

US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project

SANTA CLARA COUNTY, CALIFORNIA
04-SCL-101-PM 38.6/39.4
EA 04-0K710

Draft Environmental Impact Report/Environmental Assessment



Prepared by the
State of California, Department of Transportation
and Santa Clara Valley Transportation Authority

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 USC 327 and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans.



December 2023

General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), has prepared this Draft Environmental Impact Report/Environmental Assessment (Draft EIR/EA), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in Santa Clara County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read this document.
- Additional copies of this document and the related technical studies are available for review at Caltrans District 4, 111 Grand Avenue, Oakland, CA 94612 or VTA, 3331 North First Street, San José, CA 95134 on weekdays from 8:00 am-5:00 pm. Hardcopies of the report are also available at the Joyce Ellington Branch Library (491 East Empire Street, San José, CA 95112). This document may be downloaded at the following website: www.vta.org/projects/us-101zanker-road-project.
- Attend the public meeting and open house: Wednesday, January 10, 2024 from 6:00 -7:30 pm at Walter L. Bachrodt Elementary School, 102 Sonora Avenue, San José, CA 95110.
- We'd like to hear what you think. If you have any comments about the proposed project, please attend the public meeting and/or send your written comments via postal mail or email to Caltrans by the deadline.
 - Send comments via postal mail to: Charles Winter, Associate Environmental Planner, Caltrans District 4 Office of Environmental Analysis, P.O. Box 23660, MS-8B, Oakland, CA 94623-0660.
 - Send comments via email to: 101-zanker@vta.org.
- Be sure to send comments by the deadline: February 16, 2024.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the FHWA, may: (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the project.

Alternative Formats:

For individuals with sensory disabilities, this document can be available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternative formats, please write to Caltrans, District 4 – Office of Environmental Analysis, Attn: Charles Winter, P.O. Box 23660, MS-8B, Oakland, CA 94623-0660; or call (510) 847-3752 (voice); or use the California Relay Service TTY number, (800) 735-2929 or 711.

SCH 2021100033

04-SCL-PM 101-38.6/39.4
EA 04—0K710

Construct improvements in the vicinity of US 101/Zanker Road/Skyport Drive/Fourth Street in the City of San José, Santa Clara County. The project limits are between post miles (PM) 38.6 and 39.4 on US 101.

DRAFT ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL ASSESSMENT

**Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)**

**THE STATE OF CALIFORNIA
Department of Transportation
and**

**Responsible Agencies: Santa Clara Valley Transportation Authority and
City of San José**

12/13/2023

Date

Dina A. El-Tawansy

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District 4 Director
California Department of Transportation
NEPA and CEQA Lead Agency

The following persons may be contacted for more information about this document:

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SUMMARY

NEPA ASSIGNMENT

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 United States Code (USC) 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 USC 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding (MOU) pursuant to 23 USC 327 (National Environmental Policy Act [NEPA] Assignment MOU) with the Federal Highway Administration (FHWA). The NEPA Assignment MOU became effective October 1, 2012, and was renewed on May 27, 2022, for a term of ten years. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off the State Highway System within the State of California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 USC 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

JOINT NEPA/CEQA DOCUMENT

The proposed project is a joint project by Caltrans and the FHWA, and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and NEPA. Caltrans is the lead agency under NEPA and CEQA. In addition, FHWA's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the MOU dated May 27, 2022, and executed by FHWA and Caltrans.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, often a “lower level” document is prepared for NEPA. One of the most common joint document types is an Environmental Impact Report/Environmental Assessment (EIR/EA).

After receiving comments from the public and reviewing agencies, a Final EIR/EA will be prepared. Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EA will include responses to comments received on the Draft EIR/EA and will identify the preferred alternative. If the decision is made to

approve the project, a Notice of Determination will be published for compliance with CEQA, and Caltrans will decide whether to issue a Finding of No Significant Impact (FONSI) or require an Environmental Impact Statement (EIS) for compliance with NEPA. A Notice of Availability (NOA) of the FONSI will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

OVERVIEW OF PROJECT AREA

The proposed US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project (Project) is located in the City of San José on United States Highway 101 (US 101) at the existing Old Bayshore Highway and Brokaw Road ramps, on Zanker Road and Bering Drive to the north of US 101, and on North Fourth Street and Skyport Drive to the south of US 101. There is currently no direct connection across US 101 between Zanker Road on the north and North Fourth Street and Skyport Drive on the south.

PURPOSE AND NEED

PURPOSE

The purpose of the proposed Project is to improve traffic operations and safety, as well as improve access for pedestrians and bicyclists, in the project vicinity. To fulfill this purpose, the following are the specific objectives of the proposed Project:

- Enhance transportation network in the Project area to accommodate planned growth as anticipated under the adopted Envision San José 2040 General Plan.
- Improve pedestrian and bicycle facilities in the Project area.
- Improve safety and traffic operations at the on- and off-ramps and mainline of US 101 within the Project limits.
- Improve access to/from the Norman Y. Mineta San José International Airport (SJIA).

NEED

The following text summarizes the existing and projected deficiencies that establish the need for the improvements contemplated under the proposed Project.

- Under existing conditions, there is substantial AM and PM peak commute-period congestion in the Project area, both on US 101 and on local streets.
- Congestion along local streets has been increasing in the North San José area in recent years and is predicted to substantially worsen with significant planned development.
- The existing roadway network is inadequate to serve the planned growth in the North San José area. As a result, the proposed Project is identified as a key

infrastructure improvement project in the *Envision San José 2040 General Plan*, the *North San José Area Development Policy*, and the *North San José Deficiency Plan*.

- Activity at SJIA, located just southwest of the Project limits, is projected to grow from 15.6 million passengers in 2019 to 22.5 million passengers in 2037.
- The Project area lacks adequate facilities for bicyclists and pedestrians. Tenth Street and North First Street are currently the only routes that bicyclists and pedestrians can use to cross US 101 in the project area. Along North First Street, there are no bike lanes south of Brokaw Road under US 101. Within the Project limits, sidewalks are lacking on segments of North First Street, Skyport Drive, Technology Place, Bering Drive, Old Bayshore Highway, Zanker Road, and Brokaw Road.
- The existing off-ramp from northbound US 101 to Brokaw Road is a nonstandard freeway feature because it is “isolated” as there is no corresponding on-ramp associated with this off-ramp.
- The existing US 101/Old Bayshore Highway northbound on- and off-ramps have non-standard design features. Accident rates are higher than average at this location.
- Access between US 101 and SJIA is both indirect and circuitous as there is no connection to/from SR 87 and southbound US 101, as well as no connection between Skyport Drive and US 101.
- There is no direct connection from southbound Interstate 880 (I-880) to northbound US 101. Such traffic must exit the southbound I-880/Gish Road off-ramp to access northbound US 101 via a nonstandard hook on-ramp at Old Bayshore Highway.

PROPOSED ACTION

This Draft EIR/EA evaluates the “Build Alternative” and the “No Build Alternative”.

BUILD ALTERNATIVE

As shown on Figures 1.3-1 and 1.3-2 in Section 1.3, the Project proposes to address the above-described needs and achieve the above-described objectives in three primary ways:

- Construct an overcrossing above US 101 that would connect Zanker Road on the north with North Fourth Street and Skyport Drive on the south.
- Replace the existing nonstandard ramps on northbound US 101 at Old Bayshore Highway and Brokaw Road with new ramps at Bering Drive that meet higher design standards.
- Incorporate bicycle and pedestrian facilities into the Project design.

New Overcrossing of US 101 Connecting Zanker Road, Skyport Drive and North Fourth Street

An overcrossing of US 101 would be constructed to connect Zanker Road on the northside of US 101 to Skyport Drive and North Fourth Street on the southside of US 101. The overcrossing would accommodate three lanes of traffic in each direction, turning lanes, median, bikeways, and sidewalks. Skyport Drive would loop under the new overcrossing to intersect with North Fourth Street approximately 500 feet south of the overcrossing.

Freeway On- and Off-Ramps Improvements

- The northbound US 101/Old Bayshore Highway hook off-ramp and Brokaw Road off-ramp would be consolidated into one off-ramp that intersects at Bering Drive.
- The northbound US 101/Old Bayshore Highway on-ramp and North First Street on-ramp would be consolidated into one on-ramp from Bering Drive.
- The southbound US 101 on-ramp from North Fourth Street would be replaced with a new loop on-ramp from Skyport Drive.
- The southbound US 101 on-ramp from Technology Place (formerly Matrix Boulevard) would remain at the current location but would be extended to provide additional storage.
- The on-ramps to US 101 would be modified to include High Occupancy Vehicle (HOV) lanes and ramp metering.

Construction of Bicycle and Pedestrian Facilities

- Class IV bikeways¹ and sidewalks would be provided along the new Zanker Road/North Fourth Street connection between Archer Street and Bering Drive except along the east side between Regatta Lane and Old Bayshore Highway where a Class I² bikeway would be provided.
- Class IV bikeways and sidewalks would be provided along Skyport Drive between North First Street and North Fourth Street.
- Class IV bikeways and sidewalks would be provided along Old Bayshore Highway between Zanker Road and Terminal Avenue.
- A Class I bikeway and sidewalk would be provided along the south side of Technology Place between North First Street and Skyport Drive.
- A Class I bikeway would be provided along the west side of North Fourth Street between the Skyport Drive/Technology Place/Southbound US 101 on-ramp intersection and the Skyport Drive/North Fourth Street intersection.

¹ A **Class IV bikeway** (Separated Bikeway) provides for the exclusive use of bicycles and includes a separation (e.g., grade separation, flexible posts, inflexible physical barrier, or on-street parking) required between the separated bikeway and the through vehicular traffic.

² A **Class I Bikeway** (Bike Path) provides a completely separated facility for the exclusive use of bicycles and pedestrians with crossflow by vehicles minimized.

- A buffered Class II bikeway³ would be provided along eastbound Brokaw Road between Bering Drive and Zanker Road and a reconstructed sidewalk would be provided along a segment of eastbound Brokaw Road near Bering Drive to connect to the sidewalk on northbound Bering Drive.
- Sidewalks would be provided on both sides of Bering Drive.

Other Improvements

- Old Bayshore Highway would be elevated to intersect with the new Zanker Road overcrossing. Traffic from southbound I-880 heading for northbound US 101 would ascend to the intersection, go through the traffic signal, and descend to a new northbound US 101 collector-distributor road where it would enter the freeway at a new on-ramp location.
- The following local streets would be widened to accommodate traffic from the above-described overcrossing connection and ramp modifications (refer to Figure 1.3-1):
 - Skyport Drive between North First Street and North Fourth Street
 - Bering Drive between Brokaw Road and Zanker Road
 - Zanker Road between Bering Drive and US 101
 - North Fourth Street from north of Koll Circle to US 101
- Local traffic (accessing the Bay 101 Casino and an office building planned development) would be separated from the southbound US 101 on-ramp traffic along Technology Place.
- Local traffic for Reynolds Circle Business Park would be accommodated by a connector between Old Bayshore Highway and Robertson Lane running along existing northbound Zanker Road.

NO BUILD ALTERNATIVE

The No Build Alternative would consist of not constructing the Project, which would avoid all of the environmental impacts of the Build Alternative, as described in this document. However, the No Build Alternative would not meet the purpose or need of the Project.

³ A **Class II Bikeway** (Bike Lane) provides a striped lane for one-way bike travel on a street or highway. Buffering can be provided by a painted safeguard area of one to two feet in width that creates extra space between cyclists and passing cars.

PROJECT IMPACTS

Table S-1 provides a brief summary of the environmental impacts of the Build and No Build Alternatives, as well as avoidance, minimization, and/or mitigation measures. The analyses contained in this Draft EIR/EA determined that neither the Build Alternative nor the No Build Alternative would result in impacts to the following resources:

- Farmlands
- Timberlands
- Community Cohesion
- Parks and Recreational Facilities
- Coastal Zones
- Wild and Scenic Rivers
- Natural Communities
- Wetlands
- Plant Species
- Threatened and Endangered Species

Therefore, these impact categories were not included in Table S-1. Detailed discussions of the existing setting, impacts, and avoidance, minimization, and/or mitigation measures are provided in Chapter 2 of this Draft EIR/EA.

Table S-1: Summary of Environmental Impacts and Avoidance, Minimization and/or Mitigation Measures

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
Existing and Future Land Use (Section 2.2)			
Changes to Existing or Future Land Use	No effect	No effect	None required
Consistency with State, Regional, and Local Plans and Programs (Section 2.3)			
Consistency with Relevant Plans & Policies	Inconsistent	Consistent	None required
Growth (Section 2.4)			
Growth-Inducing Effects	Potential limit to planned growth as congestion worsens	Would facilitate planned growth; would not result in unplanned growth	None required
Relocations and Real Property Acquisition (Section 2.5)			
Business or Residential Relocations	None	The Project would require full acquisitions of five commercial parcels	MM-RRP-1.1: The Project would comply with all requirements of the Uniform Act to ensure businesses displaced by the Project would be properly compensated and relocated, as necessary.

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
Environmental Justice (Section 2.6)			
Disproportionate Effects on Minority or Low Income Groups	None	None	None required
Utilities/Emergency Services (Section 2.7)			
Increased Demand for Utilities	None	None	None required
Increased Response Times for Emergency Services	No increase	Beneficial due to improved traffic conditions	None required
Traffic and Transportation/Pedestrian and Bicycle Facilities Section 2.8)			
Effect on Vehicle Miles Traveled	No effect	Slight reduction in VMT compared to No Build	None required
Changes in Traffic Circulation	No change	Traffic shift from North First Street to North Fourth Street	None required
Pedestrian and Bicycle Impacts	No impact	Beneficial due to construction of new bikeways and wider sidewalks	None required
Visual/Aesthetics (Section 2.9)			
Tree Loss	No effect	Approximately 250+ trees to be removed	MM-VIS-1.1: To the maximum extent practicable, damage to or removal of trees will be avoided by the Project. If trees need to be removed or are damaged as a result of the Project, they will be replaced within the Project corridor, to the extent feasible. Replacement planting will be irrigated and maintained for a period of not less than 3 years after planting.
Aesthetic Impacts of New Structures	No effect	Moderate level of visual impact looking south down Zanker Road from the intersection with Bering Drive due to loss of mature trees, the expansion of hardscape, and partial blocking of the Santa Cruz Mountains; moderate level of visual impact looking north along North Fourth Street from the intersection with Archer Street due to the loss of mature	See MM-VIS-1.1 above. MM-VIS-1.2: The Project will incorporate treatments to improve aesthetics and reduce the opportunity for graffiti including texture, landscaping, and/or color on Project features. Architectural treatments (e.g., color, texture, design) will be consistent with the character of the freeway corridor in the Project vicinity.

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
		<p>trees, the addition of an elevated roadway at close range, and the new streetlight.</p> <p>Moderate level of visual impact on northbound US 101 due to the overcrossing structure and elevated roadways and loss of trees.</p>	
Light and Glare	No effect	Temporary construction lighting and permanent operational lighting; glare from sunlight reflecting off new, unstained concrete surfaces.	MM-VIS-1.3: If nighttime work is necessary, lighting will be limited to the work area by using directional lighting and shielding of light fixtures. Permanent lighting installed by the Project will be designed to limit light pollution and have minimum impact on the surrounding environment. All light fixtures will be configured with the minimum necessary number of bulbs and the optimal mounting height, mast-arm length, and angle to restrict light to the roadways. Where applicable, shields on the fixtures will be considered during the detailed design phase to prevent light trespass to adjacent properties.
Cultural Resources (Section 2.10)			
Effect on Historic Resources	No effect	No effect	None required
Effect on Archaeological Resources	No effect	Low-lowest potential to discover unknown archaeological resources	None required
Hydrology and Floodplain (Section 2.11)			
Floodplain Encroachment	No effect	Project would encroach onto 100-year floodplains	<p>MM HF-1.1: Proposed fill and cut within the 100-Year Floodplain will be balanced such that adverse effects associated with changes in flooding depths will be avoided.</p> <p>MM HF-1.2: In order to avoid increased flooding elsewhere, the Project shall be designed to minimize any obstruction to the flow of floodwaters.</p>

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
Water Quality and Stormwater Runoff (Section 2.12)			
Long-term Increase in Stormwater Runoff	No increase	1.29 acres of net new impervious surface	MM-WQ-1.1: Although long-term water quality effects of the Project would not be substantial, the design of the Project includes Best Management Practices (BMPs) such as site design, permanent erosion control, drainage facilities, source control measures, and treatment measures to reduce the pollutant component of stormwater runoff, as required by the Caltrans National Pollution Discharge Elimination System (NPDES) permit. In addition to the requirements of the NPDES permit, compliance with the requirements of the Caltrans Stormwater Management Plan (SWMP) is also required. The SWMP describes the programs to reduce the discharge of pollutants associated with the stormwater drainage systems, and describes how Caltrans will comply with the provisions of the NPDES permit.
Water Quality Impacts During Construction	No impact	Short-term degradation of water quality may occur from various construction activities	MM-WQ-1.2: Prior to any soil disturbance work, file a Notice of Intent with State Water Resources Control Board (SWRCB). To maintain proper permit coverage under the Construction Stormwater General Permit (CGP), in addition to filing a Notice of Intent, all dischargers must electronically file permit registration documents, Notice of Termination, changes of information, sampling and monitoring information, annual reporting, and other required compliance documents through the SWRCB's Stormwater Multiple Application and Report Tracking System (SMARTS). MM-WQ-1.3: Prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would be submitted by the Contractor and approved by Caltrans prior

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
			to the start of construction. The SWPPP shall detail the measures to address the temporary water quality impacts resulting from construction activities associated with this Project. The SWPPP shall also include the development of a Construction Site Monitoring Program that presents procedures and methods related to the visual monitoring, sampling, and analysis plans.
Geology/Soils/Seismic/Topography (Section 2.13)			
Impacts Due to Expansive Soils	The near surface soil of the Project area has moderate potential for expansion		The Project would be designed to comply with both the Uniform Building Code and Caltrans' Design Standards. This will avoid the need for adoption of any non-standard avoidance, minimization, and/or mitigation measures.
Seismic Activity	The Project site is not located on an active fault, however, it is located in a seismically active part of Northern California.		
Paleontology (Section 2.14)			
Potential to Impact Paleontological Resources during Construction	No impact	Native sediments at the Project site that are more than 30 feet deep are given a high sensitivity for containing fossils	<p>MM-PALEO-1.1: A qualified paleontologist shall provide preconstruction training on the potential for significant fossil localities in the Project area and provide an Alert Sheet that includes contact information for a qualified paleontologist who will be on call to respond in the event a fossil is recovered.</p> <p>MM-PALEO-1.2: If unanticipated discoveries of paleontological resources occur during Project construction, all work within 25 feet of the discovery must cease and the find will be protected in place until it can be evaluated by a qualified paleontologist. The qualified paleontologist shall follow Society of Vertebrate Paleontology guidelines to determine whether the fossil can be identified and whether it meets significance criteria. Work may resume immediately outside of the 25-foot radius.</p>
Hazardous Waste/Materials (Section 2.15)			
Impacts Due to Exposure to Aerially-Deposited Lead	No impact	Aerially-deposited lead (ADL) may be present in the soils at the Project site	MM-HAZMAT-1.1: As part of Project development, a soil investigation will be conducted to determine whether ADL has affected soils that will be

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
			excavated as part of the proposed Project. The investigation for ADL will be performed in accordance with Caltrans' Lead Testing Guidance Procedure. The analytical results will be compared against applicable hazardous waste criteria. Based on analytical results, the investigation will provide recommendations regarding management and disposal of affected soils in the Project area including the reuse potential of ADL-affected soil during Project development. The provisions of a variance granted to Caltrans by the California Department of Toxic Substances Control on September 22, 2000 (or any subsequent variance in effect when the Project is constructed) regarding aerially-deposited lead will be followed.
Impacts Due to Exposure to Lead-Based Paints	No impact	Lead-based paint may be present on the structures to be modified or removed by the Project	MM-HAZMAT-1.2: Testing for the presence of lead-based paint on the existing structures to be demolished and roadway paint to be removed will occur. If this substance is found to be present, applicable regulations pertaining to its removal and disposal will be followed.
Impacts Due to Exposure to Asbestos-Containing Materials	No impact	Materials containing asbestos may be present on the structures to be modified or removed by the Project	MM-HAZMAT-1.3: Testing for the presence of asbestos-containing materials on the existing structures will occur. If these materials are found to be present, applicable regulations pertaining to their removal and disposal will be followed.
Impacts Due to Exposure to polychlorinated biphenyl (PCBs)	No impact	Materials containing PCBs may be present on the structures to be modified or removed by the Project	MM-HAZMAT-1.4: Testing for the presence of PCBs on the existing structures will occur. If these materials are found to be present, applicable regulations pertaining to their removal and disposal will be followed.
Impacts Due to Disturbance of Chemically Treated Wood	No impact	Chemically treated wood may be disturbed by the Project	MM-HAZMAT-1.5: Treated wood waste will be handled properly in accordance with applicable Caltrans guidelines and if warranted, will require special removal, handling, and disposal.

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
Impacts Associated with Exposure to Contaminated Groundwater	No impact	Soil and groundwater contaminated from former leaking underground fuel storage tanks at the Capital Towers/ARCO site may be present at the Project site	<p>MM-HAZMAT-1.6: A Soil and Groundwater Management Plan will be prepared to properly manage any soil and/or groundwater impacted by hazardous materials discovered during ground-disturbing activities within the Project area.</p> <p>MM-HAZMAT-1.7: A site-specific Health and Safety Plan (HSP) that is consistent with Caltrans requirements will be prepared. The HSP shall include: identification of key personnel; summary of risk assessment for workers, the community, and the environment; air monitoring plan; and emergency response plan.</p> <p>MM-HAZMAT-1.8: For worker safety and soil management purposes, testing of the soils and groundwater within the Project area will occur to determine if the following substances are present: 1) total petroleum hydrocarbons as gasoline, as diesel, and as motor oil; 2) volatile organic compounds including tetrachloro-ethene; and 3) pesticides, herbicides, and metals.</p> <p>MM-HAZMAT-1.9: If at any point during construction stained or odoriferous soils are encountered, these soils be stockpiled separately on plastic sheeting. The stockpiles shall then be sampled for the above-mentioned analytes and characterized for special handling and/or disposal.</p>
Air Quality (Section 2.16)			
Long-Term Increases in Emissions of Criteria Air Pollutants	Compared to existing conditions, particulate matter emissions will be higher, while carbon monoxide, reactive organic gases, and nitrogen oxide emissions will be lower	Compared to the No Build Alternative, emissions will be slightly lower	None required

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
Long-Term Increases in Emissions of Toxic Air Contaminants (TAC)	Compared to existing conditions, TAC emissions will be lower	Compared to the No Build Alternative, emissions will be slightly lower	None required
Increases in Emissions During Construction	No increase.	Construction activities and equipment will increase emissions	MM-AIR-1.1 through MM-AIR-1.4 will require the use of Tier 4 construction equipment, limit the idling of diesel-powered equipment, and prohibit the use of diesel-powered generators. MM-AIR-2.1 through MM-AIR-2.15 will limit the generation of dust. See Section 2.15.4 for detailed descriptions of these measures.
Noise and Vibration (Section 2.17)			
Long-Term Increases in Noise	Compared to existing conditions, the change in noise levels will range from 0 to +1 dBA	Compared to existing conditions, the increase in noise levels will range from -5 to +4 dBA	None required except at Waterford Place Apartments (see below)
Long-Term Increases in Noise at the Waterford Place Apartments	Noise increases would exceed the noise abatement criteria of FHWA	Noise increases would exceed the noise abatement criteria of FHWA	Construction of a soundwall is under consideration
Short-Term Increases in Noise During Construction	No effect	Construction activities and equipment will increase noise temporarily	MM-NOI-1.1 through MM-NOI-1.7 will avoid or limit the generation of noise during construction. See Section 2.17.5.2 for detailed descriptions of these measures.
Vibration Impacts during Construction	No effect	Vibration levels would be under the applicable thresholds	None required
Energy (Section 2.18)			
Energy Consumption During the Operational Phase	No effect	Compared to the No Build Alternative, energy consumption will be slightly lower	None required
Energy Consumption During the Construction Phase	No effect	Construction equipment will increase energy use in the short-term	MM-AIR-1.1 through MM-AIR-1.3 will require the use of energy-efficient Tier 4 construction equipment, limit the idling of diesel-powered equipment, and ensure equipment are maintained and properly tuned, all of which will also reduce energy consumption.
Animal Species (Section 2.19)			
Impacts to Nesting Birds, Peregrine	No effect	Tree removal during nesting season could impact	MM-BIO-1.1: To minimize and avoid take of all migratory birds, their nests, and their young,

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
Falcons, and Burrowing Owls		nesting birds, peregrine falcons, and burrowing owls	vegetation removal will occur outside the nesting season between Oct. 1 and Dec. 31, If tree removal, or other construction activities that may affect nesting birds occurs within the nesting season, then qualified biologists will conduct preconstruction surveys for nesting birds no more than 2 days prior to construction. If an active nest is discovered, biologists will establish an appropriate species-specific exclusion buffer around the nest. The area within the buffer will be avoided until the young are no longer dependent on the adults or the nest is no longer active. Further details are listed in Section 2.19.4.
Removal of Trees	No effect	Approximately 250+ trees would be removed	<p>MM-BIO-2.1: Prior to construction, a survey will be undertaken to 1) identify and mark trees for removal, and 2) to identify trees that will remain during construction. Whenever possible, trees will be trimmed rather than removed. For trees that will remain, those trees and their root zone will be temporarily fenced to avoid harm during construction.</p> <p>MM-BIO-2.2: Work will not be performed in the root zone of any tree to be retained without consultation with an International Society of Arboriculture-certified arborist. If trees are damaged during construction and become unhealthy or die, the damaged tree(s) will be removed and replaced.</p> <p>MM-BIO-2.3: Trees impacted by the Project will be replaced at ratios that are listed in Section 2.19.4. If trees cannot be replaced at the stated ratios within the Project footprint, in-lieu fees will be paid to an appropriate fund so that trees can be planted elsewhere within the City of San José limits.</p>

Impact	No Build Alternative	Build Alternative	Avoidance, Minimization and/or Mitigation Measures
Invasive Species (Section 2.20)			
Use of Invasive Species for Landscaping	No effect	No effect. Only non-invasive species will be utilized	None required
Accidental Introduction or Spread of Invasive Species during Construction	No effect	Construction activities and equipment could inadvertently disperse invasive seeds or plant material	<p>MM-INV-1.1: Prior to vegetation clearing and grubbing, vehicles (including wheels, undercarriages, and bumpers) and all other equipment, will be washed before and after entering the Project's construction site. Vehicles will be cleaned at legally operating car washes before entering the construction site and at existing construction yards after they have encountered vegetation.</p> <p>MM-INV-1.2: Soil and plant material from areas that support invasive species will be properly contained and transported to an approved facility for disposal in accordance with applicable regulations and procedures, and fill material will be sourced from weed-free areas.</p>
Cumulative Impacts (Section 2.21)			
Significant Cumulative Impacts	No effect	No significant effect with implementation of avoidance, minimization and/or mitigation measures listed above.	

COORDINATION WITH OTHER AGENCIES/PERMITS REQUIRED

Construction of the Build Alternative will require an encroachment permit from the City of San José (City) for all work extending onto local streets within San José. The application for the encroachment permit will be submitted to the City during final design. Coverage under the National Pollution Discharge Elimination System (NPDES) Statewide Construction General Permit will also be required to address stormwater pollution issues.

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Appendices

Appendix A	Title VI Policy Statement
Appendix B	Avoidance, Minimization and/or Mitigation Summary
Appendix C	List of Acronyms and Abbreviations
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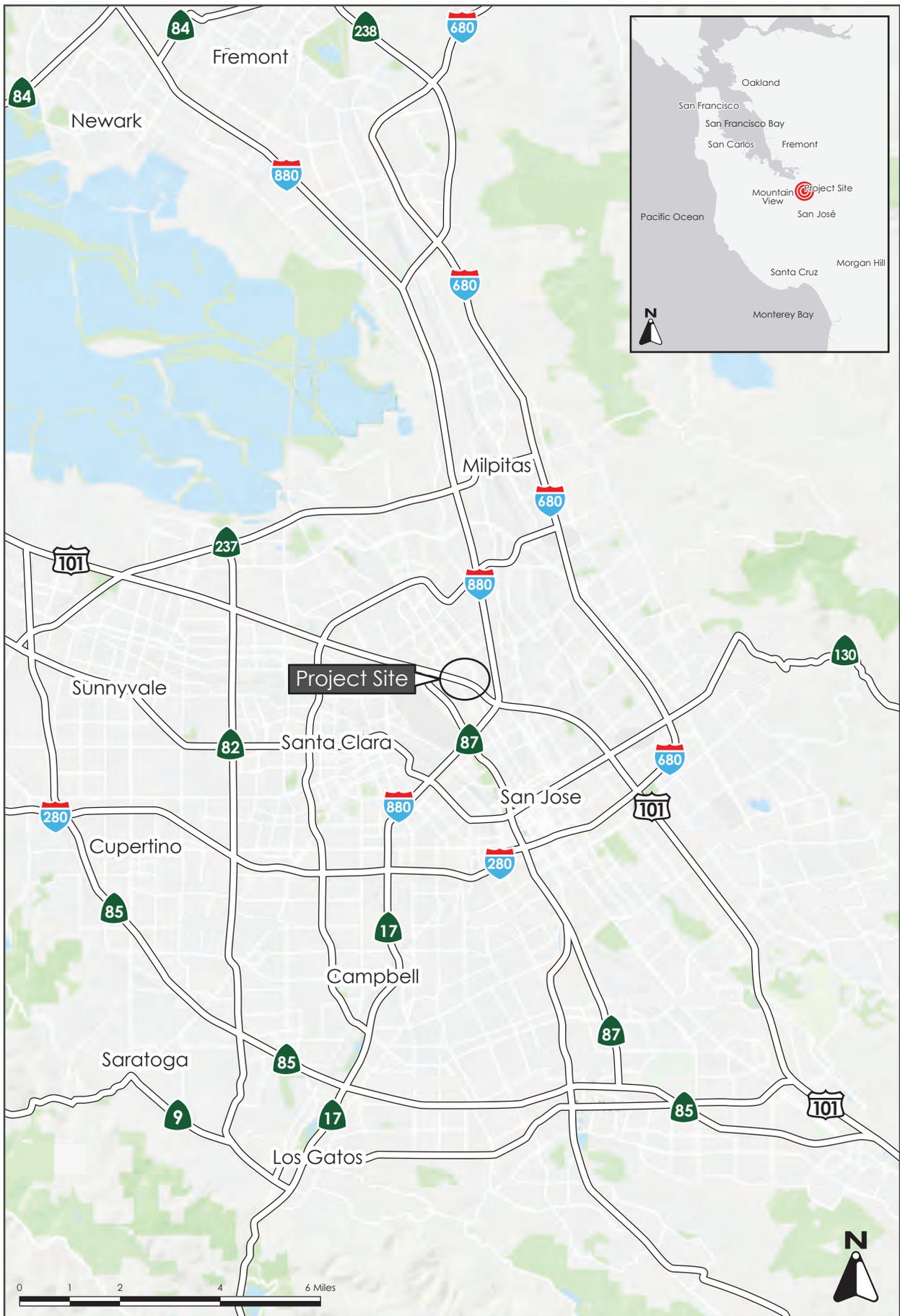
SECTION 1.0 PROPOSED PROJECT

1.1 INTRODUCTION AND BACKGROUND

The proposed Project is in the City of San José, Santa Clara County, California on United States Highway 101 (US 101) at the existing Old Bayshore Highway and Brokaw Road ramps, on Zanker Road and Bering Drive to the north of US 101, and on North Fourth Street and Skyport Drive to the south of US 101. There is currently no direct connection across US 101 between Zanker Road on the north and North Fourth Street and Skyport Drive on the south. See Figures 1.1-1 and 1.1-2 for the Project location. Figure 1.1-3 depicts the Project boundary on an aerial photograph.

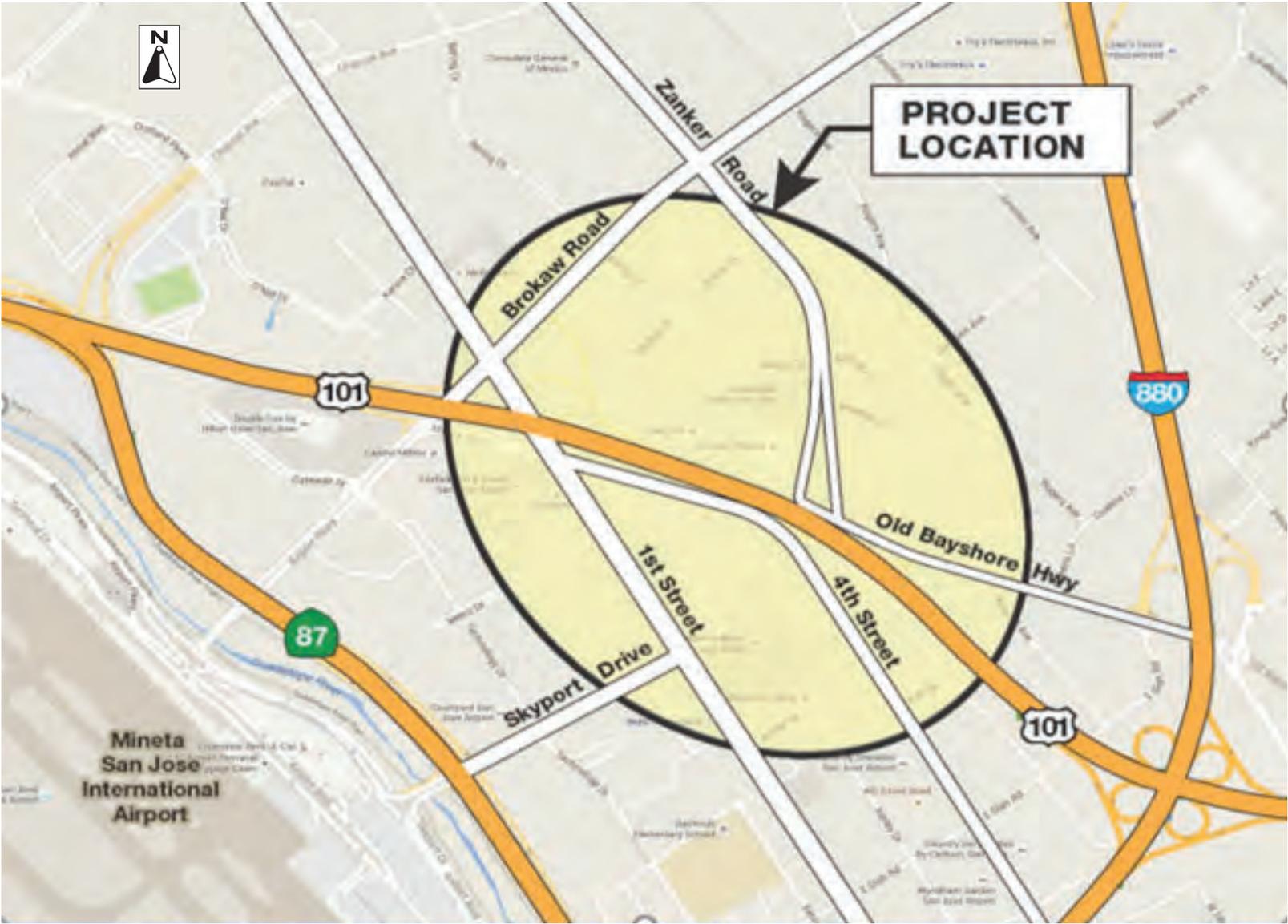
Currently, there is substantial peak-period congestion in the Project area, both on US 101 and on local streets. Furthermore, there is substantial planned development in the North San José area, which would further contribute to the existing congestion. The Norman Y. Mineta San José International Airport (SJIA) is also a substantial generator of traffic in the Project area. Access between US 101 and SJIA is both indirect and circuitous. Identified as an Across Barrier Connections (ABC) deficiency in the 2008 Countywide Bicycle Plan, Tenth Street and North First Street are currently the only routes that pedestrians and bicyclists can use to cross US 101 in the Project area. The *Envision San José 2040 General Plan*, the *North San José Area Development Policy*, and the *North San José Deficiency Plan* have identified the US 101/Zanker Road-Skyport Drive interchange as a key roadway and multi-modal improvement project.

In the context of this background, the California Department of Transportation (Caltrans), in cooperation with the Santa Clara Valley Transportation Authority (VTA) and the City of San José (City), proposes to construct an overcrossing above US 101 to connect Zanker Road on the northside of US 101 to Skyport Drive and North Fourth Street on the southside of US 101, and modify the surrounding on- and off-ramp improvements at Old Bayshore Highway, Brokaw Road, North First Street, North Fourth Street, and Technology Place. The detailed Project description is found in Section 1.3.1.



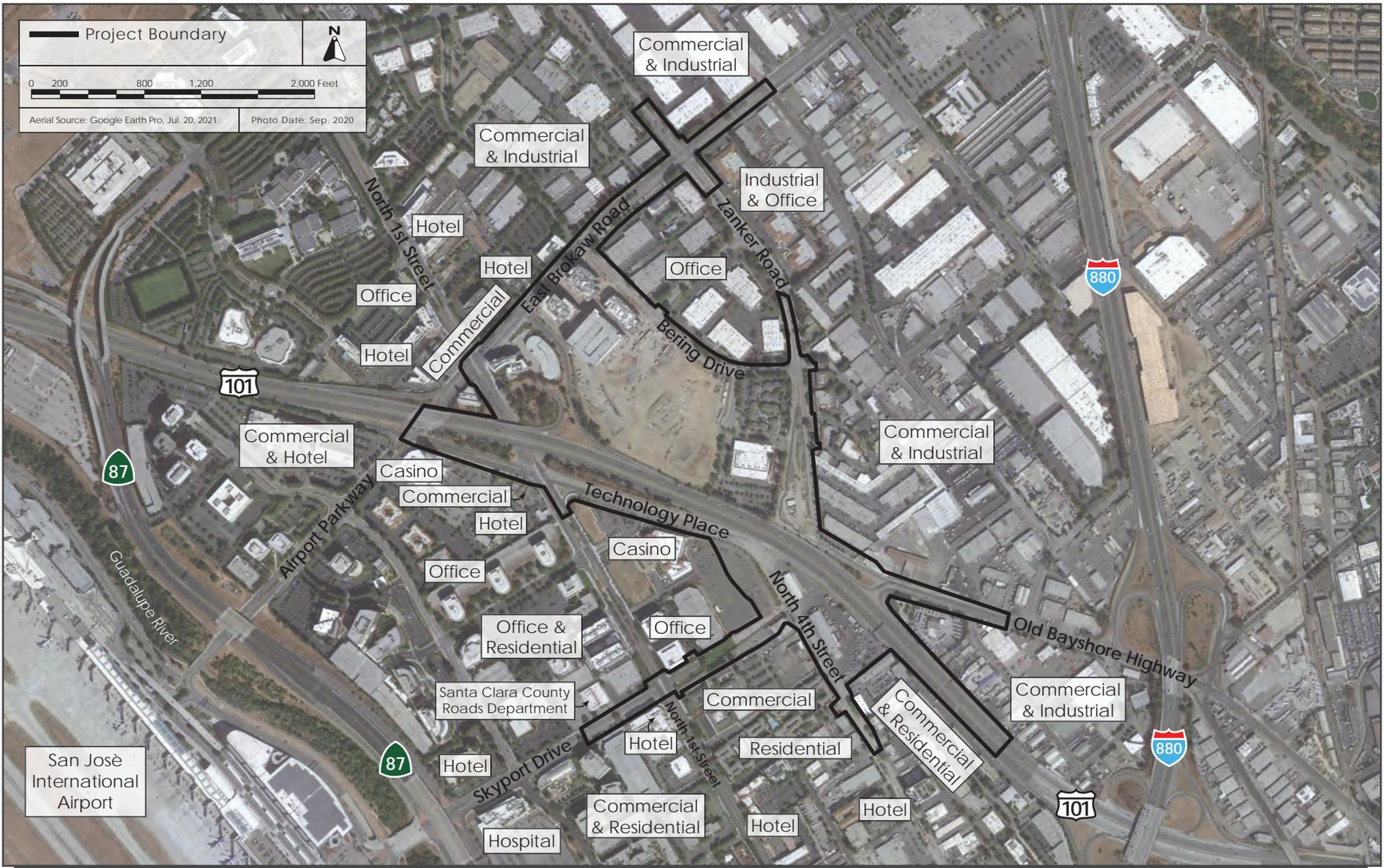
REGIONAL MAP

FIGURE 1.1-1



VICINITY LOCATION MAP

FIGURE 1.1-2



AERIAL PHOTO OF PROJECT BOUNDARY WITH SURROUNDING LAND USES

FIGURE 1.1-3

1.2 PURPOSE AND NEED

1.2.1 Purpose of the Project

The purpose of the proposed Project is to improve traffic operations and safety, as well as improve access for pedestrians and bicyclists, in the project vicinity (Figure 1.1-2). To fulfill this purpose, the following are the specific objectives of the proposed Project:

- Enhance transportation network in the Project area to accommodate planned growth as anticipated under the adopted *Envision San José 2040 General Plan*.
- Improve pedestrian and bicycle facilities in the Project area.
- Improve safety and traffic operations at the on- and off-ramps and mainline of US 101 within the Project limits.
- Improve access to/from SJIA.

1.2.2 Need for the Project

1.2.2.1 *Existing/Projected Congestion and Planned Growth*

Under existing conditions, there is substantial peak-period congestion in the Project area, both on US 101 and on local streets. Northbound US 101 operates under congested conditions in the AM peak commute period and southbound US 101 operates under congested conditions in the PM peak commute period. Key bottlenecks along US 101 are at Trimble Road/De La Cruz Boulevard, State Route 87 (SR 87), and Interstate 880 (I-880). During the peak hours, the queues from these key bottlenecks connect with each other and extend outside the study area.

Congestion along local streets has been increasing in the North San José area in recent years and is predicted to worsen with planned development. The *Envision San José 2040 General Plan* provides for the development of 26,700,000 square feet of industrial uses, 300,000 square feet of commercial uses, and 32,000 residential dwelling units in North San José. Resulting from this growth, vehicle hours of delay will increase from 23,979 daily in 2025 to 40,731 daily in 2045.

The existing roadway network is inadequate to serve this planned growth. As a result, the connection of Zanker Road over US 101 to Skyport Drive and North Fourth Street is identified as a key infrastructure improvement project in the *Envision San José 2040 General Plan*, the *North San José Area Development Policy*, and the *North San José Deficiency Plan*.

SJIA, just southwest of the North San José area, is also a substantial generator of traffic in the Project area. SJIA, which accommodated 15.6 million passengers in 2019, is projected to serve 22.5 million passengers annually by 2037.

1.2.2.2 Multimodal Transportation Deficiencies

Current state, regional, and local plans include policies that mandate the provision of facilities to accommodate and promote safe travel by bicyclists and pedestrians. The Project area currently lacks adequate facilities for those modes of travel. Tenth Street and North First Street are currently the only routes that bicyclists and pedestrians can use to cross US 101 in the Project area. Between these two streets, a distance of 1.25 miles, there are no crossings of US 101. Along North First Street, there is a narrow sidewalk on the east side, no sidewalk on the west side, and no bike lanes south of Brokaw Road under US 101. Within the Project limits, sidewalks are lacking on segments of Skyport Drive, Technology Place, Old Bayshore Highway, Zanker Road, Fourth Street, and Brokaw Road.

1.2.2.3 Safety

The existing off-ramp from northbound US 101 to Brokaw Road is a nonstandard freeway feature because it is “isolated” as there is no corresponding on-ramp associated with this off-ramp.

The existing US 101/Old Bayshore Highway northbound on- and off-ramps have very tight radii (60-foot), nonstandard superelevation rates and transitions, as well as nonstandard acceleration/deceleration lane lengths. Accident rates are higher than average at this location.

Based on data from Caltrans’ Traffic Accident Surveillance and Analysis System (TASAS), Table 1.2-1 presents a summary of accidents that occurred on the study segment of US 101 on- and off-ramps during the 3-year period of August 1, 2019 through July 31, 2022. The data show that the Fatal + Injury and Total accident rates for four out of six of the study segments of the on- and off-ramps are above the average statewide accident rate of the freeways with similar characteristics. Details for the four locations are as follows:

- On northbound US 101, there were 121 reported collisions. The collision consisted of rear-end types (56), hit-object types (35), sideswipe types (19), broadside types (6), overturn types (4), auto-pedestrian type (1).
- On southbound US 101, there were 32 reported collisions. Of these, 5 were sideswipe types, 25 were rear-end types, 1 was hit-object type, and 1 involved an overturning vehicle.
- At the northbound US 101 Brokaw Road off-ramp, sideswipe type (1), rear-end type (1), overturn types (2), and hit-object types (4) made up the collisions that occurred at this segment.
- At the northbound US 101 Old Bayshore Highway off-ramp, broadside types (2) and hit-object types (6) made up the collisions that occurred at this segment.

- At the Old Bayshore Highway on-ramp to northbound US 101, the collisions consisted of one head-on type and two hit-object types.
- At the North Fourth Street on-ramp to southbound 101, sideswipe type (1), rear-end type (1), and hit-object type (1) made up the collisions that occurred at this segment.

Table 1.2-1: Freeway Accident Rates

Location	Number of Accidents	Actual Accident Rate (per million vehicle-miles)			Average Statewide Accident Rate (per million vehicle-miles)		
		Fatal	Fatal + Injury	Total	Fatal	Fatal + Injury	Total
US 101/I-880 Interchange to northbound US 101 Brokaw Road off-ramp	121	0.009	0.39	1.07	0.004	0.34	1.06
Old Bayshore Highway off-ramp	9	0.00	0.00	3.73	0.007	0.42	1.37
Old Bayshore Highway on-ramp	3	0.00	0.34	0.51	0.002	0.18	0.57
Brokaw Road off-ramp	8	0.00	0.41	0.82	0.003	0.38	1.04
SB US 101 from North Fourth Street on-ramp to off-ramp to SB US 101 Connector to SB I-880	32	0.00	0.39	0.89	0.004	0.34	1.06
North Fourth Street on-ramp to southbound 101	3	0.00	0.16	0.24	0.002	0.09	0.31
Source: US 101/Zanker Road Project Design Standard Decision Document. July 2023. Tables 4-1, 4-2, and 4-3. Notes: SB = southbound Ramp accident rate are expressed as number of accidents per million vehicles. Bold text denotes locations that exceed the statewide average.							

1.2.2.4 Roadway Deficiencies

Skyport Drive serves as the major gateway and entrance into SJIA from SR 87 and the North First Street corridor. Currently, access between US 101 and SJIA is both indirect and circuitous as there is no connection to/from SR 87 and southbound US 101, as well as no connection between Skyport Drive and US 101.

Currently, there is no direct connection from southbound I-880 to northbound US 101. Such traffic must exit the southbound I-880/Gish Road off-ramp to access northbound US 101 via a nonstandard hook on-ramp at Old Bayshore Highway.

1.3 PROJECT DESCRIPTION

This section describes the proposed action and the design alternatives that were developed to meet the identified need through accomplishing the defined purpose, while avoiding or minimizing environmental impacts. The alternatives are the “Build Alternative” and the “No Build Alternative.”

In addition to the Build and No Build Alternatives, this section summarizes 25 design and location alternatives that were evaluated for their potential to meet the Project’s purpose and need, but which have been eliminated from further evaluation in this Draft Environmental Impact Report/Environmental Assessment (Draft EIR/EA) due to one or more of the following reasons: 1) failure to adequately meet the purpose and need, 2) failure to meet minimum roadway design criteria, 3) substantial right-of-way needs that would require significant residential and/or business acquisitions and relocations, 4) substantial environmental impacts, and 5) substantial cost. The evaluation of these 25 alternatives complies with the California Environmental Quality Act (CEQA) requirement that an EIR “describe a range of reasonable alternatives to the project” (CEQA Guidelines §15126.6).⁴

After the public circulation period, all comments will be considered, and Caltrans will select a preferred alternative and make the final determination of the Project’s effect on the environment. Under CEQA, Caltrans will certify that the Project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to Project approval. Caltrans will then file a Notice of Determination with the State Clearinghouse that will identify whether the Project will have significant impacts, if mitigation measures were included as conditions of Project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. Similarly, if Caltrans, as assigned by the Federal Highway Administration (FHWA), determines the NEPA action does not significantly impact the environment, Caltrans will issue a Finding of No Significant Impact (FONSI). If it is determined that the Project is likely to have a

⁴ Under NEPA, an EA need only address one build alternative (FHWA Technical Advisory T6640.8A).

significant effect on the environment, an Environmental Impact Statement (EIS) will be prepared.

ALTERNATIVES

1.3.1 Build Alternative

The Project proposes to address the above-described needs and achieve the above-described objectives in three primary ways (Figures 1.3-1 and 1.3-2):

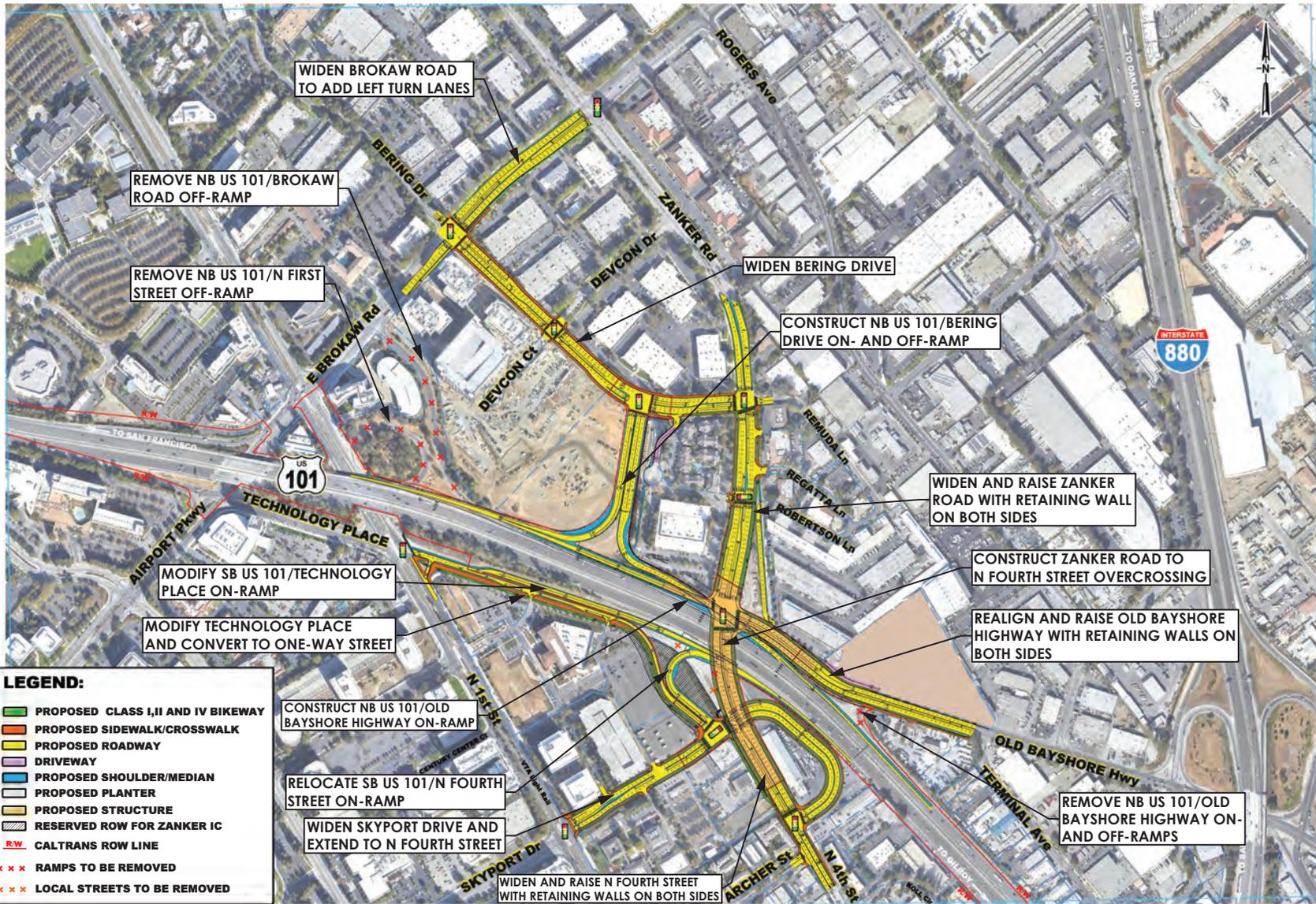
- Construct an overcrossing above US 101 that would connect Zanker Road on the north with North Fourth Street and Skyport Drive on the south.
- Replace the existing nonstandard ramps on northbound US 101 at Old Bayshore Highway and Brokaw Road with new ramps at Bering Drive that meet higher design standards.
- Incorporate bicycle and pedestrian facilities into the Project design.

1.3.1.1 *New Overcrossing of US 101 Connecting Zanker Road, Skyport Drive and North Fourth Street*

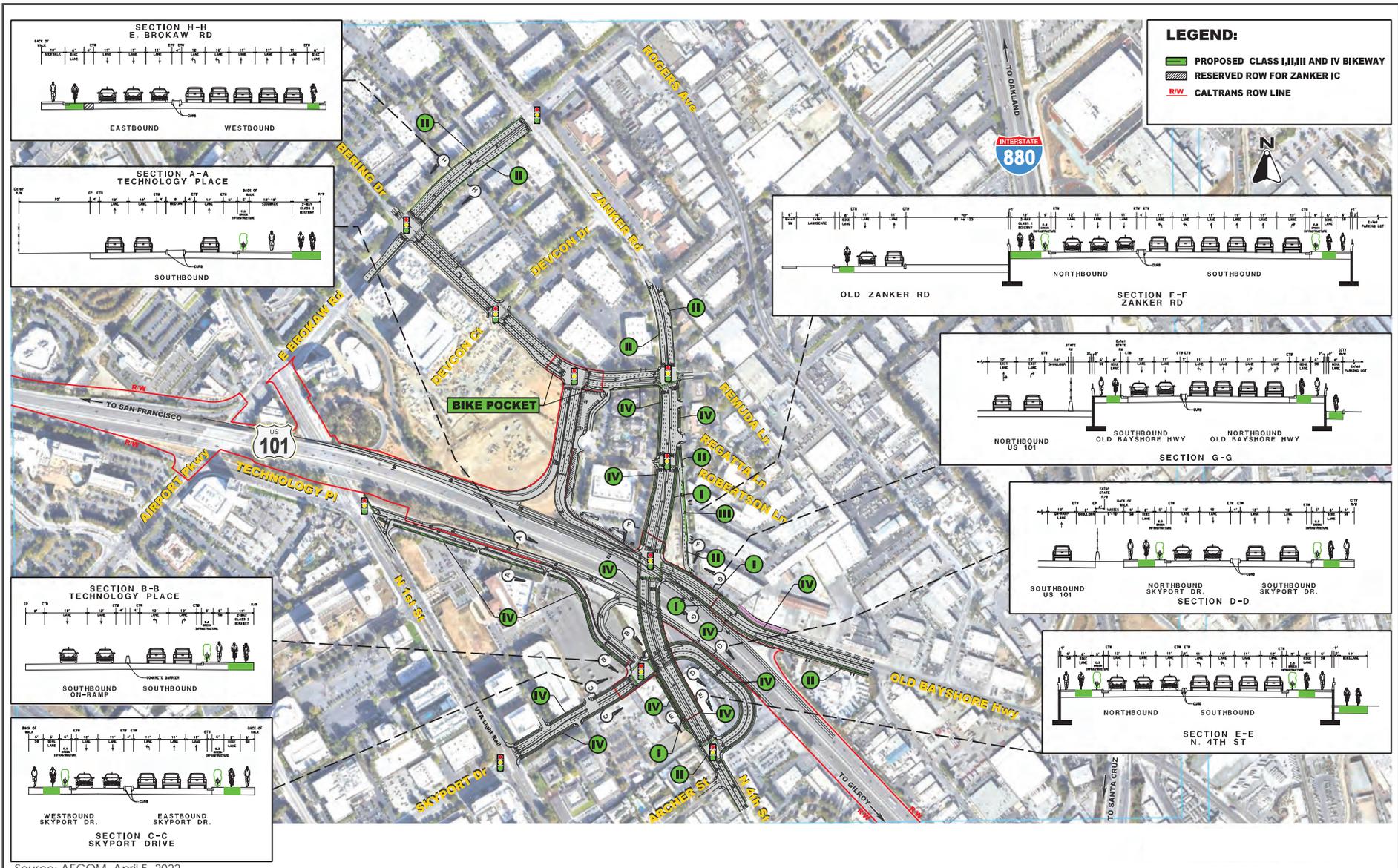
An overcrossing of US 101 would be constructed to connect Zanker Road on the northside of US 101 to Skyport Drive and North Fourth Street on the southside of US 101. The overcrossing, approximately 27 feet above the existing ground level, would accommodate three lanes of traffic in each direction, turning lanes, median, bikeways, and sidewalks. Skyport Drive would loop under the new overcrossing to intersect with North Fourth Street approximately 500 feet south of the overcrossing.

1.3.1.2 *Freeway On- and Off-Ramps Improvements*

- The northbound US 101/Old Bayshore Highway hook off-ramp and Brokaw Road off-ramp would be consolidated into one off-ramp that intersects at Bering Drive.
- The northbound US 101/Old Bayshore Highway on-ramp and North First Street on-ramp would be consolidated into one on-ramp from Bering Drive.
- The southbound US 101 on-ramp from North Fourth Street would be replaced with a new loop on-ramp from Skyport Drive.
- The southbound US 101 on-ramp from Technology Place (formerly Matrix Boulevard) would remain at the current location but would be extended to provide additional storage.
- The on-ramps to US 101 would be modified to include High Occupancy Vehicle (HOV) lanes and ramp metering.



Source: AECOM, December 15, 2021.



Source: AECOM, April 5, 2022.

CONCEPTUAL BIKE WAY PLAN

FIGURE 1.3-2

1.3.1.3 **Construction of Bicycle and Pedestrian Facilities**

- Class IV bikeways⁵ and sidewalks would be provided along the new Zanker Road/North Fourth Street connection between Archer Street and Bering Drive except along the east side between Regatta Lane and Old Bayshore Highway where a Class I⁶ bikeway in lieu of Class IV bikeway and sidewalk would be provided.
- Class IV bikeways and sidewalks would be provided along Skyport Drive between North First Street and North Fourth Street.
- Class IV bikeways and sidewalks would be provided along Old Bayshore Highway between Zanker Road and Terminal Avenue.
- A Class I bikeway and sidewalk would be provided along the south side of Technology Place between North First Street and Skyport Drive.
- A Class I bikeway would be provided along the west side of North Fourth Street between the Skyport Drive/Technology Place/Southbound US 101 on-ramp intersection and the Skyport Drive/North Fourth Street intersection.
- A buffered Class II bikeway⁷ would be provided along eastbound Brokaw Road between Bering Drive and Zanker Road and a reconstructed sidewalk would be provided along a segment of eastbound Brokaw Road near Bering Drive to connect to the sidewalk on northbound Bering Drive.
- Sidewalks would be provided on both sides of Bering Drive.

1.3.1.4 **Other Project Features**

- Old Bayshore Highway would be elevated to intersect with the new Zanker Road overcrossing. Traffic from southbound I-880 heading for northbound US 101 would ascend to the intersection, go through the traffic signal, and descend to a new northbound US 101 collector-distributor road where it would enter the freeway at a new on-ramp location.
- The following local streets would be widened to accommodate traffic from the above-described overcrossing connection and ramp modifications:
 - Skyport Drive between North First Street and North Fourth Street
 - Bering Drive between Brokaw Road and Zanker Road
 - Zanker Road between Bering Drive and US 101
 - North Fourth Street from north of Koll Circle to US 101
- Local traffic (accessing the Bay 101 Casino and an office building planned development) would be separated from the southbound US 101 on-ramp traffic along Technology Place.

⁵ A **Class IV bikeway** (Separated Bikeway) provides for the exclusive use of bicycles and includes a separation (e.g., grade separation, flexible posts, inflexible physical barrier, or on-street parking) required between the separated bikeway and the through vehicular traffic.

⁶ A **Class I Bikeway** (Bike Path) provides a completely separated facility for the exclusive use of bicycles and pedestrians with crossflow by vehicles minimized.

⁷ A **Class II Bikeway** (Bike Lane) provides a striped lane for one-way bike travel on a street or highway. Buffering can be provided by a painted safeguard area of one to two feet in width that creates extra space between cyclists and passing cars.

- Local traffic for Reynolds Circle Business Park would be accommodated by a connector between Old Bayshore Highway and Robertson Lane running along existing northbound Zanker Road.

1.3.1.5 **Standardized Measures**

This Project contains a number of standardized Project measures which are employed on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed Project. These measures are addressed in more detail in the Environmental Consequences sections found in Section 2. Examples include, but are not limited to:

- A Transportation Management Plan (TMP) will be prepared for the Project.
- Standard provisions dealing with the discovery of unanticipated cultural materials or human remains will be included in the Project plans and specifications.
- The construction contractor must comply with Caltrans Standard Specifications in Section 14 that pertain to air pollution control during construction.
- Temporary (construction) and permanent Best Management Practices (BMPs) will be implemented to the maximum extent practicable.

1.3.1.6 **Right-of-Way Requirements**

Many of the proposed improvements would be constructed within the existing Caltrans and City of San José rights-of-way for US 101 and local streets, respectively. There are locations, however, where Project improvements would require additional right-of-way and/or a temporary construction easement (TCE). Based on preliminary design, the locations where additional right-of-way and/or TCEs would be required are listed in Table 1.3-1. This includes full acquisitions of the following parcels: 237-12-102, 235-01-002, 235-01-003, 235-01-004, 235-04-014, and 235-04-015. This information is preliminary and is subject to revision during final design.

Table 1.3-1: Preliminary Right-of-Way Requirements

Assessor's Parcel Number	Parcel Address	Existing Use	Parcel Size [acres]	R/W Needed [s.f.]	TCE Needed [s.f.]
Parcels Located on the Northerly Side of US 101					
237-12-102	1764 Old Bayshore Hwy	Office/Industrial	0.14	6,222	n/a
237-12-103	1780 Old Bayshore Hwy	Industrial Park	1.88	4,707	3,789
237-12-113	1630 Zanker Road	Office/Industrial	1.15	--	113
237-12-114	1650 Zanker Road	Office	0.73	343	649
237-12-119	1660 Old Bayshore	Industrial Park	6.08	728	1,223

Assessor's Parcel Number	Parcel Address	Existing Use	Parcel Size [acres]	R/W Needed [s.f.]	TCE Needed [s.f.]
237-16-056	217 Devcon Drive	Office	3.25	3,341	1,875
237-16-057	150 E Brokaw Road	Industrial	3.22	50	807
237-16-061	1800 Bering Drive	Industrial Park	2.48	7,715	1,681
237-16-062	1828 Bering Drive	Industrial Park	2.82	8,571	1,961
237-16-063	214 Devcon Drive	Industrial Park	3.17	3,641	1,607
237-16-066	1602 Crane Court	Hotel	3.64	16,605	8,651
237-16-069	1610 Crane Court	Gym/Fitness Center	5.65	39,351	17,564
237-16-075	1801 Bering Drive	Office under construction	18.74	194,557	13,361
237-27-058	1691 Old Bayshore Hwy	Commercial/Industrial	1.61	103	1,313
237-27-059	n/a	Commercial/Industrial	0.35	--	78
Parcels Located on the Southerly Side of US 101					
235-01-002	n/a	Access Road	0.12	5,110	n/a
235-01-003	1705 N 4 th Street	Commercial (Practice Place)	1.02	44,431	n/a
235-01-004	1695 N 4 th Street	Commercial (Herc Rentals)	1.39	60,548	n/a
235-01-005	n/a	Vacant	0.95	879	461
235-01-010	1720 N 1 st Street	Office	6.83	7,875	2,532
235-01-022	1700 N 1 st Street	Residential	5.17	--	4,042
235-01-033	n/a	Parking for Bay 101 Casino	1.24	1,831	1,128
235-01-034	n/a		2.49	108,247	n/a
235-01-035	n/a		0.47	20,647	n/a
235-01-036	1730 N 1 st Street	Office	5.08	4,015	2,313
235-01-037	N 1 st Street	Office	0.90	154	376
235-04-011	1600 N 4 th Street	Office	0.53	822	921
235-04-013	1610 N 4 th Street	Commercial	0.95	--	502
235-04-014	1740 N 4 th Street	Commercial (Coast Counties Peterbilt)	4.78	208,217	n/a
235-04-015	N 4 th Street		1.17	50,924	n/a
R/W = right-of-way TCE = temporary construction easement s.f. = square feet Note: The City of San José's approval for the Bay 101 Casino Project in 2014 (File Numbers PDC13-017, PD13-049, PT13-071) is conditioned on setting aside APN #s 235-01-033, 235-01-034, and 235-01-035 for this Project. Information in this table is preliminary and is subject to revision during final design.					

1.3.1.7 Project Cost and Schedule

Construction of the Project is anticipated to begin at the end of 2025 and be completed at the end of 2028. The total capital construction cost of the Project is estimated to be \$351.5 million, of which the right-of-way costs are estimated to be approximately \$132.8 million.

1.3.2 Transportation System Management (TSM) and Transportation Demand Management (TDM) Alternatives

Transportation systems management (TSM) strategies increase the efficiency of existing facilities by accommodating a greater number of vehicle trips on a facility without increasing the number of through lanes. Transportation demand management (TDM) focuses on regional means of reducing the number of vehicle trips and vehicle miles traveled (VMT), as well as increasing vehicle occupancy.

The Project need could not be adequately satisfied by reasonable TSM and TDM strategies. The Project area is currently serviced by one VTA bus route (Route 60). Additionally, there are two light rail routes that serve the Project area (Blue Line and Green Line) that travel along North First Street. Project improvements are expected to reduce congestion along North First Street by providing an alternative north-south corridor in the Project area, leading to marginally improved transit system reliability and efficiency in the immediate Project area.

However, despite the improvements, due to the spread-out configuration of the County's transit system, major improvements and expansions beyond the scope and purpose of this Project would need to be made to the transit system in order to divert motorists out of their vehicles in sufficient numbers so as to eliminate the need for the Project. For example, a recent preliminary study conducted by VTA for a future Bus Rapid Transit (BRT) line on the Stevens Creek Boulevard corridor estimated only 5,000 added daily trips in ridership in year 2030 with BRT implementation. This projected increase in transit ridership with BRT in the Stevens Creek Boulevard corridor would not translate into sufficiently fewer cars to adequately reduce congestion.

In addition to facilitation of improved transit service through less congestion, the Project would improve bicycle and pedestrian connectivity and accommodation within the Project limits, which would attract additional bicycle and pedestrian trips and reduce auto trips.

Although TSM and TDM measures alone could not satisfy the purpose and need for the Project, the following TSM and TDM measures have been incorporated into the Build Alternative for this Project:

- To increase the efficiency of the freeway system during peak travel periods, ramp metering would be installed on the US 101 on-ramps.
- High Occupancy Vehicle (HOV) lanes would be installed on the US 101 on-ramps.

- The installation of bikeways throughout the Project limits would facilitate improved bicycle and pedestrian access across US 101 and within and beyond the Project area, reducing local auto trips.

1.3.3 No Build Alternative

The No Build Alternative would consist of not constructing the Project, which would avoid all of the environmental impacts of the Project, as described in this document. However, the No Build Alternative would not meet the purpose of the Project, which is listed in Section 1.2.1. Under the No Build Alternative, projected increases in traffic would cause congestion to worsen and the existing problems that are described in Section 1.2.2 would be exacerbated. For a discussion of future traffic conditions in the Project area under the No Build Alternative, please see Section 2.8, *Traffic and Transportation*.

1.3.4 Comparison of Alternatives

This section highlights the differences between the Build Alternative and the No Build Alternative. Key differences are also shown in Table 1.3-2.

Table 1.3-2: Comparison of Alternatives

Category	Build Alternative	No Build Alternative
Summary of Vehicular Improvements	Construct an overcrossing from Zanker Road to North Fourth Street and Skyport Drive; replace northbound US 101 ramp at Old Bayshore Highway and Brokaw Road with new ramps at Bering Drive; incorporate bicycle and pedestrian facilities.	No improvements
Key Bicycle and Pedestrian Improvements	Class IV bikeway, Class I and II bikeways, and sidewalks in Project area	No improvements
Ability to Meet Purpose and Need	Meets the purpose and need	Does not meet the purpose and need
Cost	\$351.5 million	\$0
Changes in Traffic Circulation Pattern	Additional connection over US 101 in the project area that will provide an alternative travel route parallel to North First Street	No changes
Effect on Congestion and Delay	Reduction in congestion, delay, VMT, and peak-period travel times	Congestion will worsen over time as planned growth continues

Category	Build Alternative	No Build Alternative
Business Relocations	Full acquisitions of five commercial parcels	None
Residential Relocations	None	None
Change in Noise Levels Compared to Existing Conditions	-5 to +4 dBA	0 to +1 dBA
Change in Noise Levels Compared to No Build Conditions	-5 to +3 dBA	---
Visual Impacts	Moderate to Moderately Low Level of Change	None
Impacts to Sensitive Habitat	None	None
Impacts to Threatened & Endangered Species	None	None
Duration of Construction	Approximately three years	None
Construction Impacts	Noise, vibration, and dust may be substantial but will be avoided/minimized.	None

Congestion will substantially worsen under the No Build Alternative as planned growth in the area continues. However, when compared to the No Build Alternative, the Build Alternative would result in improvements in traffic operations within the Project area, particularly during weekday and weekend peak travel periods.

The Build Alternative would meet the purpose and need of the Project. However, the No Build Alternative, would not meet the purpose and need of the Project.

1.3.5 Alternatives Considered but Eliminated from Further Discussion

During the development of the proposed Project, numerous alternatives and design variations were considered and studied. Each alternative was evaluated for its potential to meet the purpose and need of the Project, its engineering feasibility in terms of its ability to meet Caltrans' minimum design criteria, its cost, and its environmental impacts. The evaluation process included multiple meetings from 2005 to 2020 with Caltrans, VTA, City of San José, and other stakeholders.

Table 1.3-3 summarizes each of these alternatives and design variations, as well as the reasons they were eliminated from further discussion and evaluation in this Draft EIR/EA. This summary is based on a detailed analysis contained in the US 101/Zanker Road Project Study Report – Project Development Support (PSR-PDS) (June 2017), and other Project memos provided by the Project engineers. The PSR-PDS and memos are incorporated into this Draft EIR/EA by reference and are available for review at the locations listed inside the front cover of this document.

Table 1.3-3: Summary of Alternatives and Design Variations Considered But Eliminated From Further Discussion

Name	Description	Reason(s) for Rejection
Z-1 Zanker Interchange	Zanker Road/North Fourth Street overcrossing with elevated “T” intersections at both ends of the structure. The NB US 101 Zanker Road off-ramp and a single lane from Old Bayshore Highway would be elevated to intersect the Zanker Road overcrossing. SB US 101 on-ramp would descend from a “T”-intersection on Skyport Drive extension west of the Zanker Road/North Fourth Street/Skyport Drive intersection, and loop under the Zanker Road overcrossing to an existing auxiliary lane on SB US 101.	Would not improve access to US 101, no NB US 101 access from Zanker Road, requires mandatory nonstandard intersection spacing between North Fourth Street/Skyport Drive intersection and SB US 101 on-ramp intersection, and would have a nonstandard slip ramp from a local street to an off-ramp.
Z-2 Zanker/Fourth and Old Bayshore/Skyport Overcrossings	Two overcrossings proposed over US 101 connecting Zanker Road with North Fourth Street and Old Bayshore Highway with Skyport Drive. There would be an elevated intersection on Zanker Road north of US 101 where a Type L-8 cloverleaf interchange configuration would be constructed for the NB US 101 access. The existing NB US 101 off-ramp to Brokaw Road would braid over the new on-ramp from Zanker Road. A new SB off-ramp would connect to Skyport Drive in a Type L-6 interchange configuration. Another SB US 101 on-ramp would originate from the North First Street/Technology Place intersection and cross under the new SB US 101 off-ramp.	Significant right-of-way impacts in the southwest quadrant and would impact the Bay 101 development.
Z-3 Zanker/Fourth and Old Bayshore/Skyport Overcrossings, First Street/ Technology Place SB 101 Only On-Ramp	Alternative Z-3 is similar to Alternative Z-2 with the exception that the SB US 101 off-ramp and the SB US 101 on-ramp from Zanker Road/North Fourth Street/Skyport Drive are not included.	Would impact the Bay 101 development.
Z-4M Zanker Road and Old Bayshore Highway over US 101 with Roundabouts	Two overcrossings over US 101 would be constructed, one from Zanker Road to North Fourth Street and one from Old Bayshore Highway to Skyport Drive. Alternative Z-4 is also similar to Alternative Z-2 with the exception that the SB US 101 on-ramp from Skyport Drive and the SB US 101 on-ramp from North First Street would be on different alignments and there would be no SB US 101 off-ramp.	Would eliminate the connection from SB I-880 to NB US 101 via Old Bayshore Highway and would not provide direct connection from North Fourth St and Skyport Drive to SB 101. It also would have significant parking impacts to 24 Hour Fitness.
Z-5M Zanker Road over US 101	Construct an overcrossing over US 101 from Zanker Road to Skyport Drive with a “Combined L-7/L-8 Two-Quadrant Cloverleaf” interchange geometric with the ramps on the same side of the local road.	It would have significant right-of-way impacts in the NW, NE, and SW quadrants.

Name	Description	Reason(s) for Rejection
	The existing NB US 101 off-ramp to Brokaw Road and the NB US 101 off-ramp to Old Bayshore Highway would be closed. Old Bayshore Highway north of US 101 would be realigned to become the fourth leg of the NB ramp intersection.	
Z-6 US 101 over Zanker Road	Raise US 101 above grade and extend Zanker Road to Skyport Drive at-grade with traffic signals at the ramp intersections. Alternative Z-6 is similar to Alternative Z-5M except that it proposes to raise the freeway and keep the Zanker Road/Skyport Drive extension at-grade.	It would have significant right of way impacts in the NW and SW quadrants. There would also be significant construction impacts to the freeway as it would require multiple stages to raise the freeway. Operations of the managed lane would be impacted.
Z-7 US 101 over Zanker Road with Roundabouts	Raise US 101 above grade and extend Zanker Road to Skyport Drive at-grade with roundabouts at the ramp intersections.	It would have significant right of way impacts in the NW and SW quadrants. There would also be significant construction impacts to the freeway as it would require multiple stages to raise the freeway. Operations of the managed lane would be impacted.
Z-8 Zanker Road Overcrossing Only	Construct an overcrossing over US 101 from Zanker Road to Skyport Drive with minimal modification to existing freeway on- and off-ramps. Access to SB US 101 would be provided from Zanker Road/North Fourth Street/ Technology Place intersection.	Z-8 was refined to become Alt SZ. The alternative would not improve the existing NB US 101 on- and off-ramps at Old Bayshore Highway. It would require the acquisition and relocation of 24 Hour Fitness.
Z-8A Old Bayshore Highway Connection to Zanker Road through Bering Drive	Similar to Alternative Z-8 but it avoids full take of 24-Hour Fitness Center (only partial take) on Zanker Road by connecting Old Bayshore to Bering Drive.	Z-8A was refined to become Alt SZ. The alternative would not improve the existing NB US 101 on- and off-ramps at Old Bayshore Highway.
Z-9 Old Bayshore Highway Connection to Zanker Road through Bering Drive	Similar to Alternative Z-8 but it avoids 24-Hour Fitness on Zanker Road and with a longer bridge overcrossing structure over US 101 it avoids impact to Park and Jet site on North Fourth St. and maintains existing North Fourth Street/Technology Place intersection and access to US 101 SB on-ramp.	The alternative would not improve access to US 101 and SJIA. It also would not improve the existing NB US 101 on- and off-ramps at Old Bayshore Highway.
Z-10 Separate Overcrossing Structures with Center Lanes connection to Old Bayshore Highway	Construct a four-lane Zanker Road in order to avoid impact to 24-Hour Fitness by utilizing existing wide Zanker median for the local road connection to Old Bayshore. Also avoids impact to Park and Jet site on North Fourth St. and maintains existing North Fourth Street/Matrix Blvd. intersection and access to US 101 SB on-ramp.	The alternative would not improve access to US 101 and SJIA. It also would not improve the existing NB US 101 on- and off-ramps at Old Bayshore Highway. It would have an unconventional connection.
F-1 Fourth Street Overpass	Construct an overcrossing over US 101 from Zanker Road to North Fourth Street and extend Skyport Drive to connect to North Fourth Street with a "T" intersection. Eliminate SB US 101 access from North	Would not meet the Project objective of improving access to SJIA.

Name	Description	Reason(s) for Rejection
	Fourth Street as well as the Technology Place to North Fourth Street movement.	
F-2 Fourth Street Partial Interchange (South)	Construct an overcrossing over US 101 from Zanker Road to North Fourth Street and extend Skyport Drive to connect to North Fourth Street with a "T" intersection. The SB US 101 on-ramp would be accessed from the new overcrossing, and the NB US 101 off-ramp to Old Bayshore Highway would be replaced by a direct ramp to the new overcrossing structure.	Inadequate weaving distance between SB US 101 on-ramp and I-880 off-ramp, and between NB US 101 off-ramp and I-880 ramp.
F-3 Fourth Street Partial Interchange (South)	Construct an overcrossing over US 101 from Zanker Road to North Fourth Street and extend Skyport Drive to connect to North Fourth Street with a "T" intersection. New braided ramps would be built from SB US 101 to the new overcrossing and from the overcrossing to NB US 101.	Inadequate weaving distance between SB US 101 on-ramp and I-880 off-ramp, and between the NB US 101 off-ramp and I-880 ramp
F-4 Fourth Street Full Interchange	Construct Zanker Road to North Fourth Street overcrossing with braided ramp access to and from US 101. Access from Old Bayshore Highway to NB US 101 would be obtained via the NB signalized ramp intersection at Zanker Road.	Inadequate weaving distance between SB US 101 on-ramp and I-880 off-ramp, and between NB US 101 off-ramp and I-880 ramp.
S-1 Skyport Drive Overpass	Provide direct connection from Zanker Road to Skyport Drive with a structure that would cross over North Fourth Street and Technology Place. Access to US 101 would remain the same.	Would not meet the Project objective of relieving traffic on North First Street.
S-2 Skyport Drive Overpass with Fourth Street Connection	Construct direct connection from Zanker Road to Skyport Drive with North Fourth Street raised to connect in a "T" intersection. Bypass ramps would be provided to allow North Fourth Street surface traffic to maintain access to the existing ramps at Technology Place and US 101.	Does not meet the purpose and need of the Project of improving access to US 101 and SJIA.
S-3 Full Interchange	Provide a direct connection from Zanker Road to Skyport Drive with North Fourth Street raised to connect in a "T" intersection. The ramps would be reconfigured to approximate the ramps developed in Alternative F-4, such that a full interchange would exist. The on-ramp to SB US 101 would be located farther south than for the "F" alternatives.	Inadequate weaving distance between SB US 101 on-ramp and I-880 off-ramp, and between NB US 101 off-ramp and I-880 ramp.
D-1 Double Bridge Overcrossing	Construct two overcrossings across US 101. One structure would connect Zanker Road to North Fourth Street, similar to the "F" alternatives, with a second structure linking Skyport Drive with Old Bayshore Highway. An elevated intersection would be created at the junction of Skyport drive and North Fourth Street with the third and fourth legs being Zanker Road and Old Bayshore Highway.	Would not improve access to US 101 because of no NB US 101 access from Zanker Road, inadequate weaving distance between SB US 101 on-ramp and I-880 off-ramp, and between NB US 101 off-ramp and I-880 ramp.

Name	Description	Reason(s) for Rejection
D-1 MOD Double Bridge Overcrossing with Loop Ramp and North Braided Ramp	This variation of Alternative D-1 includes a SB US 101 loop on-ramp. The NB US 101 off-ramp to Old Bayshore Highway would be closed and a new off-ramp would be provided to the new overcrossing at Zanker Road. The offramp would braid over the NB US 101 on-ramp from Old Bayshore Highway. A slip ramp would be provided for traffic from Old Bayshore Highway to access Zanker Road. The northbound Brokaw Road off-ramp would be eliminated.	Would not improve access to US 101 because no NB US 101 access from Zanker Road is provided, inadequate weaving distance between US 101 NB off-ramp and I-880 ramp.
D-2 Double Bridge Overcrossing with Frontage Road Access	Similar to basic geometrics of Alternative D-1 but does not provide direct access from Technology Place to the Zanker Road/North Fourth Street overcrossing. Vehicles would access the connectors via Skyport Drive from North First Street.	Does not improve access to US 101 because no NB US 101 access from Zanker Road, and inadequate weaving distance between NB US 101 off-ramp and I-880 ramp.
D-3 Double Bridge Phased Approach	Alternative D-3 is similar to Alternative D-1 MOD in the SE and SW quadrants. In the NB direction, the off-ramp to Brokaw Road and NB hook off-ramp to Old Bayshore Highway would be closed while a diamond on-ramp would be provided from Zanker Road. A new slip ramp is proposed from Old Bayshore Highway to the new northbound off-ramp to Zanker Road allowing traffic from Old Bayshore Highway to access both the northbound US 101 on-ramp and areas south of the freeway via the overcrossing.	Inadequate weaving distance between NB US 101 off-ramp and I-880 ramp.
SZ	Connect Zanker Road with Skyport Drive while North Fourth Street would be realigned and elevated to intersect with Skyport Drive. Other improvements are similar to the Build Alternative.	Inferior traffic operational performance, access issues to the Bay 101 High Tech office development, longer pedestrian crosswalks and wider overcrossing structure compared to Alternatives FZ and SFY.
FZN Zanker/Fourth Overcrossing Only	Connect Zanker Road directly with North Fourth Street, with Skyport Drive looping under the proposed overcrossing to intersect with North Fourth Street approximately 500 feet south of the proposed overcrossing. No ramp consolidations are proposed on NB US 101. Old Bayshore Highway would extend underneath the Zanker Road overcrossing with a connection directly to Bering Drive.	The alternative would not improve the existing NB US 101 on- and off-ramps at Old Bayshore Highway.
SFY	Alternative SFY proposes a Y-intersection at the Zanker Road, Skyport Drive, and North Fourth Street junction. Other improvements are similar to the Build Alternative. The traffic signal at this intersection would operate in 6 phases due to intersection width.	Require an additional eastbound right-turn lane on Skyport Drive and left turn lane on NB North Fourth Street, wider Y intersection would require longer vehicle clearance time, no right-turn on red restriction so longer delays and queues, longer crosswalks, design causes confusion to motorist, wider overcrossing, and no direct bicycle route from SB

Name	Description	Reason(s) for Rejection
		Zanker to SB First Street, and conflict with Bay 101 Phase 2 development.
NB = northbound NE = northeast	SB = southbound NW = northwest	WB = westbound SE = southeast
EB = eastbound SW = southwest	Source: Project Study Report-Project Development Support (PSR-PDS) on Route US 101 between PM 38.4 and PM39.3, approved July 2017.	

1.4 PERMITS AND APPROVALS NEEDED

Construction of the proposed Project will require permits/approvals from the agencies listed in Table 1.4-1.

Table 1.4-1: Permits and Approvals Needed

Agency	Permit/Approval	Status
City of San José	Encroachment Permit for work extending onto local streets within San José.	Application to be submitted during final design.

SECTION 2.0 **AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND AVOIDANCE, MINIMIZATION, AND/OR MITIGATION MEASURES**

2.1 **TOPICS CONSIDERED BUT DETERMINED NOT TO BE RELEVANT**

As part of the scoping and environmental analysis carried out for the Project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document.

- **Farmlands:** There are no farmlands located within or adjacent to the proposed improvements.
- **Timberlands:** There are no timberlands located in the Project vicinity.
- **Community Cohesion:** The Project will construct improvements to existing freeway interchanges and local streets. The improvements will not divide any community or neighborhood.
- **Parks and Recreational Facilities:** There are no existing parks located within, or in the immediate vicinity of, the Project limits. The closest park is Rosemary Gardens Park, a 1.3-acre neighborhood park located west of North First Street and south of Skyport Drive, approximately 0.3 mile from the Project. There are no recreational trails or bikeways located in the Project limits. The closest trail is the Guadalupe River Trail, which is located west of SR 87, approximately 0.5 mile from the Project area.
- **Coastal Zones:** The Project site is not in or near areas covered by the Coastal Zone Management Act.
- **Wild & Scenic Rivers:** There are no waterways designated as Wild & Scenic Rivers in the Project area. The closest rivers with this designation are over 100 miles from the Project area.
- **Natural Communities:** Based on the Natural Environment Study (NES)⁸ prepared for this Project (AECOM, 2022), there are no sensitive habitats located within, or in proximity to, the area to be disturbed by the Project. The Project is not located

⁸ The NES is incorporated into this Draft EIR/EA by reference. A copy of the NES is available for review at the locations listed inside the front cover of this document.

in or near a wildlife corridor. There are no waterways located within or adjacent to the Project limits.

- **Wetlands:** Based on the NES prepared for this Project (AECOM, 2022), there are no wetlands within or adjacent to the Project area.
- **Plant Species:** Based on the NES prepared for this Project (AECOM, 2022), there are no special-status plant species within or adjacent to the Project area.⁹
- **Threatened & Endangered Species:** Based on the NES prepared for this Project (AECOM, 2022), there is no suitable habitat for any threatened or endangered species within or adjacent to the Project area. This Project is located outside of National Oceanic Atmospheric Administration (NOAA) Fisheries Service jurisdiction; therefore, a NOAA species list is not required and no effects to NOAA species are anticipated.

⁹ Special-status plant species include California Department of Fish and Wildlife species of special concern, United States Fish and Wildlife Service candidate species, and California Native Plant Society rare and endangered plants.

HUMAN ENVIRONMENT

2.2 EXISTING AND FUTURE LAND USE

The information in this section is based primarily on a technical Community Impact Memorandum (May 2022) that was prepared for the Project. This study is incorporated into this Draft EIR/EA by reference. A copy of this study is available for review at the locations listed inside the front cover of this document.

2.2.1 Affected Environment

The Project is located within an urban area of the City of San José. As shown on Figure 1.1-3, the existing land uses within the Project limits are primarily commercial and industrial, including numerous retail and wholesale businesses, multiple hotels, and two casinos. These uses are located along Zanker Road, Brokaw Road, North Fourth Street, North First Street, Skyport Drive, Bering Drive, Old Bayshore Highway and other local streets. Residential uses within the Project limits include the Century Towers Apartments and the Waterford Place Apartments on North First Street.

Although not within the Project limits, the most notable land use within the immediate area is SJIA, which occupies approximately 1,000 acres on the west side of SR 87. SJIA, which serves multiple domestic and international cities, accommodated 15.6 million passengers in 2019 and is projected to serve 22.5 million passengers annually by 2037.¹⁰

2.2.2 Environmental Consequences

The Project would not result in a substantial change to community character because construction would primarily occur along existing highways and in a commercial/industrial setting. The exception to this conclusion is at the Waterford Place Apartments located on the north side of Archer Street between North First and Fourth Streets. Constructed in 1998, this residential development consists of 238 apartments in six 3-story buildings. The 15 apartments on the east side of Building #6, which is adjacent to North Fourth Street, would be exposed to increased noise and lighting due to the Project, as well as aesthetic changes associated with proximity to the proposed overcrossing structure. Specifically, noise levels would increase by two to three decibels due to the Project, five London Plane trees between the apartments and North Fourth Street would be removed, and views to the east would include the new overcrossing structure. Refer to Sections 2.9 and 2.17 pertaining to aesthetic and noise impacts at this location.

The Project would not construct new roadways within an established neighborhood or community. No residences would be acquired or relocated as part of the Project. Up to five business properties (two of which are by the same owner) would, however, be impacted and acquired to accommodate the Project, as listed in Table 2.2-1. These

¹⁰ Source: City of San José, Amendment to SJIA Master Plan EIR, 2020.

buildings are located in industrial/commercial areas adjacent to US 101 on North Fourth Street and Old Bayshore Highway; see Photos 1 through 4.

Table 2.2-1: Notable Development in the Project Vicinity

Name	Land Uses	Status
Bering/Brokaw Road Office Campus (1801 Bering Drive)	1,297,000 square feet of office space	Approved; under construction
Mineta San José International Airport Master Plan Update	New/modified facilities to accommodate 22.5 million annual passengers by year 2037.	Approved; under construction
Bay 101 Technology Place Phase II (1740 North First Street, southeast corner of North First Street and Technology Place)	234,192 square feet of office space	Approved; construction not yet commenced
San José Hilton Garden Inn (111 East Gish Road)	150 hotel rooms	Approved; under construction
Cloud 10 (1601 Technology Drive)	350,000 square feet of office space	Approved; construction not yet commenced
1660 Old Bayshore Highway Industrial	Repurpose 24,486 square feet of warehouse space, add 3,00 square feet of office space, and 17,700 square feet of canopy-covered loading area	Approved; construction pending
Source: City of San José, 2022.		

Land use in San José is guided by the *Envision San José 2040 General Plan*. The Project is limited to improvements to existing roadways and would not change land use patterns or density anticipated in the City of José’s General Plan. The Project, which is intended to reduce traffic congestion and vehicle delay, would not change or negatively affect the land uses for the Project area that are identified in the General Plan, as shown in Figure 2.2-1. Rather, the improvements that are part of the Project would improve the transportation network that serve those land uses.

Indirect land use impacts (e.g., aesthetics and noise) are discussed under their own headings in this document.

2.2.3 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are required. For indirect land use impacts (e.g., noise and aesthetics) and their respective avoidance, minimization, and/or mitigation measures (MM-VIS-1.1 through MM-VIS-1.3 and MM-NOI-1.1 through MM-NOI-1.7), please see Sections 2.9 and 2.17.



Photo 1: Existing view of 1705 North Fourth Street.



Photo 2: Existing view of 1695 North Fourth Street.

Source: Google Maps

PHOTOS 1 & 2



Photo 3: Existing view of 1740 North Fourth Street and North Fourth Street.



Photo 4: Existing view of 1764 Old Bayshore Highway.

Source: Google Maps

PHOTOS 3 & 4



- | | |
|--|---|
|  Agriculture |  Mixed Use Neighborhood |
|  Combined Industrial/Commercial |  Mobile Home Park |
|  Commercial Downtown |  Neighborhood/Community Commercial |
|  Downtown |  Open Hillside |
|  Heavy Industrial |  Open Space, Parklands and Habitat |
|  Industrial Park |  Private Recreation and Open Space |
|  Light Industrial |  Public/Quasi-Public |
|  Lower Hillside |  Regional Commercial |
|  Mixed Use Commercial |  Residential Neighborhood |
|  Main Street Commercial |  Transit Employment Center |

Source: Envision San José 2040 General Plan.

2.3 CONSISTENCY WITH STATE, REGIONAL, AND LOCAL PLANS AND PROGRAMS

2.3.1 Regional Transportation Plans

The Project is listed in, and therefore consistent with, the Metropolitan Transportation Commission's (MTC's) *Plan Bay Area 2050*, which is the Regional Transportation Plan (RTP).¹¹ The Project is also included in the adopted 2021 Transportation Improvement Program (TIP) for the San Francisco Bay Area.¹²

The No Build Alternative would not be consistent with the RTP and TIP.

2.3.2 VTA 2016 Measure B Program

In 2016, Santa Clara County voters approved Measure B, which increased the local sales tax to fund specified transportation projects. The Project is listed as one of the projects to be funded using Measure B monies and is therefore consistent with the Measure B program.

The No Build Alternative would not be consistent with the Measure B program.

2.3.3 Envision San José 2040 General Plan

The *Envision San José 2040 General Plan* contains a number of policies that are relevant to the proposed Project:

Policy LU-1.2: Encourage Walking. Create safe, attractive, and accessible pedestrian connections between developments and to adjacent public streets to minimize vehicular miles traveled.

Policy TR-1.1: Accommodate and encourage use of non-automobile transportation modes to achieve San José's mobility goals and reduce vehicle trip generation and vehicle miles traveled (VMT).

Policy TR-1.5: Design, construct, operate, and maintain public streets to enable safe, comfortable, and attractive access and travel for motorists and for pedestrians, bicyclists, and transit users of all ages, abilities, and preferences.

Policy TR-2.1: Coordinate the planning and implementation of citywide bicycle and pedestrian facilities and supporting infrastructure. Give priority to bicycle and pedestrian safety and access improvements at street crossings (including proposed grade-separated crossings of freeways and other high vehicle volume roadways) and near areas with

¹¹ RTP Project ID 21-T06-028

¹² TIP Project ID# SCL-19007

higher pedestrian concentrations (school, transit, shopping, hospital, and mixed-use areas).

Policy TR-2.3: Construct crosswalks and sidewalks that are universally accessible and designed for use by people of all abilities.

Policy TR-2.5: Integrate the financing, design and construction of pedestrian and bicycle facilities with street projects. Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation.

Policy TR-2.6: Require that all new traffic signal installations, existing traffic signal modifications, and projects included in San José's Capital Improvement Plan include installation of bicycle detection devices where appropriate and feasible.

Policy TR-2.7: Give priority to pedestrian improvement projects that: improve pedestrian safety; improve pedestrian access to and within the Urban Villages and other growth areas; and that improve access to parks, schools, and transit facilities.

Policy TR-2.21: Identify locations where traffic signal phases can be modified or added or where alternative intersection control can be utilized to enhance efficiency and safety for pedestrian service.

Based on the following, the Project is consistent with these policies:

- It would extend Zanker Road via an overcrossing over US 101 to connect to North First Street to provide additional and enhanced bicycle and pedestrian facilities across US 101 in North San José.
- It would add Class IV bikeways and sidewalks along the new Zanker Road/North Fourth Street connection between Archer Street and Bering Drive except along the east side between Regatta Lane and Old Bayshore Highway where a Class 1 bikeway would be provided.
- It would construct Class II bikeways and sidewalks along Skyport Drive between North First Street and North Fourth Street, along Old Bayshore Highway between Zanker Road and Terminal Avenue, and on Technology Place between North First Street and Skyport Drive.
- It would construct a Class I bikeway along the west side of North Fourth Street between the Skyport Drive/Technology Place/Southbound US 101 on-ramp intersection and the Skyport Drive/North Fourth Street intersection.
- It would construct a buffered Class II bikeway along eastbound Brokaw Road between Bering Drive and Zanker Road and reconstruct a sidewalk along a segment of eastbound Brokaw Road near Bering Drive to connect to the sidewalk on northbound Bering Drive.
- It would construct sidewalks on both sides of Bering Drive.

Furthermore, the connection of Zanker Road over US 101 to Skyport Drive and North Fourth Street is identified as a key infrastructure improvement project in the *Envision San José 2040 General Plan*, the *North San José Area Development Policy*, and the *North San José Deficiency Plan*.

The No Build Alternative would not be consistent with the *Envision San José 2040 General Plan*, *North San José Area Development Policy*, or the *North San José Deficiency Plan*.

2.3.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are required.

2.4 GROWTH

2.4.1 Regulatory Setting

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with NEPA, require evaluation of the potential environmental effects of all proposed federal activities and programs. This provision includes a requirement to examine indirect effects, which may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations (40 Code of Federal Regulations [CFR] 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

CEQA also requires the analysis of a project's potential to induce growth. The CEQA Guidelines (Section 15126.2[d]) require that environmental documents "...discuss the ways in which the proposed Project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment..."

2.4.2 Environmental Consequences

The information in this section is based primarily on a Community Impact Memorandum (May 2022) that was prepared for the Project. This study is incorporated into this Draft EIR/EA by reference. A copy of this study is available for review at the locations listed inside the front cover of this document.

The Project is limited to improvements to an existing freeway and local streets and would not change land use patterns or density. The Project is located within, and is intended to serve, an urbanized and mostly-developed area of San José. The Project would not open additional areas to development.

The Project is intended to reduce traffic congestion and vehicle delay, which are the result of growth that has already occurred or is expected to occur in the area in accordance with the land uses identified in the City's adopted General Plan.

One result of reducing congestion can be to increase accessibility, which can in turn affect the timing and location of growth elsewhere. However, due to the urban location of this interchange, the Project is not expected to drive growth in unplanned areas or areas where growth is not currently foreseeable, therefore, the Project would not result in a population increase.

The Project purpose is limited to serving the local urbanized area. To the extent that a reduction in congestion makes the area more attractive for development, the Project could facilitate office, industrial, and commercial growth in the area, as identified in the *Envision San José 2040* General Plan.

As stated previously, the Project would not induce unplanned growth but would facilitate the planned growth of the area as identified in the General Plan. The General Plan contains policies that ensure that the future capacity of services (e.g., schools, utilities, police and fire protection, libraries, parks, etc.) will be adequate to serve that planned growth.

There are no related (i.e., highway improvement) projects in the area. The closest projects of a similar type are the I-280/Winchester Boulevard Interchange Improvements Project, which is located approximately 3.8 miles to the southwest, and the US 101/Trimble Road Interchange Improvement Project, which is located approximately 1.8 miles to the northwest. At that distance, none of the effects of each project would combine to result in cumulative growth effects.

No Build Alternative

The No Build Alternative would potentially limit planned growth as congestion worsens at US 101 and local streets, including North Fourth Street, Old Bayshore Highway, and Brokaw Road.

2.4.3 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are necessary because the Project would not induce growth beyond what is expected to occur in the area.

2.5 RELOCATIONS AND REAL PROPERTY ACQUISITION

The information in this section is based primarily on a technical Community Impact Memorandum (May 2022) that was prepared for the Project. This study is incorporated into this Draft EIR/EA by reference. A copy of this study is available for review at the locations listed inside the front cover of this document.

2.5.1 Regulatory Setting

Caltrans' Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), and Title 49 CFR Part 24. The purpose of the RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix C for a summary of the RAP.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix A for a copy of the Department's Title VI Policy Statement.

2.5.2 Affected Environment

The Project is located within an urban area of the City of San José. As shown on Figure 1.1-3, the existing land uses within the Project limits are primarily commercial and industrial, including numerous retail and wholesale businesses, multiple hotels, and two casinos. These uses are located along Zanker Road, Brokaw Road, North Fourth Street, North First Street, Skyport Drive, Bering Drive, Old Bayshore Highway and other local streets. Residential uses within the Project limits include the Century Towers Apartments and the Waterford Place Apartments on North First Street.

2.5.3 Environmental Consequences

Many of the proposed improvements would be constructed within the existing Caltrans and City of San José rights-of-way for US 101 and local streets, respectively. There are locations, however, where the improvements would require additional right-of-way that would directly impact businesses. Based on preliminary design which is subject to revision during final design, the Project would require full acquisitions of five commercial parcels as listed in Table 2.5-1. One parcel is currently vacant, two parcels are each occupied by one business (Herc Rentals and The Practice Place), and two parcels comprise the Coast Counties Peterbilt truck dealership.

Table 2.5-1: Preliminary Full Acquisition Right-of-Way Requirements

Assessor's Parcel Number	Parcel Address	Existing Use	Parcel Size [acres]	R/W Needed [square feet]
Parcels Located on the Northerly Side of US 101				
237-12-102	1764 Old Bayshore Hwy	Office/ Industrial (vacant)	0.14	6,222
Parcels Located on the Southerly Side of US 101				
235-01-003	1705 N 4 th Street	Commercial (Practice Place)	1.02	44,431
235-01-004	1695 N 4 th Street	Commercial (Herc Rentals)	1.39	60,548
235-04-014	1740 N 4 th Street	Commercial (Coast Counties Peterbilt)	4.78	208,217
235-04-015	N 4 th Street		1.17	50,924
R/W = right-of-way TCE = temporary construction easement Information in this table is preliminary and is subject to revision during final design.				

2.5.4 Avoidance, Minimization, and/or Mitigation Measures

The following measure is included in the Project for the purpose of avoiding, minimizing, and mitigating the relocation impacts of the Project.

MM-RRP-1.1: The Project would comply with all requirements of the Uniform Relocation Act to ensure businesses displaced by the Project would be properly compensated and relocated, as necessary.

2.6 ENVIRONMENTAL JUSTICE

The information in this section is based primarily on a technical Community Impact Memorandum (May 2022) that was prepared for the Project. This study is incorporated into this Draft EIR/EA by reference. A copy of this study is available for review at the locations listed inside the front cover of this document.

2.6.1 Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2020, this was \$26,200 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this Project. Caltrans' commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix A of this document.

The CEQ defines minority as a person who is:

- Black (having origins in any of the black racial groups of Africa);
- Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
- Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or
- American Indian and Alaskan Native (having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).

2.6.2 Affected Environment

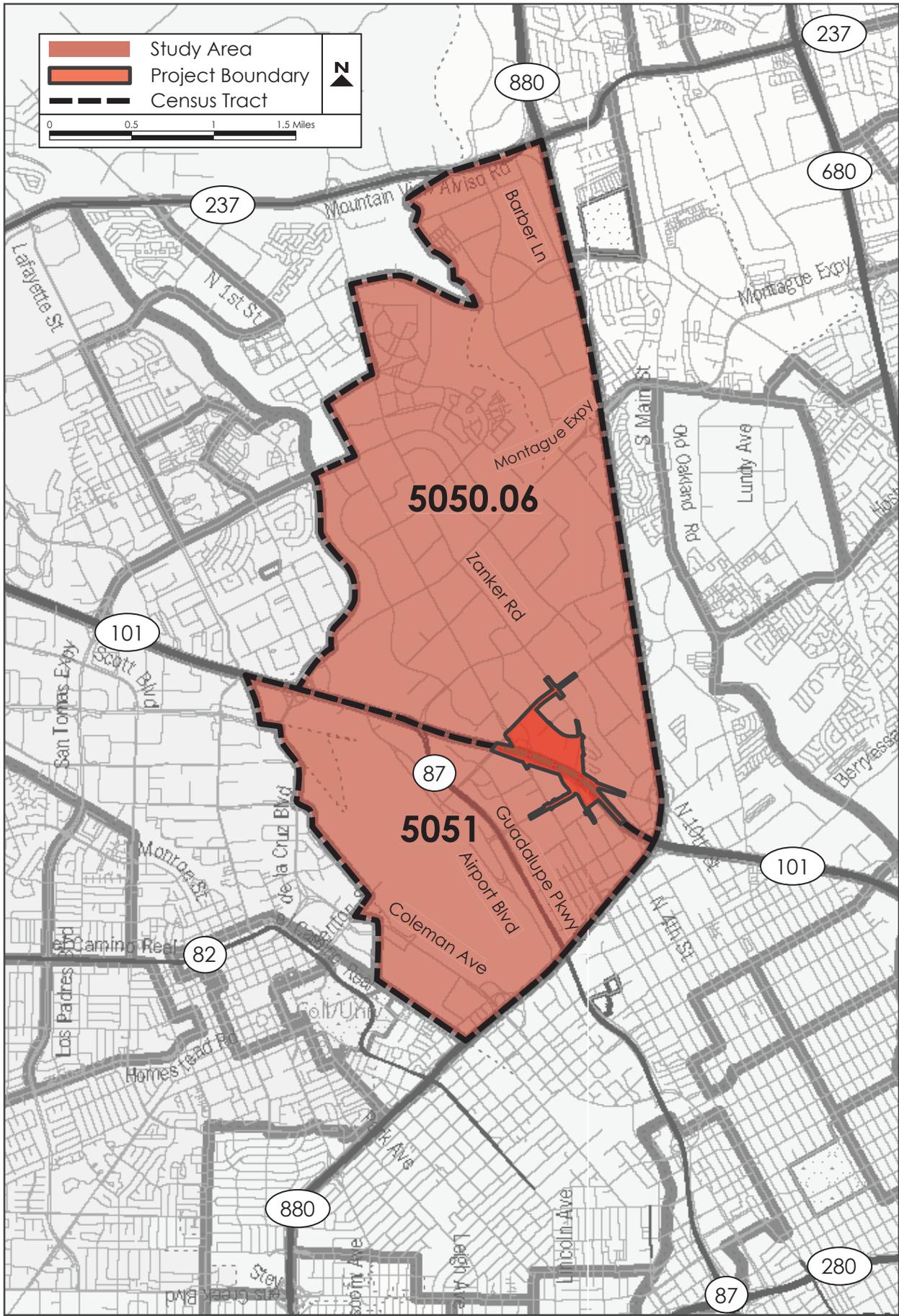
The study area for the purposes of this analysis is comprised of two census tracts within and adjacent to the footprint of the Project. Figure 2.6-1 depicts the study area and shows the location of the census tracts in relation to the proposed Project. The demographic characteristics of the population within the study area were also compared to that for the City of San José as a whole. The purpose of this research was to determine if minority and/or low-income populations are present in sufficient numbers such that the Project could potentially result in a disproportionately high and adverse effect on these

populations. This analysis would show the comparative effects on these populations in relation to either non-minority or higher income populations, as appropriate.

As shown in Table 2.6-1, an environmental justice minority population is present because 75% of the population in the study area are minorities, which is comparable to 72% for the City of San José as a whole. Persons of low-income represent 8% of the population in the study area, which compares to 9% for the City of San José as a whole. Therefore, an environmental justice low-income population is not present within the study area. The data in Table 2.6-1 also show that, with one exception, the percentage of each minority population within the study area is lower than, or similar to, that found throughout the City of San José as a whole. The exception is that the Asian population in the study area is 59%, which compares to 36% for the City of San José as a whole. This higher percentage is driven by Census Tract 5050.06 where Asians comprise 68% of the population.

Table 2.6-1: Existing Demographics in the Study Area and City of San José

	Study Area ^a	City of San José
Total Population	15,517	1,021,795
Minority Populations (% of total)		
Black	3.5%	3.0%
Asian American	59.4%	36.4%
Native American	0.0%	0.6%
Hispanic	12.0%	31.6%
Total Minorities	74.9%	71.6%
<hr/>		
% of Population below Poverty Guidelines	7.6%	8.7%
Median Household Income in 2020	\$124,508	\$109,593
^a The study area is comprised of the following census tracts the encompass the Project limits: Census Tracts 5050.06 and 5051.00.		
Source: Year 2010 U.S. Census, as supplemented by Census Bureau 2020 American Community Survey (ACS) data.		



ENVIRONMENTAL JUSTICE STUDY AREA

FIGURE 2.6-1

Although an environmental justice minority population is present given that 59% of the population is Asian, demographic, financial, and survey data of the study area do not align with it being characterized as disadvantaged. This conclusion is based on the following information:

- Field surveys of the study area determined that, with few exceptions, the neighborhoods that contain homes are well-maintained and in good condition. As an example, the Rosemary Gardens Neighborhood in the southerly portion of the study area is a cohesive and established neighborhood that dates to the late 1940s.
- The Waterford Place Apartments, which are adjacent to the proposed Project on North Fourth Street, are modern residences marketed as “chic and stylish living” with monthly rents ranging from \$2,294 to \$3,230.¹³
- The residences in the northerly portion of the study area are multi-family apartment and condominium buildings that were constructed in the 1990s.
- The 2021 median home value in zip codes 95112, 95131, and 95134, which comprise the study area, are approximately \$1.0 million, \$1.3 million, and \$1.1 million, respectively.¹⁴ These numbers are higher than for the City of San José as a whole.
- The 2020 median household income in the study area is \$124,508, which is 14% higher than for the City of San José as a whole. In Census Tract 5050.06, the median household income is even greater (i.e., >\$166,000), reflecting the high-tech nature of that area.
- Most of the businesses in the study area are well-maintained. Businesses in Census Tract 5051 include two casinos, several hotels, and a mix of retail and commercial establishments. Census Tract 5051 also includes SJIA. Businesses in Census Tract 5050.06 include numerous high-tech companies and retail and commercial uses. Also included are multiple small industrial and commercial enterprises that are concentrated along, and north of, Old Bayshore Highway.

To summarize, the study area, which is comprised of the two census tracts shown on Figure 2.6-1, is generally considered to be a thriving and desirable location.

2.6.3 Environmental Consequences

The long-term impacts of the Project would primarily consist of increased noise and visual effects, concentrated at the 15 apartments located at the east end (i.e., along North Fourth Street) of the Waterford Place Apartments. A breakdown of the ethnicity and economic status of the tenants occupying the 15 apartments is not available but, as noted above, the rental rates for the apartments exceed the poverty level annual income for a family of four. The study area includes freeways and major arterials that carry substantial volumes

¹³ Source: <https://www.essexapartmenthomes.com/apartments/san-jose/waterford-place>, accessed October 6, 2021.

¹⁴ Source: <https://www.zillow.com/san-jose-ca/home-values/>, accessed July 27, 2021.

of traffic, which produce emissions that affect the surrounding land uses. Traffic-related emissions of air pollutants occur under existing conditions and will continue irrespective of whether the Project is implemented. However, because the Project would improve traffic operations and slightly reduce VMT, emissions would be lower as compared to emissions under the No Build Alternative.¹⁵

The highway improvements that are part of the Project would improve vehicular access and circulation in the study area. Similarly, the bicycle and pedestrian improvements that are part of the Project would facilitate bicycle and pedestrian travel in the study area.

The construction impacts of the Project would primarily take the form of increased noise and emission of air pollutants, as well as traffic delays associated with temporary lane closures.

Based on the above, 75% of the population that would be affected by both the adverse and beneficial impacts of the Project would be minorities. This is congruent with the fact that 72% of San José's population are minorities. Thus, by definition, the effects of the Project would predominately be borne by minority populations. In contrast, the effects of the Project would not be predominantly borne by low-income populations since they comprise only 8% of the population in the study area.

The conclusion of the previous paragraph notwithstanding, the adverse effects of the Project to be suffered by minorities would not be appreciably more severe or greater in magnitude than the adverse effects that will be suffered by the non-minority population. Adverse effects would affect all populations to the same degree. Similarly, the transportation and air quality benefits of the Project would accrue to all populations equally.

Based on the above discussion and analysis, the Project will not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of EO 12898. No further environmental justice analysis is required.

2.6.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are required.

¹⁵ Source: Illingworth & Rodkin, Inc., Air Quality Report for the US 101/Zanker Road/Skyport Drive/Fourth Street Improvements Project, 2022.

2.7 UTILITIES/EMERGENCY SERVICES

2.7.1 Regulatory Setting

There are no federal or state regulations or plans applicable to utilities or emergency services.

2.7.2 Affected Environment

Various utility lines (e.g., gas, electric, water, communications, sanitary sewer, stormwater, etc.) cross US 101 and are located along/within the local streets in the vicinity of the Project that cross or parallel the freeways.

San José Fire Station #5 is located approximately 0.6 mile southeast of the Project area at 1380 North Tenth Street, near the intersection of North 10th Street, East Gish Road, and Old Bayshore Highway. Depending on the location of the emergency, either Old Bayshore Highway, East Gish Road, or North Tenth Street is used as the emergency response route from Fire Station #5.

2.7.3 Environmental Consequences

Increased Demand for Utilities and Services

The Project is limited to improvements to existing roadway facilities and is intended to improve traffic operations in the Project area. As stated previously in Section 2.5, *Growth*, the Project would not induce unplanned growth but would facilitate the planned growth of the area as identified in the General Plan. The General Plan contains policies that ensure that the future capacity of services (e.g., schools, utilities, police and fire protection, libraries, parks, etc.) will be adequate to serve that planned growth.

Impacts on Emergency Vehicle Response Times

The Project would not cut off or adversely impact the existing emergency response routes along Old Bayshore Highway, East Gish Road and North Tenth Street from nearby San José Fire Station #5. During the construction phase of the Project, any temporary lane or road closures would be coordinated in advance with the fire department, as well as with other emergency responders (e.g., police, ambulance, etc.).

Upon completion of the Project, the improvements to Zanker Road, Old Bayshore Highway, and Skyport Drive would result in improved access to the surrounding community for emergency vehicles and other public service providers from outside the Project area.

Utility Relocation Impacts

The Project will require the relocation of a number of overhead and underground utility lines (e.g., water, gas, communications, electric lines, sanitary sewer, stormwater, etc.), to

construct the proposed improvements. However, no disruption of any utility services for an extended period of time (i.e., more than 24 hours) is expected to be necessary.

2.7.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are required.

2.8 TRAFFIC AND TRANSPORTATION/PEDESTRIAN AND BICYCLE FACILITIES

2.8.1 Regulatory Setting

Caltrans, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of Federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all Federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

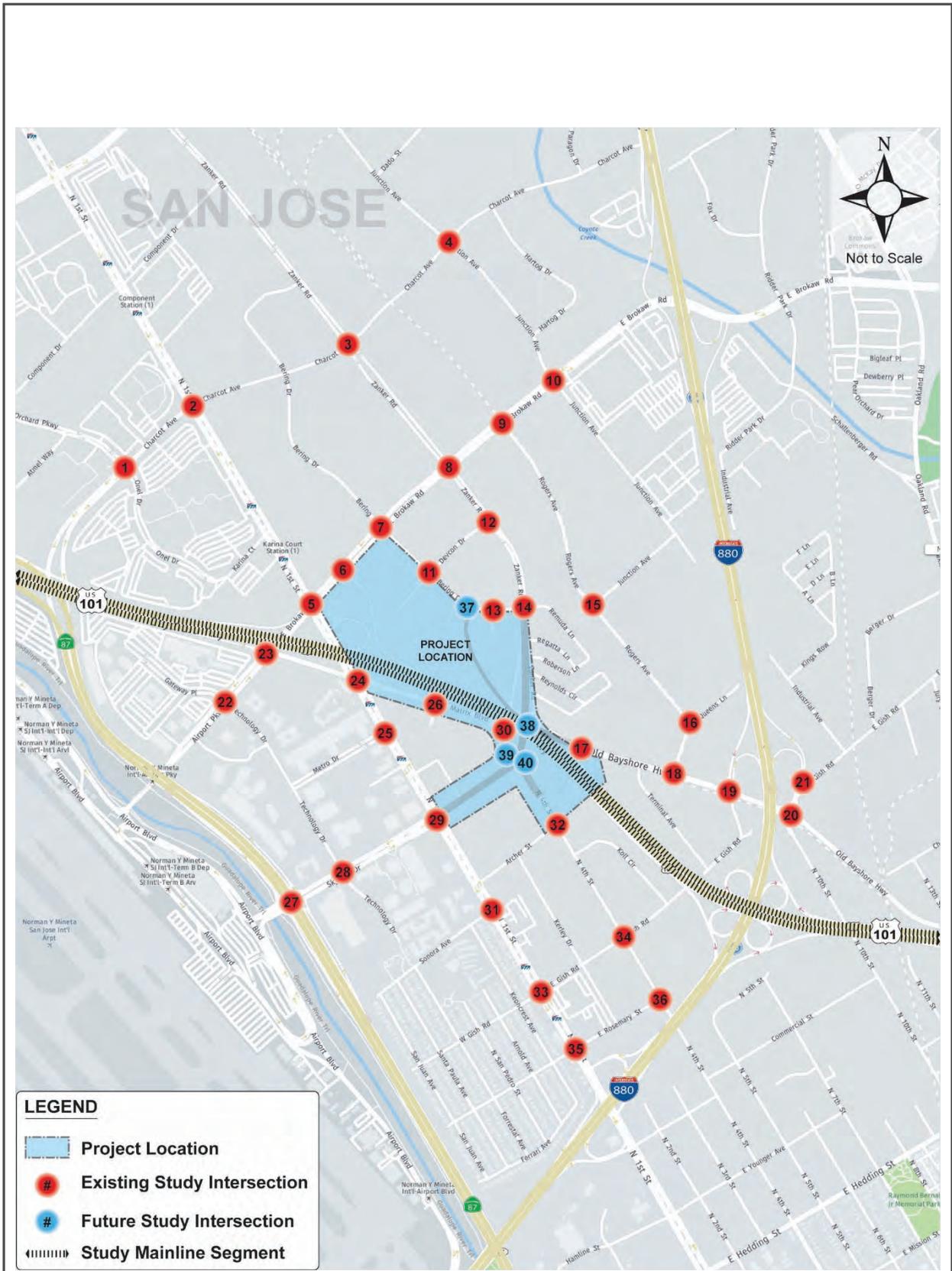
In July 1999, the U.S. Department of Transportation (USDOT) issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the USDOT regulations (49 CFR 27) implementing Section 504 of the Rehabilitation Act (29 United States Code [USC] 794). The FHWA has enacted regulations for the implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to Federal-aid projects, including Transportation Enhancement Activities.

2.8.2 Affected Environment

The information in this section is based primarily on a technical Traffic Operations Analysis Report (May 2020), which is incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

2.8.2.1 *Existing Roadway Network*

The existing roadway network in the Project study area is shown on Figure 2.8-1 and the key facilities are as follows:



EXISTING ROADWAY NETWORK

FIGURE 2.8-1

US 101 serves as a major gateway route between San Francisco and the Silicon Valley, as well as to SJIA. US 101 also provides a link to the East Bay via the I-880 connection within the Project vicinity. In the vicinity of the Project site, US 101 is typically an eight-lane facility (four lanes in each direction) running in the north-south direction with auxiliary lanes between most of the interchanges. Additionally, one of the four lanes is utilized as a carpool lane in both directions. Access between the Project site and US 101 is provided via ramps at Brokaw Road, North First Street, Technology Place/North Fourth Street, and Old Bayshore Highway.

Skyport Drive is a divided east-west arterial connected to SJIA adjacent to the SR 87 interchange at the west end. To the east, Skyport Drive is bounded by North First Street. Skyport Drive has a varying number of lanes but is generally three through lanes in each direction with striped buffered bike lanes (between Technology Drive and North First Street) and a posted speed limit of 40 miles per hour (mph).

Old Bayshore Highway is a north-south arterial that is bounded by Zanker Road to the north and North Thirteenth Street and Commercial Street intersection to the south. Old Bayshore Highway is a four-lane undivided roadway with two lanes in each direction. Bike lanes are provided in each direction, with some segments having striped buffered bike lanes.

Technology Place (formerly Matrix Blvd) is a north-south multi-lane collector roadway in the City of San José. Technology Place extends from the US 101 southbound off-ramp at Airport Parkway at the north end to the intersection of US 101 southbound on-ramp at North Fourth Street to the south. Between North First Street and North Fourth Street, Technology Place has two lanes in the southbound direction and one lane in northbound direction divided by a center median. Bikeways are not provided.

Brokaw Road/Airport Parkway is a major east-west multi-lane arterial roadway in the City of San José. Airport Parkway stretches from SJIA to US 101, where the name changes to East Brokaw Road, extending to Old Oakland Road to the East. Airport Parkway is a four-lane road with two lanes in each direction. Once the roadway transitions to Brokaw Road, the roadway begins to widen into a six-lane roadway with three lanes in each direction divided by a center median. Bike lanes are striped along this corridor in both directions, with gaps on the approach to North First Street.

Bering Drive is a two-lane north-south street with a posted speed limit of 35 mph. Within Project limits, Bering Drive extends from East Brokaw Road at the north end to Zanker Road to the south. Bikeways are not provided.

Zanker Road is a north-south arterial that extends from Old Bayshore Highway to New Street in the northern part of San José bordering Milpitas. Throughout the Project study area, Zanker Road is a divided four lane roadway with two lanes and striped bike lanes in each direction with a speed limit of 40 mph.

North First Street is a north-south arterial that extends from downtown East Reed Street to Liberty Street in the northern part of San José bordering Milpitas. Throughout the Project study area, North First Street north of US 101 is a divided four lane roadway with two lanes in each direction and a posted speed limit of 45 mph. North of East Brokaw Road there are striped bike lanes (intermittently buffered) along both directions of North First Street.

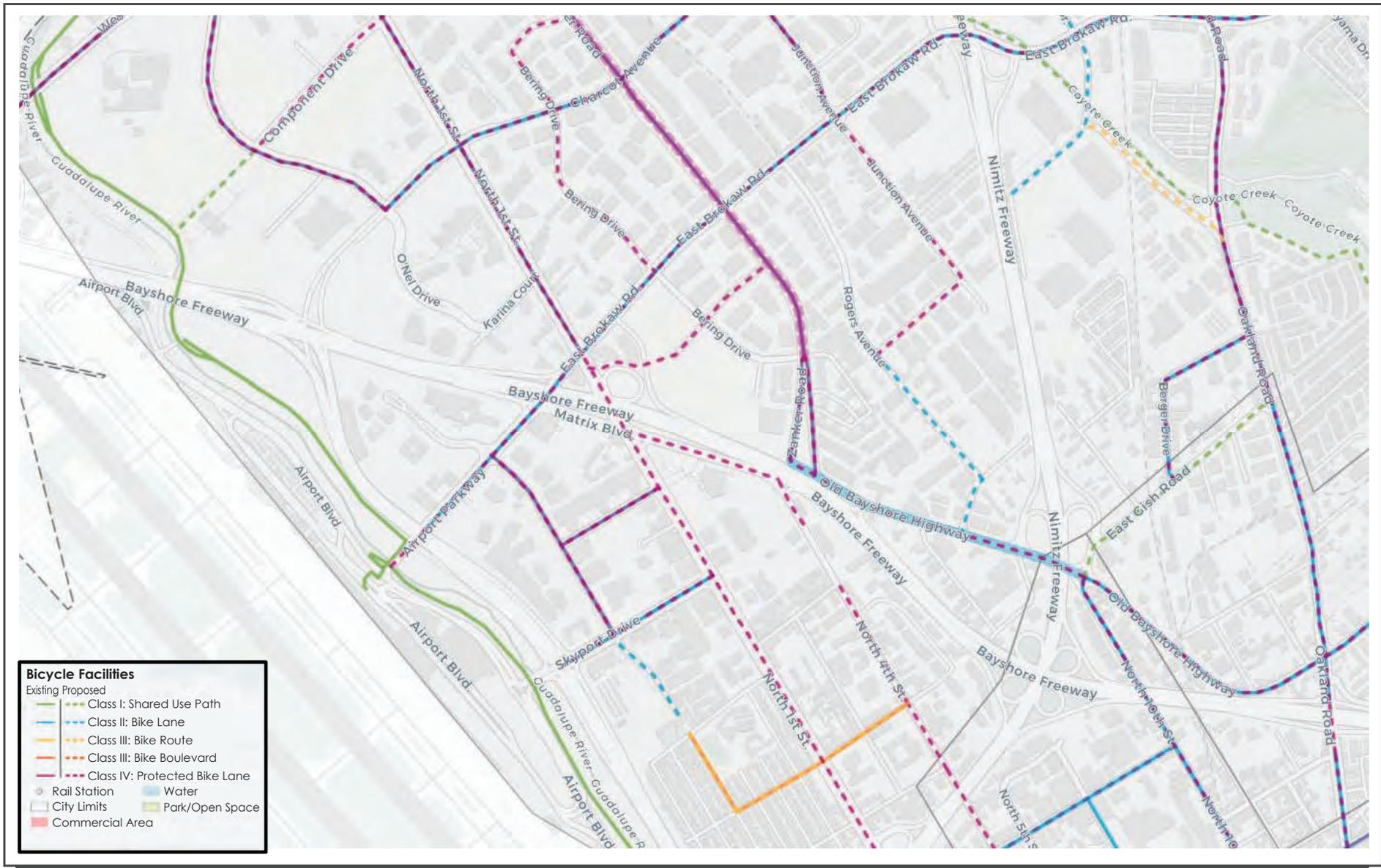
North Fourth Street is a north-south arterial that extends from the intersection of US 101 southbound on-ramp/Technology Place in the north to downtown East Reed Street in the south. Throughout the Project study area, North Fourth Street is an un-divided four lane roadway with two lanes in each direction with a posted speed limit of 40 mph. North Fourth Street is a parallel route to North First Street.

Charcot Avenue is a short east-west street in the City of San José. At the west end, Charcot Avenue extends from SR-87, continuing to O'Toole Avenue at the East end. From SR-87 to North First Street, Charcot Avenue is a divided four-lane roadway providing two lanes in each direction. From North First Street to O'Toole Avenue Charcot Avenue is reduced in width to a two-lane undivided roadway with one travel lane in each direction. Charcot Avenue has a posted speed limit of 40 mph.

2.8.2.2 Existing Bicycle and Pedestrian Facilities

The existing bicycle network in the Project study area is shown on Figure 2.8-2. There is one Class I bike trail in the study area; Guadalupe River Trail runs north south along the west side of the study area. The trail is approximately 9 miles in length, providing unbroken bicycle and pedestrian access from Virginia Avenue south of Downtown San José to Gold Street in Alviso. The trail crosses under Airport Parkway and Skyport Drive. Trail access is provided at Skyport Drive and Airport Parkway.

Within the study area, Class II bike lanes exist along Charcot Avenue, Airport Parkway/ Brokaw Road, Skyport Drive, Technology Drive, Metro Drive, Zanker Road, Old Bayshore Highway, and North First Street north of Brokaw Road.



EXISTING BICYCLE FACILITIES

FIGURE 2.8-2

Within the study area, sidewalks are provided along City streets at the following locations:

- **Skyport Drive:** Sidewalks are provided on both sides between North First Street and Technology Drive and on the south side only west of Technology Drive.
- **Old Bayshore Highway:** This roadway does not have a continuous sidewalk network. Discontinuous sidewalk segments are provided on the east side of the roadway between 13th Street and south of Gish Road and between Terminal Ave and Zanker Road. A sidewalk is provided on the west side between the US 101 northbound off-ramp and 500 feet south of Terminal Avenue.
- **Technology Place:** Most of the roadway has no sidewalks. A sidewalk is provided on the west side of the roadway between Airport Parkway and North First Street.
- **Brokaw Road:** Sidewalks are provided on the south side of Brokaw Road between Technology Place and Zanker Road. Sidewalks are provided on the north side of Brokaw Road between the US 101 northbound on ramp and 260 feet west of Bering Drive.
- **Bering Drive:** Sidewalks are provided along portions of Bering Drive on both sides.
- **Zanker Road:** North of Brokaw Road, sidewalks are provided on the west side starting 500 feet north of the intersection. Between Brokaw Road and Bering Drive, sidewalks are provided on both sides. South of Bering Drive, sidewalks are partially provided on both sides, but there are long gaps of missing sidewalk on each side.
- **North First Street:** South of Technology Place, sidewalks are provided on both sides. Between Technology Place and 185 feet south of Brokaw Road, as North First Street travels under US 101, the sidewalk on the west side drops. North of Brokaw Road, sidewalks are again provided on both sides.
- **North Fourth Street:** Sidewalks are provided on both sides south of Archer Street. North of Archer Street, sidewalks are provided in front of a few properties, with sidewalks missing from most of the roadway.
- **Charcot Avenue:** Sidewalks are provided on both sides west of Zanker Road. No sidewalks are provided east of Zanker Road.

2.8.2.3 Existing Public Transit Service

Bus service in the Project area and throughout Santa Clara County is provided by VTA. There is one VTA bus route (Route 60) currently passing through and stopping in the Project area. Route 60 operates between Winchester light rail transit (LRT) Station in Campbell and Milpitas Transit Center (Bay Area Rapid Transit [BART] Station) via SJIA. Additionally, there are two light rail routes that also serve the Project area (Blue Line and Green Line) that travel along North First Street.¹⁶ The existing public transit facilities are shown on Figure 2.8-3.

¹⁶ Currently, priority for light rail is integrated into the signals along North First Street. However, VTA is conducting a separate study to improve the light rail operations through enhanced signal priority/preemption at intersections and other roadway improvements (e.g. narrower lanes, etc.) along North First Street. These proposed improvements along North First Street are projected to increase bike usage and improve pedestrian safety.



EXISTING TRANSIT FACILITIES

FIGURE 2.8-3

2.8.2.4 Existing Bicycle and Pedestrian Volumes

Identified as an ABC deficiency in the *2008 Countywide Bicycle Plan*, Tenth Street and North First Street are currently the only routes that pedestrians and bicyclists can use to cross US 101 in the Project area.

People bicycle through the study area. The highest volume observed was along Brokaw Road, and especially at the intersection of Zanker Road/East Brokaw Road with 40 bicyclists per hour during the weekday AM peak period. This intersection is adjacent to hotel and office development. The North First Street/East Brokaw Road intersection had 30 bicyclists per hour during the weekday AM peak period. The intersections of Rogers Avenue/East Brokaw Road and Technology Drive/Airport Parkway had 30 bicyclists per hour during the weekday PM peak period. These intersections are adjacent to office uses. The remaining studied intersections had below 30 bicyclists per hour during weekday peak period.

Pedestrian crossings are highest along North First Street, and especially at the intersections of North First Street/East Gish Road with 113 and 161 pedestrians per hour in the AM and PM peak hours, respectively, and North First Street/Metro Drive with 128 and 141 pedestrians per hour in the AM and PM peak hours, respectively. Both of these intersections are adjacent to VTA light rail stations (Gish Station and Metro Airport Station). Other intersections with notable pedestrian volumes includes North First Street/Sonora Avenue, North First Street/Skyport Drive, and North First Street/East Rosemary Street. These intersections are adjacent to a variety of office, hotel, commercial, and residential development, which encourages pedestrian travel.

2.8.2.5 Existing Operating Conditions at Key Intersections in the Study Area

Based on their proximity to the proposed improvements, 36 signalized intersections in the Project study area were selected as study intersections. The intersections are shown on Figure 2.8-1. Operating conditions at the intersections were measured using the “level of service” (LOS) concept as the metric for NEPA, whereby traffic demand is evaluated in the context of capacity. The methodology computes a level of service taking into account factors such as the demand for each traffic movement (i.e., left turns, straight, right turns), the number of lanes, and (where applicable) signal timing. Based on these factors, the methodology computes the average delay per vehicle at the intersection to which a corresponding LOS is assigned. As summarized in Table 2.8-1, level of service can range from “LOS A”, representing free-flow conditions, to “LOS F”, representing jammed/over-saturated conditions.

The intersection LOS results for the existing weekday AM and PM peak hours are presented in Table 2.8-2. Of the 36 intersections, 24 intersections currently operate at LOS D or better during both AM and PM peak hours, and the remaining 12 intersections currently operate at LOS E or F in one or both the peak hours.

Table 2.8-1: Level of Service Definitions for Signalized Intersections

Level of Service	Description of Operations	Average Control Delay ^a (seconds/vehicle)
A	Insignificant Delays: No approach phase is fully utilized and no vehicle waits longer than one red indication.	≤ 10
B	Minimal Delays: An occasional approach phase is fully utilized. Drivers begin to feel restricted.	> 10 to 20
C	Acceptable Delays: Major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 20 to 35
D	Tolerable Delays: Drivers may wait through no more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.	> 35 to 55
E	Significant Delays: Volumes approaching capacity. Vehicles may wait through several signal cycles and long vehicle queues from upstream.	> 55 to 80
F	Excessive Delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

^a Average Control Delay includes the time for initial deceleration delay, queue move-up time, stopped delay, and final acceleration.

Table 2.8-2: Comparison of Intersection Levels of Service

Intersection	Peak Period	Existing		YEAR 2025				YEAR 2045			
				No Build Alternative		Build Alternative		No Build Alternative		Build Alternative	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1. Charcot Avenue & O'Nel Drive	AM	33.6	C	34.4	C	34.1	C	40.4	D	38.4	D
	PM	28.3	C	30.9	C	43.6	D	72.3	E	85.5	F
2. Charcot Avenue & North First Street	AM	46.3	D	42.6	D	42.5	D	48.6	D	82.5	F
	PM	37.0	D	142.6	F	51.6	D	201.8	F	134.5	F
3. Charcot Avenue & Zanker Road	AM	40.4	D	93.1	F	70.7	E	91.5	F	61.8	E
	PM	52.3	D	60.7	E	82.5	F	108.4	F	108.5	F
4. Charcot Avenue & Junction Avenue	AM	19.1	B	106.2	F	91.6	F	28.1	C	33.0	C
	PM	43.0	D	107.3	F	107.2	F	33.1	C	35.2	D
5. E Brokaw Road & N First Street*	AM	64.8	E	70.9	E	71.1	E	63.9	E	83.7	F
	PM	77.3	E	84.6	F	93.8	F	92.8	F	100.8	F
6. E Brokaw Road & US-101 NB Off-Ramp*	AM	63.3	E	107.5	F	79.8	E	57.7	E	40.0	D
	PM	38.5	D	23.9	C	51.5	D	46.3	D	48.1	D
7. E Brokaw Road & Bering Drive	AM	44.0	D	112.2	F	99.3	F	92.3	F	93.7	F
	PM	27.7	C	36.1	D	56.4	E	64.7	E	75.2	E
8. E Brokaw Road & Zanker Road*	AM	40.3	D	120.4	F	81.5	F	116.9	F	125.0	F
	PM	37.0	D	64.0	E	75.8	E	116.1	F	97.3	F
9. E Brokaw Road & Rogers Avenue	AM	111.5	F	524.4	F	626.8	F	404.6	F	1478.0	F
	PM	70.2	F	86.6	F	60.4	F	997.6	F	194.7	F

Intersection	Peak Period	Existing		YEAR 2025				YEAR 2045			
				No Build Alternative		Build Alternative		No Build Alternative		Build Alternative	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
10. E Brokaw Road & Junction Avenue	AM	35.3	D	101.7	F	76.1	E	190.0	F	130.0	F
	PM	45.4	D	71.4	E	56.9	E	106.7	F	90.3	F
11. Devcon Court & Bering Drive	AM	5.6	A	17.2	C	12.2	B	6.4	A	17.6	B
	PM	60.6	F	9.2	A	7.0	A	20.7	C	13.6	B
12. Devcon Drive & Zanker Road	AM	14.5	B	132.5	F	85.2	F	26.1	D	59.3	F
	PM	28.6	D	29.9	D	43.5	E	100.8	F	65.7	F
13. Crane Court & Bering Drive	AM	5.7	A	5.7	A	3.0	A	7.1	A	4.9	A
	PM	86.0	F	15.0	B	6.5	A	9.7	A	11.6	B
14. Bering Drive & Zanker Road	AM	25.3	D	4.9	A	21.1	C	5.8	A	33.2	C
	PM	223.0	F	81.0	F	52.4	D	101.4	F	57.1	E
15. Junction Avenue & Rogers Avenue	AM	7.1	A	6.3	A	5.9	A	7.1	A	263.8	F
	PM	10.3	B	10.8	B	9.7	A	4.4	A	6.7	A
16. Queens Lane & Rogers Avenue	AM	9.8	A	7.9	A	9.8	A	210.5	F	2158.2	F
	PM	11.2	B	10.2	B	9.5	A	85.3	F	9.4	A
17. Old Bayshore Hwy & US-101 NB Ramps	AM	2.2	A	4.8	A	Intersection does not exist		16.5	C	Intersection does not exist	
	PM	34.4	D	63.9	F	Intersection does not exist		54.6	F	Intersection does not exist	
18. Old Bayshore Hwy & Queens Lane	AM	98.5	F	112.7	F	190.5	F	168.8	F	573.1	F
	PM	40.3	E	52.0	F	41.3	E	55.7	F	55.2	F
19. Old Bayshore Hwy & I-880 SB Ramp	AM	53.8	D	59.0	E	61.4	E	58.3	E	57.6	E
	PM	53.1	D	56.5	E	43.4	D	55.5	E	43.5	D
20. Old Bayshore Hwy & N 10 th Street	AM	74.0	E	164.4	F	183.6	F	250.7	F	231.6	F
	PM	31.7	C	133.8	F	145.5	F	180.9	F	187.7	F
21. East Gish Road & I-880 NB Ramps	AM	52.8	F	145.4	F	227.2	F	255.3	F	228.4	F
	PM	36.5	E	117.1	F	140.8	F	222.1	F	267.5	F
22. Airport Parkway & Technology Drive	AM	21.8	C	18.6	B	16.6	B	80.9	F	129.4	F
	PM	39.1	D	28.6	C	28.6	C	35.7	D	34.1	C
23. Airport Parkway & Technology Place	AM	34.9	C	86.6	F	30.1	C	106.6	F	64.9	E
	PM	22.3	C	28.5	C	32.6	C	41.6	D	37.8	D
24. Technology Place & North First Street	AM	19.6	B	22.7	C	24.5	C	26.2	C	39.5	D
	PM	49.3	D	62.5	E	63.7	E	77.2	E	61.8	E
25. Metro Drive & North First Street	AM	41.4	D	59.3	E	52.7	D	63.6	E	65.8	E
	PM	65.3	E	63.2	E	48.4	D	200.6	F	58.9	E
26. Technology Place & Bay 101 Casino Driveway	AM	4.9	A	5.9	A	2.3	A	8.9	A	2.6	A
	PM	23.5	C	33.5	D	3.6	A	36.6	E	5.3	A
27. Skyport Drive & SR 87 Ramps	AM	57.1	E	71.7	E	78.2	E	115.4	F	77.7	E
	PM	36.3	D	56.8	E	65.5	E	113.6	F	84.5	F
28. Skyport Drive & Technology Place	AM	24.3	C	35.0	C	26.4	C	81.1	F	40.8	D
	PM	41.1	D	70.2	E	75.6	E	125.3	F	83.5	F
29. Skyport Drive & North First Street	AM	24.6	C	52.8	D	41.7	D	151.2	F	95.7	F
	PM	25.1	C	32.5	C	39.3	D	90.0	F	51.1	D

Intersection	Peak Period	Existing		YEAR 2025				YEAR 2045			
				No Build Alternative		Build Alternative		No Build Alternative		Build Alternative	
		Delay	LOS								
30. Technology Place & North Fourth Street	AM	33.8	D	123.1	F	Intersection does not exist		210.2	F	Intersection does not exist	
	PM	29.3	D	41.0	E	Intersection does not exist		140.6	F	Intersection does not exist	
31. Sonora Avenue & North First Street	AM	16.7	B	16.5	B	16.1	B	77.8	E	87.7	F
	PM	13.0	B	15.5	B	15.9	B	50.3	D	17.2	B
32. Archer Street & North Fourth Street	AM	11.2	B	37.5	E	9.6	A	226.9	F	45.3	E
	PM	19.3	C	50.7	F	16.4	C	251.6	F	46.3	E
33. East Gish Road & North First Street	AM	25.9	C	26.8	C	23.7	C	57.6	E	57.2	E
	PM	25.1	C	26.4	C	26.2	C	55.9	E	32.0	C
34. East Gish Road & North Fourth Street	AM	11.1	B	14.8	B	17.2	B	166.5	F	22.6	C
	PM	12.4	B	14.2	B	20.0	B	16.9	B	28.0	C
35. Rosemary Street & North First Street	AM	33.6	C	30.0	C	31.4	C	38.7	D	45.6	D
	PM	14.5	B	15.1	B	25.0	C	20.5	C	21.3	C
36. East Rosemary Street & North Fourth Street	AM	37.6	E	23.6	C	74.0	F	1030.7	F	98.2	F
	PM	62.6	F	44.6	E	43.8	E	203.2	F	97.9	F
37. Bering Drive & US 101 NB Ramps	AM	Intersection does not exist		Intersection does not exist		19.3	B	Intersection does not exist		22.6	C
	PM	Intersection does not exist		Intersection does not exist		13.0	B	Intersection does not exist		17.9	B
38. Old Bayshore Hwy & Zanker Road	AM	Intersection does not exist		Intersection does not exist		27.7	C	Intersection does not exist		39.5	D
	PM	Intersection does not exist		Intersection does not exist		44.7	D	Intersection does not exist		52.3	D
39. Skyport Drive & Technology Place	AM	Intersection does not exist		Intersection does not exist		8.6	A	Intersection does not exist		10.5	B
	PM	Intersection does not exist		Intersection does not exist		17.1	B	Intersection does not exist		19.2	B
40. Skyport Drive & North Fourth Street	AM	Intersection does not exist		Intersection does not exist		14.9	B	Intersection does not exist		48.7	D
	PM	Intersection does not exist		Intersection does not exist		19.6	B	Intersection does not exist		21.4	C

Intersection locations are shown on Figure 2.8-1.

Bold text denotes LOS E or worse. Shaded cells with bold text denote LOS F.

Source: Traffic Operations Analysis Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvements Project, May 1, 2020.

2.8.2.6 Existing Operating Conditions on Roadways in the Project Area

The following discussion summarizes observed operating conditions on roadways in the Project area. The observations represent existing conditions on a typical weekday AM and PM peak periods, with traffic volumes presented in Table 2.8-3. Conditions due to atypical circumstances (i.e., stalls and accidents, major storms, holidays, etc.) are not described.

Table 2.8-3: Existing Two-Way Traffic Volumes on Local Streets

Roadway Segment	Weekday AM Peak (trips)	Weekday PM Peak (trips)
<u>North First Street</u>	1,550	1,250
- South of Charcot Avenue	1,450	1,950
- South of Brokaw Road	1,400	2,050
- South of Skyport Drive	1,600	2,250
- South of Rosemary Street		
<u>Zanker Road/North Fourth Street</u>	1,600	2,100
- South of Charcot Avenue	1,050	1,600
- South of Brokaw Road	1,200	2,050
- South of Bering Drive	800	1,000
- South of Skyport Drive	1,200	1,300
- South of Rosemary Street		
<u>North Tenth Street</u>	950	950
- South of Old Bayshore Highway		
<u>Bering Drive</u>	350	850
- North of Brokaw Road	250	700
- South of Brokaw Road		
<u>Junction Avenue</u>	1,050	1,100
- North of Brokaw Road	350	650
- South of Brokaw Road		
<u>Brokaw Road</u>	1,100	900
- West of Technology Drive	2,300	2,500
- West of North First Street	2,450	2,150
- West of Zanker Road	3,000	2,750
- West of Junction Avenue		
<u>Skyport Drive</u>	1,850	2,150
- West of Technology Drive	1,000	1,050
- West of North First Street	250	100
- West of North Fourth Street		
<u>Gish Road</u>	300	200
- West of North First Street	350	350
- West of North Fourth Street		
<u>Rosemary Street</u>	350	200
- West of North First Street	250	300
- West of North Fourth Street		
Note: Volumes are rounded to the nearest 50.		
Source: Traffic Operations Analysis Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvements Project, May 1, 2020.		

Northbound US 101 traffic from Oakland Road uses Old Bayshore Highway to avoid the congestion on the freeway. Also, southbound I-880 traffic uses Old Bayshore Highway to enter northbound US 101. Therefore, the study intersections along Old Bayshore

Highway experience heavy volumes and long queues; Old Bayshore Highway and US 101 northbound on-/off-ramp intersection is heavily congested during the AM peak hours, especially in the westbound approach to US 101.

In the PM peak, to avoid congestion on southbound US 101, traffic from southbound Zanker Road uses Bayshore Highway. Therefore, heavy traffic is observed along eastbound Old Bayshore Highway in the PM peak.

In the AM and PM peak hours, Brokaw Road and North First Street are backed up due to heavy traffic trying to enter and exit US 101. The study intersections along these two corridors experience heavy queues.

At North First Street/East Brokaw Road during the AM and PM peak hours, long left turn queues were observed at southbound North First Street, due to heavy traffic volumes and interruptions by the VTA Light Rail operations. East Brokaw Road westbound queues from North First Street extend back to the US 101 northbound off-ramp intersection. The North First Street light rail operation also impacts traffic at East Brokaw Road and Technology Place.

At East Brokaw Road/US 101 northbound off-ramp during the AM peak hours, long queues were observed at the northbound off-ramp due to the capacity being constrained by the heavy queue extending from the downstream of North First Street/East Brokaw Road intersection. The westbound approach queue on Brokaw Road backs up to Bering Drive and beyond. With the planned development in the future, it is expected that the queues may worsen.

At North First Street/US 101 southbound on-ramp/Technology Place during the PM peak hours, the heavy southbound left-turn queue along North First Street extends back to the East Brokaw Road intersection due to an inadequate intersection capacity and the light rail operations. Most of the traffic from the existing businesses along North First Street and Brokaw Road utilize North First Street to access southbound US 101.

At Old Bayshore Highway and the northbound/southbound I-880 on-/off-ramps, these two intersections experience heavy queues in all approaches due to congestion on Old Bayshore Highway and I-880 in the AM and PM peak hours.

2.8.2.7 Future “No Build” Traffic Conditions

Forecasts for the opening (2025) and design horizon (2045) years were developed using the VTA’s countywide travel demand model. The most recent version of the VTA countywide model has a validation base year for 2015. This model is capable of forecasting the interim year 2025 and horizon year 2045, which matches with the Project opening (2025) and design (2045) years.

The benefit of the travel demand model is that it provides projections of future traffic volumes, taking into account traffic from future development planned in the approved general plans of the cities in Santa Clara County. The model also accounts for planned growth in the region, as well as planned improvements to the transportation network.

Although Zanker Road is currently two lanes in each direction in the Project vicinity, the City of San José General Plan assumes the widening of Zanker Road to three lanes in each direction with no geometry improvements to the study intersections along Zanker Road. With additional lanes on Zanker Road, higher volumes entering the study area are projected. As a result, study intersections along Old Bayshore Highway and Brokaw Road will continue to experience heavy queues and delays in the westbound direction during the AM peak hours, and in the eastbound direction during the PM peak hours. Similar to Existing Conditions, the US 101 northbound off ramp at Brokaw Road in the AM peak hour and southbound North First Street intersection at Technology Place in the PM peak hour will experience long queues due to inadequate capacity. Five intersections in the AM and 10 intersections in the PM are projected to operate at LOS E conditions under 2025 No Build compared to five in the AM and four in the PM under existing conditions. Thirteen intersections in the AM and 10 intersections in the PM are projected to operate at LOS F conditions under 2025 No Build compared to three in the AM and five in the PM under Existing Conditions. Projected traffic volumes for 2025 are presented in Tables 2.8-4.

Table 2.8-4: Projected 2025 Two-Way Traffic Volumes on Local Streets

Roadway Segment	Weekday AM Peak (trips)		Weekday PM Peak (trips)	
	No Build Alt.	Build Alt.	No Build Alt.	Build Alt.
<u>North First Street</u>	1,850	1,800	1,400	1,400
- South of Charcot Avenue	2,000	2,000	2,200	2,100
- South of Brokaw Road	1,650	1,650	2,450	2,300
- South of Skyport Drive	1,900	1,800	2,500	2,350
- South of Rosemary Street				
<u>Zanker Road/North Fourth Street</u>	2,300	3,000	2,950	3,150
- South of Charcot Avenue	1,150	2,450	2,000	2,750
- South of Brokaw Road	1,400	3,050	2,500	3,200
- South of Bering Drive	950	2,000	1,250	2,400
- South of Skyport Drive	1,500	1,900	1,800	2,050
- South of Rosemary Street				
<u>North Tenth Street</u>	1,000	1,050	1,000	1,050
- South of Old Bayshore Highway				
<u>Bering Drive</u>	350	600	900	950
- North of Brokaw Road	350	2,150	750	1,650
- South of Brokaw Road				

Roadway Segment	Weekday AM Peak (trips)		Weekday PM Peak (trips)	
	No Build Alt.	Build Alt.	No Build Alt.	Build Alt.
Junction Avenue	1,100	1,100	1150	1,150
- North of Brokaw Road				
- South of Brokaw Road	350	400	700	650
Brokaw Road	1,200	950	1,050	1,050
- West of Technology Drive	2,700	2,150	2,800	2,650
- West of North First Street	2,900	2,600	2,600	2,550
- West of Zanker Road				
- West of Junction Avenue	3,300	3,350	3,100	3,350
Skyport Drive	2,400	2,750	2,650	2,750
- West of Technology Drive	1,400	2,050	1,550	2,000
- West of North First Street				
- West of North Fourth Street	250	1,400	150	1,300
Gish Road	350	300	200	200
- West of North First Street				
- West of North Fourth Street	400	500	450	550
Rosemary Street	350	350	200	200
- West of North First Street				
- West of North Fourth Street	300	250	400	300
Note: Volumes are rounded to the nearest 50. Source: Traffic Operations Analysis Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvements Project, 2020.				

More than half of the study intersections will operate at LOS F in 2045. The delays and queues will get worse along North First Street, North Fourth Street, Old Bayshore Highway and Skyport Drive intersections during both AM and PM peak hours.

As shown in Table 2.8-2, six intersections in the AM and six intersections in the PM are projected to operate at LOS E conditions under 2045 No Build, compared to five in the AM and ten in the PM under 2025 No Build. Eighteen intersections in the AM and 20 intersections in the PM are projected to operate at LOS F conditions under 2045 No Build, compared to 13 in the AM and 10 in the PM under 2025 No Build. Projected traffic volumes for 2045 are presented in Table 2.8-5.

Table 2.8-5: Projected 2045 Two-Way Traffic Volumes on Local Streets

Roadway Segment	Weekday AM Peak (trips)		Weekday PM Peak (trips)	
	No Build Alt.	Build Alt.	No Build Alt.	Build Alt.
<u>North First Street</u>	2,300	2,300	1,550	1,500
- South of Charcot Avenue	2,650	2,450	2,650	2,550
- South of Brokaw Road	2,200	2,300	3,100	2,750
- South of Skyport Drive	2,300	2,350	3,300	2,850
- South of Rosemary Street				
<u>Zanker Road/North Fourth Street</u>	3,050	3,850	3,700	3,900
- South of Charcot Avenue	1,500	3,300	2,350	3,250
- South of Brokaw Road	1,800	4,000	2,950	3,800
- South of Bering Drive	1,300	3,150	1,450	3,000
- South of Skyport Drive	1,900	2,350	2,350	2,450
- South of Rosemary Street				
<u>North Tenth Street</u>	1,050	1,100	1,150	1,150
- South of Old Bayshore Highway				
<u>Bering Drive</u>	550	800	1,150	1,150
- North of Brokaw Road	400	2,300	850	1,950
- South of Brokaw Road				
<u>Junction Avenue</u>	1,300	1,450	1,500	1,550
- North of Brokaw Road	450	500	950	800
- South of Brokaw Road				
<u>Brokaw Road</u>	1250	1,300	1,200	1,200
- West of Technology Drive	3,000	2,700	3,150	2,900
- West of North First Street	3,450	3,350	3,350	3,100
- West of Zanker Road	3,600	4,000	3,450	3,850
- West of Junction Avenue				
<u>Skyport Drive</u>	3,200	3,650	3,600	3,700
- West of Technology Drive	2,000	2,850	2,250	2,850
- West of North First Street	250	1800	350	1,650
- West of North Fourth Street				
<u>Gish Road</u>	400	300	400	250
- West of North First Street	550	750	600	750
- West of North Fourth Street				
<u>Rosemary Street</u>	350	350	200	200
- West of North First Street	350	350	500	350
- West of North Fourth Street				

Note: Volumes are rounded to the nearest 50.
Source: Traffic Operations Analysis Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvements Project, 2020.

2.8.3 Environmental Consequences

2.8.3.1 *Impacts on Freeway Operations*

An analysis of northbound and southbound US 101 mainline traffic operations was conducted for AM peak period (5 AM– 9 AM) and PM peak period (3 PM – 7 PM). All segments are projected to operate at LOS C or better for northbound US 101 in the PM and for southbound US 101 in the AM Peak period conditions under both No Build and Build conditions.

With the inclusion of the proposed double express lanes on US 101 within the Project study area and based on the 2025 opening year analysis, traffic conditions would improve slightly compared to the existing condition. The entire study section would, however, be congested during the last hour for northbound US 101 in the AM peak period and during all hours for southbound US 101 in the PM peak period. During the AM peak period, the speeds improve slightly after the Bering Road off-ramp in Build conditions because the Brokaw Road off-ramp volumes would exit earlier compared to No Build. Conditions are similar for southbound US 101 between Build and No Build in 2025 as there are no freeway mainline improvements as part of this Project.

With the increase in demands in Year 2045, inclusion of the approved US 101 Express Lanes project (throughout the study limits) would not improve the US 101 northbound AM conditions compared to 2025 conditions. The entire study section would be congested during the last two hours for northbound US 101 in the AM peak period. Conditions would remain similar between the No Build and Build for northbound US 101 in the AM peak period.

As a result of the planned improvements, such as the approved US 101 Express Lanes project, under future No Build and Build Alternatives, 2045 conditions would improve for southbound US 101 during the PM peak period compared to 2025 conditions. Conditions would remain similar between the No Build and Build in 2045 as there are no freeway mainline improvements as part of this Project.

2.8.3.2 *Impacts on Local Travel Patterns*

The Project would provide an alternative route for North First Street traffic which currently experiences heavy delays and queues, in part, because of the light rail operations (see Table 2.8-5). The intersection delays and queues within the study area will be improved compared to No Build Conditions, as the existing ramps at Brokaw Road, Old Bayshore Highway and North First Street would be modified with the Project's on-/off-ramp relocations. The Old Bayshore Highway single lane off-ramp would be converted to a two-lane off-ramp at Bering Drive with an optional exit from lane #3, eliminating a weave from US 101 northbound mainline auxiliary to exit lane, which would reduce potential off-ramp backup to mainline northbound US 101. The widened Bering Drive due to the Project would help carry the consolidated Old Bayshore Highway/ Brokaw Road off-ramp volumes with acceptable delays.

The improved access that would result from the Project would, when compared to the No Build Alternative, result in an overall decrease in VMT. Please see Section 3.2.17 of this Draft EIR/EA for a discussion of VMT.

2.8.3.3 *Impacts on Peak Period Operations at the Study Intersections*

With the proposed Project in place, year 2025 operations along Old Bayshore Highway, North Fourth Street, North First Street, and Technology Place would improve, as compared to the No Build Alternative. As shown in Table 2.8-2, about 10 percent more of the study intersections would operate at LOS D or better under 2025 Build conditions compared to No Build.

Similarly, operations along Old Bayshore Highway, North Fourth Street, North First Street, and Technology Place would improve in Build conditions within the Project area in 2045 conditions. As shown in Table 2.8-2 above, the operations under 2045 Build conditions improve considerably in the PM peak hours, as compared to the No Build Alternative.

2.8.3.4 *Impacts to Transit Facilities*

The Project would redirect southbound left turning demand at North First Street/Technology place in the PM peak period to use the proposed overcrossing, which would reduce delays on the VTA light rail corridor on North First Street. The Project will be designed to accommodate existing transit facilities and any associated planned improvements.

2.8.3.5 *Impacts to Bicycle and Pedestrian Facilities*

New bicycle and pedestrian facilities would be constructed as part of the Project, which would facilitate safe travel by those modes in the area. The new facilities would include the following:

- Class IV bikeways and sidewalks would be provided along the new Zanker Road/North Fourth Street connection between Archer Street and Bering Drive except along the east side between Regatta Lane and Old Bayshore Highway where a Class I bikeway would be provided.
- Class IV bikeways and sidewalks would be provided along Skyport Drive between North First Street and North Fourth Street.
- Class IV bikeways and sidewalks would be provided along Old Bayshore Highway between Zanker Road and Terminal Avenue.
- A Class I bikeway and sidewalk would be provided along the south side of Technology Place between North First Street and Skyport Drive.
- A Class I bikeway would be provided along the west side of North Fourth Street between the Skyport Drive/Technology Place/southbound US 101 on-ramp intersection and the Skyport Drive/North Fourth Street intersection.
- A buffered Class II bikeway would be provided along eastbound Brokaw Road between Bering Drive and Zanker Road and a reconstructed sidewalk would be

provided along a segment of eastbound Brokaw Road near Bering Drive to connect to the sidewalk on northbound Bering Drive.

- Sidewalks would be provided on both sides of Bering Drive.

2.8.3.6 *Short-Term Transportation Impacts During Construction*

Construction of the Project would include temporary lane closures and narrowing of lanes. Narrowed lanes on the freeways throughout the construction zone will also be likely.

Prior to construction, as is standard practice on all large infrastructure improvement projects, a TMP will be prepared. The TMP will address all traffic-related aspects of construction including, but not limited to, the following: traffic handling in each stage of construction, pedestrian safety/access, and bicycle safety/access. A component of the TMP will involve public dissemination of construction-related information through notices to the neighborhoods, press releases, and the use of changeable message signs. The TMP will also include advance coordination with the San José Fire Department, as well as with other emergency responders (e.g., police, ambulance, etc.), especially with regard to any temporary lane closures or detours.

2.8.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are required.

2.9 VISUAL/AESTHETICS

2.9.1 Regulatory Setting

NEPA, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically (emphasis added) and culturally pleasing surroundings (42 USC 4331[b][2]). To further emphasize this point, FHWA, in its implementation of NEPA (23 USC 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of aesthetic, natural, scenic and historic environmental qualities” (CA Public Resources Code [PRC] Section 21001[b]).

California Streets and Highways Code Section 92.3 directs Caltrans to use drought resistant landscaping and recycled water when feasible, and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

2.9.2 Affected Environment

The information in this section is based primarily on a technical Minor Visual Impact Assessment (August 2022), which is incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

2.9.2.1 *Existing Visual Character*

The Project corridor is characterized by heavily trafficked, multi-lane freeways, and surrounding commercial and industrial development. Visual character of the freeways is wide due to the multiple lanes, and heavy traffic. For the most part, commercial and industrial buildings adjacent to the freeway are at the same level as, and directly visible from, the freeway. The northbound US 101 shoulder is almost continuously vegetated with trees, on or close to the freeway. Vegetation on the US 101 southbound shoulder is sparser.

Streets within the Project area north of US 101 range from one to three lanes in each direction (see Figure 2.9-1). These streets are characterized by continuous commercial development including single and multi-story industrial and business parks. Repetitive boxy forms of the commercial structures line the streets. They are set back by small parking lots and strips of landscaping. Landscaping is an important characteristic of the views of the Project area north of US 101. Rows of trees and other landscaping lining the streets are visually dominant and block views of buildings. The vegetation offers color, texture, and organic forms that contrast with the gray color of the roads and soften the transition from the roads to the commercial and industrial buildings.

The landscape south of US 101 has a more mixed visual character and contains a variety of building forms and densities (see Figure 6-1). Parts of North Fourth Street have boxy warehouses and extensive pavement that impart an industrial character and a grey palette. Some properties do not have sidewalks, so the asphalt of the property merges with that of the street. Other parts of the Project area south of US 101 have a more mixed-use, urban character with closely spaced commercial and residential structures of varying heights on streets lined with landscaping. The Bay 101 Casino (located at 1788 North First Street) is a hybrid of the two; the cardroom is a new-looking building with a red-tiled, multi-tiered roof surrounded by an extensive parking lot.

2.9.2.2 *Existing Visual Quality*

Visual quality in the Project area ranges from moderate to moderately low depending on the specific location. Freeway views are typical of similar stretches of freeway throughout the City of San José and the South Bay region and are not memorable. Where visible, views of the Diablo Range to the east and the Santa Cruz Mountains to the west form vivid elements. Vegetation along the freeway also provides a scenic amenity.

The Project area north of US 101 has at least a moderate level of visual quality because of extensive street plantings of mature trees and the absence of heavy industrial properties and other encroaching features. Areas south of US 101 vary block by block. Portions of the Project area without trees lining the streets and with large parking lots or industrial properties have lower levels of visual quality. The visual quality of the existing setting is moderate to moderately low overall.



North of US 101: view down Bering Drive from Zanker Road.



North of US 101: typical development along project corridor.



South of US 101: Bay 101 Casino parking lot.



South of US 101: view of lot that will become extension of Skyport Drive.



South of US 101: Apartment building on Fourth and Archer.



South of US 101: typical development along project corridor.

Source: Caltrans, July 2022.

2.9.3 Environmental Consequences

2.9.3.1 *Overview of Visual Impacts*

The Project would be compatible with the existing visual character and visual quality of the Project area. From most vantage points in the Project area and vicinity, Project-related changes would be noticeable but would be consistent with the character of the existing large US 101 freeway and primarily commercial and industrial land uses along surface streets. The Project expands the footprint of US 101 into surrounding areas with a new overcrossing, elevated roadways, and reconfigured on- and off-ramps. Zanker Road to the north and North Fourth Street to the south would both be expanded and ascend to cross the freeway and merge together. A large industrial property on North Fourth Street would be converted into a new loop on-ramp to US 101. The new ramps and overcrossing structure would block foreground views outside the freeway corridor from US 101. It is estimated that over 250 trees within the Project footprint would be removed or heavily pruned by the Project.¹⁷ As further discussed below, tree removal would be mitigated with tree replacement at established ratios. Primary areas of tree removal include:

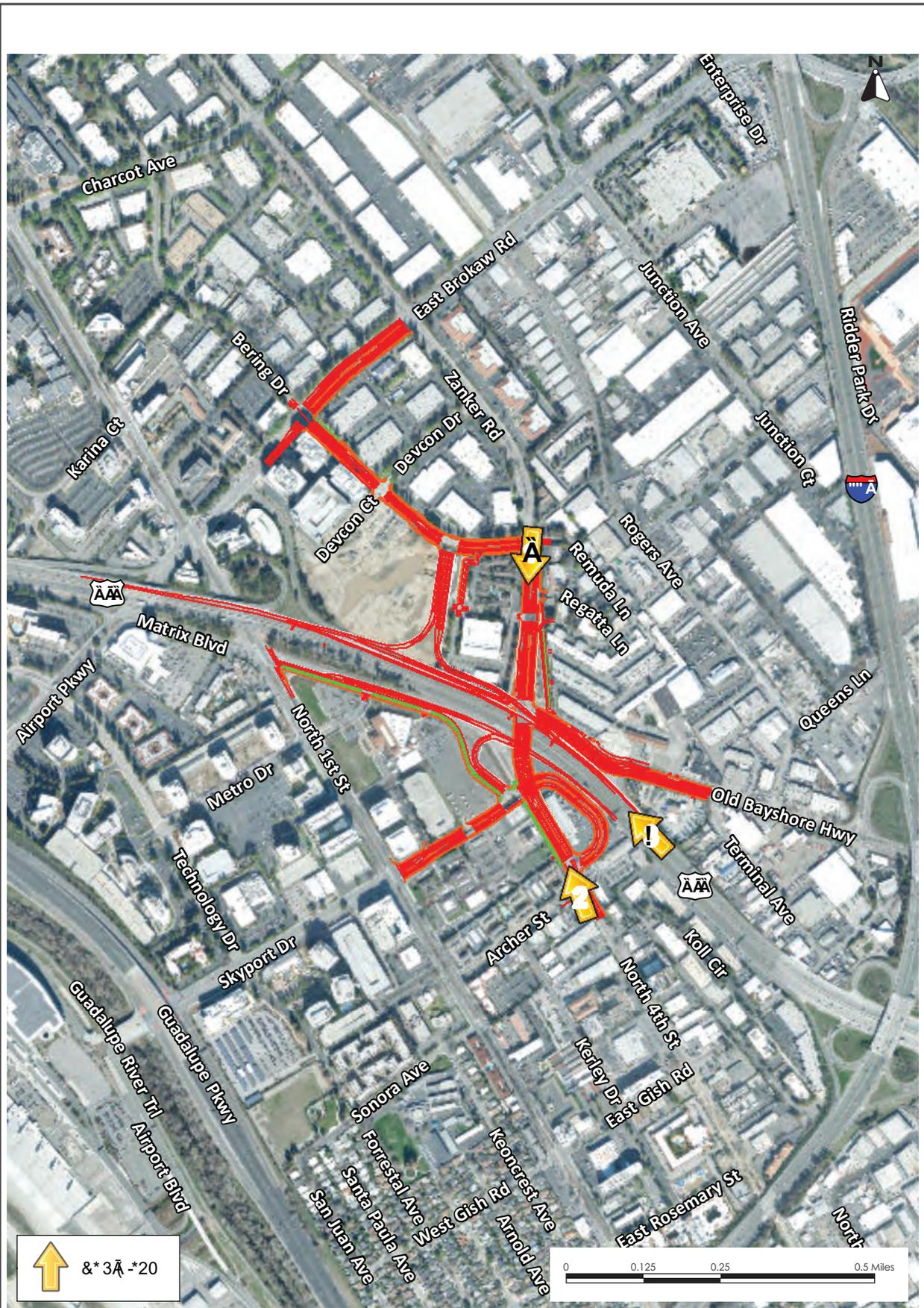
- US 101 northbound – a 0.25 mile stretch around the new overcrossing.
- North of US 101 – on the west side of Zanker Road, along Bering Drive, and in the median of Brokaw Road between Bering Drive and Zanker Road.
- South of US 101 – on the new Skyport Drive extension between North First Street and North Fourth Street, on North Fourth Street, and on the east side of the Bay 101 Casino parking lot (small trees).

Removal of mature trees would cause resource change, particularly in areas where there would not be room for tree planting. Even areas that would be replanted would experience adverse short- to moderate-term changes to the visual character as new landscaping becomes established. Overall, resource change would be moderate to moderate-low.

2.9.3.2 *Visual Impacts from Key Views*

Because it is not feasible to analyze all the views in which the Project would be seen, it is necessary to select a number of key views that would most clearly demonstrate the change in the Project's visual resources. Key views also represent the viewer groups that have the highest potential to be affected by the Project, considering exposure and sensitivity. The following section describes and illustrates visual impacts by comparing existing conditions to conditions anticipated with the Project in place at three locations. The locations of the three key views are shown on Figure 2.9-2.

¹⁷ This is an estimate based on preliminary design and will be refined during final design. For a listing of existing trees in the project area, please see the tree inventory in the Natural Environmental Study.



Source: Caltrans, July 2022.

LOCATIONS OF KEY VIEWS

FIGURE 2.9-2

Key View #1: Looking South down Zanker Road from the Intersection with Bering Drive

Figure 2.9-3 presents the existing and post-Project view from Key View #1, taken from Zanker Road looking south from the intersection with Bering Drive. As seen in Figure 2.9-3, Zanker Road has two lanes in each direction and a median that is narrow in the foreground but expands outward as Zanker Road narrows to one lane on either side approaching US 101. The street is lined with lawns, shrubs, and large trees, which provide a scenic amenity and largely screen businesses and parking lots from view. The median is not currently landscaped because it is being used as a temporary storage site for another project. The storage pile largely blocks the view of US 101 and the buildings and trees beyond it. The Santa Cruz Mountains are visible across the horizon line in the distance.

The simulated view from Key View #1 shows the reconfigured Zanker Road rising to form a new crossing over US 101. Old Bayshore Highway has been elevated and connects with the new overcrossing from the left. On the right, a new collector-distributor road descends from the overcrossing to become a US 101 northbound on-ramp. The new Zanker roadway is wider with three lanes in each direction, turning lanes, and a smaller paved median. Bicycle lanes and sidewalks have been built on both sides of Zanker Road, separated from the roadway by a hedgerow. The former northbound Zanker roadway (left side) has been reconfigured but the landscaping on the left side of the road remains intact. The former southbound Zanker roadway (right side) has been reconfigured and landscaping would be removed and replaced by the Project. More than half of the existing mature trees would be removed on the right side of Zanker Road south of Bering Drive (including the stretch of Zanker Road visible from this vantage point). Though several mature trees along this stretch would remain, the loss of trees would be obvious to the viewer, especially in views further to the right (west).

The simulated view from Key View #1 is dominated by the widened and elevated Zanker roadway. The character of Zanker Road is changed from that of a minor arterial/connector road to that of a major arterial. This change would be compatible with the commercial character of the area. The new roadway slope blocks the view of the mid and lower parts of the Santa Cruz Mountains from Key View #1. However, motorists, bicyclists, and pedestrians would have a better view of the mountains than was previously available while on the new overcrossing. Together, the loss of mature trees, the expansion of hardscape, and partial blocking of the Santa Cruz Mountains would create a moderate adverse resource change from this vantage point. Under MM-VIS-1.1 described below, new trees would be planted along Zanker Road to replace trees that were removed.



EXISTING CONDITION



SIMULATED CONDITION

Source: Caltrans, July 2022.

To summarize, Project features would create a moderate level of long-term resource change from this vantage point with implementation of MM-VIS-1.1. Combined with a moderate viewer response,¹⁸ the Project would create a moderate level of visual impact from Key View #1.

Key View #2: Looking North Along North Fourth Street from the Intersection with Archer Street

Figure 2.9-4 presents the existing and post-Project view from Key View #2, which was taken from North Fourth Street looking north from the intersection with Archer Street. This view captures North Fourth Street and its intersection with Archer Street. North Fourth Street has two lanes in each direction. The Waterford Place Apartment complex is on the left (west) side, and large industrial warehouses and an airport parking lot are on the right (east) side. No sidewalk exists in front of the warehouses, so the asphalt of the industrial property merges with the street. Street trees line the left (west) side of the street in front of the apartment complex but are not present on the right (east) side of the street. To the right (east) side, the Diablo Range is visible in the distance.

Two post-Project scenarios are described below because a final decision on whether to construct a soundwall adjacent to the Waterford Place Apartment complex has not been made. Variation 1 assumes no soundwall and Variation 2 assumes the soundwall would be constructed. [Note: For a discussion of noise impacts and the feasibility of the soundwall, please see Section 2.17, *Noise*.]

Key View #2 – Variation 1

In the simulated view from Key View #2 – Variation 1, post-Project conditions are shown with no soundwall. The large warehouses have been removed to accommodate Project features. North Fourth Street now rises to form a new crossing over US 101 and connects with Zanker Road. North Fourth Street now has two to three lanes of traffic in each direction as well as turning lanes. Bicycle lanes and sidewalks are now on both sides of North Fourth Street, and north of the Skyport Drive connection, separated from the roadway by a hedgerow. US 101, the new overcrossing, and the newly elevated Old Bayshore Highway are all visible from this point. Skyport Drive now connects to North Fourth Street through the new intersection on the right side of the view. Mature trees and other landscaping in front of the apartment complex have been removed. A new row of trees has been planted and the simulation assumes at least 10 years of growth. Trees across the industrial property have also been removed. Views of Diablo Range, seen in the distance on the right side of the view, would not be affected by the Project.

¹⁸ The population affected by the Project is composed of viewers. There are two major types of viewer groups for highway projects: project neighbors and project users. Each viewer group has its own level of viewer exposure and viewer sensitivity, resulting in distinct and predictable visual concerns for each group that help to predict their responses to visual changes.

The new overcrossing dominates the view in Key View #2— Variation 1. The character has changed from a mainly industrial view to one dominated by roadway/freeway infrastructure. In general, this change would be compatible with the industrial and mixed-use character of the area. From the apartment complex, the newly elevated North Fourth Street would be visible from lower windows partially due to the removal of mature trees. This elevated roadway would be visible at close range from lower windows and would cut down on light to lower units. Though utility lines would be removed from the street, a new streetlight would be installed in front of the apartment complex. The loss of mature trees, the addition of an elevated roadway at close range, and the new streetlight create adverse visual changes from the apartment complex. Under MM VIS-1.1, new trees would be planted in front of the apartment complex that would be visible from this view and would at least partially block the elevated roadway and other transportation infrastructure. Long-term resource change would be moderate.

To summarize, with implementation of MM-VIS-1.1, the Project would result in a long-term moderate level of resource change from this vantage point. Combined with a moderate viewer response, the Project would result in an overall moderate level of visual impact from Key View #2— Variation 1.



EXISTING CONDITION



VARIATION 1: NO SOUNDWALL



VARIATION 2: WITH SOUNDWALL

Source: Caltrans, July 2022.

Key View #2 – Variation 2

In the simulated Key View #2 – Variation 2, post-Project conditions are shown with a soundwall around the Waterford Park Apartment complex. Because the soundwall is located behind the landscaping and apartment sign, it does not stand out in the view from Key View #2 – Variation 2. From the outside, resource change would be the same as described for Key View #2-- Variation 1. From within the apartment complex, the addition of the soundwall would further cut down on the light received by the lower units and potentially reduce the visibility of trees from these units. However, it would also block close range views of the elevated roadway from these units. Overall, the Project would create at least a moderate level of resource change from Key View #2 – Variation 2. Under MM-VIS-1.1, new trees would be planted in front of the apartment complex and the long-term resource change would be moderate. In addition, under MM-VIS-1.2, the soundwall would receive architectural treatments to make the new hardscape more visually appealing.

To summarize, the Project with the proposed soundwall would result in a moderate level of resource change from this vantage point in the long term with implementation of MM VIS-1.1 and MM VIS-1.2. Combined with a moderate viewer response, the Project would result in a moderate level of visual impact from Key View #2-- Variation 2.

Key View #3: On US 101 Northbound

Figure 2.9-5 presents the existing and post-Project view from Key View #3 on northbound US 101. The view is typical of freeways in the region and is a heavily used, multi-lane roadway. Ramps to the Old Bayshore Highway are visible on the right. The freeway is at grade, and a mix of urban land uses are visible adjacent to the freeway including the commercial and industrial buildings. Trees on the shoulders partially screen views of this urban development.

In the simulated view from Key View #3, the Zanker Road/North Fourth Street overcrossing structure has been constructed. On the right side, the new Old Bayshore Highway roadway rises up to connect with the overcrossing structure. On the left side is the new North Fourth Street roadway connecting to the overcrossing. Trees along the freeway have been removed except for those visible in the distance on the left side of the simulation.



EXISTING CONDITION



SIMULATED CONDITION

Source: Caltrans, July 2022.

The overcrossing structure and elevated roadways add a substantial amount of hardscape to the view from Key View #3. Hardscape now wraps around this section of US 101, blocking lower-level views of the urban setting outside the corridor. However, the height of the new infrastructure does not exceed that of the buildings in the surroundings and does not substantially block views of the sky from this vantage point. Fewer trees are visible because of tree removal and because the new roadway structures block views outside the freeway corridor.

This change makes this stretch of freeway appear to be more urban. This character is consistent with that of the surrounding urban environment and the proximity of complex interchanges on this stretch of freeway, including the US 101/I-880 interchange 0.4 mile to the south, and the US 101/SR-87 interchange 1.2 miles to the north. The long-term adverse resource change would be moderate. Under MM-VIS-1.2, the new overcrossing structure, abutments, and retaining walls would receive architectural treatments to make the new hardscape more visually appealing.

To summarize, the Project would create a moderate level of resource change with the implementation of MM-VIS-1.2. Combined with a moderately low viewer response, the Project would create a moderate level of visual impact from Key View #3.

2.9.3.3 *Light and Glare Impacts*

Under certain conditions, sunlight reflecting off new, unstained concrete surfaces can create glare at some sun angles. With implementation of MM VIS-1.2, concrete surfaces on the new US 101 overcrossing and ramps would receive treatment such as texturing and/or staining that would reduce the potential for glare. In addition, under MM VIS-1.3, all temporary lighting used during construction and permanent operational lighting installed by the Project would be designed and operated to limit light pollution.

2.9.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures are included in the Project for the purpose of avoiding, minimizing, and mitigating the visual effects of the Project.

MM-VIS-1.1: To the maximum extent practicable, damage to or removal of trees will be avoided by the Project. If trees need to be removed or are damaged as a result of the Project, they will be replaced within the project corridor, to the extent feasible. Replacement planting will be irrigated and maintained for a period of not less than 3 years after planting.

MM-VIS-1.2: The Project will incorporate treatments to improve aesthetics and reduce the opportunity for graffiti including texture, landscaping, and/or color on Project features. Architectural treatments (e.g., color, surface texture, and other treatments) will be consistent with the character of the freeway corridor in the project vicinity.

MM-VIS-1.3: If nighttime work is necessary, lighting will be limited to the work area by using directional lighting and shielding of light fixtures. Permanent lighting installed by the Project will be designed to limit light pollution and have minimum impact on the surrounding environment. All light fixtures will be configured with the minimum necessary number of bulbs and the optimal mounting height, mast-arm length, and angle to restrict light to the roadways. Where applicable, shields on the fixtures will be considered during the detailed design phase to prevent light trespass to adjacent properties.

2.10 CULTURAL RESOURCES

2.10.1 Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (e.g., structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 CFR 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among the FHWA, the ACHP, the California State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the ACHP’s regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA’s responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 USC 327).

CEQA requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as “unique” archaeological resources. California Public Resources Code (PRC) Section 5024.1 established the California Register of Historical Resources (CRHR) and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires Caltrans to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state

agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a MOU between Caltrans and SHPO, effective January 1, 2015. For most Federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

2.10.2 Affected Environment

The information in this section is based primarily on a technical Historic Property Survey Report (HPSR, November 2021) that was prepared for the Project. This study contains confidential information regarding the location(s) of cultural resources; therefore, is not available for public review.¹⁹

A prehistoric and historic archaeological site record and literature search by the Northwest Information Center (NWIC) at Sonoma State University was undertaken to determine if known resources are present within the Project's area of potential effects (APE). The APE is defined as the area which may be impacted, either directly or indirectly, by implementation of the Project. The NWIC determined that there are no recorded archaeological sites within or adjacent to the APE. Furthermore, the APE was determined to have a low-to-lowest potential to have archaeological resources due to its distance to the nearest water source and other archaeological factors. A search of the Native American Heritage Commission's (NAHC) sacred lands file was also conducted, with negative results.

None of the structures or buildings that are located within the APE are historically significant or eligible to be historically significant, and were exempt from further evaluation per the Section 106 PA.

As required by the Section 106 PA and AB 52, Native American consultation was initiated on September 6, 2019, as part of the Project. VTA received comments from two tribal representatives indicating interest in the Project. One tribe requested a copy of the approved HPSR, which has been provided, and the other tribe requested to be notified in the event cultural materials are discovered during construction. No other issues or concerns were identified during the consultation process.

2.10.3 Environmental Consequences

Based upon the research, technical studies, and field testing described above, there is no indication of prehistoric or historic archaeological resources within the Project's APE.

¹⁹ Under Federal and State laws, the archaeological reports are not public documents as they contain confidential information regarding the location(s) of cultural resources.

Therefore, construction of the proposed Project is not expected to result in effects on cultural resources.

2.10.4 Avoidance, Minimization, and/or Mitigation Measures

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to Public Resources Code (PRC) Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Caltrans District 4 Office of Cultural Resources Studies so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

PHYSICAL ENVIRONMENT

2.11 HYDROLOGY AND FLOODPLAIN

2.11.1 Regulatory Setting

Executive Order (EO) 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. The FHWA requirements for compliance are outlined in 23 CFR 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a 1% chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

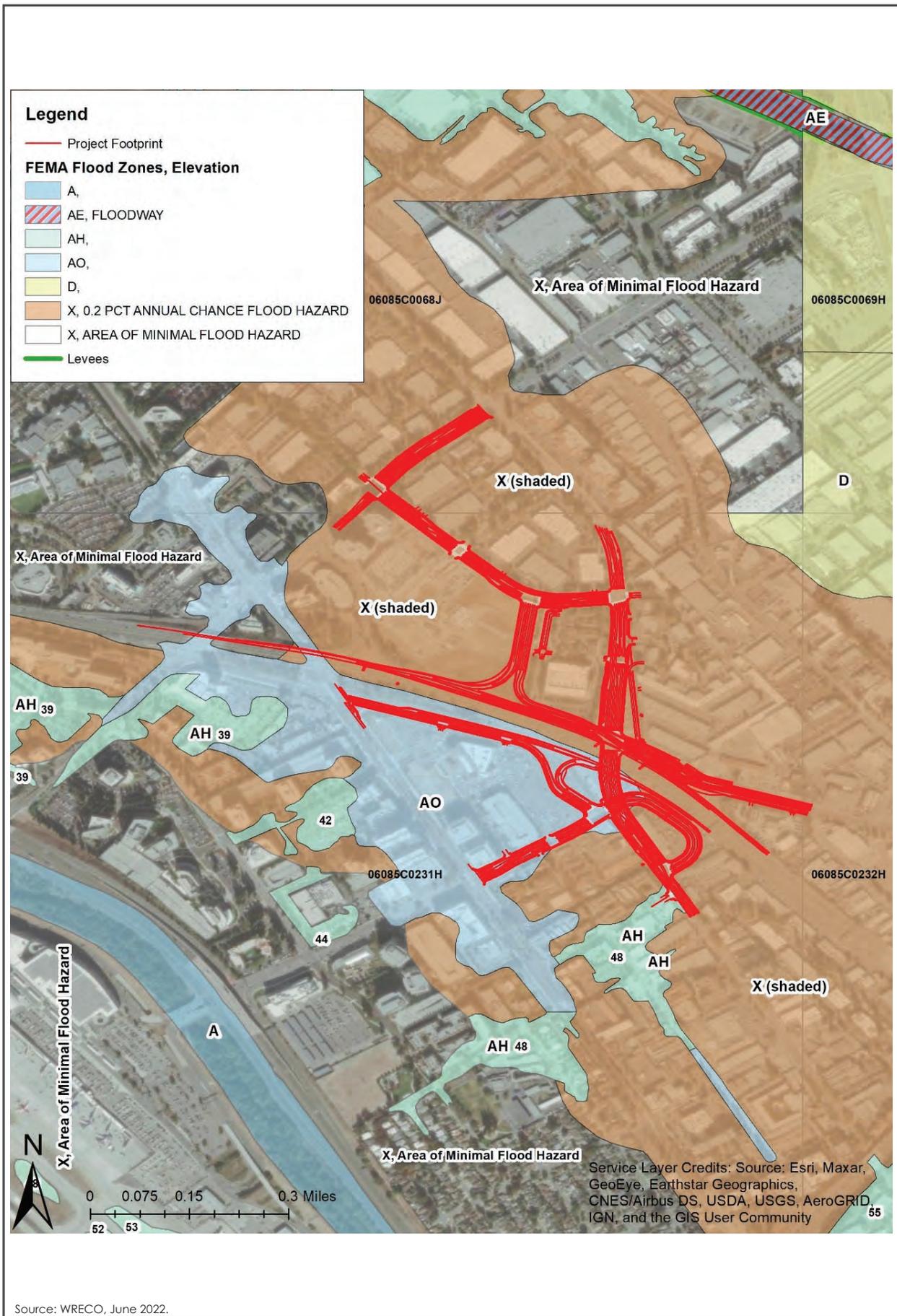
2.11.2 Affected Environment

The information in this section is based primarily on a Location Hydraulic Study/Floodplain Evaluation Report (September 2022), which incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

The Project site is depicted on the following floodplain maps prepared by the Federal Emergency Management Agency (FEMA): Flood Insurance Rate Map panels 06085C0068J, 06085C0231H and 06085C0232H, as shown on Figure 2.11-1.

The majority of the Project limits is located within non-Special Flood Hazard Area (SFHA) shaded Zone X (orange shaded area), which represent area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods. The shaded Zone X within the Project limits is defined as having 0.2% annual chance flood hazard.

At the north end near US 101 at approximately PM 39.3 and 39.4 the Project lies in the non-SFHA unshaded Zone X (unshaded area), which represents areas that have a minimal flood hazard. Unshaded Zone X are areas that have a minimal flood hazard, which is above the 500-year flood level.



SPECIAL FLOOD HAZARD AREA ZONE MAP

FIGURE 2.11-1

The Project site is also located within SFHA Zone AO (light blue shaded area), which represents river or stream flood hazard areas as well as areas with a 1% or greater chance of shallow flooding each year (100-year floodplain) with an average depth ranging from 1 to 3 feet. Within the Project limits near North First Street and Matrix Boulevard, Zone AO has a depth of 1 foot.

Within the Project location that lies near North Fourth Street and Skyport Drive, the Project is within SFHA Zone AH (green shaded area), which represent areas with a 1% annual chance of shallow flooding (100-year floodplain) that have an average depth ranging from 1 to 3 feet. Zone AH within the Project limits in the intersection between North Fourth Street and Archer Street shows base flood elevations (BFE) of approximately 48 feet.

Southwest of the Project location, the Guadalupe River is located in SFHA Zone A (dark blue shaded area) with a 1% annual chance of flooding and no BFE are available within these zones.

North of the Project location, Coyote Creek is defined as a regulatory floodway Zone AE (diagonally striped area).

The SFHA Zone AO and Zone AH that are overlapping within the proposed Project footprint are not connected to the Guadalupe River and Coyote Creek floodplain.

2.11.3 Environmental Consequences

The FHWA defines a significant floodplain encroachment as a highway encroachment, and any direct support of likely base floodplain development, that would involve one or more of the following construction or flood-related impacts: 1) significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route, 2) a significant risk with change in land use, fill inside the floodplain, or change in water surface elevation, or 3) a significant adverse impact on the natural and beneficial floodplain values. Natural and beneficial floodplain values include, but are not limited to: fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural moderation of floods, water quality maintenance, and groundwater recharge.

As described above, a portion of the Project footprint is located within the 100-Year Floodplain, delineated by Zones AH and AO. These areas are subject to shallow flooding, however, the flooding conditions would be minimal to shallow. Construction of the Project would require the placement of approximately 38,000 cubic feet of fill within Zone AO, which would equate to a loss of approximately 0.87 acre-feet of storage capacity for flood waters. This placement of fill would be offset by implementation of MM-HF-1.1, consisting of removing an equal volume of fill in the floodplain from the open areas along Technology Place and North Fourth Street. Thus, the net effect would be no increases in the depth of flooding. Further, the Project would be designed to avoid the blockage of flood flows within

its footprint. For example, holes could potentially be placed at the bottom of barriers within areas subject to flooding to not block the flow of floodwaters.

Potential short-term adverse effects to the natural and beneficial floodplain values during the construction of the Project and its avoidance and minimization measures are described in Section 2.12, *Water Quality and Stormwater Runoff*.

For these reasons, the Project is not considered a significant encroachment as it does not involve significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community's only evacuation route, a significant risk, or cause a significant adverse impact to the natural and beneficial floodplain values.

2.11.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures are included in the Project for the purpose of avoiding, minimizing, and mitigating the hydrology effects of the Project.

MM-HF-1.1: Proposed fill and cut within the 100-Year Floodplain will be balanced such that adverse effects associated with changes in flooding depths will be avoided.

MM-HF-1.2: In order to avoid increased flooding elsewhere, the Project shall be designed to minimize any obstruction to the flow of floodwaters.

PHYSICAL ENVIRONMENT

2.12 WATER QUALITY AND STORMWATER RUNOFF

2.12.1 Regulatory Setting

2.12.1.1 *Federal Requirements: Clean Water Act*

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (US) from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCBs) administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the USACE’s Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits,

the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's (US EPA) Section 404 (b)(1) Guidelines (40 CFR Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the US EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4.

2.12.1.2 State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the State include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a Project area are included in the applicable RWQCB Basin Plan. In California, RWQCBs designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQB's are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

2.12.1.3 *National Pollutant Discharge Elimination System (NPDES) Program*

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of stormwater discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying stormwater.” The SWRCB has identified Caltrans as an owner/operator of an MS4 under federal regulations. Caltrans’ MS4 permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

Caltrans’ MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012 and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014) and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015) has three basic requirements:

- Caltrans must comply with the requirements of the Construction General Permit (see below);
- Caltrans must implement a year-round program in all parts of the State to effectively control stormwater and non-stormwater discharges; and
- Caltrans’ stormwater discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Stormwater Management Plan (SWMP) to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing stormwater management procedures and practices as well as training, public education and participation,

monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed Project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address stormwater runoff.

Construction General Permit

Construction General Permit (CGP), Order No. 2009-0009-DWQ (adopted on September 2, 2009 and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012). The permit regulates stormwater discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop Stormwater Pollution Prevention Plans (SWPPPs); to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory stormwater runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with Caltrans' SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than one acre.

2.12.2 Affected Environment

The information in this section is based primarily on a technical Water Quality Assessment Report (February 2022) and Stormwater Data Report (December 2022), which are incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

There are no surface waters (e.g., creeks, streams, rivers, lakes, or other water bodies) located within the Project limits. The Project limits east of US 101 are located within the Coyote Creek Watershed and stormwater outfalls to Coyote Creek are sited

approximately 3,250 feet east of the Project limits. The Project limits west of US 101 are located within the Guadalupe River Watershed and stormwater outfalls to the Guadalupe River are sited approximately 2,000 feet west of the Project limits. Both waterways flow north until ultimately discharging into San Francisco Bay.

Beneficial uses for Coyote Creek and Guadalupe River, as set forth by the RWQCB Basin Plan are summarized below in Table 2.12-1.

Table 2.12-1: Listed Existing Beneficial Uses for Project Receiving Water Bodies

Beneficial Uses	Water Body	
	Coyote Creek	Guadalupe River
Groundwater Recharge	E	E
Commercial and Sport Fishing	E	---
Cold Freshwater Habitat	E	E
Fish Migration	E	E
Preservation of Rare and Endangered Species	E	E
Fish Spawning	E	E
Warm Freshwater Habitat	E	E
Wildlife Habitat	E	E
Water Contact Recreation	E	E
Non-Contact Water Recreation	E	E
E: existing beneficial uses		

Section 303(d) of the CWA requires that states develop a list of water bodies that do not meet water quality standards. The current (2018) version of the list of impaired water bodies, maintained by the San Francisco Bay RWQCB and approved by the US EPA, includes both Coyote Creek and Guadalupe River. The listed impairing constituents include trash, diazinon, toxicity, and mercury.

2.12.3 Environmental Consequences

2.12.3.1 *Long-Term/Operational Phase Effects*

The Project would result in approximately 1.29 acres of new impervious surfaces within the combined Coyote Creek and Guadalupe River watersheds area that encompasses 492 square miles. This is a relatively minor increase in impervious surfaces, especially in view of the fact that most of the Project site is already covered by existing impervious surfaces (i.e., the existing freeway). Further, as described below under MM-WQ-1.1, the design of the Project includes Best Management Practices (BMPs) to reduce the pollutant component of stormwater runoff into the stormwater drainage systems. Therefore, the increase in pollutant-containing runoff would not be substantial.

The additional impervious area to be added by the Project is small in relation to the size of the groundwater basin located within the Project limits; therefore, groundwater recharge impacts would be insignificant.

2.12.3.2 *Short-Term/Construction Phase Effects*

The Project would involve excavation and grading activities for the purpose of constructing the proposed roadway improvements. These activities have the potential to degrade water quality in the form of sedimentation, erosion, and leaking fuels/lubricants from equipment. At this location, the water quality of Guadalupe River and Coyote Creek could be affected by construction activities because most of the storm drains discharge into those two waterways. Since these creeks support numerous wildlife and plant species, a short-term degradation of water quality could adversely affect such species.

2.12.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures are included in the Project for the purpose of avoiding, minimizing, and mitigating the water quality effects of the Project.

2.12.4.1 *Measures to Avoid or Minimize Long-Term Effects*

MM-WQ-1.1: Although long-term water quality effects of the Project would not be substantial, the design of the Project includes Best Management Practices (BMPs) such as site design, permanent erosion control, drainage facilities, source control measures, and treatment measures to reduce the pollutant component of stormwater runoff, as required by the Caltrans National Pollution Discharge Elimination System (NPDES) permit. In addition to the requirements of the NPDES permit, compliance with the requirements of the Caltrans Stormwater Management Plan (SWMP) is also required throughout implementation of the Project. The SWMP describes the programs to reduce the discharge of pollutants associated with the stormwater drainage systems and describes how Caltrans will comply with the provisions of the NPDES permit.

2.12.4.2 *Measures to Avoid or Minimize Short-Term Effects*

In order to avoid/minimize the potential for water quality impacts to occur, the Project would implement the following measures:

MM-WQ-1.2: Prior to any soil disturbance work, file a Notice of Intent with State Water Resources Control Board (SWRCB). To maintain proper permit coverage under the Construction Stormwater General Permit (CGP), in addition to filing a Notice of Intent, all dischargers must electronically file permit registration documents, Notice of Termination, changes of information, sampling and monitoring information, annual reporting, and other required

compliance documents through the SWRCB's Stormwater Multiple Application and Report Tracking System (SMARTS).

MM-WQ-1.3: Prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). Prior to the start of construction, the SWPPP would be submitted by the Contractor to Caltrans for approval. The SWPPP shall detail the measures to address the temporary water quality impacts resulting from construction activities associated with this Project. The SWPPP shall also include the development of a Construction Site Monitoring Program that presents procedures and methods related to the visual monitoring, sampling, and analysis plans during construction of the project.

2.13 GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY

2.13.1 Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using Caltrans’ Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see the *Caltrans Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria*.²⁰

2.13.2 Affected Environment

The information in this section is based primarily on a technical Preliminary Geotechnical Design Report (September 2022) that was prepared for the Project. This study is incorporated into this Draft EIR/EA by reference. A copy of this study is available for review at the locations listed inside the front cover of this document.

The Project is located in the Santa Clara Valley on the plain between San Francisco Bay and the Santa Cruz Mountains and within the geologically complex and seismically active California Coast Ranges Geomorphic Province. The Santa Clara Valley is a broad relatively flat valley enclosed by the Santa Cruz Mountains to the west and the Diablo Range to the east.

As previously mentioned, the Project area is within the Santa Clara Valley and is relatively flat and not located within a mapped Landslide Hazard Zone. US 101 is elevated about two to three feet above the surrounding grade and the ground surface in the site vicinity generally slopes westerly toward the Guadalupe River. The surface grade of US 101 ranges from approximately 45.5 to 48 feet in elevation and the surface grades of Zanker Road and North Fourth Street are at an approximate elevation 42.5 and 44.5 feet, respectively.

The proposed overcrossing is located approximately 1,200 feet southwest of the Silver Creek fault zone; however, no active faults cross under the Project area. In addition, the Project area is not in a mapped fault rupture hazard zone. The Santa Clara County Geologic Hazard Zones Atlas does not identify the Silver Creek fault as a fault rupture hazard zone, nor has it been included by Alquist-Priolo as requiring additional study for

²⁰ <https://dot.ca.gov/programs/engineering-services/manuals/seismic-design-criteria>.

surface fault rupture. While the Project area is not located on an active fault or in a fault rupture zone, it is located in a seismically active part of Northern California. Many faults capable of producing earthquakes exist in the San Francisco Bay Area, which may cause strong ground shaking in the vicinity of the Project area. The southern segment of the Hayward fault, which passes approximately 7 miles to the northeast of the site, is the closest significant seismic source to the site. The Monte Vista/Shannon fault, which is part of Foothills fault system, passes approximately 8.5 miles to the southwest. The San Andreas fault passes approximately 13 miles to the southwest.

Expansive soils are those that shrink or swell significantly with changes in moisture content. The shrinking and swelling caused by expansive clay-rich soils often results in damage to overlying structures. The near surface soil of the Project area has moderate potential for expansion. The Project area is mostly paved or developed with buildings, therefore the potential for erosion is considered very low.

Subsidence typically occurs from subsurface fluid extraction (groundwater, petroleum) or compression of soft geologically young sediments. Groundwater extraction for high volume municipal and agricultural use has the potential to cause future ground subsidence in the region. Based on the Preliminary Geotechnical Design Report, there is no knowledge of subsidence in the area since the Santa Clara Valley Water District implemented groundwater recharge programs over 60 years ago. No active petroleum wells are present within 15 miles of Project area.

Compaction settlement, or seismic densification, occurs when loose granular soils above the water table increase in density as a result of earthquake shaking. The soil densification can result in differential settlement because of variations in soil composition, thickness, and initial density. Previous exploration at the site did not encounter loose, cohesionless soil above the water table, therefore, seismic densification or settlement appears to be low.

The Project is mapped as a Liquefaction Hazard Zone within the Santa Clara County Geologic Hazard Zone Atlas and California Geologic Survey. See below for discussion of likelihood of liquefaction.

The Guadalupe River is located approximately 0.75 mile southwest of the site and Coyote Creek approximately 1.25 miles to the northwest. Topographic maps show little elevation change across the region; therefore, the potential for lateral spreading appears to be low.

2.13.3 Environmental Consequences

The proposed Project will involve typical highway excavation and grading practices necessary to construct the additional overcrossing. As described above, the Project site is in a liquefaction zone and contains expansive soils. These conditions are common throughout the San Francisco Bay Area. The Project area's potential for liquefaction is mapped as "moderate." No historic ground failures from either the 1989 Loma Prieta

earthquake or the 1906 San Francisco earthquake have been recorded near the Project area. Although exploration in the site vicinity encountered free groundwater at a depth of 11 feet, the underlying conditions were found to comprise stiff to very stiff cohesive soil overlying a relatively thick stratum of dense to very dense sand and gravel. Based on these conditions, the potential for ground surface effects to occur at the site as a result of liquefaction appear to be low. Additional exploration and testing during the Plans Specifications and Estimates (PS&E) phase will be completed to confirm site-specific liquefaction potential. The Project will implement standard engineering practices to ensure that geotechnical and soil hazards do not result from its construction.

As noted above, the site is within the seismically active San Francisco Bay Area and severe ground shaking is probable during the anticipated life of the Project. Users of the freeways and interchanges would be exposed to hazards associated with such severe ground shaking during a major earthquake on one of the region's active faults. This hazard is not unique to the Project, because it applies to all locations throughout the greater Bay Area. The proposed Project will not increase the existing exposure to hazards associated with earthquakes; the hazards in the area will be the same with or without the Project.

The Project, including the overcrossing structure, retaining walls (if warranted), soundwall, and sign structures will be designed and constructed in accordance with Caltrans' Design guidelines for Seismic Zone 4 to avoid or minimize potential damage from seismic shaking on the site. Potential seismic effects will be minimized by the use of standard engineering techniques mandated by the Uniform Building Code and Caltrans' Design Standards.

2.13.4 Avoidance, Minimization, and/or Mitigation Measures

As discussed in the previous section, the Project would be designed to comply with both the Uniform Building Code and Caltrans' Design Standards. This will avoid the need for adoption of any non-standard avoidance, minimization, and/or mitigation measures.

In addition, some of the measures that will minimize or avoid impacts to water quality will also serve to minimize or avoid impacts associated with erosion. For a list of these measures, please see Section 2.12.4.

2.14 PALEONTOLOGY

2.14.1 Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils.

A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects.

- 23 USC 1.9(a) requires that the use of Federal-aid funds must be in conformity with all federal and state laws.
- 23 USC 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with state law.

Under California law, paleontological resources are protected by CEQA.

2.14.2 Affected Environment

The information in this section is based primarily on a technical Paleontological Identification Report/Paleontological Evaluation Report (March 2022), which is incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

Results of a records search indicate that no previous fossil localities have been recorded within or adjacent to the Project limits. The nearest known fossil, known as “Lupe the Mammoth,” was found approximately 1.2 miles northwest of the Project area, 11.5 feet below the modern floodplain in the Guadalupe Riverbed near Trimble Road. Two other fossils sites were subsequently found in the vicinity of Lupe the Mammoth.

The Project surface is mapped as Holocene alluvial fan deposits. Based on existing geologic literature and borings completed for the Project, the underlying Pleistocene alluvium is anticipated to be approximately 30 feet below the surface. Based on a review of the University of California Museum of Paleontology (UCMP) database, a fossil locality search, geologic literature, and the City of San José General Plan, the only paleontologically sensitive sediments in the Project area are the Pleistocene floodplain deposits, which are found at a depth of approximately 30 feet beneath the surficial Holocene deposits.

2.14.3 Environmental Consequences

As described in the previous section, paleontological resources have been found approximately 1.2 miles northwest of the Project limits. Although no fossils have previously been discovered within the Project limits, the soils present onsite may contain

such resources, specifically areas at depths of 30 feet or greater which have the highest sensitivity of containing fossils.

The proposed depths of ground disturbance for the Project would range from trenching of less than 10 feet to installation of bridge piles up to 100 feet. Excavation and earthmoving for the development of the roadway and sidewalk surfaces and excavation for landscaping would be at depths less than 10 feet. Trenching for the installation of underground utilities would be up to 10 feet below ground surface. Augering of holes up to 25 feet deep would occur for the installation of overhead signs and traffic signal pole foundations. Piles would be driven or drilled to a depth of up to 100 feet deep for the bridge structure. While pile driving would have the potential to rotate out fossils, the specimens would lack context, depth/elevation, formation identification, and other elements that are critical to scientific significance. While unlikely, in the event paleontological resources are present at depths less than 30 feet, the construction activities would impact those resources and could destroy scientifically important fossils.

2.14.4 Avoidance, Minimization, and/or Mitigation Measures

The following measures are included in the Project. Implementation of these measures will avoid substantial impacts to paleontological resources.

MM-PALEO-1.1: A qualified paleontologist shall provide preconstruction training on the potential for significant fossil localities in the Project area and provide an Alert Sheet that includes contact information for a qualified paleontologist who will be on call to respond in the event a fossil is recovered.

MM-PALEO-1.2: If unanticipated discoveries of paleontological resources occur during Project construction, all work within 25 feet of the discovery must cease and the find must be protected in place until it can be evaluated by a qualified paleontologist. The qualified paleontologist shall follow Society of Vertebrate Paleontology guidelines to determine whether the fossil can be identified and whether it meets significance criteria. Work may resume immediately outside of the 25-foot radius.

2.15 HAZARDOUS WASTE/MATERIALS

2.15.1 Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage, and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, and the Resource Conservation and Recovery Act (RCRA) of 1976 (RCRA). The purpose of CERCLA, often referred to as “Superfund,” is to identify and cleanup abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws regulating hazardous waste/materials include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, EO 12088, Federal Compliance with Pollution Control Standards, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during Project construction.

2.15.2 Affected Environment

The information in this section is based primarily on a technical Initial Site Assessment (ISA) Update Memorandum (May 2022), which is incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

2.15.2.1 *Contamination from Prior Leaks and Spills*

The ISA database search determined that there are 33 sites within a 0.125-mile (660 feet) radius of the Project area where hazardous materials are generated, used, or stored and/or where some type of spill/leakage/contamination has occurred. Of the 33 sites identified, four are considered to represent environmental conditions relevant to the Project based on information reviewed online, open case status, ongoing monitoring, and proximity to the Project area. Four of the 33 sites are determined to not contain conditions relevant to the Project area. The remaining 25 sites are considered Historical Recognized Conditions to the Project. Historical Recognized Conditions are generally conditions that in the past have been remediated to the satisfaction of the responsible regulatory agency.

Conditions at the four sites with conditions that could potentially affect the Project are summarized below:

Site #1 – FMC 495 East Brokaw Road: This site is approximately 100 feet north/northeast of the Project area and is listed on the hazardous materials database for impacts to soil and groundwater from hydrocarbons and volatile organic compounds (VOCs). The groundwater flow direction is to the west and is cross-gradient to the Project area. A land use restriction is in place for this site that prohibits groundwater extraction at any depth without approval.

Site #2 – 1660 Old Bayshore Highway: This site is adjacent to the northeastern Project area and is listed in on the hazardous materials database for impacts to soils from elevated concentrations of select metals. The site is planned for redevelopment and is an open case for hazardous materials cleanup.

Site #3 – Capital Towers/ARCO #991⁴ at 2010 North 1st Street: This site is adjacent to the northeastern Project area and is listed on the hazardous materials database for impacts to soil and groundwater from leaking underground storage tanks that were formerly present. Soil vapor monitoring and semi-annual groundwater monitoring are ongoing at this site. The groundwater flow direction is to the west/northwest and is down-gradient from the Project area. Based on historical groundwater data, elevated concentrations of dissolved petroleum hydrocarbons in groundwater are generally restricted to the area near the former underground storage tanks and pump islands in the southwestern corner of the site, adjacent to the Project area.

Site #4 – Pacific Bell at North First Street: This site is adjacent to the northeastern Project area and is listed on the hazardous materials database for hydrocarbons discovered in the Pacific Bell maintenance area. The contamination was suspected to be from the former adjacent ARCO gas station, which is Site #3 discussed above.

2.15.2.2 Aerially-Deposited Lead (ADL)

Until recently, lead was commonly added to gasoline.²¹ As a result, lead was emitted as a component of motor vehicle exhaust. Soil sampling along many roadways has found that concentrations of lead exceed applicable thresholds for classification as a hazardous material. This phenomenon known as aerially-deposited lead (ADL) is widespread. Because the freeways and roadways in the Project area were built prior to the phaseout of lead as a gasoline additive, elevated concentrations of ADL are likely to be present in the soil along the highways.

2.15.2.3 Asbestos-Containing Materials and Lead-Based Paints

Due to the age of the structures located within the Project limits (e.g., bridges, undercrossing, and pipelines), there is a potential for the presence of asbestos-containing materials,²² lead-based paint, and/or polychlorinated biphenyl (PCB).

2.15.2.4 Treated Wood Waste

Utility poles, roadside wooden signposts, or metal beam guardrail posts within the project limits may include chemically treated wood, and may be disturbed by the construction of the Project.

2.15.3 Environmental Consequences

Lead-based paints, ADL, and/or asbestos-containing materials, and PCBs are likely present within the Project footprint. As such, various construction activities could expose workers to these substances, which could result in adverse health impacts. Such exposure will be avoided by implementing the measure described below in Section 2.15.4.

Treated wood waste in the Project area could include existing utility poles, roadside wooden signposts, or metal beam guardrail posts removed by the Project. Treated wood waste will be handled properly in accordance with applicable Caltrans guidelines and if warranted, will require special removal, handling, and disposal.

²¹ Lead is a heavy metal that is found in many products. Lead is poisonous to humans. It is especially toxic to the nervous system, although it can adversely affect many systems and organs. In recent years, lead has been removed from certain products such as paint and gasoline in order to reduce the potential for chronic exposure.

²² Asbestos is a mineral that is found in many products because of its resistance to damage from chemicals and heat, as well as its noise absorption properties. However, asbestos is toxic, especially when inhaled. It can cause diseases such as lung cancer, mesothelioma, and asbestosis.

As discussed above, there is known soil and groundwater contamination adjacent to the Project area. During ground disturbing activities, construction workers could be exposed. Such exposure will be avoided by implementing the measure described below in Section 2.15.4.

2.15.4 Avoidance, Minimization, and/or Mitigation Measures

The Project will implement the following measures during final design and construction to avoid impacts associated with exposing construction workers to unsafe levels of hazardous substances:

MM-HAZMAT-1.1: As part of Project development, a soil investigation will be conducted to determine whether aerially-deposited lead (ADL) has affected soils that will be excavated as part of the proposed Project. The investigation for ADL will be performed in accordance with Caltrans' Lead Testing Guidance Procedure. The analytical results will be compared against applicable hazardous waste criteria. Based on analytical results, the investigation will provide recommendations regarding management and disposal of affected soils in the Project area including the reuse potential of ADL-affected soil during Project development. The provisions of a variance granted to Caltrans by the California Department of Toxic Substances Control on September 22, 2000 (or any subsequent variance in effect when the Project is constructed) regarding aerially-deposited lead will be followed.

MM-HAZMAT-1.2: Testing for the presence of lead-based paint on the existing structures to be demolished and roadway paint to be removed will occur. If this substance is found to be present, applicable regulations pertaining to its removal and disposal will be followed.

MM-HAZMAT-1.3: Testing for the presence of asbestos-containing materials on the existing structures will occur. If these materials are found to be present, applicable regulations pertaining to their removal and disposal will be followed.

MM-HAZMAT-1.4: Testing for the presence of polychlorinated biphenyl (PCB) on the existing structures will occur. If these materials are found to be present, applicable regulations pertaining to their removal and disposal will be followed.

MM-HAZMAT-1.5: Treated wood waste will be handled properly in accordance with applicable Caltrans guidelines and if warranted, will require special removal, handling, and disposal.

MM-HAZMAT-1.6: A Soil and Groundwater Management Plan will be prepared to properly manage any soil and/or groundwater impacted by hazardous materials discovered during ground-disturbing activities within the Project area.

MM-HAZMAT-1.7: A site-specific Health and Safety Plan (HSP) that is consistent with Caltrans requirements will be prepared. The HSP shall include: identification of key personnel; summary of risk assessment for workers, the community, and the environment; air monitoring plan; and emergency response plan.

MM-HAZMAT-1.8: Testing of the soils within the Project area for worker safety and soil management purposes will occur. Soils and groundwater, if encountered, shall be tested for the following:

- total petroleum hydrocarbons (TPH) as gasoline, as diesel, and as motor oil;
- volatile organic compounds (VOCs) including tetrachloroethene (PCE);
- pesticides, herbicides, and metals.

MM-HAZMAT-1.9: If at any point during construction stained or odoriferous soils are encountered, these soils will be stockpiled separately on plastic sheeting. The stockpiles shall then be sampled for the above-mentioned analytes and characterized for special handling and/or disposal.

The costs for sampling, testing, special handling, and disposal of potentially hazardous materials are unknown at this stage of preliminary design and environmental review. It is estimated that costs could range from \$75,000 to \$100,000 or more depending on the number of samples collected, the laboratory analyses used, and quantity of material that requires special disposal. The costs for special handling, if required, of contaminated building materials from structures that have to be removed would be estimated during final design.

2.16 AIR QUALITY

2.16.1 Regulatory Setting

The Federal Clean Air Act (FCAA), as amended, is the primary federal law that governs air quality while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by the US EPA and the California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and state ambient air quality standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM)—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM₁₀) and particles of 2.5 micrometers and smaller (PM_{2.5}), Lead (Pb), and sulfur dioxide (SO₂). In addition, state standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride. Table 2.16-1 lists primary air pollutants, their effects on health and the environment, and their typical sources. The NAAQS and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both state and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Table 2-16-1: Air Pollutant Effects and Sources

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
<p align="center">Ozone (O₃)</p>	<p>High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.</p>	<p>Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds (ROG or VOC) and nitrogen oxides (NO_x) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.</p>
<p align="center">Carbon Monoxide (CO)</p>	<p>CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical ozone. Colorless, odorless.</p>	<p>Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.</p>

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Respirable Particulate Matter (PM₁₀)	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic & other aerosol and solid compounds are part of PM ₁₀ .	Dust- and fume-producing industrial and agricultural operations; combustion smoke & vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.
Fine Particulate Matter (PM_{2.5})	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the PM _{2.5} size range. Many toxic & other aerosol and solid compounds are part of PM _{2.5} .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NO _x , sulfur oxides (SO _x), ammonia, and ROG.
Nitrogen Dioxide (NO₂)	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain & nitrate contamination of stormwater. Part of the “NO _x ” group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.
Sulfur Dioxide (SO₂)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.
Lead (Pb)	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.
Sulfates	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Hydrogen Sulfide (H₂S)	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.
Visibility Reducing Particles (VRP)	Reduces visibility. Produces haze. NOTE: not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See particulate matter above. May be related more to aerosols than to solid particles.
Vinyl Chloride	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA. In addition to this environmental analysis, a parallel "Conformity" requirement under the FCAA also applies.

Conformity

The conformity requirement is based on FCAA Section 176(c), which prohibits the USDOT and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP) for attaining the NAAQS. "Transportation Conformity" applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed Project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. US EPA regulations at 40 CFR 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for CO, NO₂, O₃, PM₁₀ and PM_{2.5}, and in some areas (although not in California), SO₂. California has nonattainment or maintenance areas for all of these transportation-related "criteria pollutants" except SO₂, and also has a nonattainment area for Pb; however, lead is not currently required by the FCAA to be

covered in transportation conformity analysis. Regional conformity is based on emission analysis of RTPs and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP).

RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the Metropolitan Planning Organization (MPO), FHWA, and Federal Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and TIP; the project has a design concept and scope that has not changed significantly from those in the RTP and TIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

2.16.2 Affected Environment

The information in this section is based primarily on a technical Air Quality Report (October 2023), which is incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

The Norman Y. Mineta San José International Airport climatological station, maintained by the National Weather Service, is located approximately three miles from the Project site and is representative of meteorological conditions near the Project. The climate of the Project area is generally Mediterranean in character, with cool winters and warm, dry summers. Mountains surround the city on three sides, and its location on the rain shadow side of the Santa Cruz Mountains has a significant influence on the climate. The prevailing winds in the Project area flow mainly from the northwest off the San Francisco Bay. Annual average rainfall is 15.9 inches.

2.16.2.1 *Existing Air Quality*

The Bay Area Air Quality Management District (BAAQMD) monitors air quality conditions at over 30 locations throughout the Bay Area. The monitoring station closest to the Project site is in San José.

Table 2.16-2 identifies the state and federal attainment status for regulated pollutants in the San Francisco Bay Area Air Basin. The area complies with ambient air quality standards for all pollutants except O₃, PM₁₀, and PM_{2.5}.

Table 2.16-2: Air Quality Standards Attainment Status for San Francisco Bay Area

Pollutant	State Attainment Status	Federal Attainment Status	Attainment Plan (O₃, PM and CO)
Ozone O ₃	Nonattainment	Nonattainment (Marginal)	Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard (2001)
Respirable PM (PM ₁₀)	Nonattainment	Unclassifiable/ Attainment	--
Fine PM (PM _{2.5})	Nonattainment	Nonattainment (Moderate)	Bay Area Winter Emissions Inventory for Primary PM _{2.5} & PM Precursors: Year 2010 (2012)
Carbon Monoxide (CO)	Attainment	Unclassifiable/ Attainment	2004 Revision to the California State Implementation Plan for Carbon Monoxide (2004)
Nitrogen Dioxide (NO ₂)	Attainment	Unclassifiable/ Attainment	--
Sulfur Dioxide (SO ₂)	Attainment	Unclassifiable/ Attainment	--
Lead (Pb)	Attainment	Unclassifiable/ Attainment	--
Visibility-Reducing Particles	Unclassified	N/A	--
Sulfates	Attainment	N/A	--
Hydrogen Sulfide	Unclassified	N/A	--
Vinyl Chloride	No Information Available	N/A	--

O₃ is the air pollutant of greatest concern in summer. Prevailing summertime wind conditions tend to cause a buildup of ozone in Santa Clara County. In the 5-year period from 2017 to 2021, ozone levels measured in San José exceeded the 1-hour state standard for 3 days in 2017, 1 day in 2019, 1 day in 2020, and 3 days in 2021. In the same period, exceedances of the national and state 8-hour ozone standards occurred for 4 days in 2017, 2 days in 2019, 2 days in 2020, and 4 days in 2021.

PM₁₀ and PM_{2.5} are other pollutants of concern in the Project area. Under stagnant air quality conditions in late fall and winter, the combination of vehicle exhaust and wood smoke leads to a buildup of particulates. In the 5-year period from 2017 to 2021, measured exceedances of the State PM₁₀ standards occurred on 19 days in 2017, 12 days in 2018, 12 days in 2019, and 30 days in 2020. In the same period, exceedance of the federal PM_{2.5} standards occurred on 6 days in 2017, 15 days in 2018, 12 days in 2020, and 1 day in 2021.

2.16.2.2 Sensitive Receptors

Sensitive receptors are generally defined as facilities and land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of sensitive receptors include residential dwellings (including single-family houses and multi-family residential buildings, townhouses, and apartments), schools, daycare centers, hospitals, and senior-care facilities. Figure 2.16-1 shows the locations of sensitive receptors relative to the footprint of the Project. Table 2.16-3 lists the type of sensitive receptors and the number identified within 500 feet of the Project's footprint. This area represents the zone of greatest concern for pollutants near roadways, including CO, diesel particulate matter, sulfur dioxide, and CO₂ emitted as vehicle exhaust. Sensitive receptors would not be directly affected by emissions of regional pollutants, such as ozone precursors (ROG and NO_x).

Table 2.16-3: Sensitive Receptors Located Within 500 Feet of the Project Footprint

Sensitive Receptor Group	Receptor Name	Receptor Address	Number of Receptors Identified	Distance Between Receptor and Project (ft)
Residences	Century Tower Apts.	1729 N. First St.	360	372
	Waterford Place Apts.	1700 N First St.	234	53
	Atrium Gardens Studio Apts.	1536 Kerley Dr.	54	498
	Fourth Street Apts.	1460 N Fourth St.	100	530



SENSITIVE RECEPTORS IN THE PROJECT VICINITY

FIGURE 2.16-1

2.16.3 Environmental Consequences

2.16.3.1 *Long-Term Operational Air Quality Effects*

Clean Air Act Conformity

This Project is not exempt from regional conformity requirements per 40 CFR 93.127. Therefore, the Project must be included in a conforming RTP and TIP and demonstrate that it will not interfere with the timely implementation of Transportation Control Measures (TCMs) identified in the applicable SIP (i.e., 2017 Clean Air Plan [CAP]).

The Project is listed in the current RTP, *Plan Bay Area 2050* (Project ID 21-T06-028). The RTP is financially constrained and have been determined to conform to the SIP (i.e., 2017 CAP).

MTC's financially constrained 2023 TIP also includes the Project (Project ID SCL190007) and has been found to conform to the SIP by FHWA and FTA as part of their approval of the Federal-Statewide TIP (FSTIP). The design concept and scope of the Project listed in the TIP and FSTIP are consistent with the project description in both the RTPs and the TIP.

Project-level conformity requires project sponsors demonstrate their transportation project will not cause or contribute to any new localized CO, PM₁₀, and/or PM_{2.5} violations, increase the frequency or severity of any existing CO, PM₁₀, and/or PM_{2.5} violations, or delay timely attainment of any NAAQS or any required interim emission reductions or other SIP milestones. This is demonstrated through a hot-spot analysis where Build and No Build emissions are modeled, both with and without any mitigation measures committed to in the RTP. The Project is in an attainment/maintenance area for CO and a nonattainment area for PM_{2.5}. Thus, a project-level conformity analysis applies to the Project for both pollutants under 40 CFR 93.109. However, current guidance from FHWA and Caltrans states that a project-level CO hot-spot analysis is no longer required to demonstrate project-level conformity. Similarly, hot-spot analysis for PM_{2.5} is only required for projects found to meet the definition of a Project of Air Quality Concern (POAQC) by the MTC's Air Quality Conformity Task Force (AQCTF). The Project was found not to be a POAQC by MTC's AQCTF on May 4, 2022. Therefore, a PM_{2.5} hot-spot analysis is not required.

The determination by MTC is subject to public review as part of this Draft EIR/EA. Public comment is requested regarding the project-level conformity analysis and determination. Following the close of the public review and comment period for the Draft EIR/EA, all comments received on the air quality conformity determination will be included in an air quality conformity report to be submitted to FHWA for their review and concurrence. The final determination on project-level conformity will be made by FHWA.

Criteria Air Pollutant Emissions

Emissions of criteria air pollutants from vehicles on roadways in the Project area were calculated for existing/baseline conditions, the Project's opening year (2025), the Project's design year (2045) and the current RTP horizon year (2050). Air pollutant emissions were estimated using specific traffic data and conditions provided by the Project's traffic consultant, AECOM, and Caltrans' CT-EMFAC2021 emissions model.

Overall, NO_x, ROG, and CO emissions in the future will decrease by between 53% and 85% as older vehicles are replaced by newer vehicles with more stringent emissions and fuel economy standards. PM₁₀ and PM_{2.5} emissions will increase in the future, when compared to current conditions, as they are a function of fugitive road dust, tire wear, and break wear which increase with VMT. When compared to the No Build Alternative, the Build Alternative would result in approximately the same emissions (i.e., within 0.3%), with a slight increase (0.1% or less) in NO_x, ROG, and CO emissions in 2025 and slight reductions (0.3% or less) in emissions beyond 2025 based on the operational period emission data in Table 2.16-4.

Table 2.16-4: Criteria Air Pollutant Emissions

Year	Scenario	CO (lbs/day)	PM _{2.5} (lbs/day)	PM ₁₀ (lbs/day)	ROG (lbs/day)	NO _x (lbs/day)	
2015	Existing/Baseline	23,577	385	1,751	1,333	6,392	
2025	No Build Alternative	10,582	373	2,003	625	1,758	
	Build Alternative	10,584	373	2,003	626	1,759	
2045	No Build Alternative	8,007	433	2,421	475	948	
	Build Alternative	8,004	433	2,421	474	947	
2050	No Build Alternative	8,230	449	2,515	482	953	
	Build Alternative	8,227	449	2,515	480	952	
		CO = carbon monoxide				ROG = reactive organic gases	
		PM _{2.5} = particulate matter, 2.5 microns in size				NO _x = nitrogen oxides	
		PM ₁₀ = particulate matter, 10 microns in size					
Source: Air Quality Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2023.							

When compared to the No Build Alternative, the reduction in emissions under the Build Alternative would in large part result from the overall decrease in VMT. Please see Section 3.2.17 of this Draft EIR/EA for a discussion of VMT.

MSAT Emissions

Mobile source air toxics (MSATs) are emitted from highway vehicles and non-road equipment. Some toxic compounds are present in fuel and are emitted to the air when

the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as by-products. Metal air toxics result from engine wear or from impurities in oil or gasoline.

The US EPA has identified nine priority MSATs with significant contributions from mobile sources. These are 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. The 2007 US EPA rule on the Control of Hazardous Air Pollutants from Mobile Sources requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines. According to an FHWA analysis, even if vehicle activity (i.e., vehicle-miles traveled) increases by 31% from 2020 to 2060 as forecast, a combined reduction of 76% in the total annual emission rate for the priority MSATs is projected for the same time period.

Similar to the process used for calculating criteria pollutant emissions, above, emissions of MSATs were calculated using the CT-EMFAC2021 model for baseline/existing conditions and each study year. The results are depicted in Table 2.16-5. The data show that future emissions of nine priority MSATs under the Build Alternative would be the approximately the same as under the No Build Alternative.

Regardless of the alternative chosen, emissions would on average be between 68% and 82% lower than baseline emissions, due in large part to vehicle fleet turnover. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the U.S. EPA-projected reductions is so great (even after accounting for VMT associated with planned growth) that MSAT emissions in the study area are likely to be lower in the future for both the No Build and Build alternatives.

Table 2.16-5: MSAT Emissions

Year	Scenario	1,3-butadiene (lbs/day)	Acetaldehyde (lbs/day)	Acrolein (lbs/day)	Benzene (lbs/day)	Diesel PM (lbs/day)	Ethylbenzene (lbs/day)	Formaldehyde (lbs/day)	Naphthalene (lbs/day)	POM (lbs/day)
2015	Existing/Baseline	3.35	11.43	0.36	41.92	81.53	15.72	27.27	2.85	0.70
2025	No Build Alternative	0.93	4.12	0.08	16.43	11.18	7.01	9.46	0.90	0.26
	Build Alternative	0.93	4.13	0.08	16.45	11.19	7.02	9.47	0.90	0.26
2045	No Build Alternative	0.53	2.07	0.06	10.61	6.90	5.06	4.83	0.44	0.12
	Build Alternative	0.53	2.07	0.06	10.59	6.90	5.05	4.83	0.44	0.12
2050	No Build Alternative	0.531	2.01	0.06	10.75	6.80	5.14	4.72	0.45	0.12
	Build Alternative	0.53	2.01	0.06	10.72	6.80	5.13	4.72	0.45	0.12

POM = polycyclic organic matter

Source: Air Quality Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2023.

2.16.3.2 Construction Air Quality Effects

Site preparation and construction would involve clearing, cut-and-fill activities, grading, removing, or improving existing roadways and bridges, and paving roadway surfaces. During construction, degradation of air quality is expected from the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other activities related to construction. Dust can result in adverse health effects (e.g., irritation of the eyes and respiratory tract) as well as visual effects (e.g., haze and reduced visibility). Emissions from construction equipment and on-road vehicles powered by gasoline and diesel engines are also anticipated and would include CO, NO_x, ROG, directly emitted PM₁₀ and PM_{2.5}, and toxic air contaminants (TACs) such as diesel exhaust particulate matter. See Table 2.16-1 for a description of these pollutants and their health effects.

Construction emissions were estimated using the Cal-CET2021, which uses emission factors from EMFAC2021. Cal-CET2021-provided equipment quantities and construction phases were used along with the scheduling durations provided by the Project's design engineering team.

Construction was divided into two concurrent construction stages (bridges/structures and roadway) with nine "default" phases for each stage: Land Clearing/ Grubbing, Roadway Excavation & Removal, Structural Excavation & Removal, Base/Subbase/Imported Borrow, Structure Concrete, Paving, Drainage/Environmental/Landscaping, Traffic Signalization Signage, and Other Operations.

Using the Cal-CET2021 model and based on the above-described inputs, estimated construction emissions for the Project, excluding fugitive dust, are presented in Table 2.16-6. It is important to note that the data in Table 2.16-6 represent uncontrolled construction-related emissions, meaning that no measures to reduce emissions are assumed. Because of this conservative scenario, actual emissions would be less.

Implementation of the measures listed in Section 2.16.4 will reduce air quality impacts resulting from construction activities. These reductions cannot be quantified at this time because pollutant emissions would vary daily depending on the level of activity, specific operations, and prevailing weather. In addition, a Transportation Management Plan (TMP) will be prepared prior to construction. The TMP will address all traffic-related aspects of construction and avoid routing truck traffic near sensitive receptors to the extent feasible.

Table 2.16-6: Uncontrolled Construction Emissions

Stage	Phase/ Activity	ROG (lbs/day)	CO (lbs/day)	NO _x (lbs/day)	Exhaust PM ₁₀ (lbs/day)	Exhaust PM _{2.5} (lbs/day)	CO _{2e} (MT/ Phase)
Roadway	Land Clearing/ Grubbing	2.08	11.96	12.68	12.00	2.00	47
	Roadway Excavation & Removal	4.74	30.57	31.59	5.67	2.73	353
	Structural Excavation & Removal	1.93	5.92	10.21	20.76	2.64	24
	Base/Subbase/ Imported Borrow	7.53	53.03	50.69	9.40	4.50	324
	Structure Concrete	2.30	7.24	11.19	0.70	0.69	105
	Paving	5.51	16.86	39.39	2.98	2.92	173
	Drainage/Environment/ Landscaping	2.13	6.25	13.32	1.04	1.02	123
	Traffic Signalization/ Signage/Striping/ Painting	1.96	9.42	14.53	0.88	0.86	237
	Other Operations	N/A	N/A	N/A	N/A	N/A	N/A
Bridges/Structures	Land Clearing/ Grubbing	5.97	34.36	36.46	8.72	3.15	14
	Roadway Excavation & Removal	10.38	67.03	69.46	7.02	5.42	85
	Structural Excavation & Removal	4.60	14.13	24.37	2.11	1.55	111
	Base/Subbase/Imported Borrow	15.94	112.30	107.34	9.63	8.50	194
	Structure Concrete	10.88	34.21	52.98	3.34	3.26	373
	Paving	6.51	20.12	46.72	3.51	3.44	28
	Drainage/Environment/ Landscaping	2.96	8.76	18.57	1.45	1.41	39
	Traffic Signalization/ Signage/ Striping/Painting	5.40	26.61	40.39	2.41	2.36	141
	Other Operations	N/A	N/A	N/A	N/A	N/A	N/A
Average Daily Emissions (lbs/day)*		6.3 lbs/day	30.5 lbs/day	39.3 lbs/day	5.5 lbs/day	3.2 lbs/day	1,186 MT/Year
Roadway Construction (tons)		0.9 tons	4.7 tons	5.9 tons	1.1 tons	0.5 tons	1,387 MT
Structures Construction (tons)		0.7 tons	3.0 tons	4.0 tons	0.3 tons	0.3 tons	985 MT
Total Construction (tons)		1.6 tons	7.7 tons	9.9 tons	1.4 tons	0.8 tons	2,372 MT
*Based on 504 workdays MT = metric tons, lbs = pounds							
Source: Air Quality Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2023.							

Construction activities will not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 CFR 93.123(c)(5)).

2.16.3.3 *Climate Change*

Neither the US EPA nor the FHWA has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the CEQA chapter of this document (see Section 3.3). The CEQA analysis may be used to inform the NEPA determination for the project.

2.16.3.4 *Cumulative Air Quality Effects*

As previously discussed, transportation plans that have been found to conform with the SIP are not considered to cause or contribute to violations of ambient air quality standards. Furthermore, a project included in a conforming plan would not result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under an applicable federal or state ambient air quality standard. Conforming transportation plans are subject to a threshold of no net increase in emissions. Because the proposed Project is included in MTC's *Plan Bay Area* and 2023 TIP, which conform to the SIP, the proposed Project would not result in a cumulatively considerable net increase of any criteria pollutant.

Furthermore, as shown in Tables 2.16-4 and 2.16-5, operational emissions of air pollutants would be lower under the Build Alternative than under the No Build Alternative. Therefore, since the Project would have no adverse effect on emissions, it would not, by definition, contribute to a cumulative air quality impact.

2.16.4 Avoidance, Minimization, and/or Mitigation Measures

2.16.4.1 *Long-Term (Operational)*

No avoidance, minimization, or mitigation measures are required.

2.16.4.2 *Construction Period*

The following measure will be implemented for the purpose of avoiding, minimizing, or mitigating the construction-related air quality effects of the Project that pertain to equipment exhaust:

MM-AIR-1.1: Prior to construction, the contractor for the Project shall submit a list of all off-road equipment greater than 25 horsepower (hp) that would be operated for more than 20 hours over the entire duration of Project construction, including equipment from subcontractors, to Bay Area Air Quality Management District (BAAQMD) for review and certification. The list shall include all information necessary to ensure the equipment meets the following requirement:

- Equipment shall be zero emissions or have engines that meet or exceed either Environmental Protection Agency (EPA) or Air Resource Board (ARB) Tier 4 off-road emission standards, and it shall have engines that are retrofitted with a ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used. Equipment with engines that meet Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement; therefore, a VDECS would not be required.

MM-AIR-1.2: Idling time of diesel-powered construction equipment and trucks shall be limited to no more than five minutes. Clear signage of this idling restriction shall be provided for construction workers at all access points.

MM-AIR-1.3: All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications.

MM-AIR-1.4: Portable diesel generators shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible.

The following measures will be implemented for the purpose of minimizing or avoiding the construction-related air quality effects of the Project that pertain to the generation of dust:

MM-AIR-2.1: All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

MM-AIR-2.2: On-site dirt piles or other stockpiled particulate matter (PM) shall be covered, wind breaks installed, and water and/or soil stabilizers employed to reduce wind-blown dust emissions. The use of approved nontoxic soil stabilizers shall be incorporated according to manufacturers' specifications to all inactive construction areas.

MM-AIR-2.3: All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.

MM-AIR-2.4: All vehicle speeds on unpaved roads and surfaces shall be limited to 15 mph.

MM-AIR-2.5 All roadway, driveway, and sidewalk paving shall be completed as soon as possible.

- MM-AIR-2.6:** All construction sites shall provide a posted sign visible to the public with the telephone number and person to contact at the lead agency regarding dust complaints. The recommended response time for corrective action shall be within 48 hours. BAAQMD's Complaint Line (1-800-334-6367) shall also be included on posted signs to ensure compliance with applicable regulations.
- MM-AIR-2.7:** All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.
- MM-AIR-2.8:** Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50% air porosity.
- MM-AIR-2.9:** Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- MM-AIR-2.10:** The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- MM-AIR-2.11:** All transfer processes involving a free fall of soil or other PM shall be operated in such a manner as to minimize the free fall distance and fugitive dust emissions.
- MM-AIR-2.12:** Site accesses to a distance of 100 feet from the paved road shall be treated with a 6-to 12-inch compacted layer of wood chips, mulch, or gravel.
- MM-AIR-2.13:** Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%.
- MM-AIR-2.14:** Open burning shall be prohibited at the Project site. No open burning of vegetative waste (natural plant growth wastes) or other legal or illegal burn materials (e.g., trash, demolition debris) may be conducted at the Project site. Vegetative wastes shall be chipped or delivered to waste-to-energy facilities (permitted biomass facilities), mulched, composted, or used for firewood. It is unlawful to haul waste materials off-site for disposal by open burning.

MM-AIR-2.15: All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2.17 NOISE

2.17.1 Introduction

Noise is measured in "decibels" (dB), which is a numerical expression of sound levels on a logarithmic scale. A noise level that is 10 dB higher than another noise level has ten times as much sound energy and is perceived as being twice as loud. A sound change of less than 3 dB is just barely perceptible, and then only in the absence of other sounds. Intense sounds of 140 dB are so loud that they are painful and can cause damage with only brief exposure. These extremes are not commonplace in our normal working and living environments. An "A-weighted decibel" (dBA) approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. Thus, traffic noise impact analyses commonly use the dBA.

Regarding traffic-generated noise, noise levels rise as vehicle speeds, overall volumes, and truck volumes increase. In general, a doubling of traffic results in a 3 dBA increase in noise at a nearby receptor, assuming a relatively homogeneous traffic composition (i.e., mainly passenger cars). The peak noise hour is typically not the peak commute hour due to lower operating speeds during the latter. The combination of volumes and speeds that produces the peak noise hour is that which is associated with level of service C/D.

2.17.2 Regulatory Setting

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

California Environmental Quality Act

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA/Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772) noise analysis; please see Section 3 of this document for further information on noise analysis under CEQA.

NEPA and 23 CFR 772

For highway transportation projects with FHWA involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending

on the type of land use under analysis. For example, the NAC for residences (67 dBA) is lower than the NAC for commercial areas (72 dBA). Table 2.17-1 lists the NAC for use in the NEPA/23 CFR 772 analysis.

Table 2.17-1: Noise Abatement Criteria

Activity Category	NAC, Hourly A-Weighted Noise Level, Leq(h)¹	Description of Activity Category
A	57 (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 ²	67 (Exterior)	Residential.
C ²	67 (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 (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 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F
F	No NAC - reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC - reporting only	Undeveloped lands that are not permitted.
¹ The equivalent sound level (Leq[h]) activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibels (dBA). ² Includes undeveloped lands permitted for this activity category.		

Figure 2.17-1 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

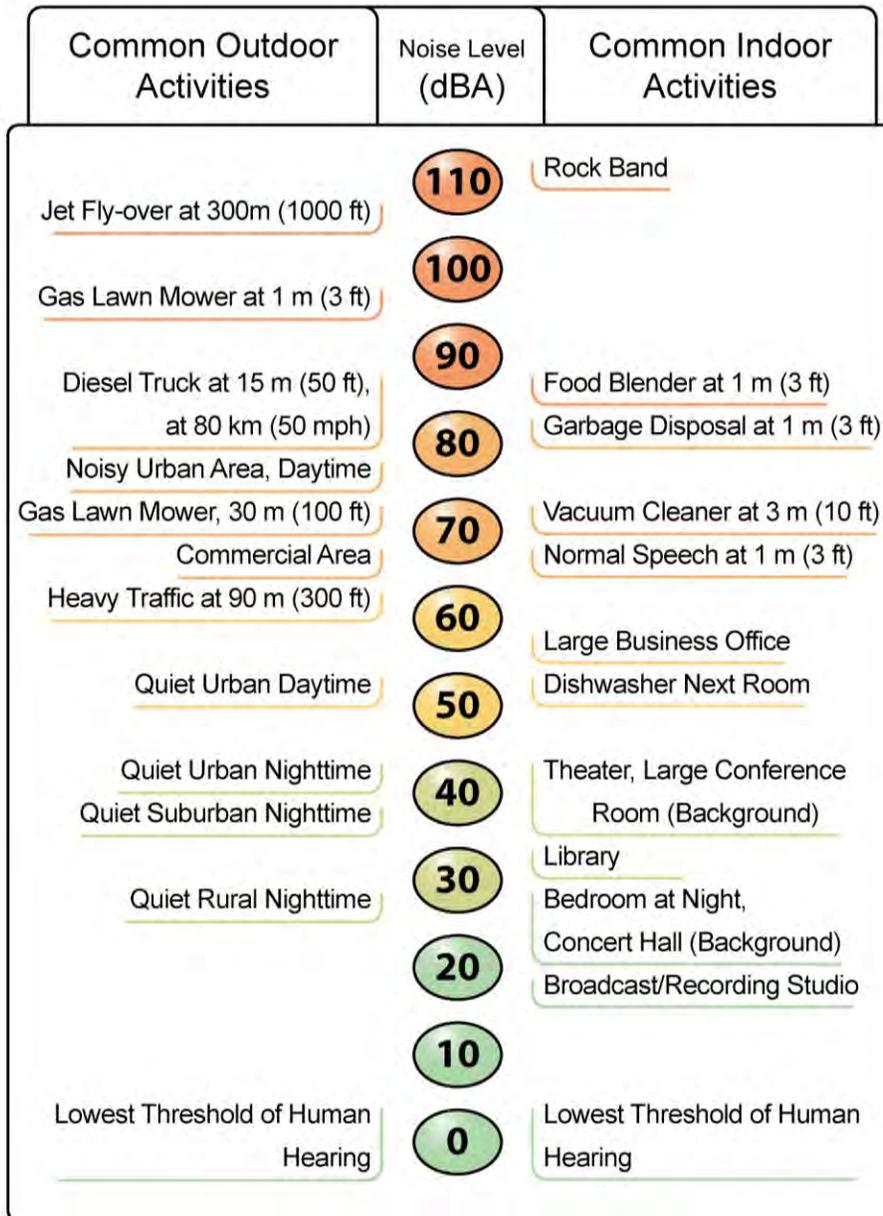


Figure 2.17-1: Noise Levels of Common Activities

According to the Caltrans *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects* (April 2020), a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more) or when the future noise level with the project approaches or exceeds the NAC. A noise level is considered to approach the NAC if it is within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Caltrans' Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 dB at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

2.17.3 Affected Environment

The information in this section is based primarily on the Project's Noise Study Report (January 2022), which is incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

The existing noise environment throughout the Project area varies by location, depending on site characteristics such as the proximity of receptors to US 101 and other arterial roadways, local roadways, other significant sources of noise in the area (e.g., San José International Airport), the relative base elevations of roadways and receptors, and the presence of any intervening structures or barriers.

Existing peak-hour noise levels were quantified within the Project limits at Category B receptors (i.e., residences), as well as at Category E receptors (i.e., hotels, restaurants, offices) where there are outdoor use areas. These locations are shown on Figures 2.17-2 through 2.17-4. As shown in Table 2.17-2, the loudest-hour noise levels at Category B land uses range from 60 to 67 dBA Leq[h] under existing conditions. The loudest hour noise levels at Category E land uses range from 51 to 67 dBA Leq[h] under existing conditions. No Category A, C, or D receptors are present.

Table 2.17-2 also includes projected exterior noise levels under future (year 2045) "No Build" conditions. Future noise levels will be up to one decibel higher than existing levels, reflecting increases in traffic that will occur as a result of planned growth in the area.

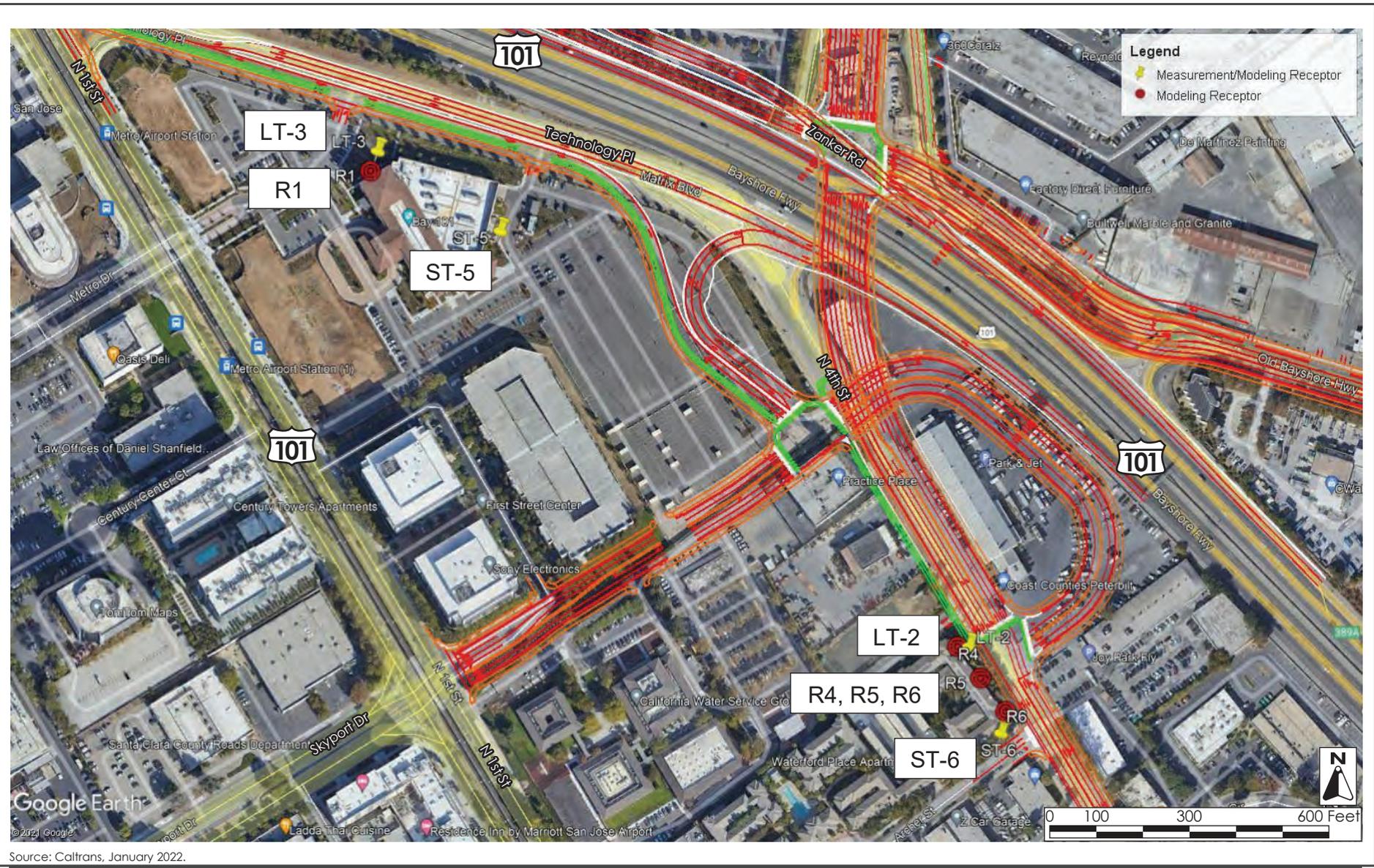


Source: Caltrans, January 2022.

NOISE RECEPTORS – MAP 1 OF 3 FIGURE 2.17-2



Source: Caltrans, January 2022.



NOISE RECEPTORS – MAP 3 OF 3

FIGURE 2.17-4

Table 2.17-2: Existing and Future Loudest Hour Leq Exterior Noise Levels

Recep- tor Numb er	Location	Land Use	NAC Activity Cat- egory	Loudest-Hour Exterior Noise Levels, Leq[h] dBA			Year 2045			
				Existing	2045 No Build	2045 Build	No Build Increase Over Existing	Build Increase Over Existing	Build Increase Over No Build	Impact Type ^a
ST-1	Hyatt Place	Hotel	E (72)	65	66	66	1	1	0	None
ST-2	Extended Stay America	Hotel	E (72)	55	55	55	0	0	0	None
ST-3	Sonesta ES Suites	Hotel	E (72)	51	52	53	1	2	1	None
ST-4	Fairfield Inn & Suites	Hotel	E (72)	55	56	56	1	1	0	None
ST-5	Bay 101 Casino	Restau- rant	E (72)	67	67	67	0	0	0	None
ST-6	Waterford Place Apts	Residenti- al	B (67)	60	61	64	1	4	3	None
R1	Bay 101 Casino	Restau- rant	E (72)	60	60	60	0	0	0	None
R2	Brokaw Road Office – Activity Field	Office	E (72)	65	65	60	0	-5 ^b	-5 ^b	None
R3	Brokaw Road Office – Ball Field	Office	E (72)	56	57	57	1	1	0	None
R4	Waterford Place Apts – 1 st Floor Patio	Residen- tial	B (67)	65	66	68	1	3	2	A/E
R5	Waterford Place Apts – 2 nd Floor Balcony	Residen- tial	B (67)	66	67	70	1	4	3	A/E
R6	Waterford Place Apts – 3 rd Floor Balcony	Residen- tial	B (67)	67	68	70	1	3	2	A/E

Receptor locations are shown on Figures 2.17-2 through 2.17-4.

All projected noise levels are rounded to the nearest decibel.

^a Impact Type: S = Substantial Increase (12 dBA or more); A/E = Approach or Exceed the NAC; None = Increase is less than 12 dBA and noise levels do not approach or exceed the NAC.

^b At R2, the 2045 noise levels under the Build Alternative decrease because of the removal of the US 101 northbound off-ramp to Brokaw Road and shielding provided by intervening buildings.

Source: Noise Study Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2022.

2.17.4 Environmental Consequences

2.17.4.1 *Long-Term Operational Noise Impacts*

Future traffic-related noise levels at land uses adjacent to the Project were quantified in accordance with FHWA and Caltrans procedures. Projected noise levels were then compared to FHWA's NAC shown in Table 2.17-1 to determine whether the consideration of noise abatement measures was warranted. Projected noise levels were also compared with existing noise levels to determine whether the increase (if any) would be substantial.

As shown in Table 2.17.2, future noise increases, and the contribution of the Project to those increases, would vary by location, highlighted as follows:

- When compared to existing conditions, changes in noise levels under 2045 No Build conditions would range from 0 to +1 dBA. The slight increase in noise would reflect increases in traffic that will occur as a result of planned growth in the area.
- Except at Receptor R2, when compared to 2045 No Build conditions, the effect of the Project on noise levels would range from 0 to +3 dBA.
- Except at Receptor R2, when compared to existing conditions, changes in noise levels under 2045 Build conditions would range from 0 to +4 dBA.
- At Receptor R2, an activity field associated with an office complex, noise levels would decrease by 5 dBA due to the Project. The decrease would result from the Project's removal of the US 101 northbound off-ramp to Brokaw Road and shielding provided by intervening buildings.
- None of the exterior noise level increases that would result from the Project are considered substantial as they would be well below the Caltrans 12 dBA threshold.
- Noise levels would approach or exceed FHWA's NAC at various Waterford Place Apartments (i.e., Receptors R4, R5, and R6), as is the case under existing conditions. Please see Section 2.17.5 for a discussion of the feasibility of noise abatement for those locations.

2.17.4.2 Short-Term Noise Impacts During Construction

Project construction is anticipated to occur over a period of approximately three years and would include grubbing and land clearing, grading and excavation, draining, utilities, and sub-grade work, and paving. Pile driving will likely be required as a method of construction for bridge foundations. Blasting would not be required. Construction noise would primarily result from the operation of heavy construction equipment and arrival and departure of heavy-duty trucks.

Table 2.17-3 presents construction noise levels calculated for each major phase of the Project at distances of 50 and 100 feet, based on calculations conducted in FHWA's Roadway Construction Noise Model (RCNM) using Project-specific construction information. This construction noise model includes representative sound levels for the most common types of construction equipment and the approximate usage factors of such equipment that were developed based on an extensive database of information gathered during the construction of the Central Artery/Tunnel Project in Boston, Massachusetts (CA/T Project or "Big Dig"). In some instances, maximum instantaneous noise levels are calculated to be slightly lower than hourly average noise levels. This occurs because the model reports the maximum instantaneous noise level generated by

the loudest single piece of construction equipment, while reporting the hourly average noise levels resulting from the additive effect of multiple pieces of construction equipment operating simultaneously. Noise generated by construction equipment drops off at a rate of 6 dB per doubling of distance.

Although the overall construction schedule is anticipated to occur over a period of three years, roadway construction activities typically occur for relatively short periods of time in any specific location as construction proceeds along the Project’s alignment. Construction noise would mostly be of concern in areas where heavy construction would be concentrated for extended periods of time in areas adjacent to noise-sensitive receptors, where noise levels from individual pieces of equipment are substantially higher than ambient conditions, or when construction activities would occur during noise-sensitive early morning, evening, or nighttime hours.

As indicated by the data in Table 2.17-3, most construction phases would generate average noise levels that would exceed ambient daytime noise levels at adjacent land uses by 15 to 20 dBA Leq[h]. With the exception of short periods of pile driving (if used as a method of construction), demolition, and site preparation, construction noise levels would not be expected to exceed the quantitative noise limits established by Caltrans.

Table 2.17-3: Noise Levels by Construction Phase at 50 Feet and 100 Feet

Construction Type	Construction Phase	At 50 Feet		At 100 Feet	
		Maximum Noise Level (L _{max} , dBA)	Hourly Average Noise Level (L _{eq} [h], dBA)	Maximum Noise Level (L _{max} , dBA)	Hourly Average Noise Level (L _{eq} [h], dBA)
Roadway Construction	Grubbing / Land Clearing	85	87	79	81
	Grading / Excavation	85	90	79	84
	Drainage / Utilities	85	89	79	83
	Paving	85	87	79	81
Bridge / Structures Construction	Grubbing / Land Clearing	85	86	79	80
	Grading / Excavation	85	90	79	84
	Impact Pile Driving	101	94	95	88

2.17.4.3 Short-Term Vibration Impacts During Construction

Project construction would include grubbing and land clearing, grading and excavation, draining, utilities, and sub-grade work, and paving. Pile driving will likely be required as a method of construction for bridge foundations. Blasting would not be required. Traffic, including heavy trucks traveling on a highway, rarely generates vibration amplitudes high enough to cause structural or cosmetic damage.

Due to the short-term nature of construction, the primary concern is the potential for vibration to damage a structure. Demolition and construction activities often generate perceptible vibration levels and levels that could affect nearby structures when heavy equipment or impact tools (e.g. jackhammers, hoe rams) are used in the vicinity of nearby sensitive land uses. Building damage generally falls into three categories:

- Cosmetic damage (also known as threshold damage) is defined as hairline cracking in plaster, the opening of old cracks, the loosening of paint or the dislodging of loose objects.
- Minor damage is defined as hairline cracking in masonry or the loosening of plaster.
- Major structural damage is defined as wide cracking or the shifting of foundation or bearing walls.

Critical factors pertaining to the impact of construction vibration on sensitive receptors include the proximity of the existing structures to the Project site, soil conditions, the soundness of the structures, and the methods of construction used.

Vibration is measured in terms of peak particle velocity (PPV) and the units are inches per second (in/sec). Caltrans identifies a vibration limit of 0.5 in/sec PPV as the threshold at which there is a potential risk of damage to new residential and modern commercial/industrial structures, 0.3 in/sec PPV for older residential structures, and a conservative limit of 0.25 in/sec PPV for historic and some old buildings.

Table 2.17-4 presents typical vibration levels that could be expected from representative construction equipment at a reference distance of 25 feet. Vibration levels are highest close to the source, and then attenuate with increasing distance depending on soil conditions. Assuming normal propagation, Table 2.17-4 also shows how vibration levels would vary by distance from the source.

Table 2.17-5 depicts the distances between the most vibration-critical pieces of construction equipment and nearby buildings with regard to potential exceedance of the applicable Caltrans vibration threshold.

As shown in Table 2.17-5, heavy construction located within 22 feet of historic buildings and impact pile driving located within 100 feet of historic buildings would have the potential to exceed the 0.25 in/sec PPV threshold. However, based on review of the City of San José's Historic Resource Inventory, there are no historic structures located within one-half mile of proposed construction areas. Similarly, there are no older residences in the Project vicinity, as the area is primarily bordered by new commercial/industrial buildings and a new apartment building (Waterford Place Apartments).

Heavy demolition is not proposed within 12 feet of new residential and modern commercial/industrial structures, and impact pile driving is not proposed within 55 feet of

new residential and modern commercial/industrial structures. Therefore, construction vibration levels associated with the proposed Project would not have the potential to exceed the 0.5 in/sec PPV threshold.

Table 2.17-4: Representative Vibration Levels from Construction Equipment

Equipment		PPV (in/sec) at Distance from Source			
		10 Feet	25 Feet	50 Feet	100 Feet
Pile Driver (Impact)	upper range	3.173	1.158	0.540	0.252
	typical	1.764	0.644	0.300	0.140
Pile Driver (Sonic)	upper range	2.011	0.734	0.342	0.160
	typical	0.466	0.17	0.079	0.037
Clam Shovel Drop		0.553	0.202	0.094	0.044
Hydromill (Slurry Wall)	in soil	0.022	0.022	0.004	0.002
	in rock	0.047	0.047	0.008	0.004
Vibratory Roller		0.575	0.210	0.098	0.046
Hoe Ram		0.244	0.089	0.042	0.019
Large bulldozer		0.244	0.089	0.042	0.019
Caisson drilling		0.244	0.089	0.042	0.019
Loaded trucks		0.208	0.076	0.035	0.017
Jackhammer		0.096	0.035	0.016	0.008
Small bulldozer		0.008	0.003	0.001	0.001

Table 2.17-5: Distance to Exceedance of Vibration Limit by Structure Type

Structure Type	Threshold	Distance Between Source and Structure Within Which Exceedance of Threshold Is Likely to Occur	
		Impact Pile Driving	Heavy Construction
Historic Buildings	0.25 in/sec PPV	100 feet	22 feet
Older Residences	0.3 in/sec PPV	85 feet	18 feet
New Residential and Commercial/Industrial Buildings	0.5 in/sec PPV	55 feet	12 feet

Distances were calculated assuming normal propagation conditions.

2.17.5 Avoidance, Minimization, and/or Mitigation Measures

This section describes the avoidance, minimization, and mitigation measures that were evaluated for inclusion in the Project.

2.17.5.1 *Measures for Long-Term Operational Noise Impacts*

Although the Project would not result in a substantial increase in traffic-related noise, projected noise levels will exceed FHWA's NAC at the residential patios and balconies of certain Waterford Park Apartments adjoining North 4th Street, represented by R4, R5, and R6 on Figure 2.17-5. The patios and balconies are not currently shielded by solid noise barriers. Although the apartment complex has centrally located common use areas

for quiet outdoor enjoyment, Caltrans requires that residential patios and balconies be considered for noise abatement. As a result, the feasibility and reasonableness allowances of noise abatement measures were considered.

The feasibility of constructing a new soundwall along the east side of the Waterford Place Apartments was determined by the 5-dBA minimum reduction in noise level as well as overall constructability. The reasonableness of the soundwall was determined using the following three factors contained in the Protocol:

- The noise reduction design goal (a barrier must be predicted to provide at least 7 dB of noise reduction at one or more benefited receptors).
- The cost of noise abatement (reasonable allowance per benefited receptor of \$107,000 for barrier heights of 8-12 feet).
- The viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

Soundwall #1, as depicted on Figure 2.17-5, would feasibly abate traffic noise at five ground-floor patios. As shown in Table 2.17-6, the 7 dB noise reduction goal would be met at a minimum height of 6 feet. The line-of-sight between truck stacks and receptors would be intercepted at a minimum height of 8 feet. Soundwall #1 would not, however, provide a feasible or reasonable noise reduction at second or third floor balconies.

Table 2.17-6: Comparison of Soundwall #1 Heights and Benefits

Receptor ID	Number of Units Represented	Noise Level w/o Soundwall	With Soundwall H = 6 feet		With Soundwall H = 8 feet		With Soundwall H = 10 feet		With Soundwall H = 12 feet	
			Leq[h]	Noise Reduction (dBA)	Leq[h]	Noise Reduction (dBA)	Leq[h]	Noise Reduction (dBA)	Leq[h]	Noise Reduction (dBA)
ST-6	3	64	64	0	64	0	64	0	64	0
R4 (1 st floor patio)	5	68	61	7	57	11	55	13	53	15
R5 (2 nd floor balcony)	5	70	70	0	70	0	70	0	70	0
R6 (3 rd floor balcony)	5	70	70	0	70	0	70	0	70	0

Receptors are shown on Figure 2.17-7.

Source: Noise Study Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2022.



Source: Caltrans, January 2022.

LOCATION OF SOUNDWALL #1

FIGURE 2.17-5

Based on the data in Table 2.17-7, the reasonable allowance calculated for Soundwall #1 at soundwall heights of 6 to 12 feet is \$535,000.

Table 2.17-7: Reasonableness Analysis for Soundwall #1

Noise Level w/o Soundwall at Benefited Receptors 2045 Build Conditions (Leq[h])	Soundwall Height (feet)	Noise Reduction Provided By Soundwall (dBA)	Number Of Benefited Receptors	Total Reasonable Monetary Allowance ^a	Estimated Construction Cost ^b
64 – 70 dBA	6	7	5	\$535,000	n/a ^c
	8 ^d	11	5	\$535,000	\$102,400
	10 ^d	13	5	\$535,000	\$126,400
	12 ^d	15	5	\$535,000	\$153,600
Soundwall length assumed to be approximately 240 feet.					
^a Reasonable monetary allowance is \$107,000 per benefitted receptor.					
^b Source: Caltrans Unit Cost Database					
^c Not calculated as height does not break truck stack line-of-sight.					
^d Soundwall breaks line of sight between 11.5-foot high truck stack and 5-foot high receptor.					
Sources: Noise Study Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2022. Noise Abatement Decision Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project. March 2022.					

Preliminary Noise Abatement Recommendation and Decision

The Project proposes to construct Soundwall #1 at the location described above, however, final determination of construction will require discussion with and input from the property owner during the design phase. The proposed soundwall height would be 8 feet, which would break the line-of-sight between an 11.5-ft truck exhaust stack and a 5-ft high receptor. The soundwall would reduce traffic noise levels by 11 decibels at the first-floor patios of the five Waterford Place Apartments that face east. [Note: For context, a noise level that is 10 decibels lower than another noise level has one-tenth as much sound energy and is perceived as being one-half as loud.] Finally, an 8-foot-tall soundwall provides the best value in terms of cost per benefitted receptor, taking the degree of noise reduction into account.²³

The preliminary noise abatement decision presented above is based on preliminary Project alignments and profiles, which may be subject to change. As such, the physical characteristics of noise abatement described herein also may be subject to change. If pertinent parameters change substantially during the final Project design, the preliminary noise abatement decision may be changed or eliminated from the final Project design. A final decision to construct noise abatement will be made upon completion of the Project design.

²³ Source: Preliminary Noise Abatement Decision Report for the US 101/Zanker Road//Skyport Drive/Fourth Street Improvement Project, March 2022.

2.17.5.2 *Measures for Short-Term Construction Noise Impacts*

For the purpose of minimizing and avoiding short-term construction noise impacts, the following measures will be implemented by the Project:

- MM-NOI-1.1:** All construction equipment shall conform to Section 14-8.02, Noise Control, of the latest Caltrans Standard Specifications.

- MM-NOI-1.2:** When feasible, noise-generating construction activities shall be restricted to between 7:00 a.m. and 7:00 p.m. on weekdays, with no construction occurring on weekends or holidays. If work is necessary outside of these hours, Caltrans shall require the contractor to implement a construction noise monitoring program and provide additional noise controls where practical and feasible.

- MM-NOI-1.3:** Pile driving activities shall be limited to daytime hours only.

- MM-NOI-1.4:** All internal combustion engine driven equipment shall be equipped with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.

- MM-NOI-1.5:** Unnecessary idling of internal combustion engines within 100 feet of residences shall be strictly prohibited.

- MM-NOI-1.6:** Noise generating equipment shall be located as far as practical from sensitive receptors when sensitive receptors adjoin or are near the construction project area.

- MM-NOI-1.7:** "Quiet" air compressors and other "quiet" equipment shall be utilized where such technology exists.

2.17.5.3 *Measures for Short-Term Construction Vibration Impacts*

Construction vibration levels would be under the applicable thresholds and no avoidance, minimization, and/or mitigation measures are required.

2.18 ENERGY

2.18.1 Regulatory Setting

NEPA (42 USC Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

CEQA Guidelines section 15126.2(b) and Appendix F, Energy Conservation, require an analysis of a project's energy use to determine if the project may result in significant environmental effects due to wasteful, inefficient, or unnecessary use of energy, or wasteful use of energy resources.

2.18.2 Affected Environment

The information in this section is based primarily on a technical Energy Analysis Report (October 2023), which is incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

Non-renewable energy resources used in California include petroleum, natural gas, and nuclear power, while renewable energy resources include hydroelectric, biomass, wind, solar, and geothermal heat (i.e., heat given off by the Earth). Approximately 36% of California's electricity comes from renewable sources, and 42% of that renewable energy comes from solar, the State's top renewable energy source. California also relies on energy sources from out of state, receiving approximately 28% of its electricity supply in 2019 from generating facilities outside the State. As mandated by Senate Bill 100, the State is targeting 100% renewable or carbon-free energy usage by 2045.

The transportation sector is the top consumer of energy in California, comprising nearly 40% of energy consumption in 2018. The high consumption of transportation fuels in California is attributed to the state's reliance on airports, military bases, public transportation, and automobiles. In addition, major metropolitan areas, such as the San Francisco Bay Area and Los Angeles metropolitan and surrounding areas, experience extremely long commute travel times and delay because of high traffic congestion and long distances of travel between homes and jobs.

Fossil fuels have been the leading transportation fuels in the country and state. California's fossil fuel consumption for transportation is shown in Table 2.18-1. Gasoline is the most consumed fuel in California at approximately 55.79% of total fossil fuel consumption for the state's transportation sector.

Alternatives to fossil fuels for transportation have helped decrease the dependence on gasoline and other fossil fuels. In addition to traditional petroleum fuels, California currently uses the following "alternative" fuels and energy sources: compressed natural gas, electric, ethanol, hydrogen, liquefied natural gas, and liquefied petroleum gas.

Table 2.18-1: Fossil Fuel Use in California for the Transportation Sector (2018)

Fuel Type	California Consumption	
	Trillion BTUs	Percent of Total
Natural Gas	44.8	1.42%
Aviation Gasoline	2.2	0.07%
Distillate Fuel Oil	483.8	15.30%
Hydrocarbon Gas Liquid	0.7	0.02%
Jet Fuel	684.8	21.65%
Lubricants	13.2	0.42%
Motor Gasoline	1,764.4	55.79%
Residual Fuel Oil	168.8	5.34%
Total	3,162.7	100%

BTU = British Thermal Unit. One BTU is the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

Source: Energy Analysis Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2023.

As stated in Section 1.2, there is substantial peak-period congestion in the Project area, both on US 101 and on local streets. Additionally, vehicle hours of delay are anticipated to increase from 23,979 daily in 2025 to 40,731 daily in 2045. Traffic congestion reduces vehicle fuel economy and increases excess fuel consumption, leading to higher direct energy consumption (US Department of Energy 2013). The Build Alternative is anticipated to curb these effects by increasing the efficiency of the transportation system in the Project area, thus reducing congestion and energy consumption.

2.18.3 Environmental Consequences

The Build Alternative was evaluated to determine if it would result in the inefficient and/or a substantial increased use of energy. Both direct energy usage and indirect energy uses were assessed.

2.18.3.1 *Methodology*

Direct energy consumption was quantified by leveraging data from the Project’s traffic and air quality reports. The study areas for both reports encompass portions of US 101, and local intersections in the City of San José. The Project study area was identified based on input from the study team, the City of San José and Caltrans staff.

The future forecast volumes for the study area were developed using the most current VTA travel demand model that was developed and maintained by the VTA. 2015 was used as the Base Year, as that is the validation Base Year in the VTA model. Forecasts were developed for the opening year 2025, design year 2045, and RTP horizon year 2050 for the No Build and Build Alternatives.

Daily operational VMT was used to estimate existing direct energy consumption in 2015 (Base Year), as well as future direct energy consumption in 2025, 2045, and 2050 for the No Build and Build Alternatives.

Operational gasoline, diesel fuel, and natural gas, electricity consumption for the Base Year, as well as the No Build and Build Alternatives in 2025, 2045, and 2050, were used to further refine the direct energy consumption estimate. Direct energy consumption in gallons was converted to direct energy consumption in BTUs. Direct energy consumption in kilowatt hours from zero emission electric vehicles was likewise converted to BTUs. BTUs for all four vehicle categories were recombined to obtain total energy consumption for the Base Year, as well as the No Build and Build alternatives in 2025, 2045, and 2050. Comparisons were drawn between total energy consumption in 2015, 2025, 2045, and 2050.

Direct energy usage for construction was calculated using Cal-CET, as reported in the air quality report. Project total fuel consumption in gallons of diesel and gasoline, as well as energy from zero emission electric vehicles, were converted to direct energy consumption in BTUs, following the same logic described above. Indirect energy usage is discussed qualitatively, as these types of energy usage are difficult to reliably quantify without speculation.

2.18.3.2 Direct Energy Impacts

Operational Phase

Energy consumption based on VMT is anticipated to increase over time relative to the Base Year, regardless of the chosen alternative, due to increased travel demand in the Project area (Table 2.18-2). However, as stated in the following section, better energy efficiency and standards are anticipated to apply over time as older vehicles are replaced by increasingly more fuel-efficient cars and trucks. Additionally, when compared to the No Build Alternative, daily VMT would decrease by .01% and .06% for the Build Alternative in 2025 and 2045, respectively.

Table 2.18-2: Daily Operational VMT in the Study Area

Project Alternative	Daily VMT	Change from Base Year (Daily VMT)	% Change from Base Year	Change from No Build (Daily VMT)	% Change from No Build
2015 Base Year	5,629,304	--	--	--	--
2025 No Build	6,489,663	+ 860,359	+ 15.28%	--	--
2025 Build	6,489,597	+ 860,293	+ 15.28%	- 66	- 0.01%
2045 No Build	7,657,280	+ 2,027,976	+ 36.03%	--	--
2045 Build	7,656,105	+ 2,026,801	+ 36.00%	- 1,175	- 0.06%
2050 No Build	7,949,186	+ 2,319,882	+ 41.21%	--	--
2050 Build	7,947,733	+ 2,318,429	+ 41.19%	- 1,453	- 0.02%

Direct energy usage based on operational fuel consumption was calculated using CT-EMFAC2021, which is an emissions model developed by Caltrans that calculates project-level emissions and fuel consumption using data from the California Air Resources Board. In order to convert fuel consumption to direct energy consumption in BTUs, it is assumed that a gallon of gasoline contains an energy content of 120,214 BTUs, and a gallon of diesel contains 137,381 BTUs. Zero-Emission Vehicle electricity usage was also converted by the assumption that one Kwh equals 3,412 BTUs.

Table 2.18-3 shows that operational energy consumption is anticipated to decrease over time relative to the Base Year, regardless of the chosen alternative. Energy consumption is anticipated to decrease by approximately 3% in 2025 and almost 9% in 2045, regardless of the chosen alternative. This is associated with better energy efficiency and standards, as stated above. The decline in energy usage would taper off in 2050, when the No Build and Build Alternatives would both result in an approximate 6% decrease in energy consumption. Total energy consumption is similar with the Build and No Build Alternatives, with a 0.05% relative increase in energy consumption with the Build Alternative in 2025, a 0.04% relative decrease with the Build Alternative in 2045, and a 0.06% relative decrease with the Build Alternative in 2050.

Construction Phase

Project construction would be a temporary commitment of energy, necessary for any infrastructure improvement project. Energy consumption during construction would be conserved and minimized to the maximum extent feasible. Energy conservation in construction activities is assumed, as the construction contractor would have a financial incentive and statutory mandate to minimize waste and externalities, respectively. Regulations that stipulate the reduction of energy-related externalities include ARB Title 13, Section 2485 of California Code of Regulations. This regulation limits the idling time of diesel construction equipment to five minutes.

Direct energy usage for construction was calculated using the results of the CAL-CET scenarios run for the Air Quality Report. Separate models were run for roadway and bridge construction and those results were combined to calculate total energy usage for construction.

As shown in Table 2.18-4, it is anticipated that construction of the Build Alternative would require a one-time energy commitment of approximately 29.6 billion BTUs.

Table 2-18-3: Operational Daily Fuel Consumption for the Project Area

Project Alternative	Gasoline Consumption (Gallons)	Diesel Consumption (Gallons)	Natural Gas Consumption Diesel Equivalent	Zero-Emission Vehicle Electricity Usage (KwH)	Total Energy Consumption (100,000 BTUs)	Change from Base Year (100,000 BTUs)	% Change from Base Year	Change from No Build (100,000 BTUs)	% Change from No Build
2015 Base Year	229,396.08	33,329.81	483.84	25,400.02	323,086.38	--	--	--	--
2025 No Build	212,257.42	36,409.39	1,613.07	172,345.33	313,279.19	-9,807.19	-3.04%	--	--
2025 Build	212,371.23	36,420.58	1,613.64	172,285.23	313,430.10	-9,656.28	-2.99%	150.92	0.05%
2045 No Build	197,663.80	29,076.26	1,173.95	443,013.69	294,293.22	-28,793.16	-8.91%	--	--
2045 Build	197,571.36	29,069.06	1,173.68	442,883.66	294,167.41	-28,918.97	-8.95%	-125.82	-0.04%
2050 No Build	203,627.14	29,314.57	1,116.20	476,289.14	302,845.40	-20,240.98	-6.26%	--	--
2050 Build	203,484.91	29,304.17	1,115.80	476,096.85	302,653.03	-20,433.35	-6.32%	-192.37	-0.06%

Note: Assumes an energy content of 120,214 BTUs per gallon of gasoline, 137,381 BTUs per gallon of diesel, and 3,412 BTUs per KwH of electricity.

Source: Energy Analysis Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2023.

Table 2.18-4: Direct Energy Usage for the Construction Phase

Emissions Scenario	Gasoline Consumption (Gallons)	Gasoline Energy Usage (BTUs)	Diesel Consumption (Gallons)	Diesel Energy Usage (BTUs)	Zero Emission Vehicle Electricity Usage (KwH)	Zero Emission Vehicle Electricity Usage (BTUs)	Total Energy Usage (100,000 BTUs)
Roadway Construction	29,277	3,519,505,278	100,249	13,772,307,869	8,927.04	30,459,067.30	173,222.72
Bridge Construction	22,646	2,722,366,244	69,674	9,571,883,794	4,812.30	16,419,567.60	123,106.70
Total	51,923	6,241,871,522	169,923	23,344,191,663	13,739.34	46,878,634.90	296,329.42

Source: Energy Analysis Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2023.

Total Direct Energy Usage

The Project would require a one-time energy commitment for construction, which is an unavoidable energy investment for any major infrastructure project. However, based on operational VMT and fuel consumption, it is anticipated that the Project would not substantially increase direct energy consumption in the Project area. Therefore, the Project is not anticipated to result in adverse direct energy impacts.

2.18.3.3 *Indirect Energy Impacts*

Indirect energy usage is primarily associated with project maintenance, i.e., fuel used by equipment for periodic maintenance of the system. Many other sources contribute indirectly to the energy consumption of a transportation system, but they can be difficult to reliably quantify at the project level. Maintenance and landscaping activities are anticipated to be minimal and are necessary in order to maintain the integrity of the system. Therefore, the Project is not anticipated to result in wasteful, inefficient, or unnecessary indirect consumption of energy resources.

2.18.4 Avoidance, Minimization, and/or Mitigation Measures

2.18.4.1 *Long-Term (Operational)*

No avoidance, minimization, or mitigation measures are required.

2.18.4.2 *Construction Period*

Reducing emissions during construction would have the dual benefit of increasing energy efficiency and minimizing the effect of energy consumption. For a listing of the emissions reduction measures (MM-AIR-1.1 through MM-AIR-1.3) that would be implemented by the Project during construction, please see Section 2.16.4.2.

BIOLOGICAL ENVIRONMENT

2.19 ANIMAL SPECIES

2.19.1 Regulatory Environment

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries), and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential Project impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. [Note: Species listed or proposed for listing as threatened or endangered are not discussed in the Draft EIR/EA because, based on the analysis contained in the Natural Environment Study (AECOM 2022), all such species were determined to be absent from the Project's biological study area.] All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries candidate species.

Federal laws and regulations relevant to wildlife include the following:

- NEPA
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act (MBTA)

State laws and regulations relevant to wildlife include the following:

- CEQA
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

2.19.2 Affected Environment

The information in this section is based primarily on a technical Natural Environment Study (July 2022), which is incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

The Project area currently experiences ambient noise levels from highway and street traffic, and commercial uses. The Project footprint and biological study area (BSA) are highly urbanized and consist of commercial development. Ornamental and ruderal vegetation communities surround the Project area. The BSA is based on the maximum area of physical disturbances for the Project, including grading, ground disturbance, construction staging, and construction access.

The list of special-status animal species occurring in the region was evaluated for their potential to occur within the BSA. Most of the regional special-status species were determined not to occur in the BSA because the Project area lacks suitable habitat and/or

is outside of the range of the species. Several special-status species that occur in the region may occur in the BSA, including the American peregrine falcon and burrowing owls. These species, their habitat requirements, and potential impacts of the Project to the species are discussed below.

2.19.2.1 *Special-Status Wildlife Species*

Special-status wildlife species listed in the California Natural Diversity Data Base (CNDDDB) as presently or historically occurring within one mile of the BSA are the burrowing owl and American peregrine falcon. These species are covered species under the MBTA and their status under the California Fish and Game Code is discussed below.

American peregrine falcon is designated by CDFW as Fully Protected. American peregrine falcons prefer nesting on vertical structures that are close to aquatic features, and are often found in urban areas, nesting in tall buildings, bridges, and other structures. They also forage from tall platforms. Within the BSA, there are suitable tall buildings and trees that could serve as nesting habitat or forage perches for American peregrine falcon. There is one CNDDDB occurrence from 2016 at the nearby City Hall building located to the south of the BSA. The City of San José and the University of Santa Cruz Predatory Bird Research Group installed nest cameras atop the City Hall in 2007, which have indicated two separate females which have nested there since installation.

The burrowing owl is designated by CDFW as a California Species of Special Concern. Burrowing owls typically inhabit open, dry grassland and desert habitats, but can thrive in landscapes highly altered by human activity such as airports, golf courses, pastures, agriculture fields, road embankments and vacant urban lots. There are six CNDDDB burrowing owl occurrences within a 1-mile radius of the BSA that occurred between 2003 and 2017. One occurrence falls within the BSA adjacent to Devcon Court dating back to 2009.

Additionally, a portion of the BSA and Project footprint overlaps with the burrowing owl survey area identified in the Santa Clara Valley Habitat Plan (VHP). Burrowing owls are a covered species in the VHP. Based on land cover data available in the Santa Clara Valley Habitat Agency geobrowser, a small portion of the Project footprint and BSA include a land cover type that is considered suitable foraging and breeding habitat for burrowing owls. This area corresponds to the mapped occurrence adjacent to Devcon Court.

The preceding paragraph notwithstanding, most of the BSA does not provide suitable habitat for the burrowing owl. Based on the habitat assessment, the area adjacent to Devcon Court and Bering Drive has been developed or otherwise disturbed over the last few years, and it is currently being used as a contractor's staging yard for a proposed development. The 2009 documented occurrence (#428) indicated that two adults were observed in June 2008 at this location, with numerous earlier sightings and burrows observed dating to 2001. Based on a review of aerial photos taken during this period, the

areas contained a large undeveloped ruderal grassland which are commonly used by burrowing owl. Since this time, the land use has changed from ruderal grassland to a ruderal lot devoid of vegetation, surrounding commercial buildings, construction facilities, and equipment and materials storage. During the reconnaissance surveys and a recent site visit on February 16, 2022, the soils at this location were observed as highly disturbed and compacted with staging equipment stored at the corner of Bering Drive and Crane Court. As a result, the BSA is unlikely to support burrowing owls, because habitat quality is poor, and the substrates are not suitable for burrows.

2.19.2.2 *Nesting Birds*

The Migratory Bird Treaty Act and California Fish and Game Code protect migratory birds, including their eggs, nests, and young. The killing or harassment of such birds, including activities that may result in the abandonment of active nests during the nesting season (generally, February 1st through October 31st), is prohibited.

Trees, shrubs, and herbaceous vegetation in the BSA provide suitable nesting habitat for small numbers of common birds protected under the MBTA and California Fish and Game Code, such as the red-tailed hawk, oak titmouse, song sparrow, spotted towhee, cedar waxwing, lesser goldfinch, as well as a variety of other passerines or common urban species. Furthermore, as discussed in Section 2.19.2.1, there are suitable tall buildings and trees that could serve as nesting habitat for American peregrine falcons.

2.19.3 Environmental Consequences

2.19.3.1 *Impacts to Special-Status Animal Species*

As described above, the American peregrine falcon and burrowing owl are California protected species and may be present within the Project footprint.

- Construction of the Project could impact perching habitat and nesting peregrine falcons due to the removal and/or trimming of trees. Construction disturbance during the breeding season could potentially result in the incidental loss of eggs or nestlings, either directly through the destruction or disturbance of active nests or indirectly by causing the abandonment of nests.
- While unlikely, due to the historic occurrence of burrowing owls in the Project vicinity, construction of the Project could potentially impact burrowing owls during ground-disturbing activities.

The implementation of the measures listed in Section 2.19-4 will avoid the potential impacts of Project activities on Peregrine falcons and burrowing owls.

2.19.3.2 *Impacts to Nesting Birds*

Construction of the Project could impact nesting birds due to the removal and/or trimming of trees. Construction disturbance during the breeding season could potentially result in

the incidental loss of eggs or nestlings, either directly through the destruction or disturbance of active nests or indirectly by causing the abandonment of nests. Due to the regional abundance of the common species of birds that potentially nest within the BSA, Project impacts on nesting individuals would not substantially affect regional populations of these species. The implementation of the measures listed in Section 2.19-4 will avoid the potential impacts of Project activities on nesting birds.

2.19.3.3 *Impacts to Trees*

In total, more than 600 trees were inventoried in the immediate Project area. Of those in the BSA, approximately 80% of the individual trees are not native to California and were planted as ornamentals. The dominant species are London plane tree, coast redwood, and Callery pear.

It is estimated that over 250 trees within the Project footprint would be removed or heavily pruned by construction of the Project.²⁴ Many of the trees meet the size requirements to be considered protected under San José's Municipal Code. The intent of the City's tree preservation ordinance is to maintain the benefits to the community provided by trees, including keeping public right-of-way cooler in the summer, providing aesthetic value, and removing air pollutants. Trees also provide habitat or food sources for local wildlife including nesting birds. Damage to and/or removal of trees reduces these benefits to the community and wildlife.

While Caltrans is exempt from the City's tree ordinance, the Project will replace trees removed by the Project at ratios that are consistent with the spirit and intent of the City's tree ordinance, as described in Section 2.19.4.

2.19.4 Avoidance, Minimization, and/or Mitigation Measures

The Project includes the following measures that will avoid any potential impacts on nesting birds, peregrine falcons, and burrowing owls.

MM-BIO-1.1: Nesting Migratory Bird Avoidance Measures and Surveys. To minimize and avoid take of all migratory birds, their nests, and their young, Caltrans will conduct vegetation removal between October 1 and December 31 (outside the migratory bird nesting season for passerines and raptors) to the maximum extent practicable. If vegetation trimming, tree removal, or other construction activities that may affect nesting birds occurs within the nesting season, then qualified biologists will conduct preconstruction surveys for nesting birds no more than 2 days prior to construction. If construction is stopped for more than 2 weeks, the pre-construction surveys will be repeated. If an active nest is discovered, biologists will establish an appropriate species-specific exclusion buffer around the nest.

²⁴ This is an estimate based on preliminary design and will be refined during final design.

The area within the buffer will be avoided until the young are no longer dependent on the adults or the nest is no longer active. The qualified biologist will have authority, through the Resident Engineer (RE), to order the cessation of all construction activities outside the buffer area if birds exhibit abnormal nesting behavior. Construction activities will not continue until the birds resume normal nesting behavior or the nest is no longer active. Qualified biologists will immediately notify the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) for further guidance if a listed or special-status bird species is discovered during preconstruction surveys.

The Project includes the following measures that will avoid or minimize any potential impacts to trees.

MM-BIO-2.1: Pre-Construction Tree Survey. Prior to construction, Caltrans will conduct a survey to identify and mark trees for removal, and trees that will remain during construction. Whenever possible, trees will be trimmed rather than removed. For trees that will remain, those trees and their critical root zone (CRZ) will be marked with bright orange polypropylene Environmentally Sensitive Area (ESA) fencing that can be avoided during construction to the greatest extent feasible in temporary impact areas and along the edge of the Project footprint.

MM-BIO-2.2: International Society of Arboriculture - Certified Arborist Consultation. Work will not be performed in the CRZ of any tree to be retained without consultation with an International Society of Arboriculture-certified arborist. If trees are damaged during construction and become unhealthy or die, the damaged tree(s) will be removed and replaced.

MM-BIO-2.3: Tree Replacement. Trees impacted by the Project will be replaced at ratios that are commensurate with the size of the tree to be removed. Native trees with a diameter at breast height (DBH) of less than 12 inches will be replaced at a 2:1 ratio. Native trees with a DBH of 12 inches or more will be replaced at a 3:1 ratio. If urban trees (nonnatives and ornamentals) are replaced with native trees, a reduced mitigation ratio of 1:1 for all trees smaller than 12 inches DBH, and 2:1 for all trees with a DBH of 12 inches or more, will be implemented. Replacement 24-inch box trees will be considered where feasible. The replacement trees will be irrigated and maintained for a period of not less than three years. If trees cannot be replaced at the stated ratios within the Project footprint, in-lieu fees will be paid to an appropriate fund so that trees can be planted elsewhere within the City of San José limits.

2.20 INVASIVE SPECIES

2.20.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed EO 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999 directs the use of the State’s invasive species list, maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the NEPA analysis for a proposed project.

2.20.2 Affected Environment

The information in this section is based primarily on a technical Natural Environment Study (July 2022), which is incorporated into this Draft EIR/EA by reference. This report is available for review at the locations listed inside the front cover of this document.

Within the Project area, the majority of the vegetated areas are well-kept by the City of San José as landscaped and nonnative vegetation with irrigation. There is one empty lot at Bering Drive and Devcon Court which consists of ruderal, disturbed, upland habitat characterized by weedy species.

2.20.3 Environmental Consequences

Non-invasive species will be utilized for landscaping and the Project is not anticipated to introduce any new infestations of invasive species. However, care must be taken to avoid increasing the existing infestations by dispersing seed or viable plant material through construction equipment use when grading, particularly when removing soils. These measures are described in the following section.

2.20.4 Avoidance, Minimization, and/or Mitigation Measures

MM-INV-1.1: Prior to vegetation clearing and grubbing, vehicles (including wheels, undercarriages, and bumpers) and all other equipment, will be washed before and after entering the Project’s construction site. Vehicles will be cleaned at legally operating car washes before entering the construction site and at existing construction yards after they have encountered vegetation. All washing will follow appropriate stormwater best management practices (BMPs). Only clean water in washing (no soap or detergent) will be used and appropriate runoff containment BMPs will be implemented. Wash water will be discharged in a way that it does not enter a storm drain (i.e., let it soak into a pervious area on site). Vegetation will be disposed of off-site. After clearing and grubbing of the vegetation has

been completed, construction vehicles will use designated entrance/exits and no washing will be required.

MM-INV-1.2: Soil and plant material from areas that support invasive species will be properly contained and transported to an approved facility for disposal in accordance with applicable regulations and procedures. In addition, all fill material will be sourced from weed-free areas.

2.21 CUMULATIVE IMPACTS

2.21.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

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

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under NEPA can be found in 40 CFR Section 1508.7.

2.21.2 Environmental Consequences

In a cumulative impacts analysis, the identification of “past, present, and reasonably foreseeable future actions” can utilize either the “list approach” or the “adopted plan” approach. The list approach identifies specific projects in the vicinity, typically provided by a local planning department. The adopted plan approach relies on a general plan or transportation plan or other planning document, which by definition accounts for cumulative growth in a defined area.

For this analysis, both the list and the adopted plan approach are utilized as there are multiple development projects proposed in the Project vicinity (refer to Table 2.2-1), and the Project is identified as a key infrastructure improvement project in the *Envision San José 2040 General Plan*, the *North San José Area Development Policy*, and the *North San José Deficiency Plan* to accommodate projected transportation demand over the long term. As examples, the traffic model that was utilized to project future build and no build conditions is based on the planned growth of the area, as contained in the adopted general plans of San José and Santa Clara and the surrounding cities. The traffic projections from cumulative growth were also used in the quantification of noise, air

quality, and climate change impacts. For construction-related analysis, the cumulative project lists were used to quantify construction noise and air quality impacts.

The discussion, below, addresses resource areas where the Project will result in an impact and, therefore, there is a potential for a cumulative impact. Resources areas not affected by the Project are not discussed because, by definition, no cumulative impact could occur. Examples of the latter include biology, cultural resources, geology, parks and recreation, energy, and farmlands.

2.21.2.1 Cumulative Traffic Impacts

For traffic, the Resource Study Area (RSA) was defined as the area within the Project limits, as well as the surrounding area where the Project would result in measurable changes in traffic patterns. Thus, the RSA includes the freeway segments, arterial streets, and intersections identified in the tables shown in Section 2.8.

Cumulative development has resulted in a significant increase in traffic on North First Street, and in the Project area as a whole, and future increases in traffic are projected to occur with or without the Project. The improvements that would be constructed under the Build Alternative would not contribute toward this increase in traffic volumes. Instead, the new and modified facilities that would be constructed by the Project would improve traffic operations for these vehicle trips, as well as reduce circuitous travel, as described in Section 2.8. Therefore, the Project would not result in a cumulative traffic impact.

2.21.2.2 Cumulative Noise Impacts

For noise, the RSA was defined as the land uses adjacent to the freeway segments within the Project limits. These land uses are those where Project-related changes, coupled with increased traffic from ongoing growth, could result in cumulatively substantial increases in noise.

Cumulative development has resulted in a substantial increase in ambient noise levels in the Project area and development is planned to continue with or without the Project. Ground traffic is the single largest source of noise, especially in the vicinity of the freeways. Noise typically associated with residential and urban environments is present, which also contributes to the cumulative ambient noise levels. The Project would incrementally contribute to overall noise levels, as described in Section 2.17. The analysis in Section 2.17 indicates, however, that future increases in noise - taking into account both the Project and planned growth - will not be substantial. Therefore, the cumulative noise impact would not be substantial.

2.21.2.3 Cumulative Air Quality Impacts

For air quality, the RSA was defined as the land uses adjacent to the freeway segments within the Project limits. These land uses are those where Project-related changes,

coupled with increased traffic from ongoing growth, could result in cumulatively substantial increases in emissions of air pollutants.

Cumulative development has resulted in a substantial degradation in ambient air quality in the greater San Francisco Bay Area. However, due to emissions control technology, overall air quality has been improving in recent years. Although most present and future development will likely increase emissions, improvements in technology are largely expected to offset such increases. The Project would not contribute to the region's emissions because it will not generate additional vehicle trips or lead to unplanned growth. Furthermore, as shown in the tables in Section 2.16, *Air Quality*, operational emissions of air pollutants would be lower under the Build Alternative than under the No Build Alternative. Therefore, since the Project would have no adverse effect on emissions, it would not, by definition, contribute to a cumulative air quality impact.

2.21.2.4 Cumulative Visual Impacts

The RSA for visual impacts was defined as the Project limits where new/modified overcrossings and ramps would be visible from various public vantage points. As discussed in Section 2.9, *Visual/Aesthetics*, the most visible feature of the Project would be an elevated overcrossing from Zanker Road over to North Fourth Street and the new elevated Old Bayshore Highway that would connect to the new overcrossing. These new features would be visible from many locations in the adjacent area on Zanker Road, North Fourth Street, and US 101. As discussed in Section 2.9, *Visual/Aesthetics*, the visual impact would not be significant with the implementation of MM-VIS-1.1 through MM-VIS-1.3

There are several developments that have been approved in the Project vicinity (see Table 2.2-1), which includes four office buildings, one hotel, and new facilities at SJIA.

The net effect of these projects plus the proposed Project incrementally converts Project surroundings from the current commercial and industrial character to a more modern and urban commercial character. This is part of a long-term trend in which Project surroundings, as part of Silicon Valley, have become increasingly urbanized over the last 50 years. From a visual perspective, this conversion is not necessarily adverse, and in many cases new development is beneficial.

For these reasons, the cumulative visual impact would not be considered significant.

SECTION 3.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) EVALUATION

3.1 DETERMINING SIGNIFICANCE UNDER CEQA

The proposed Project is a joint project by the California Department of Transportation (Caltrans and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this Project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated May 27, 2022, and executed by FHWA and Caltrans. Caltrans is the lead agency under CEQA and NEPA.

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

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report (EIR) must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of this Project and CEQA significance.

3.2 CEQA ENVIRONMENTAL CHECKLIST

This checklist identifies physical, biological, social, and economic factors that might be affected by the proposed Project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource.

A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

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

3.2.1 Aesthetics

Except as provided in Public Resources Code Section 21099, would the Project	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? ²⁵ If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For a detailed discussion of this topic, please see Section 2.9, *Visual/Aesthetics*, of this Draft EIR/EA.

a) Would the Project have a substantial adverse effect on a scenic vista?

²⁵ Public views are those that are experienced from publicly accessible vantage points.

No Impact. There are no designated scenic vistas in the Project vicinity. The closest scenic vista points that offer views that include the Project corridor are on Montebello foothills, at least 9 miles to the west. At this distance, Project features would not be distinguishable.

- b) Would the Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The Project is not located along, nor visible from, an officially designated state scenic highway. The nearest state designated scenic highway is Highway 9, which is located more than 10 miles southwest of the Project area. Therefore, the Project would not impact scenic resources within a state scenic highway.

- c) Would the Project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the Project is in an urbanized area, would the Project conflict with applicable zoning and other regulations governing scenic quality?

Less-than-Significant Impact with Mitigation. Policy CD-10.4 in the *Envision San José 2040 General Plan* states for the City to work with other agencies or with properties within the City's jurisdiction to promote memorable landscape treatments at freeway interchanges to frame views of San José and the City's surrounding hillsides, and Action CD-10.6 in the *Envision San José 2040 General Plan* states for the City to work with Caltrans and VTA to ensure that the freeways (including United States Highway 101 [US 101], Interstate 880 [I-880], Interstate 680 [I-680], Interstate 280 [I-280], State Route 17 [SR 17], State Route 85 [SR 85], State Route 237 [SR 237], and State Route 87 [SR 87]) and Grand Boulevards in San José are maintained and enhanced to include a high standard of design, cleanliness, and landscaping to create a consistent and attractive visual quality.

The Project is on US 101 and is adjacent to a portion of First Street and Skyport Drive that are classified as Grand Boulevards. With implementation of MM VIS-1.1 and VIS-1.2, architectural and landscape treatments would be provided, and therefore, consistent with San José General Plan Policy CD-10.4 and Action CD-10.6 to promote memorable landscape treatments and create attractive visual quality along the freeway and Grand Boulevard.

- d) Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less-than-Significant Impact with Mitigation. The Project would not create a new source of substantial light or glare with implementation of MM VIS-1.3. All permanent lighting installed would be consistent with applicable regulations and with street lighting existing in the Project vicinity. Tinting and/or texturing would be added to certain Project

features such as the proposed overcrossing, retaining walls, and soundwall to eliminate the potential for glare.

3.2.2 Agriculture and Forest Resources

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in a loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

And

b) Would the Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

And

- c) Would the Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

And

- d) Would the Project result in a loss of forest land or conversion of forest land to non-forest use?

And

- e) Would the Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. The Project area is urbanized and developed. There are no farmlands or timberlands located within or adjacent to the proposed improvements. No lands mapped as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance are located in the Project vicinity. No parcels subject to a Williamson Act contract are present.

3.2.3 Air Quality

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For a detailed discussion of this topic, please see Section 2.16, *Air Quality*, of this Draft EIR/EA.

- a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

No Impact. As discussed in Section 2.16.3, the Project conforms to the Clean Air Act. In addition, as shown in Tables 2.16-4 and 2.16-5, the long-term operational emissions of air pollutants would be lower under the Build Alternative than under the No Build Alternative.

- b) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard?

Less-than-Significant Impact with Mitigation. As shown in Table 2.16-6, construction of the project would result in criteria air pollutant emissions. Implementation of the measures listed in Section 2.16.4 (MM-AIR-1.1 through MM-AIR-1.4 and MM-AIR-2.1 through MM-AIR-2.15) would reduce these construction emissions. As shown in Tables 2.16-4 and 2.16-5, while operational emissions of air pollutants would be higher under the Build Alternative than under the No Build Alternative in 2025 (opening year), they would be lower under the Build Alternative than under the No Build Alternative in 2045 (design year) and 2050 (horizon year). Therefore, since the Project would have no adverse effect on emissions, it would not, by definition, contribute to a cumulative air quality impact.

- c) Would the Project expose sensitive receptors to substantial pollutant concentrations?

Less-than-Significant Impact with Mitigation. Emissions would be generated during the construction phase of the Project, which could affect nearby sensitive receptors. Implementation of the mitigation measures listed in Section 2.16.4 would mitigate these construction impacts to less-than-significant impacts.

- d) Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

No Impact. The Project would be limited to improvements to existing transportation facilities. The new improvements would be the same use as existing conditions and would not include any new sources of emissions, including any that would create objectionable odors. Construction of the Project would generate odors from the exhaust of construction equipment, however, implementation of the measures listed in Section 2.16.4 would reduce these short-term odorous emissions.

3.2.4 Biological Resources

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The answers to the following questions regarding biological resources are based on the Project's Natural Environment Study (2022), which is incorporated into this Draft EIR/EA by reference. The report is available for review at the locations listed inside the front cover of this document.

- a) Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special

status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Less-than-Significant Impact with Mitigation. The Project area is urbanized and developed. No listed or candidate threatened or endangered species are present. However, the Project area may provide foraging and nesting habitat for peregrine falcons and burrowing owls, which are state fully protected species under the California Fish and Game Code and state species of concern, respectively. Furthermore, the Project area has the potential to have nesting birds, which are protected under federal and state law. Therefore, wildlife could be adversely affected during the Project's construction phase. Implementation of the measures listed in Section 2.19.4 will reduce such impacts to a less-than-significant level.

- b) Would the Project 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 CDFW or USFWS?

And

- c) Would the Project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

And

- d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No Impact. The Project area is urbanized and developed. There are no wetlands, riparian corridors, or other sensitive natural communities within or adjacent to the Project footprint. The Project area is not a wildlife corridor.

- e) Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No Impact. Although Caltrans is not subject to the City of San José's tree ordinance, the Project would comply with its tree replacement provisions, as listed in Section 2.19.4. Therefore, the Project would not conflict with the ordinance.

- f) Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less-than-Significant Impact with Mitigation. A portion of the BSA and Project footprint overlaps with the burrowing owl survey area identified in the Valley Habitat Plan (VHP). Burrowing owls are a covered species in the VHP. Based on land cover data available in the Santa Clara Valley Habitat Agency geobrowser, a small portion of the Project footprint and BSA include a land cover type that is considered suitable foraging and breeding habitat for burrowing owls. However, the area contains highly disturbed and compacted soil. Given that, the suitable habitat and substrate conditions are poor, impacts to burrowing owls are not likely. Nonetheless, the Project would implement mitigation measures listed in Section 2.19.4 to reduce any potential impacts to burrowing owls to a less-than-significant level.

3.2.5 Cultural Resources

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

For a detailed discussion of this topic, please see Section 2.10, *Cultural Resources*, of this Draft EIR/EA.

- a) Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?

No Impact. None of the structures or buildings that are located within the Area of Potential Effects (APE) are historically significant or eligible to be historically significant and were exempt from further evaluation per the Section 106 Programmatic Agreement (PA).

Therefore, construction of the proposed Project is not expected to result in effects on historic resources.

- b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?

And

- c) Would the Project disturb any human remains, including those interred outside of dedicated cemeteries?

Less-than-Significant Impact. Based upon the research undertaken for the Project, there is no indication of known prehistoric or historic archaeological resources within the Project’s APE, and the potential for archaeological resources is considered low to lowest.

The Project would implement standard protocols in the event that unanticipated cultural materials or remains are encountered during Project construction, including:

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to PRC Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Caltrans District 4 Office of Cultural Resources Studies so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

Therefore, construction of the proposed Project is not expected to result in effects on cultural resources.

3.2.6 Energy

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For a detailed discussion of this topic, please see Section 2.18, *Energy*, of this Draft EIR/EA.

- a) Would the Project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

And

- b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

No Impact. As shown in Table 2.18-3, when compared to the No Build Alternative, the direct operational energy usage by the Project would be reduced. Further, the Project would use energy-efficient equipment, implement energy-conserving practices, and recycle nonhazardous waste and excess material during the construction phase, as listed in Sections 2.16.4.2. For these reasons, the Project would not result in wasteful, inefficient, or unnecessary consumption of energy. Based on this conclusion, the Project would not conflict with a plan for renewable energy or energy efficiency.

3.2.7 Geology and Soils

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
– Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
– Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
- Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For a detailed discussion of this topic, please see Section 2.13, *Geology, Soils, Seismic, Topography*, of this Draft EIR/EA.

- a) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)?

No Impact. The Project is not located on a known earthquake fault. The proposed overcrossing is located approximately 1,200 feet southwest of the Silver Creek fault zone; however, no active faults cross under the Project area. In addition, the Project area is not in a mapped fault rupture hazard zone. The Santa Clara County Geologic Hazard Zones Atlas does not identify the Silver Creek fault as a fault rupture hazard zone, nor has it been included by Alquist-Priolo as requiring additional study for surface fault rupture.

- b) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

Less-than-Significant Impact. The Project is within the seismically active San Francisco Bay Area and severe ground shaking is probable during the anticipated life of the Project. Users of the Project would be exposed to hazards associated with such severe ground shaking during a major earthquake on one of the region's active faults. This hazard is not unique to the Project, because it applies to all locations throughout the greater Bay Area. The Project will not increase the existing exposure to hazards associated with earthquakes; the hazards in the area will be the same with or without the Project. The Project, including the overcrossing structure, retaining walls (if warranted), sound barrier, and sign structures, will be designed and constructed in accordance with Caltrans' Design guidelines for Seismic Zone 4 to avoid or minimize potential damage from seismic shaking on the site. Potential seismic effects will be minimized by the use of standard engineering techniques mandated by the Uniform Building Code and Caltrans' Design Standards.

- c) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

Less-than-Significant Impact. The Project site is in a liquefaction zone and mapped with a moderate potential for liquefaction. No historic ground failures from either the 1989 Loma Prieta earthquake or the 1906 San Francisco earthquake have been recorded near the Project area. Although exploration in the site vicinity encountered free groundwater at a depth of 11 feet, the underlying conditions were found to comprise stiff to very stiff cohesive soil overlying a relatively thick stratum of dense to very dense sand and gravel. Based on these conditions, the potential for ground surface effects to occur at the site as a result of liquefaction appear to be low. Additional exploration and testing during the PS&E phase will be completed to confirm site-specific liquefaction potential. The Project will implement standard engineering practices to ensure that liquefaction hazards do not result from its construction.

- d) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

No Impact. The topography of the area where the Project would be constructed is flat and there is no potential for landslides.

- e) Would the Project result in substantial soil erosion or the loss of topsoil?

No Impact. Soil erosion would be avoided with the incorporation of standard Caltrans BMPs. Such BMPs would prevent erosion and the loss of topsoil by ensuring appropriate drainage on-site during construction and permanently stabilizing slopes with vegetation, netting, blankets, and/or paving where necessary. No impact would occur.

- f) Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

No Impact. There are no on-site conditions that would become unstable as a result of constructing the Project.

- g) Would the Project be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?

Less-than-Significant Impact. The majority of the Project site is mapped as having a moderate expansive soil potential. The Project will implement standard engineering practices to ensure that soil hazards do not result from its construction.

- h) Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The Project would not involve the generation or disposal of wastewater.

- i) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

No Impact. There are no unique geologic features located on or adjacent to the site where the Project would be constructed. Per the analysis contained in Section 2.14, *Paleontology*, there are no known paleontological resources located at the Project site. As described in Section 2.14.4, measures to avoid destruction of such resources, should any be encountered during construction, will be implemented by the Project.

3.2.8 Greenhouse Gas Emissions

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For a detailed discussion of this topic, please see Section 3.3, *Climate Change*, of this Draft EIR/EA.

- a) Would the Project generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?

Less-than-Significant Impact. Section 3.3.3 provides an analysis of construction-related and operational GHG emissions. Construction-related GHG emissions were calculated using the Caltrans Emission FACTors (EMFAC) 2021 model. Construction duration would total 24 months, and the total amount of Carbon Dioxide (CO₂) produced during construction of the project would be 2,372 metric tons of CO₂e. Such emissions would, however, be offset by projected decreases in GHG emissions during the Project's long-term operational phases. This conclusion is based on the data in Table 3.3.2 under Section 3.3.3.1, which projects lower GHG emissions under the Build Alternative than under the No Build Alternative in the long-term.

b) Would the Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

No Impact. The Project is included in the current Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP), both of which contain regional strategies for reducing GHG emissions from transportation sources. One of the main strategies to reduce GHG emissions is to make transportation systems more efficient by reducing congestion and by improving facilities for alternative modes (e.g., transit, bicycling, walking). The Project would reduce congestion and lower vehicle miles traveled (VMT) in the Project area by providing more efficient vehicular access and by constructing new bicycle and pedestrian facilities.

3.2.9 Hazards and Hazardous Materials

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For a detailed discussion of this topic, please see Section 2.15, *Hazardous Waste-Materials*, of this Draft EIR/EA.

- a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

And

- b) Would the Project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No Impact. The Project would construct modifications to existing freeway ramps and local roadways. As such, it would not involve the generation, use, or disposal of hazardous materials.

While the highways are utilized by vehicles transporting such materials, the degree or manner in which that occurs would not change if the Project is constructed. Transporters of hazardous substances will be required to comply with safety regulations as they do under existing conditions.

During the operational phase, traffic accidents on freeways and local streets could result in the accidental release of substances such as fuel, lubricants, or hazardous freight. This potential is the same under existing, No Build, and Build conditions. In order to account for these potential hazards, the Project would be designed and engineered to improve safety to motorized vehicles, bicyclists, and pedestrians, which would minimize the potential for traffic accidents resulting in hazardous material or waste release. The Project would be designed and operated consistent with all applicable standards and regulations for safety and would not present a unique or above-average risk for accidents involving hazardous materials.

- c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. Bachrodt Elementary School is within one-quarter mile of the proposed improvements. This represents existing/baseline conditions, upon which the Project would have no impact, because transportation facilities would not be moved closer to the school. The risk to the school from an accidental release of hazardous materials would be the same with or without the Project.

- d) Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less-than-Significant Impact with Mitigation. The Project footprint itself is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, however, six sites adjacent to the Project footprint are.²⁶ Amongst the six sites identified, five of them are closed cases, and one is currently listed as an open case, Capital Towers/ARCO # 9914 located at 2010 North First Street. As discussed in Section 2.15, *Hazardous Waste/Materials*, the site is listed on the hazardous materials database for impacts to soil and groundwater from leaking underground storage tanks. Soil vapor monitoring and semi-annual groundwater monitoring are ongoing at this site. The groundwater flow direction from the site is to the west/northwest and is down-gradient from the Project area. Based on historical groundwater data, elevated concentrations of dissolved petroleum hydrocarbons in groundwater are generally restricted to the area near the former underground storage tanks and pump islands in the southwestern corner of the site, which is adjacent to the Project area.

In order to avoid any adverse effects associated with exposure of construction workers to hazardous substances, MM-HAZMAT-1.5 and MM-HAZMAT-1.6 will be implemented to reduce any significant adverse effects to a less-than-significant level. These measures

²⁶ California Environmental Protection Agency. Cortese List Data Resources. <https://calepa.ca.gov/sitecleanup/corteselist/>. Accessed: June 10, 2022.

include testing, treatment, and disposal of contamination in according with regulatory criteria.

- e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the Project area?

No Impact. The Comprehensive Land Use Plan for SJIA sets forth noise and safety policies for land uses in the airport environs. Although the Project is less than one-half mile east of San José International Airport (SJIA), it is outside of SJIA's designated Airport Influence Area (AIA), defined as the areas surrounding SJIA that are affected by noise, height, and safety considerations.²⁷

The maximum height of the new overcrossing structure would be approximately 27 feet above the existing ground level, which equates to approximately 75 feet above mean sea level. For any structure that exceeds 212 feet above mean sea level, a *Notice of Proposed Construction or Alteration* (Form 7460-1) would need to be filed with the Federal Aviation Administration (FAA), as required by Part 77 of the Federal Aviation Regulations.²⁸ Since the proposed overcrossing, which is the tallest Project feature, does not exceed 212 feet above mean sea level, notification to the FAA is not required.

- f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The Project would not sever or adversely impact the existing emergency response routes along North 10th Street, East Gish Road, and Old Bayshore Highway from San José Fire Station #5. During the construction phase of the Project, any temporary lane or road closures would be coordinated in advance with the fire department, as well as with other emergency responders (e.g., police, ambulance, etc.). Completion of the Project would result in improved access to the surrounding community for emergency vehicles and other public service providers from outside the Project area.

- g) Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. According to mapping prepared by the Santa Clara County FireSafe Council, the Project site is not located within or near a Moderate, High, or Very High Fire Hazard Severity Zone. The closest fire hazard zone to the Project area is the East Foothills of the

²⁷ Source: Santa Clara County Airport Land Use Commission, Figure 8 (Airport Influence Area) from Comprehensive Land Use Plan for Norman Y. Mineta San José International Airport, 2012.

²⁸Source: City of San José Airport Department, Notice Requirement Criteria for Filing FAA Form 7460-1.

Diablo Range, more than five miles to the east.²⁹ Therefore, the Project would not increase risks associated with wildland fires.

3.2.10 Hydrology and Water Quality

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: <ul style="list-style-type: none"> - result in substantial erosion or siltation on- or off-site; - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or - impede or redirect flood flows? 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

²⁹ Source: <https://sccfiresafe.org/resources/do-you-reside-in-santa-clara-countys-wildland-urban-interface-wui/>, (accessed 7/20/2022).

For a detailed discussion of this topic, please see Sections 2.11 Hydrology and Floodplain and 2.12, *Water Quality and Stormwater Runoff*, of this Draft EIR/EA.

- a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less-than-Significant Impact with Mitigation. The design of the Project includes BMPs to reduce the pollutant component of stormwater runoff, as required by the Caltrans National Pollution Discharge Elimination System (NPDES) permit. Compliance with the Construction Stormwater General Permit (CGP) and temporary BMPs required under mitigation measure MM-WQ-1.2 and MM-WQ-1.3 would also be implemented, as listed in Section 2.12.4.2. These measures will avoid substantial effects on surface and groundwater quality.

- b) Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin?

Less-than-Significant Impact. The Project would be required to implement permanent BMPs to comply with the Caltrans NPDES Permit requirements. The Caltrans NPDES Permit lists infiltration as one of the priority BMPs, which would allow opportunity for the stormwater runoff to infiltrate underground. Furthermore, the additional 1.29 acres of impervious area to be added by the Project is small in relation to the size of the groundwater basin located within the Project limits; therefore, groundwater recharge impacts would be insignificant.

- c) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?

Less-than-Significant Impact. The Project would result in approximately 1.29 acres of new impervious surfaces within the combined Coyote Creek and Guadalupe River watersheds area that in total encompasses 492 square miles. The Project would be required to implement permanent BMPs to comply with the Caltrans NPDES Permit requirements. The Caltrans NPDES Permit requires permanent erosion control measures to be applied to all exposed areas once grading or soil disturbance work is completed to achieve slope stabilization. Furthermore, the increase in impervious surfaces is relatively minor, especially in view of the fact that most of the Project site is already covered by existing impervious surfaces (i.e., the existing freeway and roadways). Therefore, the increase in pollutant-containing runoff would not be substantial.

As discussed in Section 2.11, *Hydrology and Floodplain*, while the Project would encroach into a 100-Year Floodplain, the encroachment would be minor because fill and cut within the floodplain would be balanced.

- d) In flood hazard, tsunami, or seiche zones, would the Project risk release of pollutants due to Project inundation?

No Impact. According to floodplain maps prepared by the Federal Emergency Management Agency, the Project footprint is partially within a 100-Year Floodplain. As discussed in Section 2.11, *Hydrology and Floodplain*, the Project encroachment into the floodplain is not considered significant as it 1) does not involve significant potential for interruption or termination of a transportation facility that is needed for emergency vehicles or provides a community’s only evacuation route, 2) does not involve a significant risk, 3) does not cause a significant adverse impact to the natural and beneficial floodplain values, and 4) fill and cut within the floodplain will be balanced. Based on mapping prepared by the California Geologic Survey, the Project site is not located within a tsunami hazard zone.³⁰ There are no large bodies of water (i.e., ocean) near the Project area and, therefore, inundation of the area due to a seiche would not occur.³¹

- e) Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. Based on the above responses and the information in Section 2.12, the Project would comply with all applicable plans related to water quality and groundwater management.

3.2.11 Land Use and Planning

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

³⁰ Source: California Geologic Survey, <https://www.conservation.ca.gov/cgs/tsunami/maps/> Accessed 7/8/2022.

³¹ A seiche is a standing wave oscillating in a body of water. According to the National Oceanic and Atmospheric Administration, “seiches are typically caused when strong winds and rapid changes in atmospheric pressure push water from one end of a body of water to the other. When the wind stops, the water rebounds to the other side of the enclosed area. The water then continues to oscillate back and forth for hours or even days. In a similar fashion, earthquakes, tsunamis, or severe storm fronts may also cause seiches along ocean shelves and ocean harbors.” <https://oceanservice.noaa.gov/facts/seiche.html> Accessed 3/18/2022.

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the Project physically divide an established community?

No Impact. The Project proposes to construct an overcrossing over US 101 to improve north-south connectivity between areas divided by US 101. The overcrossing would not divide any neighborhoods or communities.

b) Would the Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. For the reasons described in Section 2.3, *Consistency with State, Regional, and Local Plans and Programs*, the Project would not conflict with any land use plans or policies.

3.2.12 Mineral Resources

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

And

b) Would the Project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The Communications Hill area in central San José is the only area within the City that is designated by the State Mining and Geology Board as containing mineral deposits of regional significance. The Project site is not on or adjacent to Communications Hill. Therefore, the Project would not result in the loss of availability of a known mineral resource or a locally important mineral resource recovery site.

3.2.13 Noise

Would the Project result in:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

For a detailed discussion of this topic, please see Section 2.17, *Noise*, of this Draft EIR/EA.

- a) Would the Project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less-than-Significant Impact with Mitigation. When compared to existing conditions, changes in operational noise levels under 2045 Build conditions would range from -5 to +4 A-weighted decibel (dBA), which is well below the 12-dBA increase that Caltrans considers to be substantial. Short-term increases in noise during construction could be significant, especially during pile driving and nighttime work. The mitigation measures listed in Section 2.17.5.2 that would be implemented by the Project during the construction phase will reduce short-term noise impacts to a less-than-significant level.

- b) Would the Project result in generation of excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact. Based on the analysis in Section 2.17.4.3, groundborne noise and vibration during construction would not exceed applicable thresholds.

- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?

No Impact. The Comprehensive Land Use Plan for SJIA sets forth noise and safety policies for land uses in the airport environs. Although the Project site is approximately one-half mile from SJIA, it is not located within the designated AIA, defined as the areas surrounding the Airport that are affected by noise, height, and safety considerations.³²

3.2.14 Population and Housing

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact. The Project is limited to modifications to existing freeway ramps and local roadways and would not change land use patterns or density. The Project is located within, and is intended to serve, an urbanized and mostly-developed area of San José. The Project would not open additional areas to development and would not induce unplanned population growth.

³² Source: Santa Clara County Airport Land Use Commission, Figure 8 (Airport Influence Area) from Comprehensive Land Use Plan for Norman Y. Mineta San José International Airport, 2012.

- b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The Project would not displace people or housing.

3.2.15 Public Services

	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<p>a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:</p> <p>1) Fire Protection?</p> <p>2) Police Protection?</p> <p>3) Schools?</p> <p>4) Parks?</p> <p>5) Other Public Facilities?</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p><input checked="" type="checkbox"/></p>

- a) Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks, or other public facilities?

No Impact. The Project is limited to improvements to an existing freeway ramp and roadways and is intended to improve traffic operations in the Project area. As stated previously in Section 2.4, *Growth*, the Project would not induce unplanned growth but would facilitate the planned growth of the area as identified in the *Envision San José 2040 General Plan*. The General Plan contains policies that ensure that the future capacity of services (e.g., schools, utilities, police and fire protection, libraries, parks, etc.) will be adequate to serve that planned growth.

3.2.16 Recreation

	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. As stated previously in Section 2.4, *Growth*, the Project would not induce unplanned growth but would facilitate the planned growth of the area as identified in the *Envision San José 2040 General Plan*. The General Plan contains policies that ensure that the future capacity of services (e.g., schools, utilities, police and fire protection, libraries, parks, etc.) will be adequate to serve that planned growth. For these reasons, the Project would not increase the use of existing parks or other recreational facilities.

b) Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The Project is limited to new highway facilities and does not include or require the construction or expansion of recreational facilities.

3.2.17 Transportation

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the Project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?

No Impact. For the reasons stated in Section 2.3, the Project would not conflict with any transportation plan, program, ordinance, or policy.

b) Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

No Impact. Historically, transportation analyses prepared under CEQA have utilized delay and congestion on the roadway system as the primary metric for the identification of traffic impacts and potential roadway improvements to relieve traffic congestion that may result due to a proposed Project. However, the State of California has recognized the limitations of measuring and mitigating only vehicle delay at intersections. Therefore, in 2013, Senate Bill (SB) 743 became law, which requires jurisdictions to stop using congestion and delay metrics, such as level of service (LOS), as the measurement for CEQA impacts in a transportation analysis. Per SB 743, by July 2020, all public agencies were required to base the determination of transportation impacts under CEQA on VMT rather than LOS.³³ Section 15064.3(b)(2) of the CEQA Guidelines states that transportation projects that reduce, or have no impact on, VMT should be presumed to cause a less than significant transportation impact.

A VMT analysis of the Project was undertaken, which involved estimating the change in total VMT with and without the Project utilizing VTA's countywide travel demand model. As shown in Table 3.2-1, the Project would result in a small decrease in VMT when compared to the No Build Alternative. Based upon this analysis, the Project would not conflict with CEQA Guidelines Section 15064.3(b).

³³ VMT measures the amount of distance people travel in personal vehicles to destinations in a day. VMT is measured by multiplying the total vehicle trips by the average distance of those trips.

Table 3.2-1: Comparison of VMT in the Study Area

Project Alternative	Daily VMT	Change from No Build (Daily VMT)	% Change from No Build
2025 No Build Alternative	6,489,663	--	--
2025 Build Alternative	6,489,597	- 66	- 0.001%
2045 No Build Alternative	7,657,282	--	--
2045 Build Alternative	7,656,106	- 1,176	- 0.02%
Source: Traffic Operations Analysis Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvements Project, May 1, 2020.			

- c) Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed Project has been designed to improve safety to motorized vehicles, bicyclists, and pedestrians. The Project does not include any geometric design features or incompatible uses that might result in a substantial increase in hazards.

- d) Would the Project result in inadequate emergency access?

No Impact. The Project would not sever or adversely impact the existing emergency response routes along North 10th Street, East Gish Road, and Old Bayshore Highway for San José Fire Station #5. During the construction phase of the Project, any temporary lane or road closures would be coordinated in advance with the fire department, as well as with other emergency responders (e.g., police, ambulance, etc.). Upon completion of the Project, the Project would result in improved access to the surrounding community for emergency vehicles and other public service providers from outside the Project area.

3.2.18 Tribal Cultural Resources

	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
<p>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:</p> <p>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)?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) 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 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)?

And

b) Would the Project cause a substantial adverse change in the significance of 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

No Impact. As described in Section 2.10, *Cultural Resources*, no tribal cultural resources are present within the Project’s APE. This conclusion was reached based on research within the APE, as well as consultation with the Native American Heritage Commission, Northwest Information Center, and representatives of local Native American tribes.

3.2.19 Utilities and Service Systems

Would the Project:	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have insufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the Project’s projected demand in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less-than-Significant Impact. Although some utility relocation within the Project’s footprint would be required, the Project does not include uses that would require new or expanded utility systems. Electricity consumption associated with the Project would be limited to power for new streetlights and traffic signals. Electrical consumption by such

features would be minimal because that equipment would utilize light-emitting diode (LED) bulbs.

- b) Would insufficient water supplies be available to serve the Project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less-than-Significant Impact. Landscaping installed by the Project, including replaced trees, would be irrigated, which would require water use. Consistent with Caltrans policy, the trees and landscaping would be drought tolerant and would require minimal watering. For these reasons, the Project would not generate a significant demand on water use that requires new or expanded entitlements.

- c) Would the Project result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?

No Impact. The Project would not include uses that would generate wastewater. Therefore, the Project would not result in demand on wastewater treatment systems.

- d) Would the Project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

And

- e) Would the Project be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?

No Impact. Caltrans requires construction waste generated by the Project to be diverted from landfills (e.g., recycled or reused) to the extent feasible. The operation of the Project would not include uses that would generate solid waste. Therefore, the Project would not impact solid waste or landfill capacity.

3.2.20 Wildfires

	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project:

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. According to mapping prepared by the Santa Clara County FireSafe Council, the Project site is not located within or near a Moderate, High, or Very High Fire Hazard Severity Zone. The closest fire hazard zone to the Project area is the East Foothills of the Diablo Range, more than eight miles to the east.³⁴ Therefore, if the Project is constructed, none of the effects listed in the above four questions would occur.

3.2.21 Mandatory Findings of Significance

	Significant and Unavoidable Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the Project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

³⁴ Source: <https://sccfiresafe.org/resources/do-you-reside-in-santa-clara-countys-wildland-urban-interface-wui/> (accessed 7/20/2022).

- a) Does the Project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less-than-Significant Impact with Mitigation. The Project is located in an urbanized and developed area. No habitat for listed and candidate threatened or endangered species is present. No sensitive or regulated habitats (e.g., wetlands, riparian corridors, waterways, important wildlife corridors, etc.) are present. Vegetation impacted by the Project would be limited to ornamental landscaping located along freeways and local roadways. However, the Project area may provide foraging and nesting habitat for peregrine falcons and burrowing owls, which are covered species under the Migratory Bird Treaty Act (MBTA). Peregrine falcons are state fully protected species under the California Fish and Game Code. Furthermore, the Project area has the potential to have nesting birds, which are protected under federal and state law. Implementation of the mitigation measures listed in Section 2.19.4 will reduce impacts to these animal species to a less-than significant-level.

- b) Does the Project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

And

- c) Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less-than-Significant Impact. All impacts of the Project, both individually and cumulatively, would be less-than-significant with mitigation incorporated.

3.3 CLIMATE CHANGE

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to GHG emissions reduction and climate change research and policy. Climate change in the past has generally occurred gradually over millennia, or more suddenly in response to cataclysmic natural disruptions. The research of the Intergovernmental Panel on Climate Change and other scientists over recent decades, however, has unequivocally attributed an accelerated rate of climatological changes over the past 150 years to GHG emissions generated from the production and use of fossil fuels.

Human activities generate GHGs consisting primarily of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), and various hydrofluorocarbons (HFCs). CO₂ is the most abundant GHG; while it is a naturally occurring and necessary component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated CO₂ that is the main driver of climate change. In the U.S. and in California, transportation is the largest source of GHG emissions, mostly CO₂.

The impacts of climate change are already being observed in the form of sea level rise, drought, more intense heat, extended and severe fire seasons, and historic flooding from changing storm patterns. Both mitigation and adaptation strategies are necessary to address these impacts. The most important mitigation strategy is to reduce GHG emissions. In the context of climate change (as distinct from CEQA and NEPA), "mitigation" involves actions to reduce GHG emissions or to enhance the "sinks" that store them (such as forests and soils) to lessen adverse impacts. "Adaptation" is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis will include a discussion of both in the context of this transportation project.

3.3.1 Regulatory Setting

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

3.3.1.1 *Federal*

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

NEPA (42 USC Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The FHWA recognizes the threats that extreme weather, sea level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (FHWA 2022). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability” (FHWA n.d.). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

The federal government has taken steps to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 USC Section 6201) as amended by the Energy Independence and Security Act (EISA) of 2007; and Corporate Average Fuel Economy (CAFE) Standards. This act established fuel economy standards for on-road motor vehicles sold in the United States. The U.S. Department of Transportation’s National Highway Traffic and Safety Administration (NHTSA) sets and enforces the CAFE standards based on each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the United States. The U.S. EPA calculates average fuel economy levels for manufacturers, and also sets related GHG emissions standards under the Clean Air Act. Raising CAFE standards leads automakers to create a more fuel-efficient fleet, which improves our nation’s energy security, saves consumers money at the pump, and reduces GHG emissions (U.S. DOT 2014).

U.S. EPA published a final rulemaking on December 30, 2021, that raised federal GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026, increasing in stringency each year. The updated GHG emissions standards will avoid more than 3 billion tons of GHG emissions through 2050. In April 2022, NHTSA announced corresponding new fuel economy standards for model years 2024 through 2026, which will reduce fuel use by more than 200 billion gallons through 2050 compared to the old standards and reduce fuel costs for drivers (U.S. EPA 2022a; NHTSA 2022).

3.3.1.2 State

California has been innovative and proactive in addressing GHG emissions and climate change by passing multiple Senate and Assembly bills and executive orders (EOs) including, but not limited to, the following:

EO S-3-05 (June 1, 2005): The goal of this EO is to reduce California’s GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80% below year

1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill (AB) 32 in 2006 and Senate Bill (SB) 32 in 2016.

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

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

EO B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40% below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80% below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO_{2e}). [GHGs differ in how much heat each traps in the atmosphere, called global warming potential, or GWP. CO₂ is the most important GHG, so amounts of other gases are expressed relative to CO₂, using a metric called “carbon dioxide equivalent”, or CO_{2e}. The global warming potential of CO₂ is assigned a value of 1, and the GWP of other gases is assessed as multiples of CO₂.] Finally, it requires the Natural Resources Agency to update the state’s climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

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

SB 1386, Chapter 545, 2016, declared “it to be the policy of the state that the protection and management of natural and working lands ... is an important strategy in meeting the state’s greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands.”

SB 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled, to promote the state's goals of reducing greenhouse gas emissions and traffic related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

SB 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires ARB to prepare a report that assesses progress made by each metropolitan planning organization in meeting their established regional greenhouse gas emission reduction targets.

EO B-55-18 (September 2018) sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing GHG emissions.

AB 1279, Chapter 337, 2022, The California Climate Crisis Act: This bill mandates carbon neutrality by 2045 and establishes an emissions reduction target of 85% below 1990 level as part of that goal. This bill solidifies a goal included in EO B-55-18. It requires ARB to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and to identify and implement a variety of policies and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California, as specified.

3.3.2 Environmental Setting

The proposed Project is in an urban area of Santa Clara County with a well-developed road and street network. The land uses in the Project area primarily consist of commercial, residential, institutional, and recreational facilities. Traffic congestion during peak hours is not uncommon in the Project area. The RTP prepared by the Metropolitan Transportation Commission (MTC) guides transportation and housing development in the Project area. The City of San José's GHG Reduction Strategy addresses GHGs in the Project area.

3.3.2.1 *GHG Inventories*

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual GHG emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. US EPA is responsible for documenting GHG emissions nationwide, and the ARB does so for the state, as required by H&SC Section 39607.4. Cities and other local jurisdictions may also conduct local GHG inventories to inform their GHG reduction or climate action plans.

National GHG Inventory

The annual GHG inventory submitted by the U.S. EPA to the United Nations provides a comprehensive accounting of all human-produced sources of GHGs in the United States. Total GHG emissions from all sectors in 2020 were 5,222 million metric tons (MMT), factoring in deductions for carbon sequestration in the land sector. Of these, 79 percent were CO₂, 11 percent were CH₄, and 7 percent were N₂O; the balance consisted of fluorinated gases. Total GHGs in 2020 decreased by 21% from 2005 levels and 11% from 2019. The change from 2019 resulted primarily from less demand in the transportation sector during the COVID-19 pandemic. The transportation sector was responsible for 27 percent of total U.S. GHG emissions in 2020, more than any other sector (Figure 3.3-1), and for 36% of all CO₂ emissions from fossil fuel combustion. Transportation CO₂ emissions for 2020 decreased 13 percent from 2019 to 2020, but were 7 percent higher than transportation CO₂ emissions in 1990 (Figure 3.3-1) (U.S. EPA 2022b).

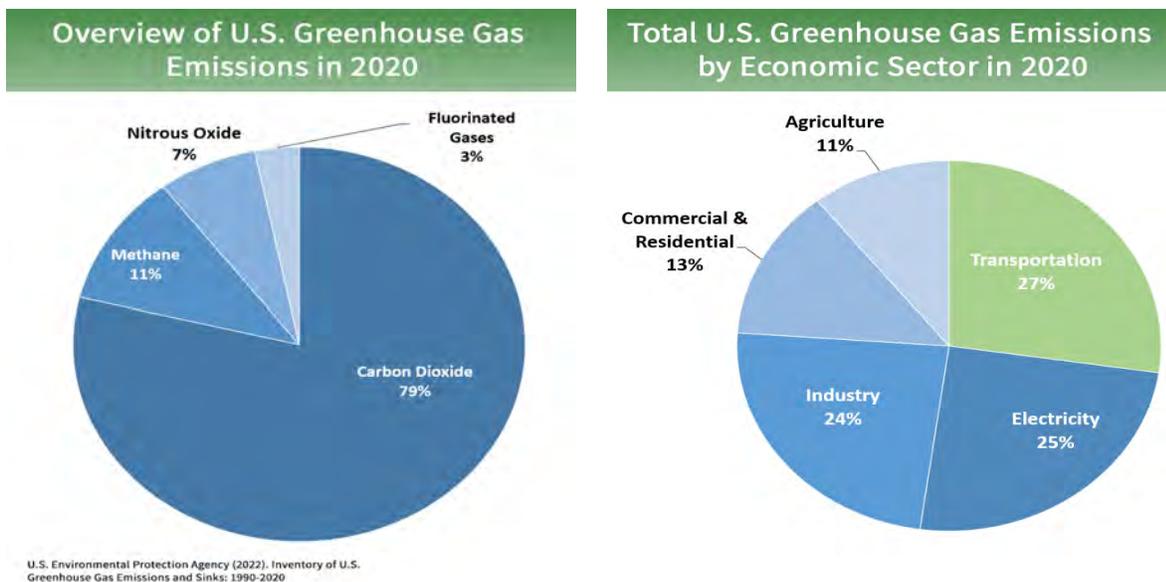


Figure 3.3-1: U.S. 2020 Greenhouse Gas Emissions (Source: U.S. EPA 2022b)

State GHG Inventory

ARB collects GHG emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its GHG reduction goals. The 2022 edition of the GHG emissions inventory reported emissions trends from 2000 to 2020. Total California GHG emissions in 2020 were 369.2 MMTCO₂e, a reduction of 35.3 MMTCO₂e from 2019 and 61.8 MMTCO₂e below the 2020 statewide limit of 431 MMTCO₂e. Much of the decrease from 2019 to 2020, however, is likely due to the effects of the COVID-19 pandemic on the transportation sector, during which vehicle miles traveled declined under stay-at-home orders and reductions in goods

movement. Nevertheless, transportation remained the largest source of GHG emissions, accounting for 37 percent of statewide emissions (Figure 3.3-2). (Including upstream emissions from oil extraction, petroleum refining, and oil pipelines in California, transportation was responsible for about 47 percent of statewide emissions in 2020; however, those emissions are accounted for in the industrial sector.) California’s gross domestic product (GDP) and GHG intensity (GHG emissions per unit of GDP) both declined from 2019 to 2020 (Figure 3.3-3). It is expected that total GHG emissions will increase as the economy recovers over the next few years (ARB 2022a).

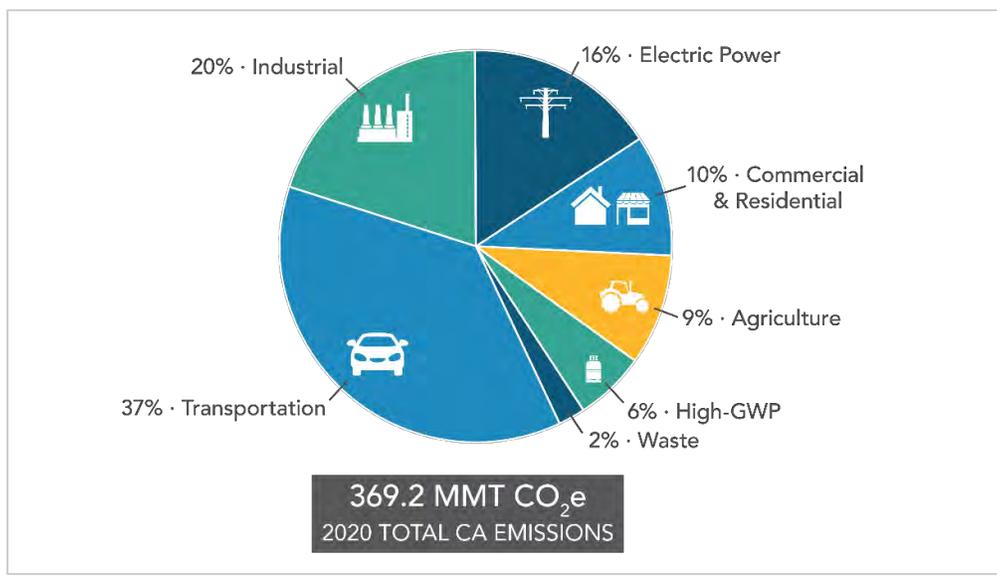


Figure 3.3-2: California 2020 GHG Emissions by Scoping Plan Category (Source: ARB 2022a)

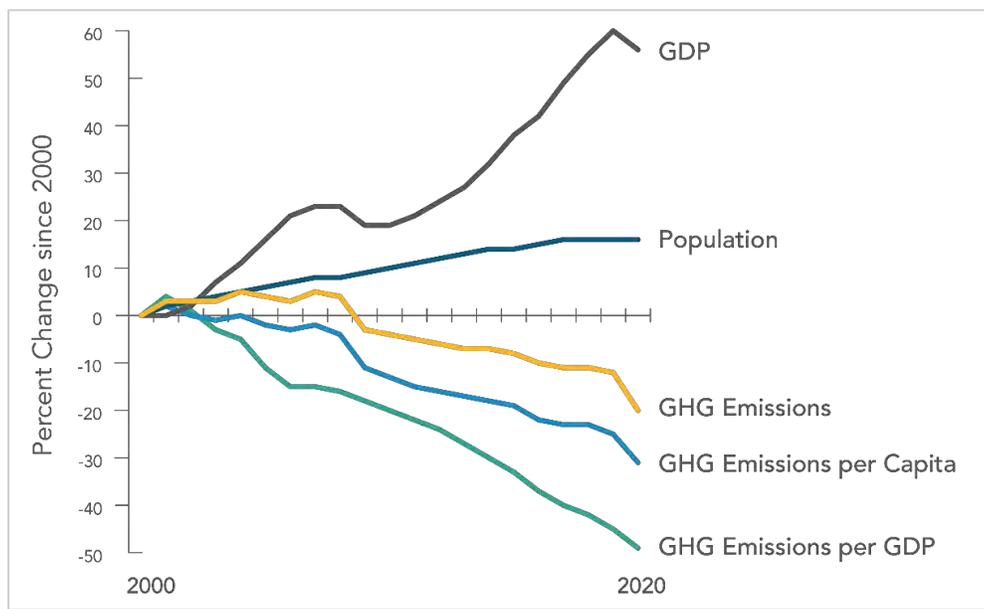


Figure 3.3-3: Change in California GDP, Population, and GHG Emissions since 2000 (Source: ARB 2022a)

AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020, and to update it every 5 years. ARB adopted the first scoping plan in 2008. The second updated plan, California’s 2017 Climate Change Scoping Plan, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32. The draft 2022 Scoping Plan Update additionally lays out a path to achieving carbon neutrality by 2045 (ARB 2022b).

Regional Plans

ARB sets regional GHG reduction targets for California’s 18 MPOs to achieve through planning future projects that will cumulatively achieve those goals, and reporting how they will be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Targets are set at a percent reduction of passenger vehicle GHG emissions per person from 2005 levels. The proposed Project is included in the RTP/SCS for San Francisco Bay Area, *Plan Bay Area 2050*, under RTP ID 21-T06-028. The regional reduction target for MTC is 10% for 2020 and 19% for 2035 (ARB 2022c).

Regional and local GHG reduction plans include MTC’s *Plan Bay Area 2050* and the City of San José’s *Climate Smart San José* Plan. Table 3.3-1 lists some of the key policies and strategies of these plans.

Table 3.3-1: Regional and Local GHG Reduction Plans

Title	GHG Reduction Policies or Strategies
Plan Bay Area 2050	Policy T8: Build a complete streets network Policy T10: Enhance local transit frequency, capacity and reliability Policy T11: Expand and modernize the regional rail network Policy EN1: Adapt to sea level rise. Policy EN7: Expand commute trip reduction programs at major employers Policy EN8: Expand clean vehicle initiatives. Policy EN9: Expand transportation demand management initiatives.
Climate Smart San José	Key Strategies: renewable energy, focused growth, electric vehicles, local jobs focus, goods movement efficiencies, energy-efficient buildings, transit system improvements. Goal: carbon neutrality by 2030.

3.3.3 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (SHS) (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO₂, CH₄, N₂O, and HFCs. CO₂ emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of CH₄ and N₂O. A small amount of HFC emissions related to refrigeration is also included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Pub. Resources Code, § 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project’s contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Assn. of Governments (2017) 3 Cal.5th 497, 512.) In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable” (CEQA Guidelines Sections 15064(h)(1) and 15130).

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

3.3.3.1 Operational Emissions

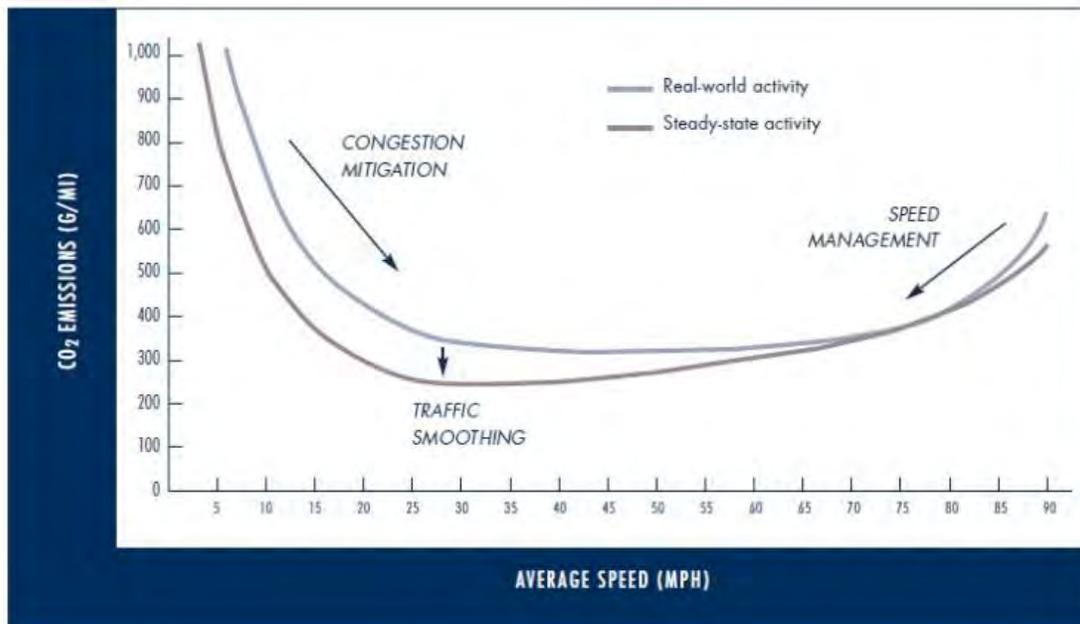
CO₂ from fossil fuel combustion is the largest component of U.S. GHG emissions, and transportation is the largest contributor of CO₂. The largest emitters of transportation CO₂ emissions in 2020 were passenger cars (38.5 percent), freight trucks (26.3 percent), and light-duty trucks (18.9 percent). The remainder came from other modes of transportation, including aircraft, ships, boats, and trains, as well as pipelines and lubricants (US EPA 2022b). Because CO₂ emissions represent the greatest percentage of GHG emissions, it has been selected as a proxy for the following analysis of potential climate change impacts.

The highest levels of CO₂ from mobile sources such as automobiles occur at stop-and-go speeds (0–25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0–25 miles per hour (see Figure 3.3-4). To the extent that a project enhances operational efficiency and improves travel times in high-congestion travel corridors, GHG emissions, particularly CO₂, may be reduced, provided that improved travel times do not induce additional VMT.

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity (e.g., vehicle miles traveled), (3) transitioning to lower GHG emitting fuels, and (4) improving vehicle technologies and efficiency. To be most effective, all four strategies should be pursued concurrently.

CO₂, as part of the carbon cycle, is an important compound for plant and animal life, but also accounted for 84% of California’s total GHG emissions in 2015. Transportation, primarily on-road travel, is the single largest source of CO₂ emissions in the state. The proposed Project, located in San José in Santa Clara County, is included in the current RTP/SCS, *Plan Bay Area 2050*. *Plan Bay Area 2050* uses a base year of 2015 for the existing conditions, except for GHG emissions, where a 2005 baseline is once again used for the analysis of SB 375 greenhouse gas reduction targets. The plan also uses a 1990

baseline for analyzing consistency with SB 32, which calls for a statewide reduction of GHG emissions to 40 percent from 1990 levels by 2030.



Source: Barth and Boriboonsomsin, 2010

Figure 3.3-4: Possible Use of Traffic Operation Strategies in Reducing On-road CO₂ Emissions (Source: Barth and Boriboonsomsin 2010)

The proposed Project would increase the efficiency of traffic operations and, when compared to the No Build Alternative, would reduce VMT. The reduction in VMT is quantified in Table 3.3-2 based on the methodology described in the following paragraphs. The reduction in VMT is due to the new connections to the roadway network that are being provided by the Project. The reduction in VMT is also anticipated to occur as a result of the inclusion of new bicycle and pedestrian facilities that will be constructed as part of the Project.

Quantitative Analysis

Methodology

ARB developed the Emission FACTors (EMFAC) model to facilitate preparation of statewide and regional mobile source emissions inventories. The model generates emissions rates that can be multiplied by vehicle activity data from all motor vehicles, including passenger cars to heavy-duty trucks, operating on highways, freeways, and local roads in California. EMFAC has a rigorous scientific foundation, has been approved by US EPA, and has been vetted through multiple stakeholder reviews. Caltrans developed CT-EMFAC to apply project-specific factors to ARB’s model.

EMFAC’s GHG emission rates are based on tailpipe emissions test data and the model does not account for factors such as the rate of acceleration and vehicle aerodynamics, which influence the amount of emissions generated by a vehicle. GHG emissions quantified using CT-EMFAC are therefore estimates and may not reflect actual on-road emissions. Furthermore, the model does not account for induced travel. Modeling GHG estimates with EMFAC or CT-EMFAC nevertheless remains the most precise means of estimating future greenhouse gas emissions. While CT-EMFAC is currently the best available tool for calculating GHG emissions from mobile sources, it is important to note that the GHG results are only useful for a comparison of alternatives. Federal CAFE and GHG emissions standards continue to evolve, and models will be updated to account for regulatory changes. GHG emissions for this project were computed using CT-EMFAC 2021.

Results

Using the methodology described above, GHG emissions impacts for the Build Alternative were computed for the existing year and future years for both the No Build and Build alternatives. Table 3.3-2 lists the GHG emissions for the existing year (2015) and design year (2045). For CEQA purposes, the difference in GHG emissions between the baseline year and the design year must be compared. Opening year (2025) and RTP horizon year (2050) GHG emissions are included for additional comparisons.

GHG emissions for the baseline year were computed to be 838,377 metric tons (MT) of carbon dioxide equivalent (CO_{2e}). The GHG emissions for the 2045 design No Build and Build alternatives were calculated as 721,129 MT CO_{2e} and 720,828 MT CO_{2e}, respectively. The difference between the baseline emissions of 838,377 MT CO_{2e} and the Build Alternative 2045 emissions of 720,828 MT CO_{2e} is a decrease of 117,549 MT of CO_{2e}. As shown in Table 3.3-2, with or without the Project, the mobile GHG emissions in the area would decrease due to the improvements in vehicle technology and reformulation of fuels. Modeling shows that the Build Alternative would have lower GHG emissions than the No Build Alternative for all future years except for the opening year (2025) where Build GHG emissions estimates exceed No Build emissions estimates. This is a result of the changes in network speeds as a result of the Project.

Table 3.3-2: Modeled Annual CO_{2e} Emissions and Vehicle Miles Traveled, by Alternative

Year	Scenario	GHG Emissions (MT/year)	Annual Vehicle-Miles-Traveled (VMT)
2015	Existing/Baseline	838,377	1,953,368,488
2025	No Build Alternative	797,917	2,251,913,061
	Build Alternative	798,295	2,251,890,159
2045	No Build Alternative	721,129	2,657,076,160
	Build Alternative	720,828	2,656,668,435

Year	Scenario	GHG Emissions (MT/year)	Annual Vehicle-Miles-Traveled (VMT)
2050	No Build Alternative	740,273	2,758,367,693
	Build Alternative	739,814	2,757,863,299

MT = metric tons (1 MT = 2,205 pounds)

Source: Air Quality Report for US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project, 2023.
CO₂e = CO₂, N₂O, CH₄
Annual VMT values derived from Daily VMT values multiplied by 347, per ARB methodology (ARB 2008: I-19)

3.3.3.2 Construction Emissions

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

Use of long-life pavement, improved traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities.

For informational purposes, GHG emissions during construction of the Project were modeled, and are estimated to be 2,372 MT of CO₂e over the course of the entire Project construction period (see Table 2.16-6).

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7 1.02C, Emissions Reduction, requires contractors to comply with all laws applicable to the project and to certify they are aware of and will comply with all ARB emission reduction regulations. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce GHG emissions.

3.3.3.3 CEQA Conclusion

Based on the analyses in this Draft EIR/EA, it is concluded that the Project would result in a less than significant impact with regard to GHG emissions and climate change. Facts in support of this determination are as follows:

- Per MM-AIR-1.1 in Section 2.16, construction equipment shall be zero emissions or have engines that meet or exceed either EPA or ARB Tier 4 off-road emission standards, and it shall have engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used.

- GHG emissions during the Project’s construction phase would be offset by projected decreases in GHG emissions during the Project’s operational phase. See the data in Table 3.3.2, which projects lower GHG emissions under the Build Alternative than under the No Build Alternative.
- The Project is included in the current RTP and TIP, both of which contain regional strategies for reducing GHG emissions from transportation sources. One of the main strategies to reduce GHG emissions is to make transportation systems more efficient by reducing congestion and by improving facilities for alternative modes (e.g., transit, bicycling, walking). The Project would reduce congestion and lower VMT in the project area by providing additional vehicular access and by constructing new bicycle and pedestrian facilities.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

3.3.4 Greenhouse Gas Reduction Strategies

3.3.4.1 *Statewide Efforts*

In response to AB 32, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Climate change programs in California are effectively reducing GHG emissions from all sectors of the economy. These programs include regulations, market programs, and incentives that will transform transportation, industry, fuels, and other sectors, to take California into a sustainable, low-carbon and cleaner future, while maintaining a robust economy (ARB 2022d).

Major sectors of the California economy, including transportation, will need to reduce emissions to meet 2030 and 2050 GHG emissions targets. The Governor’s Office of Planning and Research identified five sustainability pillars in a 2015 report: (1) increasing the share of renewable energy in the State’s energy mix to at least 50 percent by 2030; (2) reducing petroleum use by up to 50 percent by 2030; (3) increasing the energy efficiency of existing buildings by 50 percent by 2030; (4) reducing emissions of short-lived climate pollutants; and (5) stewarding natural resources, including forests, working lands, and wetlands, to ensure that they store carbon, are resilient, and enhance other environmental benefits (OPR 2015). OPR later added strategies related to achieving statewide carbon neutrality by 2045 in accordance with EO B-55-18 and AB 1279 (OPR 2022).

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of VMT. Reducing today’s petroleum use in cars and trucks is a key state goal for reducing greenhouse gas emissions by 2030 (California Environmental Protection Agency 2015).

In addition, SB 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Subsequently, Governor Gavin Newsom issued Executive Order N-82-20 to combat the crises in climate change and biodiversity. It instructs state agencies to use existing authorities and resources to identify and implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities and in particular low-income, disadvantaged, and vulnerable communities. To support this order, the California Natural Resources Agency (2022a) released *Natural and Working Lands Climate Smart Strategy*, with a focus on nature-based solutions.

3.3.4.2 Caltrans Activities

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

Climate Action Plan for Transportation Infrastructure

The California Action Plan for Transportation Infrastructure (CAPTI) builds on executive orders signed by Governor Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40% of all polluting emissions, to reach the state's climate goals. Under CAPTI, where feasible and within existing funding program structures, the state will invest discretionary transportation funds in sustainable infrastructure projects that align with its climate, health, and social equity goals (California State Transportation Agency 2021).

California Transportation Plan

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. It serves as an umbrella document for all the other statewide transportation planning documents. The CTP 2050 presents a vision of a safe, resilient, and universally accessible transportation system that supports vibrant communities, advances racial and economic justice, and improves public and environmental health. The plan's climate goal is to achieve statewide GHG emissions reduction targets and increase resilience to climate change. It demonstrates how GHG emissions from the transportation sector can be reduced through advancements in clean fuel technologies; continued shifts toward active travel, transit, and shared mobility; more

efficient land use and development practices; and continued shifts to telework (Caltrans 2021a).

Caltrans Strategic Plan

The Caltrans 2020–2024 Strategic Plan includes goals of stewardship, climate action, and equity. Climate action strategies include developing and implementing a Caltrans Climate Action Plan; a robust program of climate action education, training, and outreach; partnership and collaboration; a VMT monitoring and reduction program; and engaging with the most vulnerable communities in developing and implementing Caltrans climate action activities (Caltrans 2021b).

Caltrans Policy Directives and Other Initiatives

Caltrans Director’s Policy 30 (DP-30) Climate Change (June 22, 2012) established a Department policy to ensure coordinated efforts to incorporate climate change into Departmental decisions and activities. Caltrans Greenhouse Gas Emissions and Mitigation Report (Caltrans 2020) provides a comprehensive overview of Caltrans’ emissions. The report documents and evaluates current Caltrans procedures and activities that track and reduce GHG emissions and identifies additional opportunities for further reducing GHG emissions from Department-controlled emission sources, in support of Departmental and State goals.

3.3.4.3 Project-Level GHG Reduction Strategies

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

- The highway improvements that would be constructed as part of the Project are designed to reduce congestion and improve access. Therefore, when compared to the No Build Alternative, the Project would result in improved traffic operations and a reduction in VMT, which would translate into reduced GHG emissions (see Table 3.2-1).
- The Project includes the improvements to bicycle and pedestrian facilities that are listed in Section 1.3.1.5. The improvements would facilitate bicycle and pedestrian travel in the area, reducing GHG emissions when compared to travel by cars.
- During the construction phase, the Project would implement the emissions reduction measures listed in Section 2.16.4.2. Those measures require the use of low-emission construction equipment, prohibit unnecessary idling of trucks and equipment, and prohibit use of diesel-powered generators, all of which would reduce GHG emissions.
- Electricity required during the construction phase and during the operational phase of the Project will be supplied by San José Clean Energy (SJCE), which is a local, not-for-profit electricity supplier run by the City of San José. SJCE focuses on purchasing electricity generated by clean sources and is an integral part of San

José’s goal of carbon neutrality by 2030 and *Climate Smart San José*, the City’s climate action plan.

- Per MM-AIR-1.1 in Section 2.16, construction equipment shall be zero emissions or have engines that meet or exceed either EPA or ARB Tier 4 off-road emission standards, and it shall have engines that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used.

3.3.5 Adaptation

Reducing GHG emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

3.3.5.1 *Federal Efforts*

Under NEPA Assignment, Caltrans is obligated to comply with all applicable federal environmental laws and FHWA NEPA regulations, policies, and guidance.

The Fourth National Climate Assessment, published in 2018, presents the foundational science and the “human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways.”

The U.S. DOT Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions” (U.S. DOT 2011). The *U.S. DOT Climate Action Plan* of August 2021 followed up with a statement of policy to “accelerate reductions in greenhouse gas emissions from the transportation sector and make our transportation infrastructure more climate change resilient now and in the future,” following this set of guiding principles (U.S. DOT 2021):

- Use best-available science
- Prioritize the most vulnerable

- Preserve ecosystems
- Build community relationships
- Engage globally

U.S. DOT developed its climate action plan pursuant to the federal EO 14008, Tackling the Climate Crisis at Home and Abroad (January 27, 2021). EO 14008 recognized the threats of climate change to national security and ordered federal government agencies to prioritize actions on climate adaptation and resilience in their programs and investments (White House 2021).

FHWA order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events, December 15, 2014) established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (FHWA 2019).

3.3.5.2 State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. A number of state policies and tools have been developed to guide adaptation efforts.

California's Fourth Climate Change Assessment (Fourth Assessment) (2018) is the state's effort to "translate the state of climate science into useful information for action." It provides information that will help decision makers across sectors and at state, regional, and local scales protect and build the resilience of the state's people, infrastructure, natural systems, working lands, and waters. The State's approach recognizes that the consequences of climate change occur at the intersections of people, nature, and infrastructure. The Fourth Assessment reports that if no measures are taken to reduce GHG emissions by 2021 or sooner, the state is projected to experience a 2.7 to 8.8 degrees Fahrenheit increase in average annual maximum daily temperatures, with impacts on agriculture, energy demand, natural systems, and public health; a two-thirds decline in water supply from snowpack and water shortages that will impact agricultural production; a 77% increase in average area burned by wildfire, with consequences for forest health and communities; and large-scale erosion of up to 67% of Southern California beaches and inundation of billions of dollars' worth of residential and commercial buildings due to sea level rise (State of California 2018).

Sea level rise is a particular concern for transportation infrastructure in the coastal zone. Major urban airports will be at risk of flooding from sea level rise combined with storm surge as early as 2040; San Francisco Airport is already at risk. Miles of coastal highways vulnerable to flooding in a 100-year storm event will triple to 370 by 2100, and 3,750 miles will be exposed to temporary flooding. The Fourth Assessment's findings highlight the need for proactive action to address these current and future impacts of climate change.

In 2008, then-governor Arnold Schwarzenegger recognized the need when he issued EO S-13-08, focused on sea level rise. Technical reports on the latest sea level rise science were first published in 2010 and updated in 2013 and 2017. The 2017 projections of sea level rise and new understanding of processes and potential impacts in California were incorporated into the State of California Sea-Level Rise Guidance Update in 2018. This EO also gave rise to the California Climate Adaptation Strategy (2009), updated in 2014 as Safeguarding California: Reducing Climate Risk (Safeguarding California Plan), which addressed the full range of climate change impacts and recommended adaptation strategies. The Safeguarding California Plan was updated in 2018 and again in 2021 as the California Climate Adaptation Strategy, incorporating key elements of the latest sector-specific plans such as the Natural and Working Lands Climate Smart Strategy, Wildfire and Forest Resilience Action Plan, Water Resilience Portfolio, and the CAPTI (described above). Priorities in the 2021 California Climate Adaptation Strategy include acting in partnership with California Native American Tribes, strengthening protections for climate-vulnerable communities that lack capacity and resources, nature-based climate solutions, use of best available climate science, and partnering and collaboration to best leverage resources (California Natural Resources Agency 2022b).

EO B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This EO recognizes that effects of climate change in addition to sea level rise also threaten California's infrastructure. At the direction of EO B-30-15, the Office of Planning and Research published Planning and Investing for a Resilient California: A Guidebook for State Agencies in 2017, to encourage a uniform and systematic approach.

AB 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group to help actors throughout the state address the findings of California's Fourth Climate Change Assessment. It released its report, Paying it Forward: The Path Toward Climate-Safe Infrastructure in California, in 2018. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts (Climate Change Infrastructure Working Group 2018).

3.3.5.3 Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans completed climate change vulnerability assessments to identify segments of the State Highway System vulnerable to climate change effects of precipitation, temperature, wildfire, storm surge, and sea level rise.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront

of climate science. The findings of the vulnerability assessments guide analysis of at-risk assets and development of Adaptation Priority Reports as a method to make capital programming decisions to address identified risks.

Project Adaptation Analysis

Sea Level Rise

The proposed Project is outside the coastal zone and not in an area subject to sea-level rise. As shown by the blue shading on Figure 3.3-5, the area subject to sea level rise is located around the perimeter of San Francisco Bay and is more than five miles from the Project. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

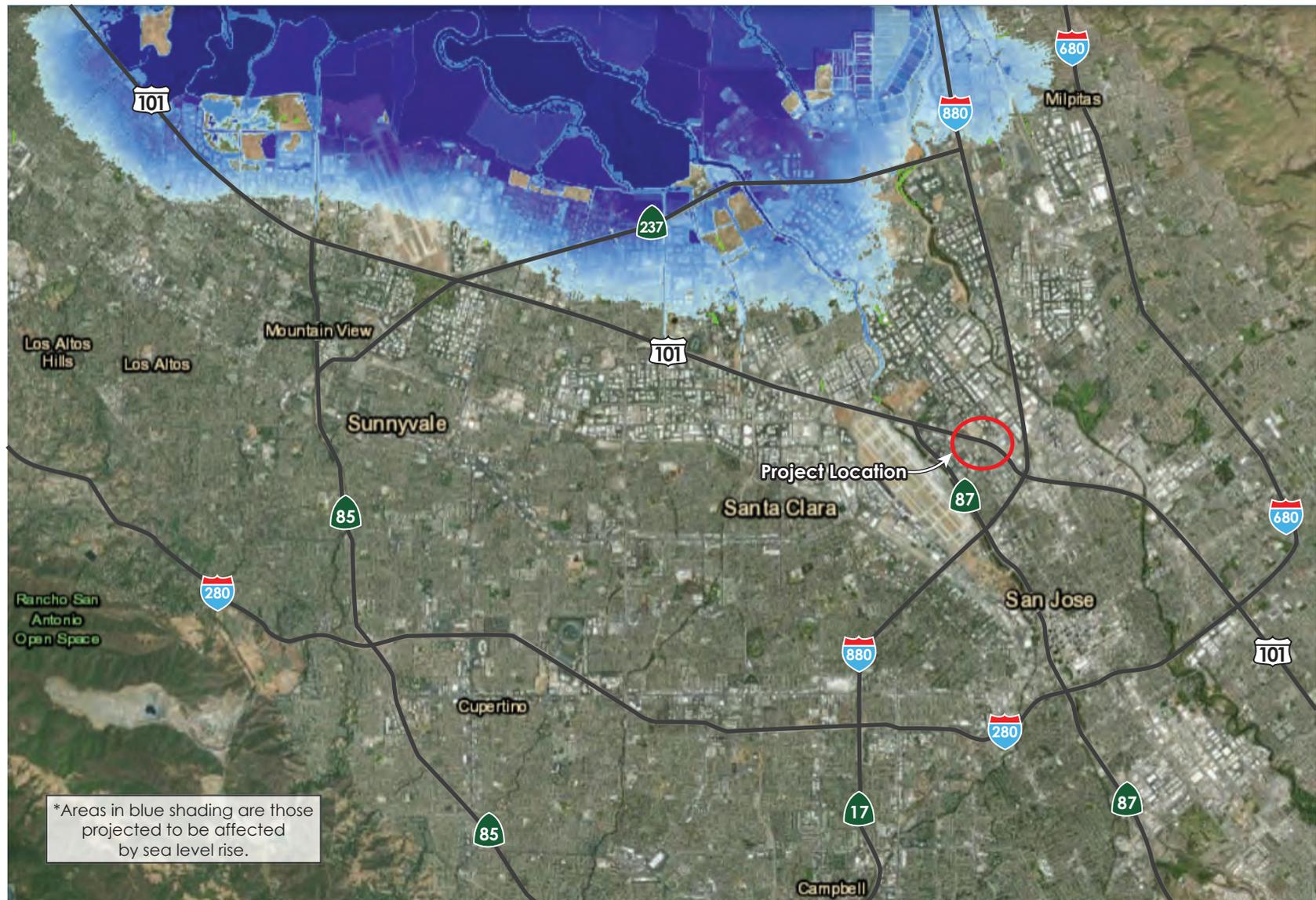
Floodplains

According to floodplain maps prepared by Federal Emergency Management Agency (FEMA), a portion of the Project footprint is located within the 100-Year Floodplain, delineated by Zones AH and AO. These areas are subject to shallow flooding, however, the flooding conditions would be minimal to shallow. Construction of the Project would require the placement of approximately 38,000 cubic feet of fill within Zone AO, which would equate to a loss of approximately 0.87 acre-feet of storage capacity for flood waters. This placement of fill would be offset by implementation of MM-HF-1.1, consisting of removing an equal volume of fill in the floodplain from the open areas along Technology Place and North Fourth Street. Thus, the net effect would be no increases in the depth of flooding. Further, the Project would be designed to avoid the blockage of flood flows within its footprint.

Wildfire

According to mapping prepared by the Santa Clara County FireSafe Council, the Project site is not located within or near a Moderate, High, or Very High Fire Hazard Severity Zone. The closest fire hazard zone to the Project area is the East Foothills of the Diablo Range, more than eight miles to the east.³⁵

³⁵ Source: <https://sccfiresafe.org/resources/do-you-reside-in-santa-clara-countys-wildland-urban-interface-wui/> (accessed 2/15/2022).



Source: NOAA Sea Level Rise Viewer

AREA PROJECTED TO BE AFFECTED BY SEA LEVEL RISE

FIGURE 3.3-5

SECTION 4.0 COMMENTS AND COORDINATION

4.1 INTRODUCTION

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures and related environmental requirements. Agency consultation and public participation for this Project have been accomplished through a variety of formal and informal methods, including Project Development Team meetings, interagency coordination meetings, a Notice of Preparation public scoping meeting, and meetings with property owners and developers.

This chapter summarizes the efforts to fully identify, address and resolve Project-related issues through early and continuing coordination.

4.2 NOTICE OF PREPARATION AND SCOPING PROCESS

Caltrans circulated a Notice of Preparation (NOP) of an EIR/EA to local, regional, state, and federal agencies on October 4, 2021. The 30-day scoping period started on October 6, 2021 and ended on November 8, 2021. A copy of the NOP is provided in Appendix D.

A virtual Environmental Scoping Meeting was held on October 20, 2021 at 6:00 PM. Approximately 350 notices for the Scoping Meeting were mailed to residences (tenants and owners) and businesses within a 0.25-mile radius of the Project. VTA posted the public meeting notice on the VTA website, VTA Headways Blog, and Social Media (Twitter, Facebook, NextDoor), and local newspapers. Notices were published in English, Spanish, Chinese, Filipino, Korean, and Vietnamese newspapers. An email notification of the NOP was sent to agencies, organizations, and individual stakeholders. Approximately 24 people attended the scoping meeting via Zoom.

One public comment was received during the scoping period. The comment was from a member of the public. The comment was related to the following subject areas:

- Traffic impacts
- Community impacts to the Japantown area

4.3 CONSULTATION AND COORDINATION WITH AGENCIES AND ORGANIZATIONS

VTA, Caltrans, and the City of San José meet on a regular basis to address any questions or issues related to Project design, construction, and planned operation.

SECTION 5.0 LIST OF PREPARERS

The following individuals were principally responsible for preparing this Draft EIR/EA and/or the technical studies upon which the Draft EIR/EA is based:

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SECTION 6.0 DISTRIBUTION LIST

This Draft EIR/EA was distributed to the following legislators, public officials, agencies and organizations:

Legislators and Public Officials

- U.S. Senator Laphonza Butler
- U.S. Senator Alex Padilla
- U.S. Representative Zoe Lofgren
- California Senator Dave Cortese
- California Assemblyman Evan Low
- Santa Clara County Supervisor Susan Ellenberg
- San José Councilmember Dev Davis
- San José Councilmember Omar Torres

State Agencies (via State Clearinghouse)

- California Highway Patrol
- California Department of Fish & Game (Region 3)
- California Department of Toxic Substances Control
- Regional Water Quality Control Board (San Francisco Bay Region)
- State Historic Preservation Office
- California Transportation Commission
- Air Resources Board
- Native American Heritage Commission
- State Water Resources Control Board

Regional Agencies

- Metropolitan Transportation Commission
- Association of Bay Area Governments
- Bay Area Air Quality Management District
- Santa Clara Valley Water District

Local Agencies

- City of San José
- City of Santa Clara
- Santa Clara County Roads & Airports Department

Organizations

- Silicon Valley Bicycle Coalition
- Silicon Valley Leadership Group
- SPUR
- Hyde Park Neighborhood Association
- Rosemary Gardens Neighborhood Association
- Northside Neighborhood Association
- Luna Park Business Association/13th Street Business Association
- Japantown Neighborhood Association
- Japantown Business Association
- Hensley Historic Neighborhood Association
- Horace Mann Neighborhood Association
- Julian St. James Neighborhood Association

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APPENDIX

A

Title VI

Policy Statement

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September 2022

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures *“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.”*

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

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To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 879-6768 (TTY 711); or at Title.VI@dot.ca.gov.

A handwritten signature in black ink, appearing to read 'Tony Tavares'.

TONY TAVARES
Director

APPENDIX

B

Avoidance, Minimization, and/or Mitigation Summary

**US 101/Zanker Road/Skyport Drive/
Fourth Street Improvement Project
EA 04-0K710**

ENVIRONMENTAL COMMITMENT RECORD

In order to be sure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record [ECR] which follows) would be implemented. During project design, avoidance, minimization, and /or mitigation measures will be incorporated into the Project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the Project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in this ECR are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. As the following ECR is a draft, some fields have not been completed, and will be filled out as each of the measures is implemented. Note: Some measures may apply to more than one resource area. Duplicative or redundant measures have not been included in this ECR.

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
RELOCATIONS AND REAL PROPERTY ACQUISITION						
MM-RRP-1.1	The Project would comply with all requirements of the Uniform Relocation Act to ensure businesses displaced by the Project would be properly compensated and relocated, as necessary.	Draft EIR/EA Section 2.5	Design	Caltrans, VTA		
VISUAL/AESTHETICS						
MM-VIS-1.1	To the maximum extent practicable, damage to or removal of trees will be avoided by the Project. If trees need to be removed or are damaged as a result of the Project, they will be replaced within the project corridor, to the extent feasible. Replacement planting will be irrigated and maintained for a period of not less than 3 years after planting.	Draft EIR/EA Section 2.9	Design through Construction	Caltrans, VTA, Contractor	■	
MM-VIS-1.2	The Project will incorporate treatments to improve aesthetics and reduce the opportunity for graffiti including texture, landscaping, and/or color on Project features. Architectural treatments (e.g., color, surface texture, and other treatments) will be consistent with the character of the freeway corridor in the project vicinity.	Draft EIR/EA Section 2.9	Design through Construction	Caltrans, VTA, CSJ Staff, Contractor	■	
MM-VIS-1.3	If nighttime work is necessary, lighting will be limited to the work area by using directional lighting and shielding of light fixtures. Permanent lighting installed by the Project will be designed to limit light pollution and have minimum impact on the surrounding environment. All light fixtures will be configured with the minimum necessary number of bulbs and the optimal mounting height, mast-arm length, and angle to restrict light to the roadways. Where applicable, shields on the fixtures will be considered during the detailed design phase to prevent light trespass to adjacent properties.	Draft EIR/EA Section 2.9	Design through Construction	Contractor	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
CULTURAL RESOURCES						
n/a	If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.	Draft EIR/EA Section 2.10	Construction	Contractor		■
n/a	If human remains are discovered, California Health and Safety Code (H&SC) Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. If the remains are thought by the coroner to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), who, pursuant to Public Resources Code (PRC) Section 5097.98, will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact Caltrans District 4 Office of Cultural Resources Studies so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.	Draft EIR/EA Section 2.10	Construction	Contractor, Caltrans, VTA		■
HYDROLOGY AND FLOODPLAIN						
MM-HF-1.1	Proposed fill and cut within the 100-Year Floodplain will be balanced such that adverse effects associated with changes in flooding depths will be avoided.	Draft EIR/EA Section 2.11	Design through Construction	Caltrans, VTA, Contractor		■
MM-HF-1.2	In order to avoid increased flooding elsewhere, the Project shall be designed to minimize any obstruction to the flow of floodwaters.	Draft EIR/EA Section 2.11	Design through Construction	Caltrans, VTA, Contractor		■

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
WATER QUALITY						
MM-WQ-1.1	Although long-term water quality effects of the Project would not be substantial, the design of the Project includes Best Management Practices (BMPs) such as site design, permanent erosion control, drainage facilities, source control measures, and treatment measures to reduce the pollutant component of stormwater runoff, as required by the Caltrans National Pollution Discharge Elimination System (NPDES) permit. In addition to the requirements of the NPDES permit, compliance with the requirements of the Caltrans Stormwater Management Plan (SWMP) is also required throughout implementation of the Project. The SWMP describes the programs to reduce the discharge of pollutants associated with the stormwater drainage systems and describes how Caltrans will comply with the provisions of the NPDES permit.	Draft EIR/EA Section 2.12	Design through Construction	Caltrans, VTA, Contractor		■
MM-WQ-1.2	Prior to any soil disturbance work, file a Notice of Intent with State Water Resources Control Board (SWRCB). To maintain proper permit coverage under the Construction Stormwater General Permit (CGP), in addition to filing a Notice of Intent, all dischargers must electronically file permit registration documents, Notice of Termination, changes of information, sampling and monitoring information, annual reporting, and other required compliance documents through the SWRCB's Stormwater Multiple Application and Report Tracking System (SMARTS).	Draft EIR/EA Section 2.12	Design through Construction	Caltrans, VTA, Contractor	■	
MM-WQ-1.3	Prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). Prior to the start of construction, the SWPPP would be submitted by the Contractor to Caltrans for approval. The SWPPP shall	Draft EIR/EA Section 2.12	Design through Construction	Caltrans, VTA, Contractor	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
	detail the measures to address the temporary water quality impacts resulting from construction activities associated with this Project. The SWPPP shall also include the development of a Construction Site Monitoring Program that presents procedures and methods related to the visual monitoring, sampling, and analysis plans during construction of the project.					
GEOLOGY/SOILS/SEISMIC/TOPOGRAPHY						
n/a	The Project would be designed to comply with both the Uniform Building Code and Caltrans' Design Standards. This will avoid the need for adoption of any non-standard avoidance, minimization, and/or mitigation measures.	Draft EIR/EA Section 2.13	Design through Construction	Caltrans, VTA, Contractor		■
PALEONTOLOGICAL RESOURCES						
MM-PALEO-1.1	A qualified paleontologist shall provide preconstruction training on the potential for significant fossil localities in the Project area and provide an Alert Sheet that includes contact information for a qualified paleontologist who will be on call to respond in the event a fossil is recovered.	Draft EIR/EA Section 2.14	Construction	Caltrans or VTA Paleontologist		■
MM-PALEO-1.2	If unanticipated discoveries of paleontological resources occur during Project construction, all work within 25 feet of the discovery must cease and the find must be protected in place until it can be evaluated by a qualified paleontologist. The qualified paleontologist shall follow Society of Vertebrate Paleontology guidelines to determine whether the fossil can be identified and whether it meets significance criteria. Work may resume immediately outside of the 25-foot radius.	Draft EIR/EA Section 2.14	Construction	Contractor, Caltrans, VTA		■
HAZARDOUS WASTE/MATERIALS						
MM-HAZMAT-1.1	As part of Project development, a soil investigation will be conducted to determine whether aerially-deposited lead (ADL) has affected soils that will be excavated as part of	Draft EIR/EA	Design through Construction	Caltrans, VTA, Contractor		■

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
	the proposed Project. The investigation for ADL will be performed in accordance with Caltrans' Lead Testing Guidance Procedure. The analytical results will be compared against applicable hazardous waste criteria. Based on analytical results, the investigation will provide recommendations regarding management and disposal of affected soils in the Project area including the reuse potential of ADL-affected soil during Project development. The provisions of a variance granted to Caltrans by the California Department of Toxic Substances Control on September 22, 2000 (or any subsequent variance in effect when the Project is constructed) regarding aeri-ally-deposited lead will be followed.	Section 2.15				
MM-HAZMAT-1.2	Testing for the presence of lead-based paint on the existing structures to be demolished and roadway paint to be removed will occur. If this substance is found to be present, applicable regulations pertaining to its removal and disposal will be followed.	Draft EIR/EA Section 2.15	Design through Construction	Caltrans, VTA, Contractor		■
MM-HAZMAT-1.3	Testing for the presence of asbestos-containing materials on the existing structures will occur. If these materials are found to be present, applicable regulations pertaining to their removal and disposal will be followed.	Draft EIR/EA Section 2.15	Design through Construction	Caltrans, VTA, Contractor		■
MM-HAZMAT-1.4	Testing for the presence of polychlorinated biphenyl (PCB) on the existing structures will occur. If these materials are found to be present, applicable regulations pertaining to their removal and disposal will be followed.	Draft EIR/EA Section 2.15	Design through Construction	Caltrans, VTA, Contractor		■
MM-HAZMAT-1.5	Treated wood waste will be handled properly in accordance with applicable Caltrans guidelines and if warranted, will require special removal, handling, and disposal.	Draft EIR/EA Section 2.15	Construction	Caltrans, VTA, Contractor	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
MM-HAZMAT-1.6	A Soil and Groundwater Management Plan will be prepared to properly manage any soil and/or groundwater impacted by hazardous materials discovered during ground-disturbing activities within the Project area.	Draft EIR/EA Section 2.15	Design through Construction	Caltrans, VTA, Contractor	■	
MM-HAZMAT-1.7	A site-specific Health and Safety Plan (HSP) that is consistent with Caltrans requirements will be prepared. The HSP shall include: identification of key personnel; summary of risk assessment for workers, the community, and the environment; air monitoring plan; and emergency response plan.	Draft EIR/EA Section 2.15	Design through Construction	Caltrans, VTA, Contractor		■
MM-HAZMAT-1.8	Testing of the soils within the Project area for worker safety and soil management purposes will occur. Soils and groundwater, if encountered, shall be tested for the following: <ul style="list-style-type: none"> • total petroleum hydrocarbons (TPH) as gasoline, as diesel, and as motor oil; • volatile organic compounds (VOCs) including tetrachloro-ethene (PCE); • pesticides, herbicides, and metals. 	Draft EIR/EA Section 2.15	Design through Construction	Caltrans, VTA, Contractor		■
MM-HAZMAT-1.9	If at any point during construction stained or odoriferous soils are encountered, these soils will be stockpiled separately on plastic sheeting. The stockpiles shall then be sampled for the above-mentioned analytes and characterized for special handling and/or disposal.	Draft EIR/EA Section 2.15	Construction	Caltrans, VTA, Contractor		■
AIR QUALITY						
MM-AIR-1.1	Prior to construction, the contractor for the Project shall submit a list of all off-road equipment greater than 25 horsepower (hp) that would be operated for more than 20 hours over the entire duration of Project construction, including equipment from subcontractors, to Bay Area Air Quality Management District (BAAQMD) for review and	Draft EIR/EA Section 2.16	Construction	Contractor	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
	<p>certification. The list shall include all information necessary to ensure the equipment meets the following requirement:</p> <ul style="list-style-type: none"> ○ Equipment shall be zero emissions or have engines that meet or exceed either Environmental Protection Agency (EPA) or Air Resource Board (ARB) Tier 4 off-road emission standards, and it shall have engines that are retrofitted with a ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used. Equipment with engines that meet Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement; therefore, a VDECS would not be required. 					
MM-AIR-1.2	Idling time of diesel-powered construction equipment and trucks shall be limited to no more than five minutes. Clear signage of this idling restriction shall be provided for construction workers at all access points.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-1.3	All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-1.4	Portable diesel generators shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.1	All haul trucks transporting soil, sand, or other loose material off-site shall be covered.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.2	On-site dirt piles or other stockpiled particulate matter (PM) shall be covered, wind breaks installed, and water	Draft EIR/EA	Construction	Contractor	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
	and/or soil stabilizers employed to reduce wind-blown dust emissions. The use of approved nontoxic soil stabilizers shall be incorporated according to manufacturers' specifications to all inactive construction areas.	Section 2.16				
MM-AIR-2.3	All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.4	All vehicle speeds on unpaved roads and surfaces shall be limited to 15 mph.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.5	All roadway, driveway, and sidewalk paving shall be completed as soon as possible.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.6	All construction sites shall provide a posted sign visible to the public with the telephone number and person to contact at the lead agency regarding dust complaints. The recommended response time for corrective action shall be within 48 hours. BAAQMD's Complaint Line (1-800-334-6367) shall also be included on posted signs to ensure compliance with applicable regulations.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.7	All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.8	Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of	Draft EIR/EA	Construction	Contractor	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
	construction. Wind breaks should have at maximum 50% air porosity.	Section 2.16				
MM-AIR-2.9	Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.10	The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.11	All transfer processes involving a free fall of soil or other PM shall be operated in such a manner as to minimize the free fall distance and fugitive dust emissions.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.12	Site accesses to a distance of 100 feet from the paved road shall be treated with a 6-to 12-inch compacted layer of wood chips, mulch, or gravel.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.13	Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1%.	Draft EIR/EA Section 2.16	Construction	Contractor	■	
MM-AIR-2.14	Open burning shall be prohibited at the Project site. No open burning of vegetative waste (natural plant growth wastes) or other legal or illegal burn materials (e.g., trash, demolition debris) may be conducted at the Project site. Vegetative wastes shall be chipped or delivered to waste-to-energy facilities (permitted biomass facilities), mulched, composted, or used for firewood. It is unlawful to haul waste materials off-site for disposal by open burning.	Draft EIR/EA Section 2.15	Construction	Contractor	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
MM-AIR-2.15	All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.	Draft EIR/EA Section 2.15	Construction	Contractor	■	
NOISE AND VIBRATION						
MM-NOI-1.1	All construction equipment shall conform to Section 14-8.02, Noise Control, of the latest Caltrans Standard Specifications.	Draft EIR/EA Section 2.17	Construction	Contractor	■	
MM-NOI-1.2	When feasible, noise-generating construction activities shall be restricted to between 7:00 a.m. and 7:00 p.m. on weekdays, with no construction occurring on weekends or holidays. If work is necessary outside of these hours, Caltrans shall require the contractor to implement a construction noise monitoring program and provide additional noise controls where practical and feasible.	Draft EIR/EA Section 2.17	Construction	Contractor	■	
MM-NOI-1.3	Pile driving activities shall be limited to daytime hours only.	Draft EIR/EA Section 2.17	Construction	Contractor	■	
MM-NOI-1.4	All internal combustion engine driven equipment shall be equipped with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.	Draft EIR/EA Section 2.17	Construction	Contractor	■	
MM-NOI-1.5	Unnecessary idling of internal combustion engines within 100 feet of residences shall be strictly prohibited.	Draft EIR/EA Section 2.17	Construction	Contractor	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
MM-NOI-1.6	Noise generating equipment shall be located as far as practical from sensitive receptors when sensitive receptors adjoin or are near the construction project area.	Draft EIR/EA Section 2.17	Construction	Contractor	■	
MM-NOI-1.7	"Quiet" air compressors and other "quiet" equipment shall be utilized where such technology exists.	Draft EIR/EA Section 2.17	Construction	Contractor	■	
BIOLOGICAL RESOURCES						
MM-BIO-1.1	Nesting Migratory Bird Avoidance Measures and Surveys. To minimize and avoid take of all migratory birds, their nests, and their young, Caltrans will conduct vegetation removal between October 1 and December 31 (outside the migratory bird nesting season for passerines and raptors) to the maximum extent practicable. If vegetation trimming, tree removal, or other construction activities that may affect nesting birds occurs within the nesting season, then qualified biologists will conduct preconstruction surveys for nesting birds no more than 2 days prior to construction. If construction is stopped for more than 2 weeks, the pre-construction surveys will be repeated. If an active nest is discovered, biologists will establish an appropriate species-specific exclusion buffer around the nest. The area within the buffer will be avoided until the young are no longer dependent on the adults or the nest is no longer active. The qualified biologist will have authority, through the Resident Engineer (RE), to order the cessation of all construction activities outside the buffer area if birds exhibit abnormal nesting behavior. Construction activities will not continue until the birds resume normal nesting behavior or the nest is no longer	Draft EIR/EA Section 2.19	Construction	Caltrans or VTA Biologist	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
	active. Qualified biologists will immediately notify the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) for further guidance if a listed or special-status bird species is discovered during preconstruction surveys.					
MM-BIO-2.1	Pre-Construction Tree Survey. Prior to construction, Caltrans will conduct a survey to identify and mark trees for removal, and trees that will remain during construction. Whenever possible, trees will be trimmed rather than removed. For trees that will remain, those trees and their critical root zone (CRZ) will be marked with bright orange polypropylene Environmentally Sensitive Area (ESA) fencing that can be avoided during construction to the greatest extent feasible in temporary impact areas and along the edge of the Project footprint.	Draft EIR/EA Section 2.19	Pre-Construction through Construction	Caltrans or VTA Biologist		■
MM-BIO-2.2	International Society of Arboriculture - Certified Arborist Consultation. Work will not be performed in the CRZ of any tree to be retained without consultation with an International Society of Arboriculture-certified arborist. If trees are damaged during construction and become unhealthy or die, the damaged tree(s) will be removed and replaced.	Draft EIR/EA Section 2.19	Pre-Construction through Construction	Caltrans or VTA Biologist		■
MM-BIO-2.3	Tree Replacement. Trees impacted by the Project will be replaced at ratios that are commensurate with the size of the tree to be removed. Native trees with a diameter at breast height (DBH) of less than 12 inches will be replaced at a 2:1 ratio. Native trees with a DBH of 12 inches or more will be replaced at a 3:1 ratio. If urban trees (nonnatives and ornamentals) are replaced with native trees, a reduced mitigation ratio of 1:1 for all trees smaller than 12 inches DBH, and 2:1 for all trees with a	Draft EIR/EA Section 2.19	Design through Construction	Caltrans, VTA, Contractor	■	

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
	<p>DBH of 12 inches or more, will be implemented. Replacement 24-inch box trees will be considered where feasible. The replacement trees will be irrigated and maintained for a period of not less than three years. If trees cannot be replaced at the stated ratios within the Project footprint, in-lieu fees will be paid to an appropriate fund so that trees can be planted elsewhere within the City of San José limits.</p>					
INVASIVE SPECIES						
MM-INV-1.1	<p>Prior to vegetation clearing and grubbing, vehicles (including wheels, undercarriages, and bumpers) and all other equipment, will be washed before and after entering the Project's construction site. Vehicles will be cleaned at legally operating car washes before entering the construction site and at existing construction yards after they have encountered vegetation. All washing will follow appropriate stormwater best management practices (BMPs). Only clean water in washing (no soap or detergent) will be used and appropriate runoff containment BMPs will be implemented. Wash water will be discharged in a way that it does not enter a storm drain (i.e., let it soak into a pervious area on site). Vegetation will be disposed of off-site. After clearing and grubbing of the vegetation has been completed, construction vehicles will use designated entrance/exits and no washing will be required.</p>	Draft EIR/EA Section 2.20	Construction	Contractor		■
MM-INV-1.2	<p>Soil and plant material from areas that support invasive species will be properly contained and transported to an approved facility for disposal disposed of in accordance with applicable regulations and procedures. In addition, all fill material will be sourced from weed-free areas.</p>	Draft EIR/EA Section 2.20	Construction	Contractor		■

ID Number	Task and Brief Description	Source	Project Timing	Responsible Staff	CEQA Mitigation Measure	Avoidance/Minimization Measure
<p>Notes:</p> <p>VTA = Santa Clara Valley Transportation Authority CSJ= City of San Jose</p>						

APPENDIX

C

List of Acronyms and Abbreviations

List of Acronyms and Abbreviations

AB	Assembly Bill
ABC	Across Barrier Connections
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
ADL	aerially-deposited lead
AIA	Airport Influence Area
APE	Area of Potential Effects
AQCTF	Air Quality Conformity Task Force
ARB	Air Resources Board
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BFE	base flood elevations
BMPs	Best Management Practices
BRT	bus rapid transit
BSA	biological study area
BTU	British Thermal Unit
CAA	Clean Air Act
CAFE	Corporate Average Fuel Economy
CalEPA	California Environmental Protection Agency
Caltrans	California Department of Transportation
CAPTI	California Action Plan for Transportation Infrastructure
CARB	California Air Resources Board
CCAA	California Clean Air Act
CDFW	California Department of Fish & Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
CO _{2e}	carbon dioxide equivalent
CRHR	California Register of Historic Resources

CTP	California Transportation Plan
CWA	Clean Water Act
dB	decibels
dBA	a-weighted decibel
DBH	diameter at breast height
DSA	Disturbed Soil Area
DTSC	(California) Department of Toxic Substances Control
EB	eastbound
EIR/EA	Environmental Impact Report/Environmental Assessment
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EMFAC	Emission FACTors
EO	Executive Order
EPA	(United States) Environmental Protection Agency
FAA	Federal Aviation Administration
FCAA	Federal Clean Air Act
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FONSI	Finding of No Significant Impact
FSTIP	Federal-Statewide Transportation Improvement Program
FTA	Federal Transit Administration
FTIPs	Federal Transportation Improvement Plans
GDP	gross domestic product
GHG	greenhouse gas
GSRD	gross solids removal device
HFCs	hydrofluorocarbons
HOV	high occupancy vehicle
hp	horsepower
HSP	Health and Safety Plan
H&SC	California Health and Safety Code
H ₂ S	hydrogen sulfide
in/sec	inches per second
ISA	Initial Site Assessment
LEDPA	least environmentally damaging practicable alternative
Leq[h]	hourly noise equivalent level
L _{max}	maximum noise level
LOS	level of service
LUST	leaking underground storage tank

MBTA	Migratory Bird Treaty Act
MCE	maximum credible earthquake
NHTSA	National Highway Traffic and Safety Administration
MLD	Most Likely Descendent
MMTCO _{2e}	million metric tons of carbon dioxide equivalent
MOU	Memorandum of Understanding
Mph	miles per hour
MPO	Metropolitan Planning Organization
MSAT	mobile source air toxic
MST	Monterey-Salinas Transit
MS4s	municipal separate storm sewer systems
MTC	Metropolitan Transportation Commission
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NAHC	Native American Heritage Commission
NB	northbound
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic and Safety Administration
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
NOA	Notice of Availability
NOAA	National Oceanic Atmospheric Administration
NO _x	nitrogen oxides
NO ₂	nitrogen dioxide
N ₂ O	nitrous oxide
NPDES	National Pollutant Discharge Elimination System
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Act
O ₃	ozone
PA	Programmatic Agreement
Pb	lead
PCE	tetrachloroethene
PM	post mile
PM _{2.5}	particulate matter – 2.5 microns in size
PM ₁₀	particulate matter – 10 microns in size
PMP	Paleontological Mitigation Plan
POAQC	Project of Air Quality Concern

POC	pedestrian overcrossing
PPV	peak particle velocity
PRC	(California) Public Resources Code
RAP	Relocation Assistance Program
RCEM	Road Construction Emissions Model
RCNM	Roadway Construction Noise Model
RCRA	Resource Conservation and Recovery Act
ROG	reactive organic gases
RSA	Resource Study Area
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel-Efficient
SB	Senate Bill
SB	southbound
SCS	Sustainable Communities Strategy
SCVWD	Santa Clara Valley Water District
SDC	Seismic Design Criteria
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SHS	State Highway System
SIP	State Implementation Plan
SJCE	San José Clean Energy
SJIA	Mineta San Jose International Airport
SMARTS	Stormwater Multiple Application and Report Tracking System
SO ₂	sulfur dioxide
SR	State Route
SWMP	Stormwater Management Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TCE	temporary construction easement
TCMs	Transportation Control Measures
TDM	transportation demand management
TIP	Transportation Improvement Program
TMDLs	Total Maximum Daily Loads
TMP	Traffic Management Plan
TPH	total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
TSM	transportation systems management

WB	westbound
UCMP	University of California Museum Paleontology
U.S.	United States
USACE	United States Army Corps of Engineers
USC	United States Code
USDOT	United States Department of Transportation
U.S. EPA	United States Environmental Protection Agency
USFWS	United States Fish & Wildlife Service
VDECS	Verified Diesel Emissions Control Strategy
VHP	Santa Clara Valley Habitat Plan
VHT	vehicle hours traveled
VMT	vehicle miles traveled
VOCs	volatile organic compounds
VTA	Santa Clara Valley Transportation Authority
VTP 2050	Valley Transportation Plan 2050
VRP	Visibility Reducing Particles
WDRs	Wastewater Discharge Requirements
WPCP	Water Pollution Control Program

APPENDIX

D

Notice of Preparation

Notice of Preparation

Notice of Preparation

To: _____

(Address)

From: **Caltrans, District 4**
111 Grand Avenue, MS 8B
Oakland, CA 94612

Subject: Notice of Preparation of a Draft Environmental Impact Report

Caltrans

_____ will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (is is not) attached.

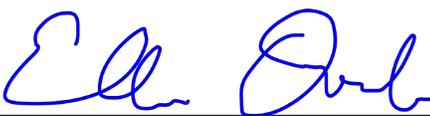
Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Ellen Doudna, Associate Environmental Planner at the address shown above. We will need the name for a contact person in your agency.

Project Title: US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project

Project Applicant, if any: Santa Clara Valley Transportation Authority

Date 09/13/2021

Signature 
Title Associate Environmental Planner
Telephone 510-847-3804

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Notice of Preparation of a Draft Environmental Impact Report/Environmental Assessment

SUPPLEMENTAL PROJECT INFORMATION:

Introduction

The California Department of Transportation (Caltrans) in cooperation with the Santa Clara Valley Transportation Authority (VTA) and the City of San José, proposes to construct improvements on US 101 and adjacent local roadways in San José, Santa Clara County, California (Figure 1). The Project limits on US 101 are postmiles 38.6 - 39.4, which are located between the US 101/State Route (SR) 87 interchange on the west and the US 101/Interstate 880 (I-880) interchange on the east.

Purpose and Need

Purpose

The purpose of the proposed Project is to improve traffic operations and safety, as well as improve access for pedestrians and bicyclists, in the project vicinity. To fulfill this purpose, the following are the specific objectives of the proposed Project:

- Enhance transportation network within the project area to accommodate planned growth as anticipated under the adopted *Envision San José 2040 General Plan*.
- Improve pedestrian and bicycle facilities in the project area.
- Improve safety and traffic operations at the on- and off-ramps and mainline of US 101 within the Project limits.
- Improve access to/from the Norman Y. Mineta San José International Airport (SJIA).

Need

The following text describes the existing and projected deficiencies that establish the need for the improvements contemplated under the proposed Project.

Existing Congestion

Under existing conditions, there is substantial peak-period congestion in the project area, both on US 101 and on local streets. Northbound US 101 operates under congested conditions in the AM peak commute period and southbound US 101 operates under congested conditions in the PM peak commute period. Key bottlenecks along US 101 are at Trimble Road/De La Cruz Boulevard, SR 87, and I-880. During the peak hours, the queues from these key bottlenecks connect with each other and extend outside the study area.

Planned Growth and Projected Increases in Congestion

Congestion along local streets has been increasing in the North San José area in recent years and is predicted to worsen with planned development. The *Envision San José 2040 General Plan* provides for the development of 26,700,000 square feet of industrial uses, 300,000 square feet of commercial uses, and 32,000 residential dwelling units in North San José. Resulting from this growth, vehicle hours of delay will increase from 23,979 daily in 2025 to 40,731 daily in 2045.

The existing roadway network is inadequate to serve this planned growth. As a result, the connection of Zanker Road over US 101 to Skyport Drive and Fourth Street is identified as a key infrastructure improvement project in the *Envision San José 2040 General Plan*, the North San José Area Development Policy, and the North San José Deficiency Plan.

SJIA, just southwest of the North San José area, is also a substantial generator of traffic in the project area. SJIA, which accommodated 15.6 million passengers in 2019, is projected to serve 22.5 million passengers annually by 2037.

Insufficient Facilities for Bicyclists and Pedestrians

Current state, regional, and local plans include policies that mandate the provision of facilities to accommodate and promote safe travel by bicyclists and pedestrians. The project area is currently lacking adequate facilities for those modes of travel. Tenth Street and First Street are currently the only routes that bicyclists and pedestrians can use to cross US 101 in the project area. Between these two streets, a distance of 1.25 miles, there are no crossings of US 101. Along First Street, there is a narrow sidewalk on the east side, no sidewalk on the west side, and no bike lanes south of Brokaw Road under US 101. Within the Project limits, sidewalks are lacking on segments of Skyport Drive, Technology Place, Bering Drive, Old Bayshore Highway, Zanker Road, and Brokaw Road.

Roadway Deficiencies

Skyport Drive serves as the major gateway and entrance into SJIA from SR 87 and the First Street corridor. Currently, access between US 101 and SJIA is both indirect and circuitous as there is no connection to/from SR 87 and southbound US 101, as well as no connection between Skyport Drive and US 101.

Currently, there is no direct connection from southbound I-880 to northbound US 101. Such traffic must exit the southbound I-880/Gish Road off-ramp to access northbound US 101 via a nonstandard hook on-ramp at Old Bayshore Highway.

The existing off-ramp from northbound US 101 to Brokaw Road is a nonstandard freeway feature because it is “isolated” as there is no corresponding on-ramp associated with this off-ramp.

The existing US 101/Old Bayshore Highway northbound on- and off-ramps have very tight radii (60-foot), nonstandard superelevation rates and transitions, as well as nonstandard acceleration/deceleration lane lengths. Accident rates are higher than average at this location.

Project Description

The Project proposes to address the above-described needs and achieve the above-described objectives in three primary ways:

- Construct an overcrossing above US 101 that would connect Zanker Road on the north with Fourth Street and Skyport Drive on the south.
- Replace the existing nonstandard ramps on northbound US 101 at Old Bayshore Highway and Brokaw Road with new ramps at Bering Drive that meet higher design standards.
- Incorporate bicycle and pedestrian facilities into the Project design.

New Overcrossing of US 101 Connecting Zanker Road, Skyport Drive and Fourth Street

An overcrossing of US 101 would be constructed to connect Zanker Road on the northside of US 101 to Skyport Drive and Fourth Street on the southside of US 101. The overcrossing would accommodate three lanes of traffic in each direction, turning lanes, median, bike lanes, and sidewalks. Skyport Drive would loop under the new overcrossing to intersect with Fourth Street approximately 500 feet south of the overcrossing.

Freeway On- and Off-Ramps Improvements

- The northbound US 101/Old Bayshore Highway hook off-ramp and Brokaw Road off-ramp would be consolidated into one off-ramp that intersects at Bering Drive.
- The northbound US 101/Old Bayshore Highway on-ramp and First Street on-ramp would be consolidated into one on-ramp from Bering Drive.
- The southbound US 101 on-ramp from Fourth Street would be replaced with a new loop on-ramp from Skyport Drive.
- The southbound US 101 on-ramp from Technology Place (formerly Matrix Boulevard) would remain at the current location but would be extended to provide additional storage.
- The on-ramps to US 101 would be modified to include High Occupancy Vehicle (HOV) lanes and ramp metering.

Construction of Bicycle and Pedestrian Facilities

- Buffered Class 2 bike lanes¹ and sidewalks would be provided along the new Zanker Road/ Fourth Street connection between Archer Street and Bering Drive.
- A Class 1 bikeway² would be provided beginning from Bering Drive, along the west side of Zanker Road, traversing under the US 101/Zanker Road overcrossing, and splitting into two Class 4 bikeways³ on Old Bayshore Highway.
- Buffered Class 2 lanes and sidewalks would be provided along Skyport Drive between First Street and Fourth Street.
- Buffered Class 2 bike lanes and sidewalks would be provided along Old Bayshore Highway between Zanker Road and Terminal Avenue.
- Class 4 bike lanes and sidewalk would be provided on Technology Place between First Street and Skyport Drive.
- A Class 1 bikeway would be provided along the west side of Fourth Street between the Skyport Drive/Technology Place/Southbound US 101 on-ramp intersection and the Skyport Drive/ Fourth Street intersection.
- Buffered Class 2 bike lanes and sidewalks would be provided along eastbound Brokaw Road between Bering Drive and Zanker Road.
- Sidewalks would be provided on both sides of Bering Drive.
- A protected intersection⁴ design would be provided at the following intersections:

¹ A **buffered Class 2 bike lane** is a painted bike lane with the added benefit of having extra space between cyclists and passing cars, usually designated with a painted safeguard area of one to two feet in width.

² A **Class 1 bikeway**, also known as a bike path or shared-use path, is a facility with exclusive right-of-way for bicyclists and pedestrians, away from the roadway and with cross flows by motor traffic minimized.

³ A **Class 4 bike lane**, also known as a protected bike lane, is physically separated from the auto travel lanes. Physical separation can include concrete curbs, landscaping, parking lanes, bollards, or other vertical elements.

⁴ A **protected intersection** includes design elements to create safe, comfortable conditions for bicyclists and pedestrians. Such features may include corner safety islands, corner aprons, forward stop bars, pedestrian safety islands, setback bicycle crossings, and bicycle signal optimization.

- Skyport Drive/Technology Place/Southbound US 101 on-ramp.
- Skyport Drive/ Fourth Street.
- Zanker Road/Old Bayshore Highway/Northbound US 101 on-ramp.

Other Improvements

- Old Bayshore Highway would be elevated to intersect with the new Zanker Road overcrossing. Traffic from southbound I-880 heading for northbound US 101 would ascend to the intersection, go through the traffic signal, and descend to a new northbound US 101 collector-distributor road where it would enter the freeway at a new on-ramp location.
- The following local streets would be widened to accommodate traffic from the above-described overcrossing connection and ramp modifications:
 - Skyport Drive between First Street and Fourth Street
 - Bering Drive between Brokaw Road and Zanker Road
 - Brokaw Road between Bering Drive and Zanker Road
 - Zanker Road between Bering Drive and US 101
 - Fourth Street from north of Koll Circle to US 101
- Local traffic (accessing the Bay 101 Casino and an office building planned development) would be separated from the southbound on-ramp traffic along Technology Place.

Probable Environmental Effects

Based on preliminary surveys and information, Caltrans has identified the following main subject areas for analysis in the EIR/EA. The scope of environmental analysis will be modified based on public input during the Project scoping period.

Air Quality

An air quality analysis will be completed to quantify the effects of the Project on the ambient air quality of the project study area and the region. An air quality study will be completed to document if the Project will expose residences or other sensitive receptors to substantial air quality pollutants. The environmental document will summarize this study and identify Best Management Practices (BMPs) and, if necessary, mitigation measures to reduce impacts to air quality during construction and operation.

Biological Resources

A biological study will be completed to determine if sensitive wildlife, plants, or habitat is present within the project study area. In addition, a tree survey will be completed to identify the trees anticipated to be removed by the Project. The environmental

document will summarize the biological study and tree survey and, if necessary, identify mitigation measures to reduce or avoid impacts to biological resources.

Community Impacts

Potential social, economic, public services, land use, and growth impacts will be discussed and addressed in the environmental document, including potential community concerns during construction of the Project. If necessary, mitigation measures to reduce or avoid community impacts will be identified.

Cultural Resources

Archaeological and historic architectural reports, and Native American consultation, will be completed to determine if cultural resources would be impacted by the Project. The environmental document will summarize the reports and consultation process and, if necessary, identify mitigation measures to reduce or avoid impacts to cultural resources.

Geology and Soils

Geology and paleontology reports will be completed to identify geologic hazards, such as active faults, landslides, and liquefiable soils, and the potential for fossils to be present in the project area. The reports will be summarized in the environmental document. If necessary, mitigation measures to reduce or avoid geology and soils impacts will be identified.

Greenhouse Gas Emissions

A greenhouse gas (GHG) study will be completed to determine if the Project would substantially increase GHG emissions. The environmental document will summarize the study and, if necessary, identify mitigation measures to reduce or avoid GHG emission impacts.

Hazardous Materials

A hazardous materials report will be completed to determine the potential for the Project to disturb contaminated soil. The report will be summarized in the environmental document. If necessary, mitigation measures will be identified to reduce or avoid hazardous materials impacts.

Hydrology and Water Quality

Hydraulic/flooding reports and a sea level rise analysis will be prepared to assess Project impacts on hydrologic conditions in the surrounding area. Short and long-term effects of the Project on water quality will be analyzed and summarized in the environmental document, including temporary water quality impacts resulting from construction activities. Construction BMPs and, if necessary, mitigation measures to reduce or avoid water quality impacts will be identified.

Noise and Vibration

A noise study report will be prepared to determine if construction and/or operational noise or vibration impacts would occur on nearby land uses. Current noise levels will be measured, and future noise levels will be modeled based on Project traffic operations. The environmental document will summarize the noise study and, if necessary, identify mitigation measures to reduce or avoid noise impacts.

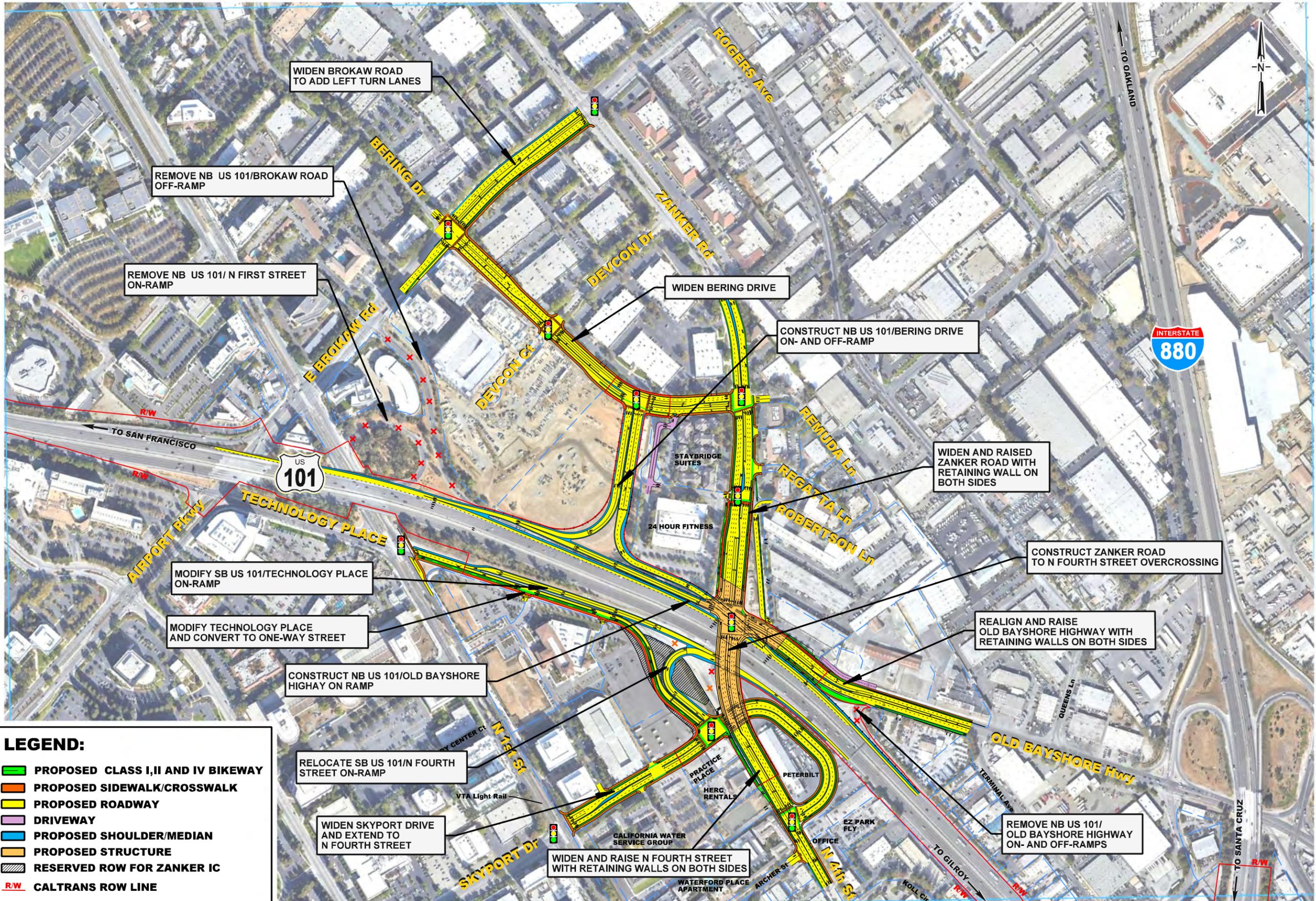
Visual

An assessment of visual and aesthetic effects due to the Project and related to proposed structures, lighting, and tree and vegetation removal will be completed and summarized in the environmental document. If necessary, mitigation measures will be identified to reduce or avoid visual and aesthetic impacts.

Traffic and Transportation

A traffic analysis will be completed for the Project. The traffic analysis will focus on improvements to freeway and roadway operations in the project area and calculate vehicle miles travelled (VMT) with and without the Project. Potential impacts to bicycle and pedestrian circulation will also be analyzed and summarized in the environmental document. If necessary, mitigation measures will be identified to reduce or avoid transportation impacts.

US 101/ZANKER ROAD/SKYPORT DRIVE/FOURTH STREET IMPROVEMENT PROJECT CONCEPTUAL SITE PLAN



LEGEND:

- PROPOSED CLASS I, II AND IV BIKEWAY
- PROPOSED SIDEWALK/CROSSWALK
- PROPOSED ROADWAY
- DRIVEWAY
- PROPOSED SHOULDER/MEDIAN
- PROPOSED STRUCTURE
- RESERVED ROW FOR ZANKER IC
- R/W CALTRANS ROW LINE
- x x x RAMPS TO BE REMOVED
- x x x LOCAL STREETS TO BE REMOVED

AUGUST 10, 2021

APPENDIX

E

List of Technical Studies

List of Technical Studies

The following technical studies were prepared for the US 101/Zanker Road/Skyport Drive/Fourth Street Improvement Project:

Name of Study	Study Author	Study Date
Air Quality Report	Illingworth & Rodkin	October 2023
Community Impact Memorandum	David J. Powers & Associates	May 2022
Noise Study Report	Illingworth & Rodkin	January 2022
Natural Environment Study with Tree Survey	AECOM	July 2022
Energy Analysis Report	AECOM	October 2023
Initial Site Assessment	AECOM	May 2022
Preliminary Geotechnical Design Report	AECOM	September 2022
Historic Properties Survey Report	Far Western Anthropological Research Group	October 2021
Paleontological Investigation Report/Paleontological Evaluation Report	AECOM	March 2022
Traffic Operations Analysis Report	AECOM	May 2020
Visual Impact Assessment	Earthview Science	August 2022
Location Hydraulic Study/Floodplain Evaluation Report	WRECO	September 2022
Water Quality Assessment Report	WRECO	February 2022
Stormwater Data Report	AECOM	December 2022