiction over land use regulations because AMBAG is determining the significance of impacts and mitigation requirements for projects within the jurisdiction of local government agencies in the Draft EIR. The commenter states that local agencies repeatedly cite reports similar to the Draft EIR as to why projects must occur and in what manner.

According to Section 15367 of the *State CEQA Guidelines*, a CEQA lead agency is the public agency that has the principal responsibility for carrying out or approving a project, in this case the 2040 MTP/SCS. As described on page 43 of the Draft EIR, because AMBAG holds the principal responsibility for approving the 2040 MTP/SCS, it is the CEQA lead agency, consistent with *State CEQA Guidelines* Section 15367. CEQA requires that lead agencies consider both mitigation measures they can implement, and mitigation measures that "can and should" be adopted by other

agencies with responsibility and jurisdiction for implementation. See *State CEQA Guidelines* Section 15091(a)(2).

The proposed 2040 MTP/SCS does not authorize or provide entitlement to development or construction projects in the AMBAG region. Rather, the proposed 2040 MTP/SCS is a regional strategy that sets a vision for future development; individual development projects must still be reviewed, analyzed and approved by local governments, which retain full control over local land use authority, pursuant to Government Code 65080(b)(2)(K). As described on pages 80 and 81 of the Draft EIR, the Draft EIR includes proposed mitigation measures to reduce impacts and identifies agencies for implementation of those mitigation measures. AMBAG, TAMC, SBtCOG and SCCRTC have lead agency status; and therefore, authority to enforce mitigation measures for projects for which they have discretionary authority. However, AMBAG, TAMC, SBtCOG and SCCRTC do not have authority to require recommended mitigation measures be implemented by other agencies that would be lead agencies for future land use development projects (e.g., cities and counties). It is the responsibility of the lead agency implementing specific 2040 MTP/SCS projects to conduct environmental review consistent with CEQA, and where applicable, incorporate mitigation measures provided in the Draft EIR. Project-specific environmental documents may adjust the mitigation measures identified in this EIR as necessary to respond to site-specific conditions. AMBAG is required to identify mitigation, but implementation of the mitigation is at the discretion of the lead agency for the project-level environmental review.

Response 11.4

The commenter expresses an opinion that the County of Santa Cruz prefers to demolish historic and cultural resources and cannot be trusted to implement or enforce the mitigation measures pertaining to these resources in the Draft EIR. The comment does not provide evidence to support this opinion, so no further response is required.

However, impacts to historic and cultural resources are addressed in Section 4.5, *Cultural and Historic Resources*, of the Draft EIR. As discussed therein, historic properties and cultural resources are protected by numerous federal and State laws and regulations. These laws and regulations, which are described on pages 214 through 217 of the Draft EIR, include the National Historic Preservation Act of 1966, Department of Transportation Act, and several sections of the California Public Resources Code. Additionally, as described on page 220 of the Draft EIR, Santa Cruz County Municipal Code Title 16 outlines the procedures that must be implemented to determine the significance of cultural and historic resources in the county, and what protection measures must be established depending on their significance. Compliance with laws, regulations and ordinances is mandatory, regardless of potential CEQA mitigation requirements. Additionally, the Draft EIR identifies mitigation measure CR-1, which would require a project-specific assessment of historical resources, and avoidance or redesign of project features to reduce impacts to historical resources, where feasible. Cities and counties in the AMBAG region, including the County of Santa Cruz, “can and should” implement this mitigation measures. However, project-specific environmental documents may adjust the mitigation measures as necessary to respond to site-specific conditions.

Response 11.5

The commenter states that discussion of water resources in the Draft EIR are missing descriptions of pre-1914 water rights associated with the San Lorenzo River and Soquel Creek, as well as other North Coast streams. The comment does not explain how these omissions are relevant to the 2040 MTP/SCS environmental impacts.

Water supply impacts of the 2040 MTP/SCS are discussed at a programmatic level in Draft EIR Impact W-2 on pages 336-338. A discussion or inventory of existing pre-1914 water rights on individual streams is unnecessary to reach the EIR's conclusion that 2040 MTP/SCS water supply impacts, including potentially new or expanded entitlements such as water rights, are significant. However, the San Lorenzo River is described as a major river and watershed in the AMBAG region on page 171 of the Draft EIR. Page 319 of the Draft EIR describes the San Lorenzo River a primary source of water for the City of Santa Cruz.

Heather Adamson

From: Becky Steinbruner [REDACTED]
Sent: Monday, February 05, 2018 6:52 PM
To: Heather Adamson
Cc: Yesenia Parra; Becky Steinbruner
Subject: Re: Comment on AMBAG MTP/SCS Draft 2040 EIR

Dear Ms. Adamson,
I would like to continue with comment regarding the AMBAG MTP/SCS and hope that you will add the material below to the previous comment. I was worried about my comment not being accepted if received after the 5pm deadline today, so sent what I felt was most critical first.

12.1

Thank you very much.
Sincerely,
Becky Steinbruner

CONTINUED COMMENT RE: MTP/SCS DRAFT 2040 EIR
Executive Summary

12.2

5) Discussion of Alternatives: I think it should be stated that "NO Project" would maintain the current AMBAG recommendations for transit and land use, as stated in the 2035 Plan. This Plan was thoroughly vetted and contains tested models for population growth, just as the 2040 Draft Plan supports, but the EIR spends little time discussing the differences between the 2035 Plan and the 2040 Plan, only that the later meets the SB 375 requirements for local jurisdictions to streamline CEQA process, most notably the careful examination of environmental impacts and full public process. I do not consider that an improvement for the public or for overall environmental protection safeguards. Please clearly discuss the differences in the 2035 Plan and 2040 Plan in the Executive Summary.

12.3

12.4

6) Table 2 Mitigations are extensive yet it is stated that "Transportation project implementing agencies **can and should implement these measures where relevant.**" Based on my experiences with Santa Cruz County government in various development projects in the past three years, I feel there is no hope that these mitigations will be followed or enforced if any are adopted. For example, in AES-1(b) "new roadways, extensions and widening of existing roadways **shall avoid removal of existing mature trees.**" Already, multiple significant Cypress trees and locust trees have been removed at the corner of Soquel Drive and State Park Drive by the County, I assume in preparation for adding lanes in the area (which is a mitigation measure associated with the Aptos Village Project). Further, I am concerned that the last of three Significant Heritage Cypress trees on Soquel Drive is destined for removal by the County for Soquel Drive improvements. The other two were cut down to make room for the Santa Cruz Community Foundation building. The remaining tree marks the lands that were once part of the adjacent historic Vincent Castro Rancho Aptos land.

12.5

I recently wrote Ms. Berge at County Public Works to inquire about any future plans in that area that would involve this remaining Significant Heritage Cypress tree. To date, I have received NO response and am even more worried that any day the tree will be cut....that is the pattern that Santa Cruz County local government follows.

12.6

Here is a copy of the messages I have sent to Ms. Berge on the matter:

[Becky Steinbruner](#) [REDACTED]
To
[Christine Berge](#)
CC
[John Presleigh](#) [Steve Wiesner](#) [Dana McRae](#) [Becky Steinbruner](#)

Today at 5:27 PM
Dear Ms. Berge,
I have not received a reply from you regarding my questions about future road improvements near Rancho del Mar Center in Aptos. Please respond.

I am concerned that the Significant Heritage Cypress tree near Chase Bank will be cut down before any members of the public even are aware of work planned for the area. I have copied the text of the Santa Cruz County Significant Tree Ordinance that defines the purpose and intent of the law:

16.34.010 Purpose.

(A) The Board of Supervisors of Santa Cruz County finds that the trees and forest communities located within the County's Coastal Zone are a valuable resource. Removal of significant trees could reduce scenic beauty and the attractiveness of the area to residents and visitors.

(B) The Board of Supervisors further finds that the preservation of significant trees and forest communities on private and public property is necessary to protect and enhance the County's natural beauty, property values, and tourist industry. The enactment of this chapter is necessary to promote the public health, safety, and general welfare of the County, while recognizing individual rights to develop, maintain, and enjoy the use of private property to the fullest possible extent. [Ord. 3443 § 1, 1983; Ord. 3341 § 1, 1982].

Please acknowledge that you have received this message. Thank you.

Sincerely,
Becky Steinbruner

Hide original message

On Tuesday, December 19, 2017 12:13 PM, Becky Steinbruner [REDACTED] wrote:

Dear Ms. Berge,

I wonder if there are any road improvements planned for Soquel Drive near the Rancho del Mar Center in Aptos? There is extensive construction work occurring there, and I wonder if there are any plans that would affect the area roadways?

I noticed that the large heritage cypress trees at the corner of State Park Drive and Soquel Drive were removed; are additional lanes are planned for that intersection? Are there any plans that would necessitate removal of the heritage cypress tree on Soquel Drive near Chase Bank?

I look forward to your response.

Thank you,
Becky Steinbruner

7) Biotic Assessment Mitigations. Again, Santa Cruz County cannot be trusted to enforce any such mitigations when large developers are involved in projects. For example, the Biotic Mitigation the 2040 MTP/SCS Draft EIR recommends that a qualified biologist evaluate the construction area no more than 14 days before the start of construction work for bat and nesting birds. The Santa Cruz County Planning Department allowed the Aptos Village Project developers to submit these evaluations over six months before construction actually began. Bat assessments were critical for the historic Hihn Apple Barn, a known roosting and breeding site. The biologist assessment was conducted during winter months. Construction and Barn relocation did not begin until the following September, with no biotic updates. Most all possible trees within the construction envelope were cut down in January, 2016 but the two Significant Heritage Redwood trees, identified in the Initial Study as roosting and possible nesting site for hawks, were cut down in February, 2016. The Santa Cruz County Planning Department did not enforce the mitigations required.

8) Historic Resources Impacts and Mitigations. The CR-1 mitigation to require "prior to permit issuance, a map is to be prepared of the Area of Potential Effects" and "if there exist structures 45 years of age and older," jurisdictions or developers "must do a survey and evaluation of structures to determine eligibility for State, Federal and Local preservation. The evaluation SHALL be prepared by an architectural historian or historical architect meeting professional qualification standards of the Secretary of Interior and evaluation SHALL comply with CEQA guidelines 15064.5(b)." Santa Cruz County government cannot be trusted to meet these requirements nor to enforce that large developers who present Planned Unit Development permits will indeed follow through with any such mitigation requirements. This has been borne out with the Aptos Village Project and is being repeated now with a similar project in Live Oak involving a significant historic and cultural resource.

12.6

12.7

12.8

The County of Santa Cruz does not have on staff or on contract a qualified architectural historian or historical architect to meet the mitigations recommended in the 2040 MTP/SCS Draft EIR. In fact, the only review of historic and cultural resource projects is by a citizen volunteer Historic Resources Commission, which has repeatedly allowed significant historic structures to be demolished. Recent examples of this are the Aptos Fire House in the Aptos Village Project, and the house at 8057 Valencia Street, an NR-3 structure that was the oldest remaining house in the historic Hihn Subdivision. Here is a link to a YouTube video documenting that "partial demolition" with no preservation whatsoever. <https://www.youtube.com/watch?v=QYz83f5zNyM&feature=youtu.be>

12.9

The Santa Cruz County Planning Department allows over-the-counter issuance of demolition permits for historic structures, and staff time necessary to secure necessary permits is waived. Another historic resource recently granted such a demolition permit was the Soquel Village Millsap House built in 1890. Nothing was preserved. Here is a YouTube video of that demolition:

12.10

<https://vimeo.com/239728570>

9) The Santa Cruz County Planning Department and Department of Public Works has no regard for following mitigations outlined in the Tribal Resources mitigations recommended in the 2040 MTP/SCS Draft EIR. the Aptos Village Project construction envelope boundary includes a documented Archaeologic Site CA-SCR-222/H. However, despite public outcry and protests at the Aptos Village Project site, the County did not hold the Aptos Village LLC developers accountable to following required CR-mitigations for the Project and never required a Native American observer be present. Rarely has there been any qualified archaeologic observer present at the massive earth disturbance areas that have taken place. Further, the County Department of Public Works staff has informed me that their project involving excavation of 1880's railroad beds in Aptos Village and surrounding areas is exempt from any archaeologic observer requirement.

12.11

Clearly, the Santa Cruz County government cannot be trusted to follow any recommended AMBAG mitigation regarding historic and cultural resources.

10) Page 47 of Executive Summary further addresses "streamlining CEQA process." I object to this draft EIR "lays the groundwork for the streamlined review of the qualifying development projects that meet statutory criteria and are consistent with the 2040 MTP/SCS" plans, making them "eligible for **streamlined environmental review pursuant to CEQA under SB 375 and other laws.**" (Section 1.3.1). It appears to me that this draft EIR will in the future waive many public process opportunities within jurisdictional development projects and I am opposed to that obfuscation.

12.12

The Summary repeats this in the discussion of MAP-21 (Moving Ahead for Progress in the 21st Century) enacted in 2012. The MAP-21 criteria for project development places "economic development" as the first priority for evaluating future projects, along with "enabling global competitiveness, productivity and efficiency." "Protecting the environment, improving quality of life, and consistency between State and Local planned growth and economic development patterns" does not appear until the fifth on the list. This is, coupled with the streamlined environmental review required under CEQA, does not adequately protect the natural resources, cultural and historic resources, or the hydrologic resources of the region, especially when it appears that the "streamlining of environmental review requirements" could very likely reduce or minimize opportunities for public input and and minimize government transparency. The Santa Cruz County government has shown an established pattern of ignoring the public in favor of promoting economic development and developer concessions.

12.13

12.14

Stronger wording must be included in all requirements for enforcement of mitigations in all areas of environmental review and further that the public must be given the opportunity to have full and free access to all documentation regarding projects. For any project involving more than one acre mixed-use development proposed, the public should be allowed to vote by yes/no ballot on the project.

12.15

12.16

I will have further comment regarding hydrologic and growth forecasts in the Draft EIR later this evening.

Thank you very much.
Sincerely,
Becky Steinbruner

On Monday, February 5, 2018 4:58 PM, Becky Steinbruner [REDACTED] wrote:

12.17

Dear Ms. Adamson,

I could not find a link on the AMBAG website for direct comment submission regarding the 2040 Moving Monterey Bay Forward Draft 2040 Plan or the MTP/SCS Draft 2040 Plan. I am sending my comments to you and ask that you forward them to the appropriate person. I am copying Ms. Parra and trust that these comments will also be directed to the Santa Cruz Regional Transportation Commission as written communication for consideration at the next Commission meeting.

Thank you very much for making the loaded flash drives with all reports and documentation available at the January 30 Open House and Public Hearing. I was able to review the material successfully from my home computer system and therefore was not restricted to visiting the public library.

Thank you very much. Please acknowledge that you have received my message.

Sincerely,
Becky Steinbruner

COMMENTS:

Executive Summary:

1) On Page. 4, it states "This is a programmatic EIR" and not intended to address site-specific impacts of individual projects (many of which are not yet defined). However, this Report is a first-tier EIR and will allow individual land use (including mixed-use, residential, transit) projects that are consistent with the Report to proceed as "Opportunity Areas" and qualify for CEQA streamlining. I oppose this method of seemingly reducing the public process on future land use projects within the various jurisdictions covered by this first-tier EIR.

2) Although the Summary states that "AMBAG has no jurisdiction over land use regulation, the EIR for the MTP/SCS will outline how to require mitigation measures that can be enacted in a manner to "ensure CEQA streamlining by implementing agencies for qualifying projects, per SB 375 and other laws." I find this deceitful. AMBAG claims on one hand to have no authority yet determines significance of impacts associated with local projects and sets all mitigation requirements for projects within the jurisdictions. Local government agencies repeatedly cite reports such as this to the public as to why projects must occur in a certain manner or indeed, why they occur at all.

3) Historic Resources

Santa Cruz County government prefers to demolish historic and cultural resources and cannot be trusted to uphold the levels of mitigation and protection in the MTP/SCS

4) Water Resources

I want to point out that there is a void in the EIR regarding the San Lorenzo River and Soquel Creek, as well as North Coast streams (pre-1914 water rights)

I am submitting this now, to meet the 5pm deadline, but will continue in a separate message and ask that it also be included.

Sincerely,
Becky Steinbruner

12.17

Letter 12

COMMENTER: Becky Steinbruner

DATE: February 5, 2018

Response 12.1

This comment letter was submitted at 6:52 PM on February 5, 2018, after the close of the public review and comment period for the Draft EIR. Although a response is not required for comments submitted after the closing date, AMBAG has elected to accept and respond to these comments.

Response 12.2

The commenter states that the No Project Alternative analyzed in the Draft EIR should include the continued implementation of the existing 2035 MTP/SCS land use and transit recommendations.

As described on page 46 of the Draft EIR, under both federal and State law, regional transportation planning agencies (RTPA) and metropolitan planning organizations (MPO) must update and replace RTPs and MTP every four years. The existing 2035 MTP/SCS was adopted in 2014 and must be updated and replaced to meet the federal and State legal requirements. The continued implementation of the existing 2035 MTP as an alternative to the proposed 2040 MTP/SCS would not meet legal requirements, and would not represent “what would reasonably be expected to occur in the foreseeable future” (*State CEQA Guidelines* Section 15126.6(e)(2)) if the 2040 MTP/SCS were not approved. Therefore, inclusion of the continued implementation of the 2035 MTP as a No Project Alternative is not warranted. However, the Draft EIR in Section 7.3, starting on page 453, does include the No Project Alternative pursuant to Section 15126.6 of the *State CEQA Guidelines*.

Response 12.3

The commenter observes that the Draft EIR spends little time discussing the differences between the 2035 Plan and the 2040 Plan, and expresses an opinion that CEQA streamlining under SB 375 is not beneficial for environmental protection or public involvement. This comment does not raise a significant environmental issue related to Draft EIR content.

This comment pertains to SB 375 and its associated regulations allowing CEQA streamlining for certain types of qualifying projects. These regulations were previously enacted by the State separate from the proposed 2040 MTP/SCS and Draft EIR. The proposed 2040 MTP/SCS has been prepared consistent with the existing SB 375 regulations. Because this comment expresses an opinion pertaining to existing State regulations, no further response is required.

Response 12.4

The commenter requests that the Executive Summary of the Draft EIR include a clear discussion of the differences between the existing 2035 MTP/SCS and the proposed 2040 MTP/SCS.

The *State CEQA Guidelines* do not require the Executive Summary or any other sections of an EIR to describe the differences between an existing plan and an updated plan, when adoption of such plan constitutes the proposed project and discretionary decision. Additionally, because the 2040 MTP/SCS completely replaces the 2035 MTP/SCS, the Draft EIR analyzes the 2040 MTP/SCS in its entirety, rather than the changes and differences between the 2035 and 2040 MTP/SCS. Therefore, revisions to the Draft EIR are not necessary.

Response 12.5

The commenter expresses an opinion that the County of Santa Cruz will not implement or enforce the mitigation measures contained in the Draft EIR, based on anecdotal observations of a specific past project.

As described on pages 80 and 81 of the Draft EIR, it is the responsibility of the lead agency implementing specific 2040 MTP/SCS projects to conduct environmental review consistent with CEQA, and where applicable, incorporate mitigation measures to reduce potential impacts. Local agencies, such as the County of Santa Cruz, can and should implement mitigation measures contained in the Draft EIR. These agencies may also modify the mitigation measures or identify new mitigation measures in project-specific environmental review documents. Further, implementing agencies are required to adopt a Mitigation Monitoring and Reporting Program to assure that adopted mitigation measures are implemented. See also Response 11.3.

Response 12.6

The commenter expresses concern that as part of improvements to Soquel Drive, the County of Santa Cruz will remove a cypress tree that the commenter notes is a Significant Heritage Tree.

The Draft EIR provides a programmatic assessment of the potential impacts of the proposed 2040 MTP/SCS, focusing on the entire set of projects and programs contained in the proposed 2040 MTP/SCS, which would occur throughout Monterey, San Benito and Santa Cruz counties. Individual land use transportation project impacts are not addressed in detail; rather, the focus of the Draft EIR is on the entire program of projects, in the aggregate. Project-level impacts of the Soquel Drive improvements, including impacts related to a specific tree, would be evaluated in a future project-level environmental review of the Soquel Drive improvements. Therefore, revisions to the Draft EIR to address a single specific tree are not warranted.

Refer to Impact B-4 in Section 4.4, *Biological Resources*, of the Draft EIR for a discussion of program-level impacts related to tree removal. As noted therein, all future transportation projects proposed for implementation under the 2040 MTP/SCS would be required to follow city and county development requirements, including compliance with local policies, ordinances and applicable permitting procedures related to tree protection. 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.

Response 12.7

The commenter expresses an opinion regarding the willingness of the County of Santa Cruz to implement and enforce mitigation measures. The commenter provides an example of a prior instance when they feel the County of Santa Cruz did not implement a mitigation measure. This comment is similar to comment 12.5. Please see Response 12.5.

Response 12.8

The commenter expresses an opinion that the County of Santa Cruz will not enforce mitigation measure CR-1 on page 22 of the Draft EIR. The commenter lists two examples of prior instances that they feel Santa Cruz County did not implement or enforce a mitigation measure similar to CR-1. This comment is similar to comment 12.5. Please see Response 12.5.

Response 12.9

The commenter states that the County of Santa Cruz does not have on staff or on contract a qualified architectural historian or historical architect to meet requirements of the mitigation measure CR-1 in the Draft EIR. The commenter states that in the county, review of historic and cultural projects is conducted by a citizen volunteer group, which has repeatedly allowed the demolition of historic structures.

This comment pertains to the enforceability of mitigation measures provided in the Draft EIR and is similar to comment 12.5. Please see Response 12.5. As noted therein, as well as on page 81 of the Draft EIR, AMBAG does not have the legal authority to require the County of Santa Cruz or other agencies to implement and enforce the mitigation measures contained in the Draft EIR. Therefore, revisions to the Draft EIR are not necessary, consistent with Response 12.5. It is worth noting, however, that if the County of Santa Cruz were to include Mitigation Measure CR-1 on page 222 of the Draft EIR in future project-level environmental review documents, the county could hire or contract with a qualified architectural historian or historical architect at that time. Likewise, project proponents and applicants may also hire a qualified architectural historian or historical architect as the need arises.

Response 12.10

The commenter asserts disapproval that the County of Santa Cruz Planning Department allows over-the-counter issuance of demolition permits for historic structures. The commenter lists a recent example of demolition that the commenter claims was permitted in this manner and provides a website link to a video of the demolition. This comment is similar to comment 12.5. Please see Response 12.5

Further, because this comment expresses an opinion pertaining to the policies or practices of the County of Santa Cruz Planning Department regarding its permitting process, it does not raise a significant environmental issue related to Draft EIR content. Refer also to Response 4.3 for a discussion of the applicability of mitigation measures to cities and counties in the AMBAG region.

Response 12.11

The commenter expresses an opinion regarding the willingness of the County of Santa Cruz to implement and enforce mitigation measures in the Draft EIR pertaining to tribal resources, cultural resources and historic resources. This comment is similar to comment 12.5. Please see Response 12.5.

Response 12.12

The commenter disapproves that the Draft EIR has been prepared to allow future qualifying projects to streamline their environmental review because it seemingly reduces opportunities for public involvement on future land use projects. This comment is similar to comments 11.2 and 12.2. Please see Response 11.2 and Response 12.2. As stated therein, CEQA streamlining for certain types of qualifying projects is allowed under current State regulations, such as SB 375 and its implementing regulations, regardless of the potential adoption of the proposed 2040 MTP/SCS. The proposed 2040 MTP/SCS and the Draft EIR have been prepared consistent with these existing State regulations for the potential streamlining of qualifying projects, as allowable by State regulations. Because this comment expresses an opinion pertaining to existing State regulations, it does not raise a significant environmental issue related to Draft EIR content.

Response 12.13

The commenter states that the Moving Ahead for Progress in the 21st Century Act (MAP-21) prioritizes economic development more than environmental protection and improvements to quality of life. The commenter states that when MAP-21 is coupled with CEQA streamlining, protection of the regions natural, cultural and historic and hydrologic resources would be inadequate. The commenter also expresses an opinion that CEQA streamlining is not beneficial for environmental protection or public involvement. This comment does not raise a significant environmental issue related to Draft EIR content.

The opinions expressed in this comment pertaining to CEQA streamlining and the opportunity for public review is similar to comments 11.2 and 12.2. Please see Response 11.2 and Response 12.2.

As described on page 47 of the Draft EIR, MAP-21 “requires that the MTP planning process provide for consideration of projects and strategies that will:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility of people and for freight;
- 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;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system.”

These considerations are not listed or presented in the Draft EIR in descending priority; nor does MAP-21 place any one consideration of more importance than another. Therefore, although support of the economy appears first on the list of MAP-21 considerations on page 47 of the Draft EIR, it holds no higher level of priority than the other items listed.

Response 12.14

The commenter expresses an opinion that the County of Santa Cruz has a demonstrated pattern of ignoring public input in favor of promoting economic development and developer concessions. Because this comment expresses an opinion pertaining to the priorities of the County of Santa Cruz, it not raise a significant environmental issue related to Draft EIR content , and no further response is necessary.

Response 12.15

The commenter asserts that the Draft EIR must include wording that mitigation measures will be enforced, and that the public must be given access to all documentation regarding the projects.

The Draft EIR’s mitigation measures meet CEQA requirements, for example those established by *State CEQA Guidelines* Section 15126.4. This comment pertains to the enforceability of mitigation measures provided in the Draft EIR and is similar to comment 11.3. Please see Response 11.3. The

comment does not raise any specific concerns with particular mitigation measures, or suggest specific ways in which they might be modified, so a more specific response is not possible.

The Draft EIR does not preclude access to documentation pertaining to future transportation and land use development projects. Therefore, the inclusion of mitigation measures in the Draft EIR that would require public access to such documents is not warranted. Revisions to the Draft EIR are not necessary.

Response 12.16

The commenter expresses an opinion that approval of mixed-use projects larger than one acre should be determined by a ballot vote. This comment pertains to existing regulations and policies regarding project review and approval decision processes, and does not raise a significant environmental issue related to Draft EIR content.

Response 12.17

The commenter provides a duplicate of letter 11. Please see Responses 11.1 through 11.5.

Becky Sternbruner

[REDACTED]@yahoo.com

COMMENT FORM

2040 MTP/SCS Workshops - January 2018

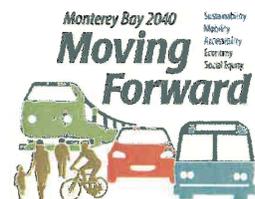
WATER SUPPLY

Santa Cruz County's water supply is not discussed thoroughly or necessarily correctly. Page 319 - "Current water needs exceed available supplies in large parts of each of the four basins of the ~~basin~~^{Region}!" Why then, does the 2040 Plan not address growth impacts on water supply/demand. "Additional water is not available from these sources (aquifers) to support current levels of demand or even modest future growth." "Water demand for the region is projected to EXCEED the projected supply by 591AFY in a normal year!" - why is this not reflected in discussions regarding growth/infill?

13.1

info@ambag.org

www.ambag.org



Letter 13

COMMENTER: Becky Steinbruner

DATE: January 30, 2018

Response 13.1

The commenter states that the Draft EIR acknowledges that groundwater aquifers in Santa Cruz County are in overdraft and do not allow for even future modest growth, and that water demand in the County is projected to exceed the projected supply. The commenter states that although the Draft EIR acknowledges these existing water supply conditions, the document does not thoroughly analyze the impacts on water supply that would result from the growth and infill development envisioned in the 2040 MTP/SCS.

The commenter accurately summarizes the existing conditions of Santa Cruz County's water supply, as described on page 319 of the Draft EIR. Impacts of additional growth and infill development on water demand are evaluated under Impact W-2, which begins on page 336 of the Draft EIR. Specifically, the third paragraph under Impact W-2, on page 336, states that development associated with the land use scenario envisioned in the 2040 MTP/SCS may also impact water supplies, requiring additional water for mixed use development and infill development. The development envisioned by the 2040 land use scenario would increase the demand on the region's water supply as a result of AMBAG's regional growth forecast. Therefore, new or expanded water supplies, entitlements, or facilities may be required, and this impact was found to be significant and unavoidable in the Draft EIR. Revisions to the Draft EIR are not necessary because existing water supply and demand conditions are described accurately, and potential impacts of growth and infill development envisioned under the proposed 2040 MTP/SCS are evaluated under Impact W-2.

LETTER 14

Verbal Comment from Draft EIR Public Hearing

COMMENTER: Lee Otter

DATE: January 30, 2018

Thank you Mr. Supervisor. 480 pages, Rincon did quite a job here, so this is pretty impressive challenge to us reviews. The first 60 pages or so are largely focused on mitigation measures for our regional transportation system and so I want to zero in on that and more particularly things that present a Coastal Act nexus, and maybe right at the top of the heap there is the issue of global climate change and sea level rise adaptation. This is something that we just got to take into account if we are looking down the road to 2040 and beyond, because whatever pattern I believe is in place by 2040 will have a lot to do with the pattern that exists for the rest of the century and we can see this in the existing pattern of roads, railways, bikeways and so forth that are in the central coast already. So, our agency will be submitting written comments later on so I will certainly not tire you out with all of those. But, I did want to first put in a plug for the continuity of the Monterey Bay Scenic Trail, which is part of the California Coastal Trail System and relate to you how the sea level rise adaptation needs to account for that. So, we need to anticipate impacts for regional transportation systems, that is roads, rail, bikeway, pedestrian pathways and the draft MTP does, but I believe it stays at 60,000 feet when it should be down around 30,000 feet and so there some addition detail might be a good idea. And this is because we believe the policies and mitigation measures should provide for periodic retreat and realignment in response to shoreline erosion and flooding. And planned retreat might be more practical for low capital investment projects like segments of the coastal trail that can be feasibly pulled back from the edge of the bluff as the need dictates. In contrast ridged structures like bridges and so forth are high investment and often cannot be feasibly or progressively retreated and they should be I would like to see the MTP call for the design so they are substantially elevated higher than is needed right now but will be needed down the line in the future. And we should error on the side of caution that is, provide lots of room for shoreline flooding shoreline retreat in so forth. We will be advocating that in our written comments and I will close with that.

14.1

14.2

Public Hearing Comment: Comment 14

COMMENTER: Lee Otter, California Coastal Commission

DATE: January 30, 2018

Response 14.1

The commenter states that accounting for climate change and sea level rise is important, and that the Coastal Commission will submit written comments on the Draft EIR pertaining to these issues. This comment is noted and does not require further response or revisions to the Draft EIR because it does not raise a significant environmental issue related to EIR content. The Coastal Commission's written comments are included herein as Letter 1. Refer to Responses 1.1 through 1.9 for responses to these written comments.

Response 14.2

The commenter states that the continuity of the Monterey Bay Sanctuary Scenic Trail (MBSST) needs to account for sea level rise, and that consideration of future sea level rise should be more detailed in the 2040 MTP/SCS. The commenter states that policies and mitigation measures in the 2040 MTP/SCS should provide for periodic realignment of low-investment projects, like segments of the MBSST. The commenter states that the 2040 MTP/SCS should design high-investment projects, such as bridges, to account for sea level rise, shoreline flooding, and shoreline retreat.

This comment pertains to the 2040 MTP/SCS and revisions to the Draft EIR are not necessary. However, the commenter's use of the term "mitigation measures" may suggest that they are also referring to the Draft EIR, in addition to the 2040 MTP/SCS. Therefore, the following response is provided to address the level of detail and analysis in the Draft EIR.

The Draft EIR provides a programmatic assessment of the potential impacts of the 2040 MTP/SCS, focusing on the entire set of projects and programs contained therein, which would occur throughout Monterey, San Benito and Santa Cruz counties. Individual transportation project impacts are not addressed in detail; rather, the focus of the Draft EIR is on the entire program of projects, in the aggregate. Project-level impacts and site-specific impacts related to the MBSST would be evaluated in a future project-level environmental review of the MBSST project. Therefore, revisions to the Draft EIR are not necessary. However, Impact GHG-5 on pages 286 through 288 of the Draft EIR addresses impacts related to sea level rise and coastal flooding. Mitigation measure GHG-5 on page 287 of the Draft EIR provides measures to reduce potential impacts related to sea level rise and coastal flooding.

LETTER 15

Verbal Comment from Draft EIR Public Hearing

COMMENTER: Pauline Seals, Santa Cruz Climate Action Network

DATE: January 30, 2018

I am Pauline Seals, Santa Cruz Climate Action Network. First of all, I want thank you for doing this, and I want to thank you for all the work on bikes and all that other stuff. Yeah, I didn't have time to read everything, but I did go to the Greenhouse Gas Section. The one thing I noticed is that you are using out of date models, that is to say the IPCC most recent thing is not that recent at all. It was published in 2013, based on data from 2011, because of the time it takes to put it together. There is a much more recent document, a U.S. document called NCA 4, which has more like 6 feet by 2100 or even sooner, of sea level rise. This needs to be taken into account. In the Green House Gas section which I went through briefly, there is a lot of reference to per capita. Well, you know Per Capita doesn't count, it is the whole area. What the whole area is doing is the only thing that counts. And the conclusion was the whole plan would conflict with the state's ability to achieve between SB 32 greenhouse gas reduction targets. I'm pointing at the document, not making this up. So, even with that, there will also be newer climate models being put into them, and it is not possible. And we have been a giant Greenhouse Gas Emitter, mostly through transportation. So, I look at this and I go \$3 billion for roads \$2.6 for transportation. Forget that, \$.5 billion or less for roads \$5 billion for transportation. Because then it wouldn't be just going to maintenance then you could really revolutionize and create a world-class transportation system or at least get started. Such as if you have ever traveled around the cities in Europe, or even the country side in Europe. They are so far ahead of us, it is sad. Thank you for the chance to speak.

15.1

15.2

15.3

15.4

Public Hearing Comment: Comment 15

COMMENTER: Pauline Seals, Santa Cruz Climate Action Network

DATE: January 30, 2018

Response 15.1

The commenter states that the GHG discussion in the Draft EIR uses an outdated information source published by the Intergovernmental Panel on Climate Change (IPCC) in 2013. The commenter states that a more recent document titled “NCA 4” should be used, which portrays higher sea level rise than the 2013 IPCC document.

The commenter appears to be referencing page 269 of the Draft EIR, which states “The most recent IPCC report (2013) predicts a mean sea level rise of 11 to 38 inches by 2100.” The 2013 report referenced in this excerpt from the Draft EIR is the most recent report published by IPCC pertaining to quantification of forecasted sea level rise. Therefore, the information source is not outdated.

The NCA 4 document that the commenter refers to is the *Climate Science Special Report: Fourth National Climate Assessment, Volume I*, published in 2017 by the United States Global Change Research Program.¹³ As stated in the 2017 document, “No single physical model is capable of accurately representing all of the major processes contributing to GMSL [global mean sea level] and regional/local RSL [regional sea level] rise.” Therefore, the 2017 document provides a range of potential sea level rise for the year 2100, with as little as 1 foot (12 inches) or as much as 8.2 feet (98.4 inches) by 2100. The values reported in the 2013 IPCC report (11 to 38 inches) generally fall within the range of the 2017 document, although the upper range of the 2017 document is substantially greater than 38 inches.

CEQA Guidelines Section 15151 allows for disagreement among experts when assessing environmental impacts of a proposed project. CEQA case law gives lead agencies considerable discretion in the choice among differing expert opinions and studies, such as projected sea level rise studies cited and used for the analysis in the 2040 MTP/SCS Draft EIR. Generally see CEB, Practice under the California Environmental Quality Act (2d. Ed.), Section 1.35 A lead agency may accept the environmental conclusions reached by the experts that prepared the EIR even though others may disagree with the underlying data, analysis or conclusions (see *Laurel Heights Improvement Ass’n v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 408). Discrepancies in results arising from different methods for assessing environmental issues do not undermine the validity of the EIR analysis as long as a reasonable explanation supporting the EIR analysis is provided (see *Planning & Conserv. League v. Castaic Lake Water Agency* (2009) 180 Cal.App.4th 210, 243). The existence of differing opinions arising from the same pool of information is not a basis for finding the EIR to be inadequate; when approving an EIR, an agency need not correctly resolve a dispute among experts about the accuracy of the EIR’s environmental forecasts (see *Eureka Citizens for Responsible Gov’t v. City of Eureka* (2007) 147 Cal.App.4th 357 and *California Oak Found. v. City of Santa Clarita* (2005) 133 Cal.App.4th 1219, 1243). Therefore, consistent with CEQA case law, although the 2017 document forecasts a potential higher sea level elevation in 2100 compared to the 2013 IPCC report, AMBAG is not required to resolve the dispute between the two reports.

¹³ United States Global Change Research Program. 2017: *Climate Science Special Report: Fourth National Climate Assessment, Volume I* [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA.

Additionally, the forecasted sea level elevations in the 2017 document would not change the analysis in the Draft EIR. The Draft EIR provides a programmatic assessment of the potential impacts of the proposed 2040 MTP/SCS, focusing on the entire set of projects and programs contained in the proposed 2040 MTP/SCS, which would occur throughout Monterey, San Benito and Santa Cruz counties. Individual land use development and transportation project impacts are not addressed in detail; rather, the focus of the Draft EIR is on the entire program of projects, in the aggregate. Project-level and site-specific impacts related to sea level rise would be evaluated in a future project-level environmental review. These future environmental reviews may use updated data and information pertaining to sea level rise compared to what is used in the Draft EIR.

Response 15.2

The commenter expresses a preference for consideration of total GHG emissions rather than per capita GHG emissions.

As described on page 46 of the Draft EIR, The Sustainable Communities Strategy and Climate Protection Act, Senate Bill (SB) 375 and the California Air Resources Board (CARB) require consideration of per capita GHG emissions. Therefore, to demonstrate compliance with CARB reduction targets, the Draft EIR presents GHG emissions on a per capita basis. However, the Draft EIR also includes total GHG emissions on a regional basis, in addition to a per capita basis. Specifically, Table 32, on page 282 of the Draft EIR, presents GHG emissions for the entire region. As shown in Table 32, regional emissions in 2040 with the 2040 MTP/SCS would be 4,593,410 metric tons carbon dioxide equivalent per year (MT CO₂e/year).

Response 15.3

The commenter correctly summarizes conclusions of the Draft EIR pertaining to conflicts with the State's ability to achieve SB 32 GHG reduction goals. Because the commenter does not specifically question the analysis supporting this finding, further response is not required. It should be noted, however, that implementation of the 2040 MTP/SCS would reduce annual GHG emissions in 2040 compared to emissions that would occur without its implementation. As shown on Table 32 on page 282 of the Draft EIR, in 2040, GHG emissions would be reduced by 6,787 MT CO₂e/year with implementation of the 2040 MTP/SCS when compared to emissions without its implementation.

Response 15.4

The commenter states AMBAG should invest more in transportation and less on roads, which would allow for a world-class transportation system comparable to Europe. This comment pertains to the 2040 MTP/SCS. This comment does not raise significant environmental issues related to the analysis and findings of the Draft EIR, and no further response is required.

LETTER 16

Verbal Comment from Draft EIR Public Hearing

COMMENTER: Becky Steinbruner

DATE: January 30, 2018

Thank you good evening my name is Becky Steinbruner and I am a resident of Aptos. And I guess I am a little confused here, there seem that there are different studies that are being discussed. I thought that there was something called Moving Monterey Bay Forward Draft 2040, is that the same as this? Because it seems there is some sort of a different document back there on the table. Online there are appendices and discussions about road modeling. So, I just wanted to put that out there because to me it seems a little confusing as to what we are really discussing here and what else is out there. There are a lot of transportation studies and things that I am hearing that in terms of Greenhouse Gasses the numbers being discusses are not even the same and cannot be the same because of different state and federal guidelines. So it is just this process is just very confusing for people and I really tried to do my homework. I want to just point out that in the document on the back table, it says that this plan is consistent with the Santa Cruz County General plan, that plan has not been updated since 1994, and so I have some questions about the congruity of that. And under the growth inducing impacts section 6.1.1 it says that the AMBAG Region is going to increase from 767,670 to by 2040 883,300 and yet in the version online that I read of the growth modeling it actually predicted a decrease in population and it didn't explain that but it did go into detail in the document that several sets of data had been put in and compared to other models and it looked like population was going to go down. So that is not consistent with what is being reported in section 6.1.1 of this report on the back table. I also have a lot of concerns about water resources in the area and I want to point out that the document on the table does not even mention the San Lorenzo river valley watershed or the Soquel Creek Watershed those are two critical watersheds for Santa Cruz County. The report only talks about Pajaro and I know this regional report and Pajaro river does cover a big area but I think the report is negligent on considering that. And I think I am out of time and I will submit a written comment.

16.1

16.2

16.3

16.4

16.5

Public Hearing Comment: Comment 16

COMMENTER: Becky Steinbruner

DATE: January 30, 2018

Response 16.1

This comment pertains to the title used for 2040 MTP/SCS and discrepancies between the regulatory requirements of State and federal agencies regarding GHG emissions. This comment does not raise a significant environmental issue related to Draft EIR content. However, please refer to pages 270 through 275 of the Draft EIR for a summary of the federal and State regulations pertaining to GHG emissions. Additionally, for clarification purposes, “Moving Monterey Bay Forward Draft 2040” is the same document as the “2040 MTP/SCS,” which is the terminology used throughout the Draft EIR. The public hearing on January 30, 2018, was on both the 2040 MTP/SCS and the Draft EIR.

Response 16.2

The commenter states that the Draft EIR describes the 2040 MTP/SCS as being consistent with the Santa Cruz County General Plan, and has questions about congruity of this finding because the General Plan was last updated in 1994.

The Draft EIR considers the adopted Santa Cruz County General Plan; the adoption date of this document is outside AMBAG’s control. While a General Plan Update is currently underway, the document has not been released or adopted. Therefore, consideration of consistency with the update would not be feasible or appropriate in the Draft EIR.

Additionally, the commenter does not provide specific comments related to the consistency of the 2040 MTP/SCS with the Santa Cruz County General Plan. Therefore, specific response it is not possible. For informative purposes, consistency of the 2040 MTP/SCS with the Santa Cruz County General Plan is discussed on pages 440 and 441 of the Draft EIR. As described therein, the Santa Cruz County General Plan encourages new development within existing urban areas while preserving agricultural land and natural resources in the rural areas. The General Plan recognizes the various types of commute behavior and includes policies to provide adequate housing opportunities and encourage an employment base that supports a diversity of income levels. The 2040 MTP/SCS is generally consistent with the broad goals and policies of the Santa Cruz County General Plan in that both clearly support focused development within existing urban boundaries to preserve natural habitats and agricultural resources. Further, both documents address the importance of maintaining a job/housing balance by, in part, diversifying transportation options as well as supporting efforts focused on reducing regional traffic congestion.

Response 16.3

The commenter states that Section 6.1.1 of the Draft EIR describes population increasing from 767,670 to 883,300 by 2040. The commenter states that this is inconsistent with a growth model obtained online that predicted a decrease in population.

The commenter does not specify if an “online version” is the electronic version of the Draft EIR available for download on the AMBAG website, or if is an online version of some other document or study. Section 6.1.1, on page 447 of the Draft EIR, states that “According to the AMBAG Draft 2018

Regional Growth Forecast, population in the AMBAG region is projected to grow from 762,676 in 2015 to 883,300 by 2040...” It is possible the commenter was viewing an older version of AMBAG’s growth forecast, but as described above, the 2018 forecast projects an increase in population. The electronic version of the Draft EIR on the website and print copies of the Draft EIR circulated for public review are identical, including page 447 of the Draft EIR. Without more specificity regarding what online document the commenter is referring to, no additional explanation or response to this comment is possible.

Response 16.4

The commenter expresses concern over water resources and states that the Draft EIR does not mention the San Lorenzo River watershed or the Soquel Creek watershed.

The San Lorenzo River is described as a major river and watershed in the AMBAG region on page 171 of the Draft EIR. Page 319 of the Draft EIR describes the San Lorenzo River a primary source of water for the City of Santa Cruz. Although Soquel Creek is not specifically described in the Draft EIR, the analysis of water quality and hydrology in the Draft EIR considers all waters and watersheds in Santa Cruz, San Benito and Monterey counties. It is unnecessary to list every watershed and creek in the region in order to provide a programmatic analysis of potential impacts to water quality and water resources. Therefore, revisions to the Draft EIR are not necessary.

Response 16.5

The commenter states that they will submit a written comment. Please refer to Letters 11, 12 and 13 for the written comments. Responses are provided to the letters, respectively, in Responses 11.1 through 11.5, Responses 12.1 through 12.17 and Response 13.1.

1.3 Other Revisions to the Draft EIR

This section presents other specific changes to the text of the Draft EIR that have been made to clarify information presented in the Draft EIR or to update information presented in the Draft EIR based on new regulatory or policy guidance since preparation of the Draft EIR. The changes in this section are in addition to the changes and revisions to the Draft EIR that have been made in response to the comments received on the Draft EIR, as presented in Section 1.2, *Comments and Responses*. In no case do these revisions represent “significant new information” that would trigger Draft EIR recirculation pursuant to State CEQA Guidelines Section 15088.5. For example, they do not disclose a new or substantially worsened significant environmental impact, or a new feasible mitigation measure or alternative not proposed for adoption.

Where revisions to the main text are called for, the page and paragraph are set forth, followed by the appropriate revision. Added text is indicated with underlined text. Text deleted from the Draft EIR is shown in ~~strike through~~. Page numbers correspond to the page numbers of the Draft EIR.

The Table of Contents of the Draft EIR has been augmented as follows:

Appendices

Appendix A Notice of Preparation and NOP Response Letters

Appendix B 2040 MTP/SCS Transportation Project List

Appendix C Performance Metric Data

Appendix D Special Status Species

Appendix E AB 52 Consultation

Appendix F Response to Comments

Page 1 of the Draft has been revised to include the following changes:

The 2040 Association of Monterey Bay Area Governments (AMBAG) ~~Draft~~ Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS) is a long-range planning document required by both State and Federal law that is an update of the 2035 AMBAG MTP/SCS. Reference to the 2040 MTP/SCS throughout this ~~Draft EIR~~ Environmental Impact Report (EIR) refers to the ~~Draft~~ 2040 MTP/SCS. It contains a compilation of the projects proposed in the ~~Draft~~ Regional Transportation Plans (RTPs) prepared by the Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG) and the Santa Cruz County Regional Transportation Commission (SCCRTC) as the state-designated Regional Transportation Planning Agencies (RTPAs) for Monterey, San Benito and Santa Cruz Counties, respectively. Transportation system improvement projects identified in the 2040 MTP/SCS include: active transportation projects, highway and local roadway projects, transportation demand management (TDM) projects, transit projects and other projects, such as airport operations, wildlife corridor crossing and administration and planning. A full list of transportation projects is provided in Appendix B. A copy of the ~~Draft~~ 2040 MTP/SCS is available for review at AMBAG offices (24580 Silver Cloud Court, Monterey, California, 93940), the TAMC offices (55 Plaza Circle B, Salinas, California 93901), the SBtCOG offices (330 Tres Pinos Road, Suite C7, Hollister, California 95023), the SCCRTC offices (1523 Pacific Avenue, Santa Cruz, California 95060), and on the AMBAG website: <http://www.ambag.org/>.

Page 2 of the Draft EIR has revised to include the following changes:

Issues to Resolve

CEQA Guidelines Section 15123(b)(3) requires that an EIR contain a discussion of issues to be resolved including the choice among 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 AMBAG and the RTPAs do 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 the Draft 2040 MTP/SCS or an alternative.

Page 9 of the Draft EIR has been revised to include the following changes:

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.

Section 1, *Introduction*, on Page 35 of the Draft EIR has been revised to include the following changes:

Section 21000 et seq. of the California Public Resources Code, commonly referred to as the California Environmental Quality Act of 1970 (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 AMBAG, other agencies and the general public in their consideration and evaluation of the environmental consequences of implementing of the proposed 2040 MTP/SCS and RTPs for the counties of Monterey, San Benito and Santa Cruz.

This Final EIR includes Responses to Comments on the Draft EIR (Appendix F) and the text of the Draft EIR, revised based on responses to comments and other information. New text added or edited from the Draft EIR is shown in underline format. In instances where changes to the document involve changed facts or information, the deleted text has been left in strikethrough format.

Section 1.4, *EIR Content and Format*, on page 41 of the Draft EIR has been revised to include the following changes:

This EIR has been organized into eight sections and six appendices. These include:

- 1.0 **Introduction.** Provides the project background, description of the type of environmental document and CEQA streamlining opportunities, and information about the EIR content and format.
- 2.0 **Project Description.** Presents and discusses the project objectives, project location and specific project characteristics.
- 3.0 **Environmental Setting and Impact Analysis Approach.** Provides a description of the existing physical setting of the AMBAG region, including a description of the regional transportation system, and discusses the EIR baseline and approach to direct and cumulative analyses.
- 4.0 **Analysis of Environmental Issues.** Describes existing conditions found in the project area and assesses environmental impacts that may be generated by implementing the proposed project. These 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.
- 5.0 **MTP Consistency with Other Plans Analysis.** Describes consistency with other local and regional plans.
- 6.0 **Other Statutory Considerations.** Identifies growth inducing impacts that may result from implementation of the proposed project, as well as long-term effects of the project and significant irreversible environmental changes.
- 7.0 **Alternatives.** Describes alternatives to the proposed project, and compares their impacts to the proposed projects.
- 8.0 **References and 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.

Appendices

A	<u>Notice of Preparation and NOP Response Letters</u>
B	<u>2040 MTP/SCS Transportation Project List</u>
C	<u>Performance Metric Data</u>
D	<u>Special Status Species</u>
E	<u>AB 52 Consultation</u>
F	<u>Response to Comments</u>

Page 42 of the Draft EIR has been revised to include the following changes:

The CEQA process for this EIR is as follows:

1. **Notice of Preparation (NOP) and Initial Study.** AMBAG, following CEQA Guidelines section 15082(a), submitted a NOP to the State Clearinghouse which publicly released it on December ~~21~~ 15, 2015 for an extended review period that ended on January 29, 2016.
2. **Draft EIR Prepared.** ~~This~~ The Draft EIR contains the following required elements: 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) and Public Review.** AMBAG, as the lead agency, has filed an NOC with the State Clearinghouse noticing agencies and the public that it has completed a Draft EIR and prepared a Public Notice of Availability of this Draft EIR as required under CEQA. As the lead agency, AMBAG is soliciting input from other agencies and the public, and respond in writing to all comments received (Public Resources Code Sections 21104 and 21253). The public review period will be a minimum of 45 days.
4. **Final EIR.** ~~AMBAG will prepare a~~ The Final EIR that includes: 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, AMBAG will 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; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project (*CEQA Guidelines* Section 15090).
6. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, AMBAG will 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. (*CEQA Guidelines* Section 15092).
7. **Mitigation Monitoring Reporting Program.** ~~AMBAG will~~ If AMBAG is required to make findings on significant effects identified in the EIR, it shall adopt a reporting or monitoring

program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

8. **Lead Agency Project Decision.** AMBAG, as 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 a statement of overriding considerations is adopted (*CEQA Guidelines* Sections 15092).
9. **Notice of Determination (NOD).** AMBAG will file a NOD after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). AMBAG will file the NOD with the applicable County Clerks to be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD will start 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

Page 43 of the Draft EIR has been revised to include the following changes:

1.6 Lead and Responsible Agencies

The *CEQA Guidelines* define lead and responsible and trustee agencies. A lead agency is the public agency with principal responsibility for carrying out or approving a project; the lead agency prepares the CEQA document (*CEQA Guidelines* Section 15367). A responsible agency is an agency other than the lead agency with responsibility for carrying out or approving a project, and uses the lead agency's CEQA document in its decision-making (*CEQA Guidelines* Section 15381).

AMBAG is the lead agency for the 2040 MTP/SCS because it holds principal responsibility for approving the 2040 MTP/SCS. TAMC, SBtCOG and SCCRTC, are responsible agencies for the 2040 MTP/SCS and lead agencies for adopting their own RTPs. AMBAG is also the lead agency, and TAMC, SBtCOG and SCCRTC are each responsible agencies, for the County RTP EIRs. Project sponsors for individual projects analyzed in this program EIR may include: TAMC, SBtCOG and SCCRTC; Caltrans; Monterey, San Benito and Santa Cruz Counties; cities within the AMBAG region; transit agencies; and other project sponsors who may implement any of the projects listed in the 2040 MTP/SCS. These agencies are considered responsible agencies for the 2040 MTP/SCS, but may be lead agencies for individual transportation or land use projects.

Page 52 of the Draft EIR has been revised to include the following changes:

The 2040 MTP/SCS plans how the AMBAG region will meet its transportation needs for the period from 2015 to 2040, considering existing and projected future land use patterns as well as forecast population and job growth. The 2040 MTP/SCS estimates approximately \$9.97 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; aviation, as well as transportation demand management measures (TDM) and transportation systems management (TSM).

Page 54 of the Draft EIR has been revised to include the following changes:

- *Appendices.* The appendices include the following:

- A. Regional Growth Forecast
- B. Financial Plan
- C. Project List
- D. Public Participation and Consultation
- E. SCS Scenario Planning Documentation
- F. Travel Demand Model and Land Use Model Documentation
- G. Performance Measures
- H. Monterey Bay Area Complete Streets Guidebook
- I. SCS Maps
- J. MTP Checklist
- K. Comments and Responses on the Draft 2040 MTP/SCS

Page 57 of the Draft EIR has been revised to include the following changes:

One of the primary goals of the 2040 MTP/SCS is to reduce per capita greenhouse gas emissions over the next 25 years. A strategic transportation system expansion would provide the region with mobility and accessibility by targeting expansion around bus transit, rail, key roadways and active transportation. The 2040 MTP/SCS provides over \$5.7~~6~~ billion for highway, local streets and roads investments which include corridor improvements, roadway widenings and extensions, new roads and maintenance/repair. Another focus of the 2040 MTP/SCS is providing \$3 billion for a long term public transit network that meets the regions mobility needs. The remaining transit funding is separated between maintenance and operation costs, as well as adding new transit vehicles and infrastructure. The 2040 MTP/SCS is focused on active transportation projects, which refers to bicycle and pedestrian facilities. Since one of the primary goals of the 2040 MTP/SCS is to reduce greenhouse gas emissions, active transportation plays a large role in reducing congestion, increasing health and overall quality of life. The 2040 MTP/SCS intends to make active transportation more attractive and feasible for all different users in the region, and the 2040 MTP/SCS has provided nearly \$640~~3~~ million for active transportation projects. These investments and improvements include addition of bike lanes, roadway widenings and extensions, sidewalks and trails. These efforts are in direct accordance with the Complete Streets Act of 2008 (AB 1358). The 2040 MTP/SCS also considers airport improvements which would improve regional and state system capacity and safety.

The transportation network is crucial for the Central Coast as the network provides the access and means of travel for the agricultural products grown in the region. The health of all the major roads, highways and railways are vital to the success and safety of the region. Lastly, the 2040 MTP/SCS address transportation demand management (TDM) and traffic systems management (TSM) which intend to improve the efficiency and effectiveness of the network. The strategies employed by these management programs would reduce vehicular demand and congestion, which is directly in line with the goal of reducing greenhouse gas emissions. The 2040 MTP/SCS allocates nearly \$42 million to TDM strategies which include vanpool and telecommuting. The 2040 MTP/SCS allocates more than \$26 million to TSM projects and programs which include, but are not limited to, autonomous vehicles, shared vehicles, incident management, ramp metering and traffic signal synchronization.

The 2040 MTP/SCS transportation projects are further described in Section 2.4, below. A complete discussion of 2040 MTP/SCS transportation investments and plans is provided in Chapter 2 of the 2040 MTP/SCS.

The 2040 MTP/SCS includes Financially Constrained projects which identify the programs and projects proposed by RTPAs, local and county government, public transit operators and airport operators in the tri-County region for which funding will likely be available. These include a full range of programs and projects intended to improve roadway capacity/vehicular flow, enhance transit operations, improve safety, support transportation planning and travel demand management, promote high occupancy vehicle use, encourage active transportation travel and improve multimodal and intermodal facilities. Specifically, the 2040 MTP/SCS includes the following types of transportation system improvement projects:

- **Active Transportation Projects.** The 2040 MTP/SCS includes projects that would complete Class I bike trails, ~~and Class II bike lanes~~ and Class III bike routes, as well as sidewalk gap closures, trail access improvements, pedestrian bridges, bicycle and pedestrian treatments such as signal priority and amenities and related improvements to facilitate the use of transportation infrastructure by pedestrians and bicyclists such as traffic calming measures.

Page 58 and 59 of the Draft EIR have been revised to include the following changes:

The financial forecasts in the 2040 MTP/SCS are based on reasonably foreseeable revenues. The projections are calculated using a combination of historical averages, current trends and/or state and federal actions. Actual revenues will vary from year to year. The financial projections and estimation methods used in the 2040 MTP/SCS were developed collectively with transportation planning agencies in the Monterey Bay Area including AMBAG, TAMC, SCCRTC, SBtCOG, Caltrans, Monterey-Salinas Transit (MST), the Santa Cruz County Metro Transit District, the three counties and 18 cities.

The Financial Plan identifies major federal, state and regional/local funding sources anticipated to be available during the life of the 2040 MTP/SCS. The majority of federal revenue is projected to come from the Urbanized Area Formulation Program, federal transit capital programs and miscellaneous federal highway revenue sources. State revenue sources include the State Highways Operation and Protection Program (SHOPP), State Transportation Improvement Program (STIP) and the Transportation Alternatives Program (TAP). Local revenue sources include the Transportation Development Act (TDA)/Local Transportation Fund (LTF), gas tax, transit fares and developer fees. In November 2016, TAMC and SCCRTC passed local sales tax measures, Measure X and Measure D respectively, to fund transportation projects of all modes in their respected counties. This significant local investment in transportation will account for a stable funding source for local road maintenance, transit operations, active transportation investments and other congestion reducing projects. Together, these measures are expected to generate roughly \$860 million over 22 years.

Total revenue is projected to be \$9.97 billion. A complete discussion of the 2040 MTP/SCS financial plan is provided in Chapter 3 of the 2040 MTP/SCS.

Page 61 of the Draft EIR has been revised to include the following changes:

- **Active Transportation.** These projects are focused on improvements designed to benefit pedestrians and bicyclists. They include the construction of Class I-III bicycle lanes, sidewalk gap closures, ADA accessible ramps and sidewalks, pedestrian bridges, widening shoulders,

maintenance, rehabilitation and repair projects, installation of traffic calming devices, roundabouts, new lighting and trail access. Within Monterey County, specific projects include the Fort Ord Regional Trail and Greenway (FORTAG), which would include approximately 30 miles of bike and pedestrian trails through the former Fort Ord; citywide intersection ADA upgrades in the City of Monterey; and sidewalk repairs at 6,000 locations. Within San Benito County, specific projects include construction of a portion of the San Benito River Recreational Trail and installation of bike lanes along Santa Ana Road, Buena Vista Road, North Street, Central Avenue, Airline Highway, Meridian Street and Sunnyslope Road. In Santa Cruz County, specific projects include several segments of the Monterey Bay Sanctuary Scenic Trail Network and installation of bicycle/pedestrian bridges over Branciforte Creek and Highway 1 at Mar Vista Drive. The Monterey Bay Sanctuary Scenic Trail (MBSST) is planned to be a multiuse transportation, recreation and interpretive pathway that links existing and newly established trail segments into a continuous coastal trail around the Monterey Bay. The MBSST Final Master Plan and Environmental Impact Report was adopted by SCCRTC in November 2013.

- **Highway Improvements.** These projects are generally focused on U.S. 101 and the state highway system throughout each of the three counties. They include the development of new infrastructure such as new interchanges, new and widened roadway lanes, ramp improvements, new overcrossings, roundabouts and other modifications designed to improve safety, traffic flow or ~~and~~ capacity. Specific projects in Monterey County include the State Routes (SR) 156 Corridor Widening Project, construction of a new interchange on U.S. 101 at Harris Road and construction of frontage roads along U.S. 101 in South County. In San Benito County, specific projects include a new interchange at U.S. 101 and SR 25 in Santa Clara County; the SR 25 Corridor Improvement Project; and construction of a four-lane expressway south of existing SR 156. Specific projects in Santa Cruz County include the construction of auxiliary lanes on Highway 1 from State Park Drive to Park Avenue, from Park Avenue to Bay Avenue/Porter Street, from 41st Avenue to Soquel Avenue and from San Andreas Road/Larkin Valley Road to Freedom Boulevard.

Page 62 of the Draft EIR has been revised to include the following changes:

- **Rail Projects.** The only regular rail passenger train currently operating in the region is provided by Amtrak, the Coast Starlight. It connects Los Angeles to Seattle and stops in Salinas, the only Amtrak rail station in the region. This route operates one train in each direction daily. In the future, Amtrak plans to expand service by offering the Coast Starlight service with stations in Soledad and King City. There is also bus service in the region for connections to the Capital Corridor route between San Jose and Sacramento. TAMC is working to extend the Capital Corridor commuter rail service to Salinas. In addition, SCCRTC is evaluating rail service and other uses on the Santa Cruz Branch Line as part of the Unified Corridor Investment Study.
- **Other Projects.** These projects are primarily focused on the construction of various improvements at public airports within the study area. These include the construction of a new terminal building, roads and surface parking at the Monterey Airport and taxiway lighting and signage improvements at the Marina Airport in Monterey County; operations and maintenance at the Hollister Airport in San Benito County; and new hangars and other improvements at the Watsonville Airport in Santa Cruz County. Other projects in San Benito County include COG planning and administration. Other projects in Santa Cruz County

include UC Santa Cruz parking operations and maintenance, RTC administration and planning and Measure D administration and implementation.

- **Transportation Demand Management.** Within Monterey County, these projects are focused on installation of Wireless Access in Vehicular Environments (WAVE) technology, ITS signal improvements and development/ implementation of the ~~Monterey Bay Area Cruz~~ 511 Traveler Information, which includes both Monterey and Santa Cruz Counties and the Monterey and Rideshare/Commute Alternatives. Funds would cover the existing vanpool program within Monterey County and the commute solutions rideshare program in Santa Cruz County. TDM projects include a rideshare/commute alternatives program in Monterey County; rideshare and vanpool programs in San Benito County; and various vanpool, bicycling and commuter incentive programs designed to reduce VMT in Santa Cruz County.

Figure 3 on page 65 of the Draft EIR has been revised to include updated information.

Figure 6 on page 68 of the Draft EIR has been revised to include updated information.

Page 77 of the Draft EIR has been revised to include the following changes:

Monterey County covers approximately 2.1 million acres, of which approximately 1.3 million acres are in agricultural use (irrigated cropland, dry farming, grazing, animal husbandry and related agricultural services) (DOC, 2015). San Benito County covers approximately 890,000 acres, with approximately 670,000 acres in agricultural use (DOC, 2015). Santa Cruz County covers approximately 282,000 acres, with approximately 38,000 acres in agricultural use (DOC, 2015).

The AMBAG’s ~~Draft~~ 2018 Regional Growth Forecast (AMBAG, 2017d) estimates the population of each county within the tri-county region as of January 2015, as the following:

Page 80 of the Draft EIR has been revised to include the following changes:

Freight rail service, once operated by Southern Pacific Railroad, then by Union Pacific and now by Santa Cruz and Monterey Bay Railway (Iowa Pacific Holdings), has been a historically important form of transportation within Santa ~~Cruz Cruz~~ County. It is anticipated that Santa Cruz and Monterey Bay Railway will not be the rail service operator much longer and the RTC is currently negotiating with a potential replacement rail service operator. There are currently three rail lines in or adjacent to Santa Cruz County. The Santa Cruz Branch rail line extends from Watsonville Junction in Pajaro north to Davenport and passes through much of the county’s urban area. The Felton Branch rail line is owned and operated by the private Santa Cruz Big Trees & Pacific Railway Company and primarily provides summertime and holiday excursions between Felton and the Beach Boardwalk in Santa Cruz. The line is also occasionally used for freight. The Coast Rail Route is the Union Pacific main coastal line extending from San Jose to San Diego. A stop for the proposed Amtrak Coast Daylight service is planned at the Pajaro Station located at the Watsonville Junction.

Table 5 on page 102 of the Draft EIR has been revised to include the following changes:

Table 5 2040 MTP/SCS Projects That May Result in Aesthetic/Visual Resource Impacts

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-GRN001-GR	Monterey	Greenfield	Apple Avenue Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	AES-1
MON-GRN005-GR	Monterey	Greenfield	Thorne Road Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	AES-1
MON-MAR157-MA	Monterey	Marina	Reservation Road/Beach Road Improvements	Widen roadway with sidewalk and bike lane improvements.	AES-1
MON-MRY002-MY	Monterey	Monterey	Del Monte – Washington Improvements	Construct pedestrian bridge over Del Monte and traffic signal improvements.	AES-1
MON-MYC075-UM	Monterey	Chualar	River Road Operational Improvements	Widen shoulders and improve geometrics and install class II bike lanes.	AES-1
MON-SCY009-SA	Monterey	Sand City	Bike Path Lighting	Install lighting on existing class I path.	AES-2
MON-SNS078-SL	Monterey	Salinas	Natividad Creek Bike Path	Install new bike path.	AES-1
MON-SNS141-SL	Monterey	Salinas	Laurel Drive Sidewalks	Sidewalk lighting.	AES-2
MON-SOL043-SO	Monterey	Soledad	Pedestrian Lighting	Construct pedestrian lighting along various City streets.	AES-2
MON-CT011-CT	Monterey	SR 68 Corridor	SR 68 – Commuter Improvements	Widen existing roadway to 4 lanes between existing 4-lane segment at Toro Park and Corral de Tierra Road (MON-68-4.0/15.0)	AES-1
MON-CT017-CT	Monterey	Monterey	SR 68 – (Holman Hwy – access to Community Hospital)	Widen Holman Highway SR 68 from CHOMP to SR 1 to 4 lanes and make operational improvements at the SR 68/SR 1 EA interchange. (EA 05-44800) PM 3.8/L4.3	AES-1
MON-CT022-CT	Monterey	Prunedale	SR 156 – Corridor Widening Project	Construct new 4-lane highway south of existing alignment convert existing highway to frontage road and construct new at U.S. 156 and 101.	AES-1
MON-CT030-SL	Monterey	Salinas	U.S. 101 – Salinas Corridor	Widen U.S. 101 to 6 lanes within the existing right of way at locations where feasible.	AES-1
MON-CT031-CT	Monterey	Chualar	U.S. 101 – South County Frontage Roads	Construct Frontage Roads from Harris Road to Chualar, then to Soledad. (EA 05-OH330)	AES-1
MON-CT0445-SL	Monterey	Salinas	U.S. 101 – Harris Road Interchange	Construct new interchange on U.S. 101 at Harris Road (PM 83.71).	AES-1

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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-GRN008-GR	Monterey	Greenfield	U.S. 101 – Walnut Avenue Interchange	Relocate and replace existing U.S. 101/Walnut Avenue Interchange and widen to six lanes. (EA 05-OP160) PM 53.4/54.3	AES-1
MON-MAR136-MA	Monterey	Marina	SR 1 & Imjin Bridge	Widen NB off-ramp to two lanes.	AES-1
MON-MAR137-MA	Monterey	Marina	SR 1 & Imjin Bridge	Widen SB on-ramp to two lanes.	AES-1
MON-SOL002-SO	Monterey	Soledad	U.S. 101 – North Interchange	Install new interchange north of U.S. 101 and Front Street.	AES-1
MON-SOL003-SO	Monterey	Soledad	U.S. 101 – South Interchange	Install new interchange south of U.S. 101 and Front Street.	AES-1
MON-PGV010-PG	Monterey	Pacific Grove	SR 68 – Bishop to Sunset	Mobility Improvements including sidewalks, lighting, landscaping and roadways overlay.	AES-2
MON-MAR001-MA	Monterey	Marina-Salinas	Marina – Salinas Corridor	Widen Davis Road to 4 lanes from Blanco Road to Reservation Road; construct new 4-lane bridge over the Salinas River; widen Reservation Road to 4 lanes from Davis Road to existing 4-lane section adjacent to East Garrison at Intergarrison Road; widen Imjin Pkwy to 4 lanes from Reservation Road to Imjin Road, construct new Imjin Parkway interchange at SR 1. Include accommodations for bicyclists, pedestrians and transit; consider high quality transit service along corridor.	AES-1
MON-SNS012-SL	Monterey	Salinas	Boronda Road Widening	Widen to 6 lanes from San Juan Grade Road to Williams Road; install Class II bike lanes and fill sidewalk gaps.	AES-1
MON-SNS044-SL	Monterey	Salinas	Natividad Road Widening	Widen from 2 to 4 lanes.	AES-1
MON-SNS050-SL	Monterey	Salinas	Russel Road Widening	Widen street from U.S. 101 to San Juan Grade Road.	AES-1
MON-SNS059-SL	Monterey	Salinas	Williams Road Widening	Widen from 2 to 4 lanes.	AES-1
MON-SNS090-SL	Monterey	Salinas	Russel Road Extension	Extend 4 lane arterial.	AES-1
MON-SNS092-SL	Monterey	Salinas	San Juan Natividad Collector	Construct an east-west 2 lane collector.	AES-1
MON-SNS093-SL	Monterey	Salinas	Independence Boulevard Extension	Extend as 2 lane collector.	AES-1
MON-SNS094-SL	Monterey	Salinas	Hemingway Drive Extension	Construct 2-lane road.	AES-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-SNS095-SL	Monterey	Salinas	Constitution Boulevard Extension	Construct 4-lane street.	AES-1
MON-SNS096-SL	Monterey	Salinas	Sanborn Road Extension	Construct 4-lane arterial.	AES-1
MON-SNS097-SL	Monterey	Salinas	Williams Russel Collector	Construct new north-south connection.	AES-1
MON-SNS-098-SL	Monterey	Salinas	Alisal Street Extension	Extend as 2-lane collector street with bike lanes.	AES-1
MON-SNS099-SL	Monterey	Salinas	Moffett Street Extension	Extend as 4-lane collector.	AES-1
MON-SNS100-SL	Monterey	Salinas	Rossi Street Widening	Widen to 4 lanes.	AES-1
MON-SNS101-SL	Monterey	Salinas	Bernal Drive Extension	Extend as 4-lane arterial.	AES-1
MON-SNS102-SL	Monterey	Salinas	Constitution Boulevard Extension	Construct new 2-lane street.	AES-1
MON-SNS103-SL	Monterey	Salinas	Williams Road Widening	Widen from 3 to 4 lanes.	AES-1
MON-SNS104-SL	Monterey	Salinas	Alisal Street Widening	Widen from 2 to 4 lanes.	AES-1
MON-SNS108-SL	Monterey	Salinas	Laurel Drive Widening	Widen to 6 lanes and add left turn channelization west of Constitution.	AES-1
MON-SNS121-SL	Monterey	Salinas	McKinnon Street Extension	Extend 2-lane collector.	AES-1
MON-FRA004-MA	Monterey	Marina	Patton Parkway (Abrams Road)	Construct a new 2-lane arterial and Class II bike lanes (FORA CIP FO2).	AES-1
MON-FRA010-MA	Monterey	Marina	Crescent Court	Extend existing Crescent Court southerly to join proposed Abrams Drive on the former Fort Ord (FORA CIP off-site 8).	AES-1
MON-FRA018-SE	Monterey	Seaside	Giggling Road	Upgrade/construct new 4-lane arterial (FORA CIP FO7).	AES-1
MON-FRA023-MA	Monterey	Marina	Salinas Avenue	Construct new 2-lane arterial (FORA CIP FO11).	AES-1
MON-FRA025-MA	Monterey	Marina	2nd Avenue Phase 2	Construct new arterial road and Class II bike lanes (FORA CIP FO8).	AES-1
MON-FRA026-MA	Monterey	Marina	2nd Avenue Phase 3	Construct new arterial road and Class II bike lanes (FORA CIP FO8).	AES-1
MON-FRA027-MA	Monterey	SR 68 Corridor	So. Boundary Road Improvements	Reconstruct street, add sidewalks, bike lanes, street lights, etc.	AES-1, AES-2
MON-GON005-GO	Monterey	Gonzales	Fanoe Road	Widen from 4 to 6 lanes and install Class II bike lanes.	AES-1

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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-GON007-GO	Monterey	Gonzales	La Gloria Road Widening	Widen road approximately one-half mile.	AES-1
MON-GRN003-GR	Monterey	Greenfield	Oak Road Bridge over U.S. 101	Widen bridge for dual left turn lanes.	AES-1
MON-GRN022B-GR	Monterey	Greenfield	Pine Avenue Overcrossing at U.S. 101	Construct new bridge over U.S. 101 to improve E-W traffic flow.	AES-1
MON-MAR150-MA	Monterey	Marina	2nd Avenue Extension	Construct new roadway.	AES-1
MON-MAR153-MA	Monterey	Marina	Patton (Abrams) Pkwy Extension	Construct new roadway.	AES-1
MON-MAR154-MA	Monterey	Marina	Imjin Parkway Widening Project	Measure X project to widen Imjin Parkway to 4 lanes from Reservation Road to Imjin Road.	AES-1
MON-MYC 043147 -UM	Monterey	Unknown	Jolon Road Overlay Safety Improvements	Shoulder widening & geometric improvements and installation of 39.2 miles of Class II bikeway.	AES-1
MON-MYC147-UM	Monterey	Castroville	Castroville Improvements/Blackie Road	Construct new road from Castroville Boulevard to Blackie Road.	AES-1
MON-MYC157 8 -UM	Monterey	Carmel Valley	CVMP – Carmel Valley Road between Laureles Grade and Ford Shoulder Widening	Shoulder widening.	AES-1
MON-MYC162-UM	Monterey	Carmel Valley	CVMP – Laureles Grade at Carmel Valley Road Roundabout, Signalization, or Widening	Install signal or widen (prior to grade separation).	AES-1
MON-MYC238-UM	Monterey	Moss Landing	Salinas Road Improvements	Widen to four lanes between future Hwy 1 and Salinas Road interchange and existing four-lane section. Widen existing three-lane section of Salinas Road from Werner road to Elkhorn Road to four lanes. Add Class II bike lanes on Salinas Road from SR 1 to Elkhorn Road. Install traffic signal and construct intersection improvements at Salinas Road/Werner Road. Construct traffic signal on Elkhorn Road at Salinas Road. Re-align Salinas Road and Werner Road to intersect Elkhorn Road at a single location with a traffic signal.	AES-1
MON-MYC247-UM	Monterey	Prunedale	San Miguel Canyon Road at Castroville Boulevard	Signalization of the intersection, roadway widening and striping improvements.	AES-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-SCY005-SA	Monterey	Sand City	Sand City Rehab in Old Town Area	Install street lighting, reconstruct streets in Old Town area; design shared streets (Woonerfs).	AES-2
MON-SNS006-SL	Monterey	Salinas	U.S. 101 – Alvin Drive Overpass/Underpass and Bypass	Construct overpass/underpass and 4-lane street structure.	AES-1
MON-SNS008-SL	Monterey	Salinas	Bernal Drive East Improvements	Widen road, construct sidewalk and retaining wall on north side of road; between N. Main and Rosarita Drive.	AES-1
MON-SNS024-SL	Monterey	Salinas	Elvee Drive	Construct 44' wide culvert and extend two lanes between Work to Elvee.	AES-1
MON-SNS041-SL	Monterey	Salinas	Maryal Drive Reconstruction	Widen roadway behind Rodeo Grounds (from 36' to 40').	AES-1
MON-SNS159-SL	Monterey	Salinas	Market/Eucalyptus Intersection Improvements	Traffic signal installation, lighting and sidewalks.	AES-2
SB-COG-A54	San Benito	Hollister - Gilroy	State Route 25 Corridor Improvement Project	To enhance safety, improve traffic operations and provide additional capacity to reduce congestion for all transportation modes on Highway 25 between San Felipe Road and the San Benito/Santa Clara County line.	AES-1
SB-CT-A01	San Benito	San Juan Bautista	SR 156 Widening – San Juan Bautista to Union Road	Construct a four-lane expressway south of the existing State Route 156 and use the existing SR 156 as the northern frontage road.	AES-1
SB-CT-A17	San Benito	Hollister	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	Widen to 4-lane expressway with bicycle lanes.	AES-1
SB-CT-A44	San Benito	Hollister	Highway 25 4-lane Widening, Phase 1	Widen to 4-lane expressway, San Felipe Road to Hudner Lane.	AES-1
SB-VTA-A01	San Benito	Gilroy	Highway 101/25 Interchange	New interchange at Highway 101 and Highway 25 in Santa Clara County.	AES-1
SB-CT-A02	San Benito	Hollister	Highway 156/Fairview Road Intersection Improvements	Construct new turn lanes at the intersection.	AES-1
SB-COH-A16	San Benito	Hollister	Memorial Drive Extension: Meridian Street to Santa Ana Road	Construct 4-lane road extension with bicycle lanes.	AES-1

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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SB-COH-A18	San Benito	Hollister	Westside Boulevard Extension	Construct 2-lane road; Nash Road to Southside Road/San Benito Street intersection with bicycle lanes.	AES-1
SB-COH-A19	San Benito	Hollister	North Street (Buena Vista) between College Street and San Benito Street	Construct 2-lane road with bicycle lanes.	AES-1
SB-COH-A55	San Benito	Hollister	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	Construct new 4-lane road and extension with bicycle lanes.	AES-1
SB-COH-A57	San Benito	Hollister	Pacific Way (New Road): San Felipe Rd. to Memorial Drive	New 2-lane road from San Felipe Road to future Memorial Drive north extension with bicycle lanes.	AES-1
SB-SBC-A04	San Benito	Hollister	Union Road Widening (East): San Benito Street to Highway 25	Widen to 4-lane arterial with bicycle lanes.	AES-1
SB-SBC-A05	San Benito	Hollister	Union Road Widening (West): San Benito Street to Highway 156	Widen to 4-lane arterial with bicycle lanes.	AES-1
SB-SBC-A09	San Benito	Hollister	Fairview Road Widening: McCloskey to SR 25	Widen to 4-lane arterial; construct new bridge south of Santa Ana Valley Road with bicycle lanes.	AES-1
SB-SBC-A14	San Benito	Hollister	San Benito Regional Park Access Road	Construct new 2-lane roadway from Nash Road to San Benito Street	AES-1
SB-SBC-A50	San Benito	Hollister	Hospital Road Bridge	Hospital Road over San Benito River, between South Side Road and Cienega Road. Replace low water crossing with 2-lane bridge. Bridge No. 00L0026	AES-1
SB-SBC-A67	San Benito	Dunneville	Shore Road Extension	4-lane arterial with Class II bike lanes.	AES-1
SB-SBC-A79	San Benito	Hollister	Enterprise Road Extension	Extend Enterprise Road westerly from Southside Road toward Union Road.	AES-1
SB-SBC-A81	San Benito	Hollister	Meridian Street Extension: 185 feet east of Clearview Road to Fairview Road	Construct 4-lane road. Located in the City of Hollister and County with bicycle lanes.	AES-1
SB-SBC-A82	San Benito	Hollister	Flynn Road Extension	San Felipe Road to Memorial Drive north extension. New roadway construction south of McCloskey Road with bicycle lanes.	AES-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SB-SJB-A07	San Benito	Hollister	Third Street Extension	Constructing Third Street to connect to First Street.	AES-1
SB-SJB-A08	San Benito	Hollister	Lavanigno Drive Construction	Construction of Lavanigno Drive, split lanes with island in the middle; total 4 lanes.	AES-1
SB-SJB-A09	San Benito	Hollister	Connect Lang Street to The Alameda	Construct and connect Lang Street; 2 lanes.	AES-1
SB-SBC-A51	San Benito	Unknown	Y Road Bridge	Y Road over San Benito River replace 2-lane Low-Water Crossing with 2-lane bridge. Bridge No. 00L0069	AES-1
SB-SBC-A54	San Benito	Near Paicines	Panoche Road Bridge (Bridge No. 43C0027)	Panoche Road, over Tres Pinos Creek, 12 miles west Little Panoche Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0027	AES-1
SB-SBC-A57	San Benito	Cienega Valley	Limekiln Road Bridge	Limekiln Rd over Pescadero Creek, 0.1 mi. S Cienega Rd. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0054.	AES-1
SB-SBC-A58	San Benito	San Juan Bautista	Rocks Road Bridge	Rocks Road over Pinacate Rock Creek, East Little Merrill Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0053.	AES-1
SB-SBC-A86	San Benito	Hollister	John Smith Realignment at Fairview Intersection	This project will realign John Smith Road to intersect Fairview Road at St. Benedict Way and add left and right turn lanes into John Smith Road.	AES-1
SB-LTA-A5348	San Benito	Hollister-Gilroy	Commuter Rail to Santa Clara County	Commuter rail from Hollister to Gilroy.	AES-1
RTC 30SC	Santa Cruz	Aptos	Hwy 1 Bicycle/Ped Overcrossing at Mar Vista	Construct a bicycle/pedestrian overcrossing of Hwy 1 in vicinity of Mar Vista Drive, providing improved access to Seacliff and Aptos neighborhoods and schools.	AES-1
SC-SC-P105-SCR	Santa Cruz	Santa Cruz	Market Street sidewalks and Bike Lanes	Completion of sidewalks and bicycle lanes. Includes retaining walls, right-of-way, tree removals and a bridge modification.	AES-1

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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SC-WAT-P65-WAT	Santa Cruz	Watsonville	Upper Struve Slough Trail	Construction of 450 foot long pedestrian/bicycle path along upper Struve Slough from Green Valley Road to Pennsylvania Drive. The trail shall consist of a twelve-foot wide by one foot deep aggregate base section with the center eight feet covered with a chip seal. Additional improvements include installing a 130-foot length of modular concrete block retaining wall, reinforcing 160-foot length of slough embankment with rock slope protection and installing a 175-foot long by eight foot wide boardwalk.	AES-1
SC-RTC-24e-RTC	Santa Cruz	Soquel	3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street 3 - Hwy 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	Construct approximately 2.5 miles of auxiliary lanes northbound and southbound between State Park Drive and Park Avenue interchange and the Park Avenue and Bay/Porter interchange. Includes retaining walls, soundwalls and reconstruction of Capitola Avenue overcrossing with wider sidewalks and bike lanes. [Part of Highway 1 CIP project (RTC 24a)]. Construct auxiliary lanes and reconstruct Capitola Avenue overcrossing.	AES-1
SC-RTC-24f-RTC	Santa Cruz	Soquel	2 - Hwy 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Ped Bridge	Construct auxiliary lanes and a bicycle/pedestrian overcrossing of Hwy 1 at Chanticleer Avenue.	AES-1
SC-RTC-24g-RTC	Santa Cruz	Soquel	4 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue	Construct auxiliary lanes.	AES-1
SC-RTC-24r-RTC	Santa Cruz	Aptos	94 - Hwy 1: Northbound Auxiliary Lane from San Andreas Road/Larkin Valley Road to Freedom Boulevard	Construct northbound auxiliary lane.	AES-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SC-SC-38-SCR	Santa Cruz	Santa Cruz	Hwy 1/San Lorenzo Bridge Replacement	Replace the Highway 1 bridge over San Lorenzo River to increase capacity, improve safety and improve seismic stability, from Highway 17 to the Junction of Hwys 1/9. Reduce flooding potential and improve fish passage. Caltrans Project ID 05-0P460	AES-1
SC-CAP-P05-CAP	Santa Cruz	Rio Del Mar	Cliff Drive Improvements	Installation of sidewalks, pedestrian crossing and slope stabilization of embankment, including seawall.	AES-1
SC-CO-P88-USC	Santa Cruz	Riverside Grove	Either Way Lane Bridge Replacement Project	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane clear span precast voided concrete slab bridge and standard bridge approaches.	AES-1
SC-CO-P89-USC	Santa Cruz	Boulder Creek	Redwood Road Bridge Replacement Project	The project will consist of completely replacing the existing steel army tread way bridge crossing a tributary of Brown's Creek on Redwood Road with a reinforced concrete slab bridge and standard bridge approaches.	AES-1
SC-CO-P90-ESC	Santa Cruz	Boulder Creek	Fern Drive at San Lorenzo River Bridge Replacement Project	The project will consist of completely replacing the existing three span single lane structure and roadway approaches with a new two lane clear span reinforced concrete box girder bridge and standards bridge approaches.	AES-1
SC-CO-P91-USC	Santa Cruz	Brookdale	Larkspur Bridge San Lorenzo River	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane bridge and standard bridge approaches.	AES-1
SC-CT-P48-CT	Santa Cruz	Pasatiempo - Glenwood	Hwy 17 Wildlife Habitat Connectivity	Wildlife crossing.	AES-1

Table 7 on page 123 of the Draft EIR has been revised to include the following changes:

Table 7 2040 MTP/SCS Projects That May Result in Agriculture and Forestry Impacts

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-GRN001-GR	Monterey	Greenfield	Apple Avenue Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	AG-1

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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-GRN005-GR	Monterey	Greenfield	Thorne Road Bridge over U.S. 101	Construct new bike/pedestrian bridge parallel to existing overpass.	AG-1
MON-MYC075-UM	Monterey	Chualar	River Road Operational Improvements	Widen shoulders and improve geometrics and install class II bike lanes.	AG-1
MON-SNS078-SL	Monterey	Salinas	Natividad Creek Bike Path	Install new bike path.	AG-1
MON-CT030-SL	Monterey	Salinas	U.S. 101 – Salinas Corridor	Widen U.S. 101 to 6 lanes within the existing right of way at locations where feasible.	AG-1
MON-CT031-CT	Monterey	Chualar	U.S. 101 – South County Frontage Roads	Construct Frontage Roads from Harris Road to Chualar, then to Soledad. (EA 05-OH330)	AG-1
MON-CT0445-SL	Monterey	Salinas	U.S. 101 – Harris Road Interchange	Construct new interchange on U.S. 101 at Harris Road (PM 83.71).	AG-1
MON-GRN008-GR	Monterey	Greenfield	U.S. 101 – Walnut Avenue Interchange	Relocate and replace existing U.S. 101/Walnut Avenue Interchange and widen to six lanes. (EA 05-OP160) PM 53.4/54.3	AG-1
MON-SOL002-SO	Monterey	Soledad	U.S. 101 – North Interchange	Install new interchange north of U.S. 101 and Front Street.	AG-1
MON-SOL003-SO	Monterey	Soledad	U.S. 101 – South Interchange	Install new interchange south of U.S. 101 and Front Street.	AG-1
MON-MAR001-MA	Monterey	Marina-Salinas	Marina – Salinas Corridor	Widen Davis Road to 4 lanes from Blanco Road to Reservation Road; construct new 4-lane bridge over the Salinas River; widen Reservation Road to 4 lanes from Davis Road to existing 4-lane section adjacent to East Garrison at Intergarrison Road; widen Imjin Pkwy to 4 lanes from Reservation Road to Imjin Road, construct new Imjin Parkway interchange at SR 1. Include accommodations for bicyclists, pedestrians and transit; consider high quality transit service along corridor.	AG-1
MON-SNS012-SL	Monterey	Salinas	Boronda Road Widening	Widen to 6 lanes from San Juan Grade Road to Williams Road; install Class II bike lanes and fill sidewalk gaps.	AG-1
MON-SNS037-SL	Monterey	Salinas	Main Street (North) Widening	Widen to 6 lanes from Market to Casentini including bicycle and pedestrian improvements.	AG-1
MON-SNS044-SL	Monterey	Salinas	Natividad Road Widening	Widen from 2 to 4 lanes.	AG-1
MON-SNS050-SL	Monterey	Salinas	Russel Road Widening	Widen street from U.S. 101 to San Juan Grade Road.	AG-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-SNS059-SL	Monterey	Salinas	Williams Road Widening	Widen from 2 to 4 lanes.	AG-1
MON-SNS090-SL	Monterey	Salinas	Russel Road Extension	Extend 4 lane arterial.	AG-1
MON-SNS092-SL	Monterey	Salinas	San Juan Natividad Collector	Construct an east-west 2 lane collector.	AG-1
MON-SNS093-SL	Monterey	Salinas	Independence Boulevard Extension	Extend as 2 lane collector.	AG-1
MON-SNS094-SL	Monterey	Salinas	Hemingway Drive Extension	Construct 2-lane road.	AG-1
MON-SNS095-SL	Monterey	Salinas	Constitution Boulevard Extension	Construct 4-lane street.	AG-1
MON-SNS096-SL	Monterey	Salinas	Sanborn Road Extension	Construct 4-lane arterial.	AG-1
MON-SNS097-SL	Monterey	Salinas	Williams Russel Collector	Construct new north-south connection.	AG-1
MON-SNS-098-SL	Monterey	Salinas	Alisal Street Extension	Extend as 2-lane collector street with bike lanes.	AG-1
MON-SNS099-SL	Monterey	Salinas	Moffett Street Extension	Extend as 4-lane collector.	AG-1
MON-SNS100-SL	Monterey	Salinas	Rossi Street Widening	Widen to 4 lanes.	AG-1
MON-SNS101-SL	Monterey	Salinas	Bernal Drive Extension	Extend as 4-lane arterial.	AG-1
MON-SNS102-SL	Monterey	Salinas	Constitution Boulevard Extension	Construct new 2-lane street.	AG-1
MON-SNS103-SL	Monterey	Salinas	Williams Road Widening	Widen from 3 to 4 lanes.	AG-1
MON-SNS104-SL	Monterey	Salinas	Alisal Street Widening	Widen from 2 to 4 lanes.	AG-1
MON-SNS108-SL	Monterey	Salinas	Laurel Drive Widening	Widen to 6 lanes and add left turn channelization west of Constitution.	AG-1
MON-SNS121-SL	Monterey	Salinas	McKinnon Street Extension	Extend 2-lane collector.	AG-1
MON-GON005-GO	Monterey	Gonzales	Fanoe Road	Widen from 4 to 6 lanes and install Class II bike lanes.	AG-1
MON-GON007-GO	Monterey	Gonzales	La Gloria Road Widening	Widen road approximately one-half mile.	AG-1
MON-GRN022B-GR	Monterey	Greenfield	Pine Avenue Overcrossing at U.S. 101	Construct new bridge over U.S. 101 to improve E-W traffic flow.	AG-1
MON-MYC043147-UM	Monterey	Unknown	Jolon Road Overlay Safety Improvements	Shoulder widening & geometric improvements and installation of 39.2 miles of Class II bikeway.	AG-1

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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
MON-MYC147-UM	Monterey	Castroville	Castroville Improvements/Blackie Road	Construct new road from Castroville Boulevard to Blackie Road.	AG-1
MON-MYC238-UM	Monterey	Moss Landing	Salinas Road Improvements	Widen to four lanes between future Hwy 1 and Salinas Road interchange and existing four-lane section. Widen existing three-lane section of Salinas Road from Werner road to Elkhorn Road to four lanes. Add Class II bike lanes on Salinas Road from SR 1 to Elkhorn Road. Install traffic signal and construct intersection improvements at Salinas Road/Werner Road. Construct traffic signal on Elkhorn Road at Salinas Road. Re-align Salinas Road and Werner Road to intersect Elkhorn Road at a single location with a traffic signal.	AG-1
MON-SNS008-SL	Monterey	Salinas	Bernal Drive East Improvements	Widen road, construct sidewalk and retaining wall on north side of road; between N. Main and Rosarita Drive.	AG-1
SB-COG-A54	San Benito	Hollister - Gilroy	State Route 25 Corridor Improvement Project	To enhance safety, improve traffic operations and provide additional capacity to reduce congestion for all transportation modes on Highway 25 between San Felipe Road and the San Benito/Santa Clara County line.	AG-1
SB-CT-A01	San Benito	San Juan Bautista	SR 156 Widening – San Juan Bautista to Union Road	Construct a four-lane expressway south of the existing State Route 156 and use the existing SR 156 as the northern frontage road.	AG-1
SB-CT-A17	San Benito	Hollister	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	Widen to 4-lane expressway with bicycle lanes.	AG-1
SB-CT-A44	San Benito	Hollister	Highway 25 4-lane Widening, Phase 1	Widen to 4-lane expressway, San Felipe Road to Hudner Lane.	AG-1
SB-VTA-A01	San Benito	Gilroy	Highway 101/25 Interchange	New interchange at Highway 101 and Highway 25 in Santa Clara County.	AG-1
SB-CT-A02	San Benito	Hollister	Highway 156/Fairview Road Intersection Improvements	Construct new turn lanes at the intersection.	AG-1
SB-COH-A16	San Benito	Hollister	Memorial Drive Extension: Meridian Street to Santa Ana Road	Construct 4-lane road extension with bicycle lanes.	AG-1

AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SB-COH-A18	San Benito	Hollister	Westside Boulevard Extension	Construct 2-lane road; Nash Road to Southside Road/San Benito Street intersection with bicycle lanes.	AG-1
SB-COH-A19	San Benito	Hollister	North Street (Buena Vista) between College Street and San Benito Street	Construct 2-lane road with bicycle lanes.	AG-1
SB-COH-A55	San Benito	Hollister	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	Construct new 4-lane road and extension with bicycle lanes.	AG-1
SB-COH-A57	San Benito	Hollister	Pacific Way (New Road): San Felipe Road to Memorial Drive	New 2-lane road from San Felipe Road to future Memorial Drive north extension with bicycle lanes.	AG-1
SB-SBC-A04	San Benito	Hollister	Union Road Widening (East): San Benito Street to Highway 25	Widen to 4-lane arterial with bicycle lanes.	AG-1
SB-SBC-A05	San Benito	Hollister	Union Road Widening (West): San Benito Street to Highway 156	Widen to 4-lane arterial with bicycle lanes.	AG-1
SB-SBC-A09	San Benito	Hollister	Fairview Road Widening: McCloskey to SR 25	Widen to 4-lane arterial; construct new bridge south of Santa Ana Valley Road with bicycle lanes.	AG-1
SB-SBC-A14	San Benito	Hollister	San Benito Regional Park Access Road	Construct new 2-lane roadway from Nash Road to San Benito Street	AG-1
SB-SBC-A67	San Benito	Dunneville	Shore Road Extension	4-lane arterial with Class II bike lanes.	AG-1
SB-SBC-A79	San Benito	Hollister	Enterprise Road Extension	Extend Enterprise Road westerly from Southside Road toward Union Road.	AG-1
SB-SBC-A81	San Benito	Hollister	Meridian Street Extension: 185 feet east of Clearview Road to Fairview Road	Construct 4-lane road. Located in the City of Hollister and County with bicycle lanes.	AG-1
SB-SBC-A82	San Benito	Hollister	Flynn Road Extension	San Felipe Road to Memorial Drive north extension. New roadway construction south of McCloskey Road with bicycle lanes.	AG-1
SB-SJB-A08	San Benito	Hollister	Lavanigno Drive Construction	Construction of Lavanigno Drive, split lanes with island in the middle; total 4 lanes.	AG-1

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AMBAG ID	County	Locale	Project	Project Description/Scope	Potential Impact
SB-SJB-A09	San Benito	Hollister	Connect Lang Street to The Alameda	Construct and connect Lang Street; 2 lanes.	AG-1
SB-SBC-A57	San Benito	Cienega Valley	Limekiln Road Bridge	Limekiln Rd over Pescadero Creek, 0.1 Mi S Cienega Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0054.	AG-1
SB-SBC-A86	San Benito	Hollister	John Smith Realignment at Fairview Intersection	This project will realign John Smith Road to intersect Fairview Road at St. Benedict Way and add left and right turn lanes into John Smith Road.	AG-1
SB-LTA-A5348	San Benito	Hollister-Gilroy	Commuter Rail to Santa Clara County	Commuter rail from Hollister to Gilroy.	AG-1

Page 147 of the Draft EIR has been revised to include the following changes:

Air emissions from on-road mobile sources were calculated using emission factors from CARB’s EMFAC 2014 model and regional vehicle miles travelled (VMT) from AMBAG’s Regional Travel Demand Model (RTDM). EMFAC emission factors are established by CARB and accommodate mobility assumptions (e.g., vehicle fleets, speed, delay times, average trip lengths, time of day and total travel time) provided by AMBAG’s RTDM, which include socioeconomic growth projections based on AMBAG’s ~~Draft~~ 2018 Regional Growth Forecast (refer to “Modeling Methodology” in Appendix F to the 2040 MTP/SCS). The long-term emissions analysis uses 2015 emissions as a baseline because this is the most recent year for which accurate regionwide VMT data is available (as of the publishing of the NOP on December 21, 2015). Projected vehicle emissions on the AMBAG transportation network for the year 2040 under the 2040 MTP/SCS were compared with 2015 existing conditions. Future conditions under the ‘no project’ scenario were provided for informational purposes.

Page 148 of the Draft EIR has been revised to include the following changes:

Conflicts or obstructions with the applicable air quality plan are typically determined by consistency with the population forecast or emissions forecast. The most recent air quality plan is MBARD’s 2012-2015 AQMP, which is based on AMBAG’s 2014 Regional Growth Forecast and includes socioeconomic assumptions for population, housing and employment. The 2040 MTP/SCS is based on the ~~Draft~~ 2018 Regional Growth Forecast, which includes new data and analysis of the current economy to provide a more accurate assessment of future growth, including updated population forecasts that are lower by 18,000-27,400 depending on the horizon year than the 2014 Regional Growth Forecast (i.e., for 2020 the ~~Draft~~ 2018 Regional Growth Forecast population forecast is 18,000 less than the 2014 Regional Growth Forecast, and for 2035 the ~~Draft~~ 2018 Regional Growth Forecast population forecast is 27,400 less than the 2014 Regional Growth Forecast). Differences in socioeconomic assumptions and forecast horizons are attributed to updated data providing more accurate assumptions for the post-recession economy and socioeconomic conditions in the region. These differences do not represent a significant impact regarding plan inconsistency, and the population forecast for the 2040 MTP/SCS is within the forecast on which the 2012-2015 AQMP is based.

Page 156 of the Draft EIR has been revised to include the following changes:

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. 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.

Page 160 of the Draft EIR has been revised to include the following changes:

Table 16 2040 MTP/SCS Projects that May Result in Air Quality Impacts

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-CT044-SL	U.S. 101 – Harris Road Interchange	Monterey County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions
MON-CT031-CT	U.S. 101 – South County Frontage Roads	Monterey County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions
MON-CT030-SL	U.S. 101 – Salinas Corridor	Monterey County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions

AMBAG Project No.	Projects	Location	Impact	Description of Impact
SC-AIR-P01-WAT	Lump Sum Watsonville Municipal Airport Capital Projects	Santa Cruz County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions
SC-RTC-24e-RTC	<u>3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street</u> <u>Highway 1 – Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street</u>	Santa Cruz County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions
SC-SC-P81-SCR	Highway 1/Mission Street at Chestnut/King/Union Intersection Modification	Santa Cruz County	AQ-2, AQ-3, AQ-4, AQ-5	Potential impacts from construction equipment grading, dust, vehicle emissions

Figure 23 on page 181 of the Draft EIR has been revised to show information pertaining to critical habitat in Santa Cruz County.

Page 185 of the Draft EIR has been revised to include the following changes:

Clean Water Act

Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE), with EPA oversight, 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. 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 of dredged or fill material into jurisdictional wetlands or other jurisdictional “waters of the United States” would require a Section 404 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 by compensatory mitigation; in general, the type and location options for compensatory mitigation should comply with the hierarchy established by the USACE Corp/EPA 2008 Mitigation Rule (in descending order): (1) mitigation banks; (2) in-lieu fee programs; and (3) permittee-responsible compensatory mitigation. Also, in accordance with Section 401 of the Clean Water Act, applicants for a Section 404 permit must obtain water quality certification from the appropriate RWQCB.

Page 207 of the Draft EIR has been revised to include the following changes:

The Monterey Coast was first visited by Europeans in 1602 by Sebastian Vizcaíno (Bean 1968). The Spanish presidio and mission, which was later moved to Carmel, were established by Captain Gaspar de Portolá in Monterey in 1770, and served as the capital of the California missions until 1803 (Bean 1968: 40; Johnson 1979:83). Mission San Antonio de Padua, in southern Monterey County, was founded in 1791. Missions Santa Cruz, located in the current city of Santa Cruz and Nuestra Señora de la Soledad, in central Monterey County, were founded

in 1791. Mission San Juan Bautista, in northwestern San Benito County, was founded in 1797 (Bean 1968: 45).

Pages 214 and 215 of the Draft EIR have been revised to include the following changes:

The Department of Transportation Act

Passed in 1966, the Department of Transportation Act (49 USC 303, formerly 49 USC 1651(b)(2) and 49 USC 1653f) includes Section 4(f), which states that the Federal Highway Administration (FHWA) and other US Department of Transportation (USDOT) agencies cannot approve the use of land from public and private historical sites unless certain conditions apply. These conditions are the following: If there is no feasible and prudent avoidance alternative to the use of land, and if the action includes all possible planning to minimize harm to the property resulting from such use; or if ~~FHWA The Administration~~ determines that the use of the property will have a de minimis impact.

Page 217 of the Draft EIR has been revised to include the following changes:

Human Burials

Human burials, in addition to being potential archaeological resources, have specific provisions for treatment in Section 5097 of the California Public Resources Code. The California Health and Safety Code (Sections 7050.5, 7051 and 7054) has specific provisions for the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protects them from disturbance, vandalism, or destruction and established procedures to be implemented if Native American skeletal remains are discovered. Public Resources Code §5097.98 also addresses the disposition of Native American burials, protects such remains and established the Native American Heritage Commission (NAHC) to resolve any related disputes.

Table 22, on pages 228 and 229 of the Draft EIR has been revised to include the following changes:

Table 22 MTP Projects that May Result in Cultural Resource Impacts

AMBAG Project No.	Project	Location	Impact
MON-CT022-CT	SR 156 – Corridor Widening Project	Monterey County	CR-2, C-3
MON- G ERN005-GR	Thorne Road Bridge over U.S. 101	Monterey County	CR-2, C-3
MON-MAR157-MA	Reservation Road/Beach Road Improvements	Marina	CR-2
MON-SOL044-SO	Pinnacles Bike Route	Soledad	CR-2
MON-CT011-CT	SR 68 – Commuter Improvements	Monterey	CR-2
MON-CT017-CT	SR 68 – Holman Highway to access to Community Hospital	Monterey	CR-2, C-3
MON-CT030-SL	U.S. 101 – Salinas Corridor	Salinas	CR-2, C-3
MON-CT031-CT	U.S. 101 – South County Frontage Roads	Monterey County	CR-2, C-3
MON-CT045-MA	SR – Monterey Road Interchange	Marina	CR-2, C-3
MON-GRN008-GR	U.S. 101 – Walnut Avenue Interchange	Greenfield	CR-2, C-3
MON-MAR136-MA	SR 1 and Imjin Bridge	Marina	CR-2, C-3
MON-MAR155 6 -MA	Imjin Parkway at SR 1	Marina	CR-2, C-3
MON-SOL014-SO	SR 146 Bypass	Soledad	CR-2, C-3

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AMBAG Project No.	Project	Location	Impact
MON-MAR001-MA	Marina – Salinas Corridor	Marina	CR-2, C-3
MON-SNS012-SL	Boronda Road Widening	Salinas	CR-2, C-3
MON-SNS029-SL	John Street – U.S. 101	Salinas	CR-2, C-3
MON-SNS035-SL	Lincoln Avenue Widening	Salinas	CR-2, C-3
MON-SNS048-SL	Romie Lane Widening	Salinas	CR-2, C-3
MON-SNS090-SL	Russell Road Extension	Salinas	CR-2, C-3
MON-SNS096-SL	Sanborn Road Extension	Salinas	CR-2, C-3
MON-SNS102-SL	Constitution Boulevard Extension	Salinas	CR-2, C-3
MON-GON011-GO	Park and Ride Lot	Gonzales	CR-2, C-3
MON-MYC1632-UM	CVMP – Laureles Grade Climbing Lane	Monterey County	CR-2, C-3
MON-MYC238-UM	Salinas Road Improvements	Monterey County	CR-2, C-3
MON_0SOL031-SO	Intersection Improvements	Soledad	CR-2, C-3
MON-FRA020-MST	Fort Ord Intermodal Centers	Monterey County	CR-2
MON-KCY035-CK	Multimodal Transportation Center	Monterey County	CR-2, C-3
MON-SNS077-SL	North Main/Espinosa Road Class II Bike Lane	Salinas	CR-1
MON-MYC149-UM	Central Avenue	Salinas	CR-1
SB-COH-A30	Meridian Street Bike Lane	Hollister	CR-2
SB-SBC-A65	San Benito River Recreational Trail Phase I (<u>Reach 1-3</u>)	San Benito County	CR-2, C-3
SB-COG-A54	SR 25 Corridor Improvements Project	San Benito County	CR-2, C-3
SB-CT-A01	SR 156 Widening – San Juan Bautista to Union Road	San Benito County	CR-2, C-3
SB-CT-A17	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	San Benito County	CR-2, C-3
SB-CT-A44	Highway 101/25 4-Lane Widening Phase I	San Benito County	CR-2, C-3
SB-CT-A02	SR 156/Fairview Road Intersection Improvements	San Benito County	CR-2, C-3
SB-SJB-A01	Roundabout at the Alameda and Fourth Street	San Juan Batista	CR-1
SB-COH-A11	Union Road (formerly Crestview Drive) Construction	Hollister	CR-2, C-3
SB-COH-A18	Westside Boulevard Extension	Hollister	CR-2, C-3
SC-SBC-A67	Shore Road Extension	San Benito County	CR-2, C-3
SB-SJB-A07	Third Street Extension	San Juan Batista	CR-2, C-3
SB-SJB-A09	Connect Lang Street to the Alameda	San Juan Batista	CR-2, C-3
SC-RTC 27a-RTC	Monterey Bay Sanctuary Scenic Trail Network (Coastal Rail Trail) – Design, Environmental Clearance and Construction	Santa Cruz County	CR-2, C-3
RTC 30SC	Highway 1 Bicycle/Pedestrian Overcrossing at Mar Vista	Santa Cruz County	CR-2, C-3
SC-SC-P30-SCR	Murry Street to Harbor Path Connection	Santa Cruz	CR-2, C-3
SC-SB-P39-SCV	Glenwood Drive Bike Lanes	Scotts Valley	CR-2
SC-SV-P40-SCVB	Lockwoode Lane Sidewalk and Bike Lanes	Scotts Valley	CR-2
SC-RTC-24e-RTC	<u>3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay</u>	Santa Cruz	CR-2, C-3

AMBAG Project No.	Project	Location	Impact
	Avenue/Porter Street 3 – Highway 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street		
SC-RTC-24f-RTC	2 – Highway 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Pedestrian Bridge	Santa Cruz	CR-2, C-3
SC-CAP-P07p-CAP	Stockton Avenue Bridge Rehab	Capitola	CR-2
SC-SC-P91-SCR	Shaffer Road Widening and Railroad Crossing	Santa Cruz	CR-2
SC-WAT-O1A-WAT	Highway 1/Harkins Slough Road Interchange: Bicycle/Pedestrian Bridge	Watsonville	CR-2, C-3
WAT 38SC	Airport Boulevard Improvements	Watsonville	CR-2, C-3
SC-VAR-P45-VAR	West Side Transit Hub	Santa Cruz	CR-2, C-3

Table 29 on page 264 of the Draft EIR has been revised to include the following changes:

Table 29 2040 MTP/SCS Projects that May Result in Geologic Impacts

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-CT011-CT	SR 68 Commuter Improvements	Monterey	G-1	Potential impacts from ground-shaking
MON-CT030-SL	U.S. 101 Salinas Corridor	Salinas	G-1	Potential impacts from ground-shaking
MON-CT015-CT	SR 1 Seaside to Sand City	Monterey	G-1	Potential impacts from ground-shaking
MON-MAR001-MA	Marina – Salinas Corridor	Marina	G-1	Potential impacts from ground-shaking
MON-SNMS090-SL	Russel Road Extension	Salinas	G-1	Potential impacts from ground-shaking
MON-FRAN018-SE	Giggling Road	Seaside	G-1	Potential impacts from ground-shaking
MON-KCY035-CK	Multimodal Transportation Center	King City	G-1	Potential impacts from ground-shaking
SB-CT-A01	SR 156 Widening – San Juan Bautista to Union Road	San Juan Bautista	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SB-SBC-A65	San Benito River Recreational Trail Phase I (<u>Reach 1-3</u>)	San Benito County	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SB-COG-A54	SR 25 Corridor Improvements Project	San Benito County	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SB-COH-A11	Union Road (formally Crestview Drive) Construction	Hollister	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SB-SJB-A08	Lavanigno Drive Construction	San Juan Bautista	G-1, G-3	Potential impacts from fault rupture, ground-shaking and liquefaction
SC-RTC-24e-RTC	<u>3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park</u>	Capitola	G-1, G-3	Potential impacts from ground-shaking,

	<u>Avenue and from Park Avenue to Bay Avenue/Porter Street</u> 3 Highway 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street			expansive soil
SC-RTC-27a-RTC	Monterey Bay Sanctuary Scenic Trail Network – Design, Environmental Clearance and Construction	Santa Cruz County	G-1, G-3	Potential impacts from fault rupture, ground-shaking, liquefaction, expansive soils
SC 46SC	<u>Branciforte Creek Bike/Pedestrian Crossing</u>	Santa Cruz	G-1, G-3	Potential impacts from ground-shaking, liquefaction
SC-SV-27-SCV	<u>Mount Hermon Road/Scotts Valley Drive/Whispering Pines Drive Intersection Operations Improvement Project</u>	Scotts Valley	G-1	Potential impacts from ground-shaking

Page 272 of the Draft EIR has been revised to include the following changes:

Assembly Bill 32

California’s major initiative for reducing GHG emissions is outlined in Assembly Bill 32, the “California Global Warming Solutions Act of 2006,” signed into law in 2006 (Chapter 488, Statutes of 2006). 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 developed a Scoping Plan, which was adopted on December 11, 2009, approving a 1990 statewide GHG level and 2020 limit of 427 MMT CO₂e (CARB 2008). The Scoping Plan included measures to address GHG emission reduction strategies related to energy efficiency, water use and recycling and solid waste, among other measures. 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 approval of the Scoping Plan.

In May 2014, CARB approved the first update to the AB 32 Scoping Plan, which included an adjusted 2020 limit of 431 MMT CO₂e (CARB 2014). The 2013 Scoping Plan update defines CARB’s climate change priorities for the next five years and sets the groundwork to reach post-2020 statewide goals. The update highlights California’s progress toward meeting the “near-term” 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluates how to align the State’s longer-term GHG reduction strategies with other State policy priorities, such as for water, waste, natural resources, clean energy and transportation and land use (CARB 2014). CARB updated the Scoping Plan again in late 2017 (see Senate Bill 32, below).

Page 273 of the Draft EIR has been revised to include the following changes:

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill 32 into law (Chapter 429, Statutes of 2016), extending AB 32 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). SB 32 became effective on January 1, 2017 and now codifies the 2030 goal set in EO B-30-15. This requires CARB to develop

technologically feasible and cost-effective regulations to achieve the targeted 40 percent GHG emission reduction.

CARB prepared an update to its AB 32 Scoping Plan to reflect the 2030 target codified in SB 32. The update, titled *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target (2017 Scoping Plan)* was adopted on December 14, 2017 (CARB, 2017e). The 2017 Scoping Plan identifies how the State can reach its 2030 climate target to reduce GHG emissions by 40 percent from 1990 levels and substantially advance toward its 2050 climate goal to reduce GHG emissions by 80 percent below 1990 levels. The 2017 Scoping Plan recommends statewide targets of no more than six metric tons CO₂e per capita by 2030 and no more than two metric tons CO₂e per capita by 2050. The statewide per capita targets account for all emissions sectors in the State, statewide population forecasts and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer term State emissions reduction goal of 80 percent below 1990 levels by 2050 under EO-S-3-05. The 2017 Scoping Plan recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) relative to the State's 1990 emissions limit established under AB 32. CARB released a draft version of the updated Scoping Plan on October 27, 2017, but the updated Scoping Plan has not yet been adopted. Adoption of a final version of the updated Scoping Plan is expected by CARB in late 2017 (CARB 2017d). The draft version of the updated Scoping Plan (CARB 2017e) calls for emissions reductions at the State level that meet or exceed the Statewide GHG target, and notes that additional effort will be needed to maintain and continue GHG reductions to meet the mid- (2030) and long-term (2050) targets.

Page 277 of the Draft EIR has been revised to include the following changes:

However, meeting the goals of SB 375 does not guarantee consistency with AB 32, which is based on regional emissions in 2020. Furthermore, any conflict with AB 32 would likely result in a conflict with SB 32, which extends AB 32 by setting a target of reducing statewide GHG emissions by 40 percent below 1990 levels by 2030. ~~On October 27, 2017, CARB released a draft version of an updated AB 32 Scoping Plan with a framework for achieving the 2030 target set forth by SB 32 (CARB 2017e). On December 14, 2017, CARB adopted the 2017 Scoping Plan (CARB, 2017e). However, the updated Scoping Plan is currently in draft form and has yet to be adopted by CARB.~~ To determine that a project would not conflict with the State's ability to achieve the SB 32 target, the 2040 MTP/SCS would need to achieve substantial progress toward the long-term reduction target. Mobile source emissions were calculated to determine region-wide GHG emissions with implementation of the 2040 MTP/SCS. If implementation of the 2040 MTP/SCS would achieve substantial progress toward the state achieving the emissions reduction targets established by SB 32, then impacts related to SB 32 would not be considered significant.

Executive Order S-3-05, which sets a goal of reducing GHG emissions to 80 percent below 1990 levels by 2050, is not adopted state policy. Although 2050 is beyond the horizon year of the ~~2040 MTP/SCS plan~~, this analysis addresses whether the 2040 MTP/SCS GHG emission would conflict with the state's ability to achieving the 2040 GHG reduction goal set forth by Executive Order S-3-05. Table 31 summarizes the scenarios analyzed along with the applicable regulations and, for mobile source emissions, vehicle types.

Page 278 of the Draft EIR has been revised to include the following changes:

Methodology for Estimating GHG Emissions

GHG emissions from mobile sources were calculated using emission factors from CARB’s EMFAC 2014 model and regional VMT from AMBAG’s Regional Travel Demand Model (RTDM) (refer to the “Modeling Methodology” section in Appendix F to the 2040 MTP/SCS). EMFAC emission factors are established by CARB and accommodate mobility assumptions (e.g., vehicle miles traveled, fleet, speed, time of day) provided by AMBAG’s RTDM, which include socioeconomic growth projections based on AMBAG’s ~~Draft~~ 2018 Regional Growth Forecast. EMFAC also reflects the emissions benefits of recent CARB rules, including on-road diesel fleet rules, Advanced Clean Car Standards and the Smartway/Phase I Heavy Duty Vehicle Greenhouse Gas Regulation (CARB 2014).

Page 282 of the Draft EIR has been revised to include the following changes:

As shown in Table 32, total future (2040) emissions with implementation of the 2040 MTP/SCS would result in fewer GHG emissions as compared to the 2015 AMBAG baseline. As previously discussed, the 2017 Scoping Plan ~~AB 32 Scoping Plan~~ outlines the main State strategies for reducing GHGs to meet the 2030 ~~2020~~ target. Many of these strategies contribute to reductions from transportation-related emissions at the regional and local levels. In addition, EMFAC 2014 also reflects the emissions benefits of recent CARB rules, including on-road diesel fleet rules, Advanced Clean Car Standards and the Smartway/Phase I Heavy Duty Vehicle Greenhouse Gas Regulation (CARB 2014). Since total regional emissions with implementation of the 2040 MTP/SCS would result in fewer GHG emissions than compared to 2015 conditions, this impact would be less than significant.

Table 33 on page 283 of the Draft EIR has been revised to include the following changes:

Table 33 Per Capita Carbon Dioxide Emission Comparison: Passenger Vehicles

	2005 Baseline (per SB 375)	2020 MTP/SCS	2035 MTP/SCS
Modeled Per Capita CO ₂ Emissions ¹	15.39	14.30	14.29
Modeled Reduction from 2005		-7.08% -7.06%	-7.14%
EMFACT 2011- EMFAC 2014 Adjustments		-2.80% - 3.0%	-5.5%
Adjusted per capita GHG reduction from 2005		-4.3%	-1.6%
Transportation System Management Strategies		N/A	-0.9%
Transportation Demand Management		N/A	-0.5%
Increase Work at Home Workers		N/A	-0.5%
Active Transportation		N/A	-1.6%
Transit System Enhancement Strategies		N/A	-0.5%
Zero Emission Vehicles and Electric Charging Infrastructure Development		N/A	-1.00%
Total % Reduction from 2005		-4.3%	-6.6%

	2005 Baseline (per SB 375)	2020 MTP/SCS	2035 MTP/SCS
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¹ Emissions include external reductions, which remove through travel and half of Internal-External and External-Internal travel.
Source: AMBAG Technical Documentation for Off-Model Adjustments (2017)

Page 284 of the Draft EIR has been revised to include the following changes:

Impact GHG-4 IMPLEMENTATION OF THE 2040 MTP/SCS WOULD NOT INTERFERE WITH CLIMATE ACTION PLANS FOR THE CITIES OF MONTEREY, CAPITOLA, SANTA CRUZ, GONZALES AND WATSONVILLE, AS WELL AS MONTEREY COUNTY AND SANTA CRUZ COUNTY. HOWEVER, THE 2040 MTP/SCS WOULD CONFLICT WITH THE STATE’S ABILITY TO ACHIEVE THE AB 32, SB 32 AND EO-S-3-05 GHG REDUCTION GOALS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The cities of Monterey, Capitola, Santa Cruz, Gonzales and Watsonville, as well as Monterey County and Santa Cruz County, have adopted climate action plans. These plans set goals and targets for the reduction of GHG emissions and outlines policies to help achieve those goals. These local climate action plans have been adopted in an effort to comply with the GHG emissions reduction goals recommended for local governments in the AB 32 Scoping Plan. The 2040 MTP/SCS would not conflict with these local climate action plans.

Although the projects, policies and land use scenarios identified in the 2040 MTP/SCS are designed to align transportation and land use planning to reduce transportation-related GHG emissions, the 2040 MTP/SCS would conflict with the State’s ability to achieve the AB 32 GHG emissions reduction goal. Implementation of the 2040 MTP/SCS would help the region achieve its SB 375 GHG emissions reduction target, thereby contributing to the State’s overall GHG emissions reduction goals identified in AB 32. However, as shown in Table 34, total regional GHG emissions in 2020 would increase by 14.1 percent above 1990 levels. Therefore, the 2040 MTP/SCS would conflict with the State’s ability to achieve the AB 32 GHG emissions reduction goal.

SB 32 has codified the 2030 GHG emissions reduction goals set forth in ~~EO-B-30-15~~ ~~EO-30-15~~. On December 14, 2017, CARB adopted the 2017 Scoping Plan, which identifies how the State can reach its 2030 climate target to reduce GHG emissions codified by SB 32 (CARB, 2017e). The 2017 Scoping Plan recommends statewide targets of no more than six metric tons CO₂e per capita by 2030 and no more than two metric tons CO₂e per capita by 2050. The 2017 Scoping Plan recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State’s sustainable development objectives and develop plans to achieve the local goals.

~~CARB is currently working to update the Scoping Plan to provide a framework for achieving these 2030 targets, which would assign targets by sector to achieve the GHG emissions reduction goal of 40 percent below 1990 levels by 2030. CARB released a draft version of the updated Scoping Plan on October 27, 2017, but a final updated Scoping Plan has not yet been adopted by CARB (CARB 2017e). Adoption is expected in late 2017 (CARB 2017d), and the adopted final updated Scoping Plan will apply to SCSs adopted beginning in 2018. In the absence of an adopted Scoping Plan, this~~ This analysis hypothetically assumes that the 2040 MTP/SCS would be required to achieve the same proportional GHG reductions as the state by the year 2030. Since data for 2030 was not available, the 2030 emissions trajectory was estimated using linear regression based on available data for the years 2015 and 2040. As shown in Table 34, implementation of the 2040 MTP/SCS would increase total regional GHG emissions to 13.9

percent above 1990 baseline levels by 2030. Thus, the 2040 MTP/SCS would conflict with the State's ability to achieve the SB 32 GHG emissions reduction goal.

This analysis does not quantify the GHG emissions for 2050. However, because the 2040 MTP/SCS would conflict with the 2030 goals of SB 32, it is reasonable to expect that Furthermore, the 2040 MTP/SCS would not be on track to be consistent with the state's ability to achieve the Executive Order S-3-05 goal of 80 percent below 1990s levels by 2050. Therefore, since the 2040 MTP/SCS would conflict with the state's ability to achieve AB, 32, SB 32 and EO S-3-05 GHG reduction goals, this impact would be significant.

It should be noted that beginning in Fiscal Year 2018, AMBAG will receive SB 1 Sustainable Communities planning funds. With this funding, AMBAG will conduct local and regional multimodal sustainable transportation and land use planning to further the AMBAG's MTP/SCS goals, contribute to the State's GHG reduction goals, targets and other sustainability goals. AMBAG will work with local jurisdictions, transportation partner agencies, Caltrans and key stakeholders to develop and implement key components and strategies of the 2040 MTP/SCS. AMBAG will collaborate with local jurisdictions to provide various plans, strategies and data that will be used in the AMBAG 2040 MTP/SCS. As part of this work, AMBAG hopes to establish a framework for conducting local sustainability planning, including but not limited to active transportation plans, housing studies, transit-oriented development and other planning activities that will implement the AMBAG SCS. The SB 1 funding may result in further reductions of the GHG emissions shown in Table 34, as these projections do not incorporate the funding or associated sustainable communities planning.

Page 287 of the Draft EIR has been revised to include the following changes:

Mitigation Measures

~~Mitigation Measures W-4(a) and W-4(b) from As described in Section 4.10, Hydrology and Water Quality, existing federal, state, and local programs and ordinances would require flood prevention measures in new development, including requiring structures to be elevated above the 100-year flood zone and tsunami inundation zones. would partially reduce impacts, as they would require structures to be elevated one foot above the 100-year flood zone and 10 feet above the ground elevation in areas subject to tsunami. Because sea level rise inundation areas are geographically similar to coastal flood and tsunami hazard areas, these regulations~~
measures would serve to minimize impacts to some extent.

Page 302 of the Draft EIR has been revised to include the following changes:

~~IMPACT HAZ-4~~ IMPACT HAZ-1 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS INCLUDED IN THE 2040 MTP/SCS WOULD FACILITATE THE ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIAL, AND MAY RESULT IN REASONABLY FORESEEABLE UPSET AND ACCIDENT CONDITIONS. MANDATORY COMPLIANCE WITH EXISTING REGULATIONS AND PROGRAMS WOULD MINIMIZE THE RISK ASSOCIATED WITH THESE ACTIVITIES OR ACCIDENT CONDITIONS. THUS, HAZARDS TO THE PUBLIC OR ENVIRONMENT WOULD BE LESS THAN SIGNIFICANT.

Page 305 of the Draft EIR has been revised to include the following changes:

~~IMPACT HAZ-5~~ IMPACT HAZ-2 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS INCLUDED IN THE 2040 MTP/SCS WOULD FACILITATE HAZARDOUS EMISSIONS OR

HANDLING OF ACUTELY HAZARDOUS MATERIALS, SUBSTANCES OR WASTE WITHIN ONE-QUARTER MILE OF AN EXISTING OR PROPOSED SCHOOL. EXISTING REGULATIONS AND PROGRAMS WOULD REDUCE THE RISK TO SCHOOLS TO ACCEPTABLE LEVELS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Page 306 of the Draft EIR has been revised to include the following changes:

~~IMPACT HAZ-6~~ IMPACT HAZ-3 THE 2040 MTP/SCS INCLUDES LAND USE PROJECTS AND TRANSPORTATION PROJECTS THAT COULD OCCUR ON PREVIOUSLY UNKNOWN HAZARDOUS MATERIAL SITES OR SITES ON THE LIST COMPILED BY GOVERNMENT CODE SECTION 65962.5. THUS, CONSTRUCTION OF THESE PROJECTS COULD CREATE A HAZARD TO THE PUBLIC OR ENVIRONMENT. IMPACTS WOULD BE SIGNIFICANT BUT MITIGABLE.

Page 308 of the Draft EIR has been revised to include the following changes:

~~IMPACT HAZ-7~~ IMPACT HAZ-4 TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE DEVELOPMENT INCLUDED IN THE PROPOSED 2040 MTP/SCS MAY BE LOCATED NEAR A PUBLIC USE AIRPORT OR PRIVATE AIRSTRIP. EXISTING REGULATIONS AND REGULATORY OVERSIGHT WOULD REDUCE THE INHERENT HAZARD OF DEVELOPMENT NEAR AIRPORTS TO SAFE LEVELS, AND IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Page 308 of the Draft EIR has been revised to include the following changes:

~~IMPACT HAZ-8~~ IMPACT HAZ-5 LAND USE DEVELOPMENT AND TRANSPORTATION PROJECTS INCLUDED IN THE 2040 MTP/SCS COULD INTERFERE WITH EXISTING EMERGENCY AND EVACUATION. HOWEVER, REQUIRED REGULAR UPDATES TO EMERGENCY RESPONSE AND EVACUATION PLANS WOULD ACCOUNT FOR DEVELOPMENT AND PROJECTS. IMPACTS RELATED TO INTERFERENCE OR IMPAIRMENT OF AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN WOULD BE LESS THAN SIGNIFICANT.

Page 309 of the Draft EIR has been revised to include the following changes:

~~IMPACT HAZ-9~~ IMPACT HAZ-6 THE 2040 MTP/SCS INCLUDES LAND DEVELOPMENT AND TRANSPORTATION PROJECTS WITHIN AREAS OF MODERATE, HIGH AND VERY HIGH FIRE HAZARD. INFILL DEVELOPMENT EMPHASIZED IN THE 2040 MTP/SCS AND EXISTING REGULATIONS AND PROGRAMS WOULD REDUCE THE VULNERABILITY OF PEOPLE AND STRUCTURES TO WILDLAND FIRE. HOWEVER, THE RISK OF LOSS, INJURY OR DEATH FROM WILDLAND FIRE WOULD BE POSSIBLE GIVEN THE FIRE HAZARD ACROSS MUCH OF THE AMBAG REGION. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Table 35 on pages 311 through 313 of the Draft EIR has been revised to include the following changes:

Table 35 2040 MTP/SCS Projects that May Result in Increased Transport of Hazardous Materials

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-CT011-CT	SR 68 - Commuter Improvements	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport

Association of Monterey Bay Area Governments
**2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation
 Plans for Monterey, San Benito and Santa Cruz Counties**

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-CT017-CT	SR 68 - (Holman Hwy - access to Community Hospital)	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
MON-CT022-CT	SR 156 - Corridor Widening Project	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-CT030-SL	U.S. 101 - Salinas Corridor	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
MON-GRN008-GR	U.S. 101 - Walnut Avenue Interchange	Monterey County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SB-COG-A54	State Route 25 Corridor Improvements Project	San Benito County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SB-CT-A01	SR 156 Widening - San Juan Bautista to Union Road	San Benito County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SB-CT-A17	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	San Benito County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SB-CT-A44	Highway 25 4-Lane Widening, Phase 1	San Benito County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-RTC-24e-RTC	<u>3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street</u> 3 - Hwy 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-RTC-24g-RTC	4 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-RTC 24f-RTC	2 - Hwy 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Ped Bridge	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport

Association of Monterey Bay Area Governments
2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

AMBAG Project No.	Projects	Location	Impact	Description of Impact
SC-RTC 24r-RTC	94 - Hwy 1: Northbound Auxiliary Lane from San Andreas Road/Larkin Valley Road to Freedom Boulevard	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-SC-38-SCR	Hwy 1/San Lorenzo Bridge Replacement	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport
SC-SC-P81-SCR	Hwy 1/Mission Street at Chestnut/King/Union Intersection Modification	Santa Cruz County	HAZ-1	Potential impacts from increased capacity on hazardous material routes facilitating additional hazardous material transport

Table 37 on page 343 of the Draft EIR has been revised to include the following changes:

Table 37 2040 MTP/SCS Projects that May Result in a Flooding Impact

AMBAG Project No.	Projects	Location	Impact	Description of Impact
MON-GRN016-GR	Elm Avenue Bike Lanes	Greenfield	W-4	Potential impacts from flooding
MON-KCY039-CK	1st Street Bike Lanes	King City	W-4	Potential impacts from flooding
MON-CT022-CT	SR 156 – Corridor Widening Project	Monterey County	W-4	Potential impacts from flooding
MON-SNS029-SL	John Street – U.S. 101	Salinas	W-4	Potential impacts from flooding
MON-SNS037-SL	Main Street (North) Widening	Salinas	W-4	Potential impacts from flooding
MON-SNS094-SL	Hemingway Drive Extension	Salinas	W-4	Potential impacts from flooding
MON-KCY043-CK	Roundabout at U.S. 101/Broadway Street/San Antonio Drive	King City	W-4	Potential impacts from flooding
SB-CT-A01	SR 156 Widening – San Juan Bautista to Union Road	San Juan Bautista	W-4	Potential impacts from flooding
SB-SBC-A50	Hospital Road Bridge	Hollister	W-4	Potential impacts from flooding
SB-SBC-A51	Y Road Bridge	San Benito	W-4	Potential impacts from flooding
SB-SBC-A52	Union Road Bridge	Hollister	W-4	Potential impacts from flooding
SC-WAT-P43-WAT	Upper Watsonville Slough Trail	Watsonville	W-4	Potential impacts from flooding and tsunami

AMBAG Project No.	Projects	Location	Impact	Description of Impact
SC-WAT-P46-WAT	Lower Watsonville Slough Trail	Watsonville	W-4	Potential impacts from flooding
SC 25SC	Highway 1 and Highway 9 Intersection Modifications	Santa Cruz	W-4	Potential impacts from flooding
SC-RTC 27a-RTC	Monterey Bay Sanctuary Scenic Trail Network	Santa Cruz	W-4	Potential impacts from flooding and tsunami

Page 366 of the Draft EIR has been revised to include the following changes:

In 2012 the SCCRTC purchased a rail line extending almost 32 miles from Davenport to Pajaro and is evaluating the potential use of this rail line, in combination with projects to ~~to~~ on ~~improve~~ parallel corridors, to enhance mobility in the region.

Table 43 on page 379 of the Draft EIR has been revised to include the following changes:

Table 43 2040 MTP/SCS Projects that May Result in Noise/Vibration Impacts

AMBAG Project No.	Project	Location	Impact	Description of Impact
MON-CT011-CT	SR 68 – Commuter Investments	Monterey County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
MON-SOLO14-SO	SR 146 Bypass	Soledad	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
MON-CT031-CT	U.S. Highway 101 – South County Frontage Roads	Monterey County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
MON-MST011-MST	Salinas Bus Rapid Transit	Salinas	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
MON-TAMC003-TAMC	Rail Extension to Monterey County	Monterey County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-CT-A44	Highway 25 4-Lane Widening, Phase I	San Benito County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-COH-A11	Union Road (formally Crestview Drive) Construction	Hollister	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-COH-A18 A19	Westside Boulevard Extension	Hollister	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-SJB-A07	Third Street Extension	San Juan Batista	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration

AMBAG Project No.	Project	Location	Impact	Description of Impact
SB-SJB-A08	Lavagnino Drive Construction	San Juan Batista	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SB-SJB-A09	Connect Lang Street to the Alameda	San Juan Batista	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SC-RTC-24e-RTC	<u>3 - Hwy 1: Auxiliary Lanes from State Park Drive to Park Avenue and from Park Avenue to Bay Avenue/Porter Street</u> Highway 1: Auxiliary Lanes from Park Avenue to Bay Avenue/Porter Street	Santa Cruz	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SC-RTC-24f-RTC	Highway 1: Auxiliary Lanes from 41st Avenue to Soquel Avenue and Chanticleer Bike/Pedestrian Bridge	Santa Cruz	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SC-RTC24g-RTC	Highway 1: Auxiliary Lanes from State Park Drive to Park Avenue	Santa Cruz	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SC-MTD-P12-MTD	Highway 17 Express Service Restoration and Expansion	Santa Cruz County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration
SC-MTD-P14-MTD	Local Transit Service Restoration and Expansion	Santa Cruz County	N-1, N-2, N-4	Potential impacts from construction and operational noise and vibration

Page 381 of the Draft EIR has been revised to include the following changes:

4.13.1 Setting

This section evaluates the impacts to the regional housing supply and population growth associated with implementation of the 2040 MTP/SCS. The information presented was compiled from multiple sources, including U.S. Department of Housing and Urban Development (HUD), AMBAG’s ~~Draft~~ 2018 Regional Growth Forecast and General Plans and associated EIRs for jurisdictions in the AMBAG region.

a. Growth Forecasting

The ~~Draft~~ 2018 Regional Growth Forecast (AMBAG, 2017d) projects the region’s population, housing and employment to 2040. The ~~Draft~~ 2018 Regional Growth Forecast is used to support regional planning efforts such as the Regional Travel Demand Model and the 2040 MTP/SCS as well as local planning such as the development of General Plans and project review.

Developing population, housing and employment forecast estimates for the Monterey Bay region consists of two distinct stages. The first stage is the identification of regional and county level forecast figures through the use of widely accepted forecasting methodologies. The second

stage is the disaggregation of county-level forecast numbers to the jurisdictional level and subsequently to the Traffic Analysis Zones (TAZ), using data gathered from jurisdictions (AMBAG 2017a).

Table 44 on page 382 of the Draft EIR has been revised to include the following changes:

Table 44 2015 Population, Housing and Employment for the AMBAG Region

Jurisdiction	Population¹	Housing Units¹	Jobs²
Monterey County	432,637	139,177	203,550
Carmel-by-the-Sea	3,824	3,417	2,935
Del Rey Oaks	1,655	741	359
Gonzales	8,411	1,987	4,477
Greenfield	16,947	3,794	7,024
King City	14,008	3,283	4,441
Marina	20,496	7,334	6,340
Monterey	28,576	13,637	34,030
Pacific Grove	15,251	8,184	5,000
Salinas	159,486	43,001	64,396
Sand City	376	176	1,517
Seaside	34,185	10,913	9,650
Soledad	24,809	3,927	3,442
Unincorporated County Territory	104,613	38,783	59,939
San Benito County	56,445	18,262	18,000
Hollister	36,291	10,757	13,082
San Juan Bautista	1,846	750	559
Unincorporated County Territory	18,308	6,755	4,359
Santa Cruz County	273,594	105,221	116,050
Capitola	10,087	5,537	7,062
Santa Cruz	63,830	23,535	40,986
Scotts Valley	12,073	4,691	7,475
Watsonville	52,562	14,131	22,644
Unincorporated County Territory	135,042	57,327	37,883
AMBAG Total	762,676	262,660	337,600

Source: AMBAG's Draft 2018 Regional Growth Forecast.

Table 45 on page 386 of the Draft EIR has been revised to include the following changes:

Table 45 Forecasted AMBAG Population Growth 2015-2040

Jurisdiction	2015	2020	2040	Population Change (2015-2040)	Percent Change (2015-2040)
Monterey County	432,637	448,211	501,751	69,114	16%
Carmel-by-the-Sea	3,824	3,833	3,876	52	1%
Del Rey Oaks	1,655	1,949	2,987	1,332	80%
Gonzales	8,411	8,827	18,756	10,345	123%
Greenfield	16,947	18,192	22,327	5,380	32%
King City	14,008	14,957	16,063	2,055	15%
Marina	20,496	23,470	30,510	10,014	49%
Monterey	28,576	28,726	30,976	2,400	8%
Pacific Grove	15,251	15,349	16,138	887	6%
Salinas	159,486	166,303	184,599	25,113	16%
Sand City	376	544	1,494	1,118	297%
Seaside	34,185	34,301	37,802	3,617	11%
Soledad	24,809	26,399	29,805	4,996	20%
Unincorporated County Territory	104,613	105,361	106,418	1,805	2%
San Benito County	56,445	62,242	74,668	18,223	32%
Hollister	36,291	39,862	46,222	9,931	27%
San Juan Bautista	1,846	2,020	2,251	405	22%
Unincorporated County Territory	18,308	20,360	26,195	7,887	43%
Santa Cruz County	273,594	281,147	306,881	33,287	12%
Capitola	10,087	10,194	10,809	722	7%
Santa Cruz	63,830	68,381	82,266	18,436	29%
Scotts Valley	12,073	12,145	12,418	345	3%
Watsonville	52,562	53,536	59,743	7,181	14%
Unincorporated County Territory	135,042	136,891	141,645	6,603	5%
AMBAG Total	762,676	791,600	883,300	120,624	16%

Source: AMBAG's Draft 2018 Regional Growth Forecast.

Table 46 on page 392 of the Draft EIR has been revised to include the following changes:

Table 46 Highway Descriptions and Congestion Issues

Highway	Length within AMBAG Region	Description
State Highway 1	139.8 miles	Highway 1 is one of two routes that traverse the entire region, connecting the Monterey Bay Area to Northern and Southern California. This important highway provides the primary access to the region's

Highway	Length within AMBAG Region	Description
		<p>coastal areas, as well as serving the needs of residents and visitors to much of the region's urbanized areas, and assisting with agricultural commodity movement.</p> <p>Highway 1 is designated a California State Scenic Highway from the intersection with State Highway 68 south to the San Luis Obispo County line, a distance of approximately 78 miles. At the Santa Cruz and San Mateo County border, Highway 1 is designated a California State Scenic Highway as it travels north towards San Francisco. Highway 1 changes in character as it moves down the Pacific Coast, from a rural, undivided two lane highway, to a four lane arterial, to a four lane divided highway, and finally to a six lane divided highway.</p> <p>Congestion issues include commuter traffic around and through the cities of Monterey and Santa Cruz and tourism traffic along its entire length, but especially in the Big Sur and Carmel-by-the-Sea areas. Portions of Highway 1 have been closed in Monterey County due to mudslides and a collapsed bridge at Pfeiffer Canyon. As of October 23, 2017, the newly constructed Pfeiffer Canyon Bridge has reopened; however, the highway remains closed at Mud Creek due to a substantial landslide and is anticipated to be closed through late 2018 <u>June 1, 2018</u> (Caltrans, 2017b). However, this temporary lull in operations of Highway 1 is not considered representative of baseline conditions.</p>
State Highway 9	25.7 miles	<p>Highway 9 is a two-lane rural highway as it enters the region from San Mateo County in the Santa Cruz Mountains. It is a 27-mile route between the cities of the Santa Clara Valley and Santa Cruz at its junction with Highway 1. It is considerably curvy and traverses forested areas, which limit travel speeds. Highway 9 serves communities in the San Lorenzo Valley, including Boulder Creek, Ben Lomond, and Felton, and is a heavily used commuter and recreational travel route.</p> <p>A section of Highway 9 has been temporarily reduced to one-way controlled traffic at Western Avenue in Santa Cruz County due to a mudslide removal. This temporary traffic control is expected remain in place until December 31, 2017 (Caltrans, 2017b). This temporary reduction in travel lanes on Highway 9 is not considered representative of baseline conditions.</p>
State Highway 17	12.5 miles	<p>Highway 17 is a four-lane freeway/expressway providing the shortest travel distance between the Santa Clara Valley and Santa Cruz County. Travelers to and from the San Francisco Bay area and Santa Cruz County use Highway 17. The route is heavily used for recreational travel on weekends and for commuter travel on weekdays and is therefore subject to delay.</p> <p>Starting at the Santa Clara/Santa Cruz County line near Summit Road, Highway 17 is a rolling to mountainous road, with slopes from four percent to six percent. Segments along this route are narrow, do not have shoulders, or have a narrow median with guard rail. Highway 17 reached its design capacity of 40,000 vehicles per day in 1968. Although this road does not have signalized intersections, there are several unsignalized intersections with acceleration/deceleration lanes as well as t-intersections with local roads. Just south of Scotts Valley, Highway 17 becomes a freeway with shoulders. The freeway portion terminates at the interchange with Highway 1 in the City of Santa Cruz. The program Safe on 17 has been an effective collaboration between <u>SCCRTC</u>, Caltrans <u>and</u> the California Highway Patrol and local and elected officials to encourage motorists to travel at safe speeds and use caution on Highway 17.</p>

Pages 395 and 396 of the Draft EIR have been revised to include the following changes:

The basic measure of the amount of vehicle travel generated is vehicle miles traveled (VMT). One vehicle traveling one mile constitutes one vehicle mile, regardless of the size of the vehicle or the number of passengers in the vehicle. Increases in VMT are associated with regional growth that would occur with or without the 2040 MTP/SCS. Thus, the VMT data may not reflect deficient traffic operations, although VMT does have a strong correlation with congestion. CVMT measures the number of vehicle miles traveled in the AMBAG region in congested conditions. For the purposes of this EIR analysis, congested conditions are roadways operating at level-of-service (LOS) E and LOS F during peak period. LOS is a qualitative measure describing the operational conditions within a traffic stream. LOS has letter designations ranging from A to F, representing progressively worsening traffic operations, with LOS F being the worst possible operations. According to the AMBAG's Regional Travel Demand Model (RTDM) (2014), in 2015, there were 499,064 CVMT during peak period in the AMBAG region. AMBAG's RTDM includes socioeconomic growth projections based on AMBAG's Draft 2018 Regional Growth Forecast.

Page 398 of the Draft EIR has been revised to include the following changes:

Santa Cruz County

~~Freight rail service, once operated by Southern Pacific Railroad and then by Union Pacific and now Monterey Bay Railway has been a historically important form of transportation within Santa Cruz County. There are currently three rail lines in or adjacent to Santa Cruz County. The Santa Cruz Branch rail line extends from Watsonville junction in Pajaro north to Davenport and passes through much of the county's urban area. The Santa Cruz Branch line was purchased by the SCCRTC in 2012. The Felton Branch line is owned and operated by the private Santa Cruz Big Trees and Pacific Railway Company. It primarily provides summertime and holiday excursions between Felton and the Beach Boardwalk in Santa Cruz and is also occasionally used for freight. The Coast Rail Route is Union Pacific main coastal line extending from San Jose to San Diego. There is currently no passenger rail service in Santa Cruz County. In 2015 the RTC completed the Santa Cruz Rail Transit Feasibility Study which evaluated the feasibility of adding rail transit service on the Santa Cruz Branch Rail Line between Santa Cruz and Watsonville. The RTC is evaluating the potential use of this rail line, in combination with projects on parallel corridors as part of the Unified Corridor Investment Study to enhance mobility in the region.~~

Page 398 of the Draft EIR has been revised to include the following changes:

Rail Freight

The majority of rail freight service in the region is provided by the Union Pacific Railroad Company and by Iowa Pacific Holdings, which operates in the AMBAG region under the business name of Santa Cruz and Monterey Bay Railway (SCCRTC, n.d.). Agricultural produce and construction materials are the principal rail freight shipments in the region. Freight service is provided (although currently it is seldom used) along the Santa Cruz Branch line, ~~the rail line between Watsonville Junction and the City of Santa Cruz, the Davenport branch line and the Hollister spur.~~ SCCRTC purchased the Santa Cruz Branch line in 2012, between Davenport and Pajaro. Santa Cruz and Monterey Bay Railway continues to operate limited freight service on the rail line and maintain the rail track (SCCRTC, n.d.). It is anticipated that Santa Cruz and Monterey

Bay Railway will not be the rail service operator much longer and the RTC is currently negotiating with a potential replacement rail service operator.

Page 404 of the Draft EIR has been revised to include the following changes:

On November 27, 2017, the Governor's Office of Planning and Research transmitted to the California Natural Resources Agency its proposal for updates and amendments to the State CEQA Guidelines. The updates include new Guidelines Section 15064.3, which proposes to replace congestion based metrics, such as auto delay and level of service, with Vehicle Miles Traveled (VMT) as the basis for determining significant impacts, unless the guidelines provide specific exceptions. The California Natural Resources Agency has begun the formal administrative rulemaking process under the Administrative Procedure Act. The rulemaking process may lead to further revisions of the CEQA Guidelines. After completing the rulemaking process, the Secretary for the Natural Resources Agency may adopt the proposed changes to the CEQA Guidelines. In August 2014, the Governor's Office of Planning and Research circulated its draft changes to the State CEQA Guidelines implementing SB 743 for public comment. Revised draft guidelines were released on January 20, 2016. In addition to new exemptions for projects that are consistent with specific plans, the draft SB 743 guidelines replace congestion based metrics, such as auto delay and level of service, with Vehicle Miles Traveled as the basis for determining significant impacts, unless the guidelines provide specific exceptions. Following any revisions Governor's Office of Planning and Research deems appropriate, it will submit the draft guidelines to the Natural Resources Agency for commencement of a formal rulemaking process.

Page 408 of the Draft EIR has been revised to include the following changes:

The 2014 RTDM includes detailed transportation and transit networks, as well as a geographically based Traffic Analysis Zone layer containing socioeconomic data for the base year 2015 and forecast years 2020, 2035 and 2040. The forecasted socioeconomic data is based on the AMBAG Draft 2018 Regional Growth Forecast, which is described in detail in Appendix A to the 2040 MTP/SCS. The AMBAG RTDM is calibrated using data from the 2011-2012 California Household Travel Survey (CHTS).

Page 411 of the Draft EIR has been revised to include the following changes:

As shown in Table 48, the 2040 daily vehicle hours of delay would substantially increase above existing conditions in all three counties, as well as the AMBAG region as a whole. As the table shows, at the regional level, the daily hours of vehicle delay would increase by 27,021 hours, which would be an approximately 45 percent increase of existing conditions. This increase is largely a result of projected growth throughout the region by 2040. The AMBAG Draft 2018 Regional Growth Forecast projects the population of the AMBAG region to increase by approximately 16 percent between 2015 and 2040. Thus, some increase in vehicle hours of delay would be unavoidable, regardless of the 2040 MTP/SCS, because more people would live and work in the region in the future. The 2040 MTP/SCS includes projects that would improve overall traffic flow, increase public transit use and encourage more infill development. These types of projects reduce the amount of time motorists are delayed at intersections, reduce the number of vehicles on the road during peak periods and locate people closer to employment centers. Nonetheless, the daily hours of vehicle delays would increase between existing 2015 conditions and 2040 conditions.

Population growth and increased employment in the AMBAG region would also inevitably increase total peak period CVMT. As Table 49 shows, the daily peak period CVMT in the region in 2040 would increase with or without the implementation of the 2040 MTP/SCS. There would be 1,118,524 daily peak period CVMT in 2040 with implementation of the 2040 MTP/SCS. This would be an approximately 149 percent increase compared to existing 2015 conditions. On a per capita basis, as the table also shows, daily peak period CVMT in the region would increase by approximately 0.68 CVMT per person in 2040 compared to 2015, an approximately 115 percent increase over existing conditions (0.59 CVMT per person under existing conditions).

Table 49 Total Daily Peak Period CVMT

Measurement	Existing Conditions (2015)	2040 Conditions with 2040 MTP/SCS	2040 Conditions without 2040 MTP/SCS
Total CVMT on Congested Facilities	499,064	1,118,524	1,259,191
Per Capita CVMT on Congested Facilities	0.59	1.27	1.43

Source: RTDM (AMBAG, 2014b)

Table 50 compares the percentage of commuter trips that ~~are within~~ ~~exceed~~ 30 minutes in duration during the morning peak period (6:00 A.M. to 9:00 A.M.) and evening peak period (4:00 P.M. to 7:00 P.M.). The table provides the existing conditions in 2015, and the 2040 conditions with implementation of the 2040 MTP/SCS for each type of motorized transportation mode in the region. The table also shows the percent of commuter trips within 30 minutes or less in 2040 without implementation for the 2040 MTP/SCS for informational purposes.

Table 50 Percent of Commuter Trips by Mode Within 30 Minutes - Peak Period

Mode	Existing Conditions (2015)	2040 Conditions with 2040 MTP/SCS	2040 Conditions without 2040 MTP/SCS
Drive Alone	84.3%	84.5% 84.0%	83.9%
Carpool	84.3%	84.5% 84.0%	83.9%
Transit	13.0%	15.8% 14.8%	13.0%

Source: RTDM (AMBAG, 2014b)

Page 415 of the Draft EIR has been revised to include the following changes:

As shown in Table 53, the daily VMT in each county, and the AMBAG region as a whole would increase in 2040 compared to existing 2015 conditions (see Appendix C). The increase, on a regional basis, would be 3,851,598 VMT daily, an approximately ~~24.3~~ ~~19.6~~ percent increase of existing daily VMT conditions in 2015. As previously discussed, population growth in the region would inevitably increase daily VMT, regardless of the potential implementation of the 2040 MTP/SCS. However, some of the 2040 MTP/SCS projects that would directly create VMT, separate from unrelated population growth, would include projects that expand public transit fleets. While these types of projects would add daily VMT to the region by introducing new vehicles to the region, they would essentially move more people per VMT than an equivalent number of passenger cars required to move the same number of people. Nonetheless, compared to existing conditions, the daily VMT in the region and each of the three counties

would increase in 2040 under implementation of the 2040 MTP/SCS. Impacts would be significant.

Page 416 of the Draft EIR has been revised to include the following changes:

c. Specific 2040 MTP/SCS Project 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 the 2040 MTP/SCS. The projects within the 2040 MTP/SCS are evaluated herein in their entirety and all are intended to improve traffic circulation rather than cause adverse impacts. However, as described above, the 2040 MTP/SCS would increase existing 2015 VMT by approximately 24.3 ~~19.6~~ percent in 2040, as well as increase the daily hours of vehicle delays and the daily CVMT in the region. These effects were found to be significant and unavoidable impacts, as described above. The RTDM data does not have the capability to distinguish which project or projects would specifically result in increased daily VMT, daily hours of vehicle delay, or daily CVMT. However, any number of the 2040 MTP/SCS projects that expand roadway capacity or improve traffic flow and circulation could presumably increase VMT, and any increase in VMT could potentially increase vehicle delays and CVMT. Thus, there are no specific projects that can be listed in this section related to the adverse impacts of increased daily VMT, daily hours of vehicle delays, and daily CVMT in the AMBAG region.

Page 417 of the Draft EIR has been revised to include the following changes:

As discussed above, the 2040 MTP/SCS would also have significant and unavoidable impacts related to an increase in daily VMT in the AMBAG region in 2040. As described above, daily VMT in the AMBAG region is partially due to commuters travelling to and from employment in the adjoining counties, particularly Santa Clara County and San Mateo County in the San Francisco Bay Area. The 2040 MTP/SCS is designed to promote economic growth and employment in the AMBAG region, while also providing the proper balance between jobs and housing within the region. With more employment in the AMBAG region, fewer residents of the region may commute to adjoining counties for employment. Thus, the increased daily VMT in 2040 resulting from the 2040 MTP/SCS may not necessarily be from commuter trips to and from employment destinations outside of the AMBAG region, and the 2040 MTP/SCS may not increase daily VMT on roadways in adjoining counties. Nonetheless, as shown in Table 53, the 2040 MTP/SCS would increase the baseline 2015 conditions for daily VMT by 3,851,598 VMT, which is an approximately 24.3 ~~19.6~~ percent increase over existing conditions. While the majority of the VMT would be expected to remain within the AMBAG 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 roadways in the counties with the highest relative employment, such as Highway 101 and 17 into Santa Clara County and Highway 1 into San Mateo County. The increased VMT in adjoining areas would contribute to traffic delays and congestion given that increases would be on major commuter routes and heavily travelled roadways in the adjoining counties, and that these counties are also expected to experience increased population growth into the future. Thus, cumulative impacts on traffic operations would be significant and the 2040 MTP/SCS contribution to congestion and traffic in adjoining areas would be cumulatively considerable. Mitigation Measure T-5 would reduce the 2040 MTP/SCS contribution, but it would remain cumulatively considerable.

Page 433 of the Draft EIR has been revised to include the following changes:

Threshold 2 pertains to the congestion management process, which pursuant to federal regulations, is a required part of the metropolitan transportation planning process for regions with one or more urbanized areas with a population of 200,000 or more. Santa Cruz County and San Benito County ~~have~~ ~~has~~ opted out of the congestion management planning process because it does not have a single urbanized area with a population of 200,000. Also, AMBAG does not require congestion management planning because the AMBAG region does not have a single urbanized area with a population of 200,000 or greater. However, within the AMBAG region, SBtCOG, SCCRTC and TAMC, all prepare and routinely update RTPs for their respective jurisdictions. The RTPs incorporate the basic principles of the congestion management process, specifically including a list of projects, goals and strategies to reduce and manage congestion on transportation facilities within their jurisdiction. AMBAG has made the congestion management process an integral part of the regional transportation planning process, including the 2040 MTP/SCS. The 2040 MTP/SCS, specifically Appendices B and C of the 2040 MTP/SCS, contains a compilation of the projects proposed in the RTPs prepared by TAMC, SBtCOG and SCCRTC. Thus, the 2040 MTP/SCS is consistent with the congestion management plans and programs of the RTPAs in the region, and impacts related to conflicting with applicable CMPs would be less than significant.

Page 447 of the Draft EIR has been revised to include the following changes:

6.1.1 Employment, Household and Population Growth

According to the AMBAG ~~Draft~~ 2018 Regional Growth Forecast, population in the AMBAG region is projected to grow from 762,676 in 2015 to 883,300 by 2040; an increase of approximately 16 percent. Employment within the region is projected to grow by approximately 57,400 jobs over the same period, an increase of approximately 17 percent. As discussed in Section 4.13, *Population and Housing*, the proposed projects under the 2040 MTP/SCS are designed and intended to accommodate projected growth up to the year 2040.

Page 453 of the Draft EIR has been revised to include the following changes:

7.3.1 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 AMBAG ~~Draft~~ 2018 Regional Growth Forecast. Rather than focusing on coordinating transportation projects that serve infill and transit oriented development, the transportation network would be comprised of committed transportation projects included in the MTIP.

7.3.2 Impact Analysis

a. Aesthetics/Visual Resources

Implementation of this alternative would result in fewer visual impacts as compared to the 2040 MTP/SCS, because many of the proposed interchanges, bridges and roadway extensions, as well as transit and rail facilities would not be constructed. Nevertheless, some ~~many~~ 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 AMBAG region.

Page 455 of the Draft EIR has been revised to include the following changes:

f. Energy

Because this alternative would result in less construction of transportation infrastructure, overall energy use associated with construction activities would be reduced when compared to the 2040 MTP/SCS. However, this alternative would not include many of the capital improvements envisioned under the proposed 2040 MTP/SCS that would improve transportation efficiency and reduce regional energy demand. Energy use will increase over time as the result of regional socioeconomic (population and employment) growth, regardless of implementation of the 2040 MTP/SCS. ~~The No Project Alternative would result in higher total and per capita energy use as compared to the 2040 MTP/SCS. As discussed in Section 4.6, Energy, the 2040 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy, and would be consistent with applicable energy conservation policies. Because the No Project Alternative would slightly reduce both total and per capita energy use, impacts would be reduced when compared to the 2040 MTP/SCS and impacts related to inefficient, unnecessary, or wasteful direct or indirect energy consumption would be less than significant.~~

Page 461 of the Draft EIR has been revised to include the following changes:

f. Energy

The proposed 2040 MTP/SCS land use scenario emphasizes infill and TOD projects that would locate both residents and jobs closer to existing and planned high quality transit, thereby encouraging the use of alternative modes of transit (e.g. buses, rail), walking and bicycling. Improvements that would occur under Alternative 2 would serve a similar purpose; however, the density and intensity of infill development would increase. In addition, this alternative would include greater investments in transit and alternative transportation modes. Given the increased density and focus on transit, this alternative would decrease VMT as compared to the 2040 MTP/SCS: from 19,687,508 daily VMT to 19,678,332 daily VMT, a decrease of approximately 0.045 percent (see Modeling Methodology in Appendix F to the 2040 MTP/SCS).

Page 462 of the Draft EIR has been revised to include the following changes:

Annual GHG emissions during operations of Alternative 2 would be slightly lower (~~0.01~~ 0.05 percent) than the proposed project (see Modeling Methodology in Appendix F to the 2040 MTP/SCS), ...

Pages 464 and 465 of the Draft EIR have been revised to include the following changes:

n. Transportation and Circulation

Alternative 2 would include a similar range of transportation improvement projects as identified for the proposed 2040 MTP/SCS, with greater priority given to bicycle, pedestrian and local transit connections. Many of these projects are intended to address traffic congestion identified by local agencies in the RTPs, and in many cases would mitigate potential impacts associated with planned long-term development projects. However, others are intended to support improvements along commercial corridors to facilitate access to alternative transportation

modes. Thus, this alternative would decrease daily VMT from 19,687,508 VMT for the 2040 MTP/SCS to 19,678,332 VMT for Alternative 2 – a decrease of approximately 0.045 percent (see Modeling Methodology in Appendix F to the 2040 MTP/SCS). Based on this reduction in daily VMT, potential impacts to transportation and circulation would be less under Alternative 2 and those impacts that do occur may be focused in urban areas rather than suburban or rural areas. Regardless, impacts related to an increase in CVMT and VMT would remain significant and unavoidable. All mitigation measures included in Section 4.14, *Transportation and Circulation*, would be applicable to Alternative 2. Overall transportation impacts would be less than the 2040 MTP/SCS.

Page 465 of the Draft EIR has been revised to include the following changes:

7.5.1 Description

The Maintained Mobility Alternative incorporates the AMBAG Draft 2018 Regional Growth Forecast (AMBAG, 2017d) and includes a land use pattern comprised of more traditional suburban development compared to the land development envisioned in the 2040 MTP/SCS. The land use pattern in the 2040 MTP/SCS emphasize TOD and development of infill sites in existing urbanized areas of the AMBAG region. The suburban development included under Alternative 3 is less concentrating in urbanized areas or within proximity to transit services, but instead allows for development of open or vacant parcels or parcels with very little existing development on the site, often outside of but near urbanized areas. Suburban residential development is typically at lower density than residential infill development on a dwelling unit per acre basis.

Page 467 of the Draft EIR has been revised to include the following changes:

f. Energy

As discussed under *Transportation and Circulation* below, Alternative 3 would have similar transportation benefits, particularly related to highway/street operations, as envisioned under the 2040 MTP/SCS. However, it would result in less compact development than the 2040 MTP/SCS. In combination, these changes would result in an increase in VMT: from 19,687,508 daily VMT to 19,785,172 daily VMT, an increase of approximately 0.54 percent (see Modeling Methodology in Appendix F to the 2040 MTP/SCS). More vehicle trips would translate to higher total and per capita energy use as compared to the 2040 MTP/SCS. As discussed in Section 4.6, *Energy*, the 2040 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy. When compared to the 2040 MTP/SCS, this alternative would serve to slightly increase the overall consumption of energy, such that impacts would be increased when compared to the 2040 MTP/SCS. However, this alternative would not result in inefficient, unnecessary, or wasteful direct or indirect energy consumption, and impacts would continue to be less than significant.

Page 468 of the Draft EIR has been revised to include the following changes:

Due to the increase of approximately 97,664 VMT, this alternative would increase operational GHG emissions by ~~0.21~~ 0.50 percent compared to the 2040 MTP/SCS (see Modeling Methodology in Appendix F to the 2040 MTP/SCS).

Page 470 of the Draft EIR has been revised to include the following changes:

n. Transportation and Circulation

Alternative 3 would involve a similar range of transportation improvement projects as compared to the 2040 MTP/SCS. However, there is a greater emphasis on roadway improvements in this alternative. Many of these projects would expand capacity, relieve traffic congestion, maintain the local and regional roadways, and in many cases are intended as mitigation measures to reduce potential impacts associated with planned long-term development. Therefore, Alternative 3 would have similar transportation benefits, particularly related to highway/street operations as envisioned under the 2040 MTP/SCS. This alternative does not involve modifications to land use patterns; and therefore, would result in less compact development than the 2040 MTP/SCS. In combination, these changes to the transportation project list and land use scenario would result in slightly higher VMT when compared to the 2040 MTP/SCS: from 19,687,508 daily VMT to 19,785,172 daily VMT, an increase of approximately 0.54 percent (see Modeling Methodology in Appendix F to the 2040 MTP/SCS).

Pages 476 and 477 of the Draft EIR have been revised to include the following changes:

- California Air Resources Board (CARB).1998. *Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant*. Retrieved on August 16, 2017, from https://www.arb.ca.gov/toxics/dieseltac/part_a.pdf
- _____. 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. <https://www.arb.ca.gov/diesel/documents/rrpFinal.pdf>
- _____. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Retrieved on August 16, 2017, from <https://www.arb.ca.gov/ch/handbook.pdf>
- _____. 2008. *Climate Change Scoping Plan*. Retrieved on August 16, 2017, from https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf
- _____. 2011. *Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Public Hearing to Consider the "LEV III" Amendments to the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures and to the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles*. Retrieved on August 16, 2017, from <http://www.arb.ca.gov/regact/2012/leviiiighg2012/levisor.pdf>
- _____. 2013. *Staff Report: Update on Senate Bill 375 Implementation in the San Joaquin Valley*. Retrieved on August 16, 2017, from https://www.arb.ca.gov/cc/sb375/finalstaffreport_011513.pdf
- _____. 2014. *EMFAC2014 User's Guide*. Retrieved on August 16, 2017, from https://www.arb.ca.gov/msei/emfac2014_users_guide.pdf
- _____. 2016a. *Ambient Air Quality Standards*. Retrieved on August 16, 2017, from <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
- _____. 2016b. *Diesel Exhaust and Health*. <https://www.arb.ca.gov/research/diesel/diesel-health.htm>

Association of Monterey Bay Area Governments
2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation
Plans for Monterey, San Benito and Santa Cruz Counties

- _____. 2017a. *California Greenhouse Gas Emission Inventory – 2017 Edition*. Retrieved on August 16, 2017, from <http://www.arb.ca.gov/cc/inventory/data/data.htm>
- _____. 2017b. *2020 Business-as-Usual (BAU) Emissions Projection: 2014 Edition*. Retrieved on August 16, 2017, from <https://www.arb.ca.gov/cc/inventory/data/bau.htm>
- _____. 2017c. MPO Target Recommendations and CARB Staff Recommendations. Retrieved on August 16, 2017, from https://www.arb.ca.gov/cc/sb375/appendix_a_mpo_target_recommendations_and_car_b_staff_recommendations.pdf
- _____. 2017d. AB 32 Scoping Plan. Retrieved on August 16, 2017, from <http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>
- _____. 2017e. *2017 Draft 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*. Retrieved on November 17, 2017, from <https://www.arb.ca.gov/cc/scopingplan/revised2017spu.pdf>
- _____. 2017e. *California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target*. Retrieved on March 5, 2018, from https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

Page 492 of the Draft EIR has been revised to include the following changes:

United States Environmental Protection Agency (U.S. EPA). 2015. *Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas*. Retrieved on March 5, 2018, from <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100NMXM.pdf>

United States Environmental Protection Agency (U.S. EPA). 2017a. *Criteria Air Pollutants*. <https://www.epa.gov/criteria-air-pollutants>

_____. 2017b. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015*. U. S. EPA #430-R-17-001. April 2017. Retrieved on August 16, 2017, from https://www.epa.gov/sites/production/files/2017-02/documents/2017_complete_report.pdf

United States Fish and Wildlife Service (USFWS). 1999. Designated Critical Habitat: Central California Coast and southern Oregon/Northern California Coasts Coho Salmon; Final Rule. 64 FR 24049

_____. 2017a. Critical Habitat Portal. Retrieved on August 16, 2017, from <http://criticalhabitat.fws.gov>

_____. 2017b. Information, Planning and Conservation System. Retrieved on August 16, 2017, from <http://ecos.fws.gov/ipac/>

_____. 2017c. National Wetlands Inventory. Retrieved on August 16, 2017, from <http://www.fws.gov/wetlands/>

University of California, Davis, Institute of Transportation Studies. 1997. *Transportation Project-Level Carbon Monoxide Protocol*. December 1997.

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