Executive Summary

ES.1 Introduction

The Santa Clara Valley Transportation Authority (VTA), in cooperation with the Federal Transit Administration (FTA), proposes to implement bus rapid transit (BRT) improvements along a 17.6-mile stretch of El Camino Real, The Alameda, and West Santa Clara Street. This chapter provides a brief summary of the Project location, Project history, purpose and need for the Project, the Project alternatives, a summary of potential environmental impacts, and proposed mitigation measures. This summary should not be relied upon for a thorough understanding of these topics. For comprehensive analysis, refer to the applicable sections in the Draft Environmental Impact Report/Environmental Assessment (EIR/EA) and the appendices.

ES.2 Project Location

The El Camino Real BRT Project (Project) is proposed in Santa Clara County in the cities of San José, Santa Clara, Sunnyvale, Mountain View, Los Altos, and Palo Alto (see Figure ES-1). The Project would be primarily located along El Camino Real, a state-owned route (State Route [SR] 82) under the jurisdiction of the California Department of Transportation (Caltrans) (Project corridor). In San José, the Project corridor is located on West Santa Clara Street and The Alameda; these streets are under the jurisdiction of the City of San José. Together, West Santa Clara Street, The Alameda and El Camino Real compose the Project corridor. The Project corridor is a four-lane east-west road in San José and a six-lane road from Santa Clara to Palo Alto (see Figure ES-2). The eastern terminus is located at the Arena in downtown San José, and the western terminus is located at the Palo Alto Transit Center in downtown Palo Alto.

El Camino Real is a major transportation corridor that intersects many local streets and other transportation corridors. Regional access to El Camino Real is provided by major intersecting routes including Interstate (I-) 880 in San José, San Tomas Expressway and Lawrence Expressway in Santa Clara, SR 85 and SR 237 in Mountain View, and Page Mill Road/Oregon Expressway in Palo Alto. The Project corridor runs parallel to and between U.S. Highway 101 (U.S. 101) (to the northeast) and I-280 (to the southwest).

ES.3 Project History

El Camino Real is one of the main thoroughfares through Santa Clara County. Communities along The Alameda and El Camino Real have adopted many land use and capital

improvement plans to aid its development over the years. The 2009 Bus Rapid Transit Strategic Plan prepared by VTA identified El Camino Real as a promising alignment for BRT in the near-term. The Grand Boulevard Initiative (GBI) vision was adopted in 2007 by the GBI Task Force to help realize the full potential of the El Camino Real "for housing and urban development, balancing the need for cars and parking with viable options for transit, walking and biking." In addition, the Valley Transportation Plan 2035, a countywide transportation plan for Santa Clara County adopted in January 2009, identifies the programs, projects, and policies VTA's Board of Directors would like to implement over the next 25 years, including along the Project corridor. The Valley Transportation Plan 2035 is not a programming document but does provide a planning and policy framework for developing and delivering future transportation projects for the program area. The Project is included in the Metropolitan Transportation Commission's (MTC) financially constrained long range plan (regional transportation plan [RTP]), *Plan Bay Area* at a $233.7M funding level. Plan Bay Area's transportation element specifies how $292 billion in anticipated federal, state, and local funds will be spent through 2040.

As described in Section 4.3, *Air Quality and Greenhouse Gas Emissions,* the Project would contribute to the MTC's and the Bay Area Air Quality Management District's goals to improve long-term air quality and support alternate modes of transportation, as described in the MTC's *Plan Bay Area*, and other air quality management documents. The regional conformity analysis for Plan Bay Area and the 2013 TIP were adopted by MTC on July 18, 2013 and approved by the Federal Highway Administration (FHWA)/FTA on August 12, 2013. MTC released the Draft 2015 TIP and associated regional conformity analysis on July 31, 2014. FHWA and FTA area expected to approve the final analyses in December 2014. Upon selection of a preferred alternative, VTA will consult with MTC on the need for an amendment to *Plan Bay Area* to ensure the Project's scope, design, and opening year are consistent with MTC's current regional conformity analysis. In May 2014, the Project was determined by the Air Quality Conformity Task Force[1] to not be a project of air quality concern as defined by 40 Code of Federal Regulations (CFR) 93.123(b)(1) or 40 CFR 93.128, and therefore a PM hotspot analysis is not required (Appendix F).

Beginning in early 2011, VTA conducted more than 20 meetings with cities, organizations, and the public to specifically discuss the Project and collect feedback. Concurrently, VTA has been collecting transportation and land use information and preparing technical analyses to assess the feasibility of implementing the Project. Based on the technical analysis performed to date and public input, VTA has developed four alternatives (specifically, Alternatives 1, 2, 3, and 4), which are discussed in detail in Chapter 3, *Alternatives*.

[1] The Air Quality Conformity Task Force is an interagency working group with which the Metropolitan Transportation Commission consults with prior to making project-level conformity determinations. Membership includes representatives from federal (U.S. Environmental Protection Agency , Region 9, Federal Highway Administration, Federal Transit Administration), state (California Air Resources Board, California Department of Transportation), regional (Metropolitan Transportation Commission, Bay Area Air Quality Management District, Association of Bay Area Governments, Santa Clara Valley Transportation Authority, and local jurisdictions.

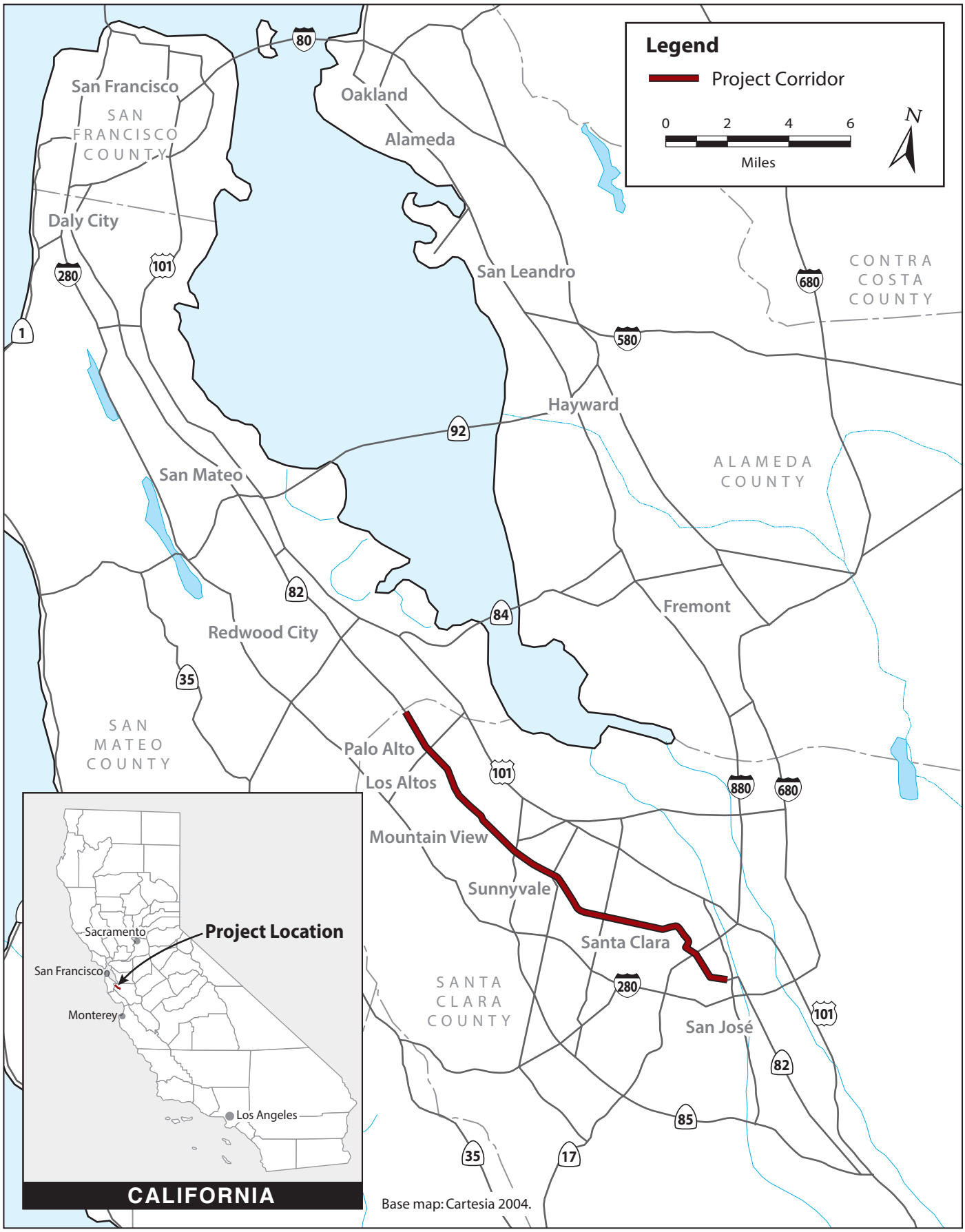
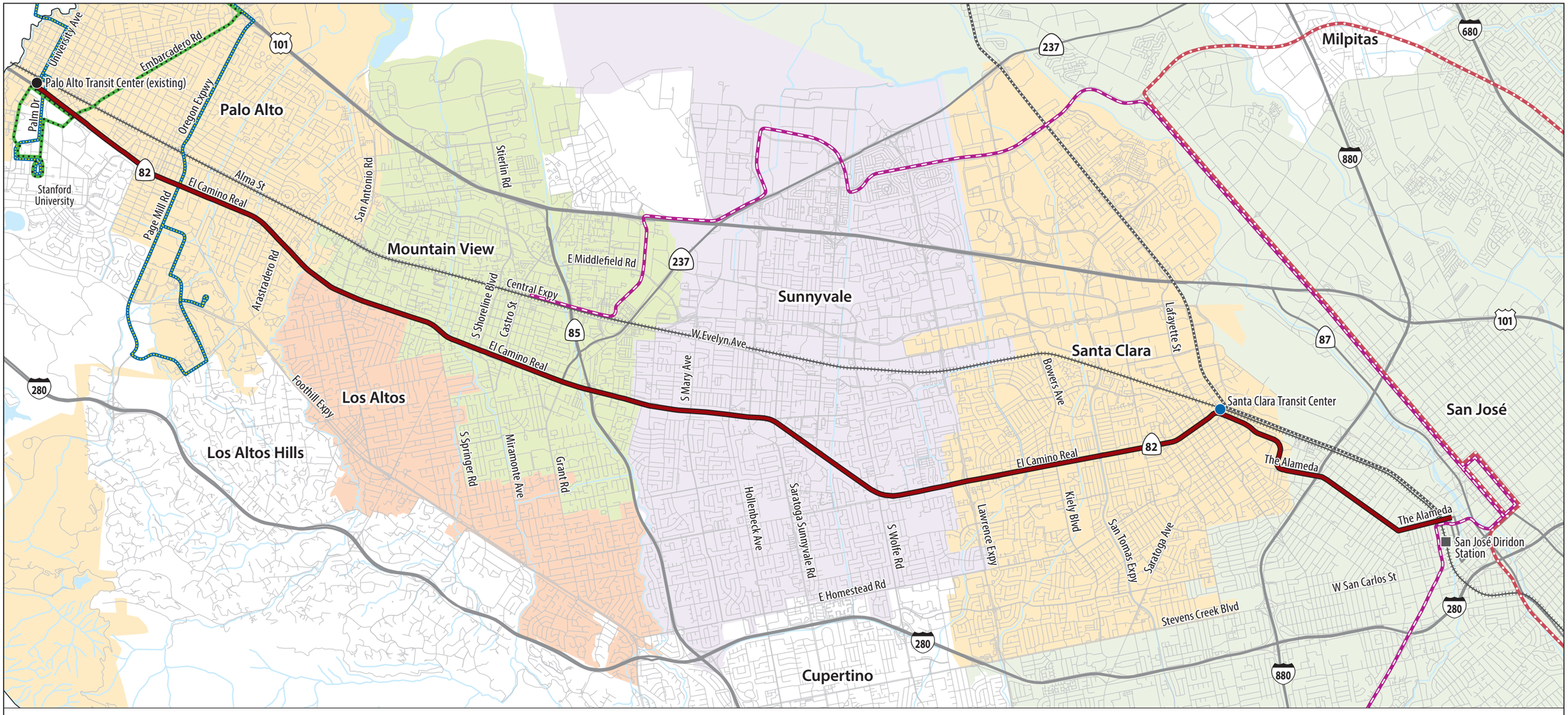


Figure ES-1
Project Location
El Camino Real Bus Rapid Transit Project



Legend

- Project Corridor
- AC Transit Corridor
- Dumbarton Express Corridor
- Caltrain Corridor
- Capitol Corridor
- Light Rail: Mountain View – Winchester
- Light Rail: Alum Rock – Santa Teresa
- BRT Station (by El Camino Real BRT Project)
- BRT Station (by Other Projects)
- Other Transit Station

N

0 1 2 3

Miles

Map sources: Roads: U.S. Census Bureau Tiger Line data, 2011.
Citiy limits: Parsons 2013. Transit routes: VTA Bus & Rail Map, January 2013.

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Figure ES-2
Project Corridor
El Camino Real Bus Rapid Transit Project

ES.4 Project Purpose and Need

El Camino Real is an important arterial in Santa Clara County and on the San Francisco Peninsula. However, El Camino Real is predominantly auto-oriented, and streetscape amenities are limited. There are widespread concerns regarding congestion, appearance, and safety, and a general public perception exists that the corridor is not well planned. Exacerbating current conditions, Santa Clara County is expected to experience substantial growth in the next 30 years from 2010 to 2040. If no improvements are implemented, heavy demand will potentially be placed on the existing transportation infrastructure, which is planned to increase by only 5 to 6 percent.

The purpose of this Project is to:

- Provide a competitive transit alternative to the automobile in the Project corridor.
- Increase the reliability, frequency, and travel speed of transit along the Project corridor.
- Improve transit amenities and facilities to provide greater comfort and safety.
- Enhance the multi-modal character of El Camino Real with street improvements for pedestrians and bicyclists.
- Provide the transit infrastructure to support the implementation of the transit goals and objectives of the Grand Boulevard Initiative (for El Camino Real).
- Provide the transit infrastructure to support city general and specific plans that call for a greater role for transit to complement their growth strategies.
- Improve efficiency and cost-effectiveness of transit services in the Project corridor.

Project need is demonstrated by the following factors.

- Anticipated population and employment growth.
- Projected increase in transit demand.
- Projected increases in transit travel times and decreases in travel speeds.
- Declines in transit performance and reliability.
- Lack of transit rider amenities and poor streetscape conditions.
- Insufficient transit infrastructure to support regional and local planning intensification policies.

The Project's purpose and need is discussed in greater detail in in Chapter 2, *Purpose and Need*.

ES.4.1 Project Description

The Project would provide BRT service along West Santa Clara Street, The Alameda, and El Camino Real in Santa Clara County from the Arena in downtown San José to the Palo Alto Transit Center in downtown Palo Alto. BRT features and Project Alternatives considered in this EIR/EA are described in the following sections.

ES.4.1.1 BRT Definition

BRT is defined as a high-quality, high-speed for of bus transit that provides services and amenities similar to light rail but at a much lower cost. BRT uses specialized vehicles that operate on city streets and in dedicated lanes, similar to light rail fixed guideway. Overall BRT is designed to improve the speed, reliability, and identity of bus transit by offering frequent, limited-stop service.

ES.4.1.2 Project Features

The Project would help the predominantly auto-oriented El Camino Real corridor transition to a multi-modal transit area. All of the Build Alternatives would be constructed and operated entirely within the existing street right-of-way. None of the alternatives includes property acquisitions. Features included in each Build Alternative together propose to create rapid and reliable transit service for the benefit of passengers along the Project corridor, and the transit system as a whole. The El Camino BRT Project (refer to Chapter 3, *Alternatives* for a comprehensive description of features) would include the following features.

- **BRT vehicles.** To clearly differentiate BRT services from local or other bus transit services, VTA would use distinctive vehicles and specialized branding to call out the BRT service as unique, innovative, and distinctive.
- **All-door boarding.** Primary fare collection would be through the ticket vending machines, which would allow passengers to board through all three doors of the 60-foot articulated bus instead of through only the front door to pay at a fare box. All-door boarding means that boarding times would be substantially shortened.
- **Transit signals.** Additional transit signal priority (TSP) infrastructure would be provided throughout the Project corridor at signals in segments that do not currently have TSP.
- **Stations.** New BRT stations would be equipped with enhanced amenities similar to VTA's light rail stations. The BRT stations would have larger and more elaborate canopies (over waiting areas and seating) with real-time passenger information displays showing next arrivals for each route and public address speakers to announce arrivals. Way-finding information, trash receptacles, ticket vending machines, Clipper™ card readers, emergency call boxes, and closed circuit television cameras would also be included at station locations.
- **Parking.** Curbside parking would be maintained to the extent possible, although some loss of street parking would result under each of the Build Alternatives. Dedicated lane segments would include bicycle lanes in place of parking. Refer to Section 4.12, *Transportation and Traffic* for more information on parking.

ES.4.1.3 Project Alternatives

Based on the results of the screening process for the 2009 BRT Strategic Plan and public input received during the 2013 public scoping meetings, four Project alternatives were developed and recommended for analysis under the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). These four alternatives consist

of a No Build Alternative (Alternative 1) and three Build Alternatives (Alternatives 2, 3, and 4). Alternatives 3 and 4 also include design options (see Figure ES-3). The Build Alternatives would replace Bus Route Rapid 522 and potentially affect ridership of Bus Route Local 22.

Each Build Alternative includes mixed-flow lanes (lanes for all vehicular travel) and curbside bulbout stations in San José. Where the BRT operates in mixed-flow lanes, typically the existing curbside bus stop would be removed and replaced with new BRT stations to be used by both BRT and local buses. Where dedicated lanes would be constructed, the existing bus stops would be maintained for local bus services, and the Build Alternatives would remove a general travel lane in each direction for dedicated bus use and build new BRT stations in the median. Both the short and long dedicated lane (lanes for exclusive use of BRT and emergency vehicles) alternatives (Alternatives 3 and 4, respectively) incorporate dedicated lanes through Santa Clara. The long dedicated lane alternative considers transitions to mixed-flow lanes at different locations along the Project corridor, specifically at SR 85 in Mountain View, Showers Drive in Mountain View, and Embarcadero Road in Palo Alto.

All Project buses would terminate at the Palo Alto Transit Center, the west end of the Project corridor, allowing for transfer to other bus lines and transportation modes. Under all of the Build Alternatives, the western end of the BRT route between Embarcadero Road and the Palo Alto Transit Center would be a mixed-flow configuration to allow BRT vehicles room to weave safely across one or two lanes of traffic to turn on University Avenue and access the Palo Alto Transit Center.

Alternative 1: No Build

Alternative 1, the No Build Alternative, would only include improvements that are planned to occur regardless of whether BRT is implemented. Local bus route 22 would continue to run in the El Camino Real corridor. Diesel buses that provide Rapid 522 service (currently providing limited-stop bus service in the Project corridor) would be replaced in 2015 by BRT hybrid diesel-electric buses, but the BRT buses would not provide BRT service. The BRT buses, instituted under the Santa Clara-Alum Rock BRT Project, would operate on 10-minute headways, providing an increase in service along the corridor from the current four buses per hour to six buses per hour. The Local 22 bus service (currently and in the future providing all-stop service in the Project corridor) would operate at 15-minute headways. Under Alternative 1, there would be no BRT station improvements and no off-board fare collection.

Alternative 2: All Mixed Flow from San José to Palo Alto

Alternative 2 would provide all mixed flow from San José to Palo Alto with no dedicated bus lane for the entire 17.6-mile corridor. Curbside bulbout stations would be developed along the corridor (three stations in San José, four stations in Santa Clara, four stations in Sunnyvale, one station in Mountain View, one station in Los Altos, and two stations in Palo Alto). Existing pork-chop islands (pedestrian islands separated from the sidewalk by a right turn lane) would be removed and existing curbs would be extended to make smaller intersections in many locations. VTA would restripe the crosswalks for these intersections. In

Palo Alto, restriping would occur on Embarcadero Road to allow for buses to pass traffic to ensure that they are first in line at the traffic signal.

Alternative 3: Short Dedicated Lane

Alternative 3 would provide dedicated lanes for BRT in portions of the Project corridor. Within this alternative, there are two options, 3a and 3b. For both options, there would be mixed-flow lanes from the Arena in San José to Lafayette Street in Santa Clara, and a 3-mile dedicated BRT lane from Lafayette Street in Santa Clara to Halford Avenue in Santa Clara. The configuration of lanes would differ west of Halford Avenue in Santa Clara to the Palo Alto Transit Center. Alternative 3a would provide no further BRT infrastructure west of Halford Avenue, whereas Alternative 3b would provide a mixed-flow configuration with full bulbout stations west of Halford Avenue.

Alternative 4 Long Dedicated Lane

Alternative 4 would provide a dedicated BRT lane along the Project corridor. Within this alternative there are three options that vary the extent of the dedicated lane, 4a, 4b, and 4c. Each option would include mixed-flow lanes from the Arena in San José to Lafayette Street in Santa Clara and west of the dedicated lane terminus at Embarcadero Road to the Palo Alto Transit Center. The alternatives would differ in the following aspects.

- Alternative 4a would provide a 7.1-mile dedicated lane segment from Lafayette Street in Santa Clara to SR 85 in Mountain View.
- Alternative 4b would have a 10.1-mile dedicated lane segment from Lafayette Street in Santa Clara to Showers Drive in Mountain View.
- Alternative 4c would have the longest dedicated lane segment, 13.9 miles, from Lafayette Street in Santa Clara to Embarcadero Road in Palo Alto.

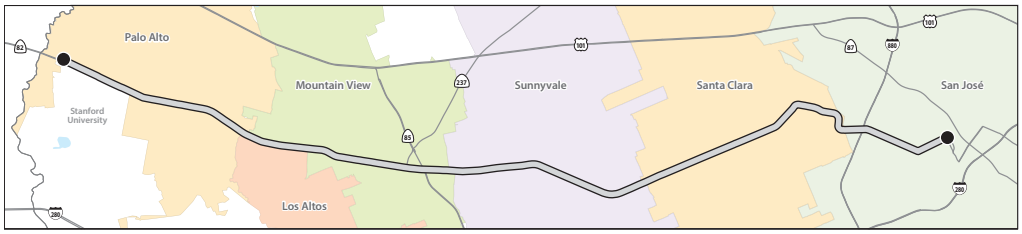
See Chapter 3, *Project Alternatives* detailed descriptions of the alternatives.

ES.4.1.4 Capital, Operations, and Maintenance Costs

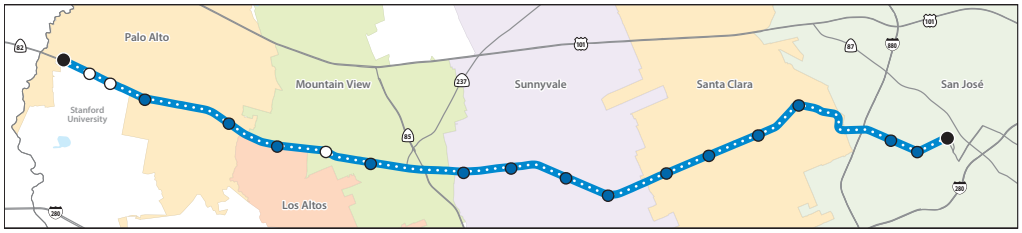
Refer to Section 3.4 of Chapter 3 *Alternatives*, for a detailed discussion of capital, operation, and maintenance costs of Build Alternatives. The capital costs of the Locally Preferred Alternative will be funded through the 2000 Measure A Transit Improvement Program from a 30-year countywide 1/2-cent sales tax devoted to specified public transit projects. VTA will also apply to the FTA for a Small Starts grant which funds major transit capital projects that have total net capital costs of less than $250M and a federal share of less than $75M.

Capital cost estimates, which include construction, engineering, construction management and administrative costs, range from $90.6M for Alternative 2 up to $232.7M for Alternative 4c. See Table ES-1 for capital cost estimates for each option.

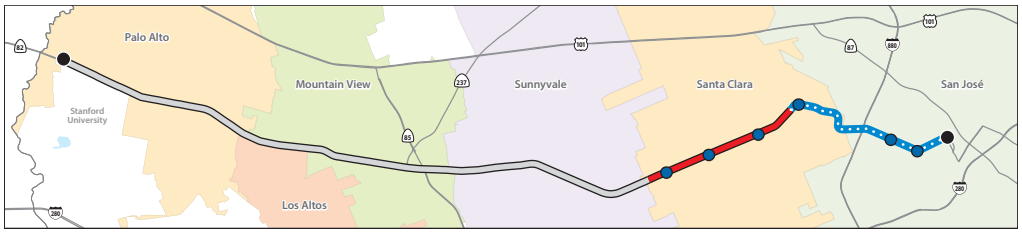
Operating costs for Build Alternatives would be funded through the existing sources of VTA operating funds including the 1976 ½-cent sales tax, fare revenues, and California State Transportation Development Act and State Transit Assistance Act funds. Net annual



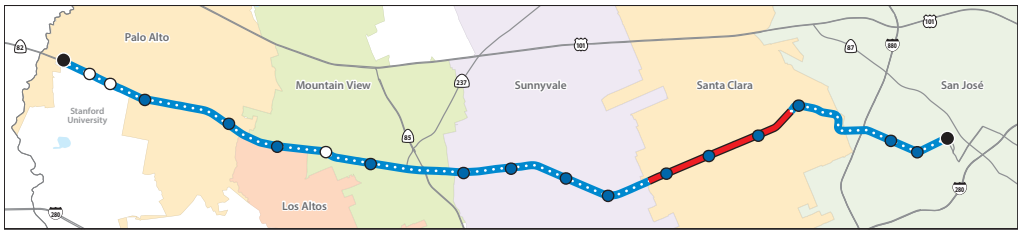
Alternative 1: No Build
- No bicycle/pedestrian improvements
- No BRT stations
- Santa Clara-Alum Rock BRT buses will use the existing Rapid 522 bus stations at 10-minute headways



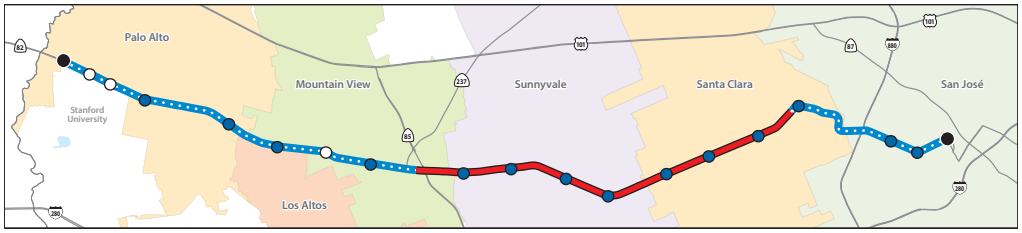
Alternative 2: Mixed Flow
- No dedicated lanes
- Curbside bulbout stations (up to 16 [including 2 optional])
- Bicycle/pedestrian/streetscape improvements



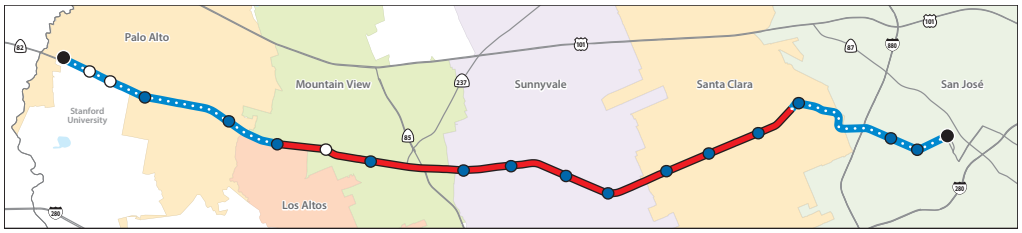
Alternative 3a: Short Dedicated Lane—No Improvements West of Halford Avenue in Santa Clara
- 3.0 miles of dedicated lanes
- Curbside bulbout stations (3) east of Santa Clara Transit Center
- Median stations (3) and dedicated lanes from Lafayette St. to Halford Ave.
- Bicycle/pedestrian/streetscape improvements



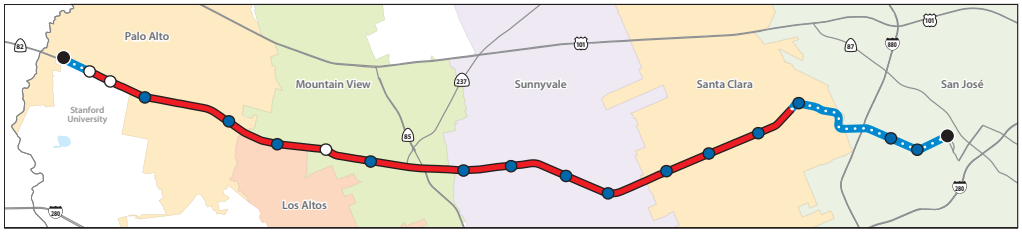
Alternative 3b: Short Dedicated Lane—Mixed Flow West of Halford Avenue in Santa Clara
- 3.0 miles of dedicated lanes
- Median stations (3) and dedicated lanes from Lafayette St. to Halford Ave.
- Mixed flow and curbside bulbout stations (up to 13) in all other areas
- Bicycle/pedestrian/streetscape improvements



Alternative 4a: Long Dedicated Lane—Lafayette Street in Santa Clara to SR 85 in Mountain View
- 7.1 miles of dedicated lanes
- Median stations (7) and dedicated lanes from Lafayette St. to SR 85
- Mixed flow and curbside bulbout stations (up to 9) in all other areas
- Bicycle/pedestrian/streetscape improvements



Alternative 4b: Long Dedicated Lane—Lafayette Street in Santa Clara to Showers Drive in Mountain View
- 10.1 miles of dedicated lanes
- Median stations (up to 10) and dedicated lanes from Lafayette St. to Showers Dr.
- Mixed flow and curbside bulbout stations (up to 6) in all other areas
- Bicycle/pedestrian/streetscape improvements



Alternative 4c: Long Dedicated Lane—Lafayette Street in Santa Clara to Embarcadero Road in Palo Alto
- 13.9 miles of dedicated lanes
- Median stations (up to 13) and dedicated lanes from Lafayette St. to Embarcadero Rd.
- Mixed flow and curbside bulbout stations (3) in all other areas
- Bicycle/pedestrian/streetscape improvements

Legend

No Build
Mixed Flow
Dedicated Lanes

BRT Station (by El Camino Real BRT Project)
Optional BRT Station
BRT Station (by Other Projects)

N

0 1 2 3
Miles

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Figure ES-3
Project Alternatives
El Camino Real Bus Rapid Transit Project

operation and maintenance costs range from $12.9M for Alternative 4c up to $22.7M for the No Build Alternative. See Table ES-2 for annual net operation and maintenance costs for each Alternative.

Table ES-1. Capital Costs (2014 dollars x 1,000)

Alternative	Capital Cost
Alt. 1: No Build from San José to Palo Alto	$0
Alt. 2: All Mixed Flow from San José to Palo Alto	$90,656
Alt 3: Short Dedicated Lane	
Alt. 3a:Lafayette Street to Halford Avenue in Santa Clara	$88,731
Alt. 3b: Lafayette Street to Halford Avenue plus Mixed Flow West of Halford Avenue in Santa Clara	$133,950
Alt 4: Long Dedicated Lane	
Alt. 4a:Lafayette Street in Santa Clara to SR 85 in Mountain View	$179,004
Alt. 4b: Lafayette Street in Santa Clara to Showers Drive in Mountain View	$205,856
Alt. 4c:Lafayette Street in Santa Clara to Embarcadero Road in Palo Alto	$232,671

Source: Parsons 2013.

Table ES-2. 2040 Annual Net Operation and Maintenance Costs (2014 dollars x 1,000)

Alternative	Annual O&M Cost 10-min All Day Headway
Alt 1: No Build from San José to Palo Alto	$22,724
Alt 2: All Mixed Flow from San José to Palo Alto	$21,607
Alt 3: Short Dedicated Lane	
Alt 3a: Lafayette Street to Halford Avenue in Santa Clara	$20,490
Alt 3b: Lafayette Street to Halford Avenue in Santa Clara plus Mixed Flow West of Halford Avenue	$19,372
Alt 4: Long Dedicated Lane	
Alt 4a: Lafayette Street in Santa Clara to SR 85 in Mountain View	$18,255
Alt 4b: Lafayette Street in Santa Clara to Showers Drive in Mountain View	$15,403
Alt 4c: Lafayette Street in Santa Clara to Embarcadero Road in Palo Alto	$12,907

Source: Parsons 2014.

ES.4.1.5 Schedule

It is anticipated that construction of the Project will take approximately 2 years to complete. Certain construction activities may begin as early as 2016.

Key Project milestones include the following:

- Final Environmental Clearance/Project Approval – June 2015
- Complete Final Design - October 2016
- Begin Construction – March 2017[2]
- Start Revenue Service – October 2018

ES.5 Agency and Community Participation

ES.5.1 Scoping

On February 6, 2013, a Notice of Preparation was posted with the Santa Clara County Clerk's office and sent to the State Clearinghouse at the Governor's Office of Planning and Research to officially solicit statewide agency and public participation in determining the scope of the EIR/EA. Public meetings were conducted on February 21, 2013 and February 28, 2013. A detailed description of the notice of preparation and public scoping meetings is included in Chapter 1, *Introduction*.

ES.5.2 Areas of Controversy

Written and oral comments received during the scoping process are on file at VTA's offices (3331 N. First Street, Bldg. B, San José, CA, 95134) and are listed in Appendix A.

Comments regarding environmental impacts focused on the following areas.

- Vehicular traffic impacts and diversion of vehicular traffic off of the Project corridor.
- Air quality and greenhouse gas emissions as a result of increased vehicular idling and traffic.
- Consistency with previously approved land uses and planning documents, as well as growth in the Project corridor.
- Potential impacts on businesses along El Camino Real.
- Emergency vehicle access times.

[2] Utility relocations could start prior to construction.

ES.6 Summary of Environmental Impacts and Mitigation Measures

Table ES-3 summarizes the environmental impacts that would result under each Project alternative, the significance of the impacts, and the associated mitigation measures (MMs).

Based on analysis completed in the scoping phase, the Project was found to have no impact on the following environmental resources, and thus these environmental resources are not discussed in the EIR/EA:

- Agricultural Resources
- Mineral Resources
- Population and Housing
- Public Services and Recreation (police and fire services are discussed under Utilities)

Under CEQA significance criteria and NEPA criteria for determining effects, the Project would result in no impacts or less than significant impacts relative to the following environmental factors (listed by EIR/EA section):

- Energy
- Land Use and Planning
- Hydrology and Floodplain/Water Quality and Storm water Runoff
- Socioeconomics
- Section 4(f)

With implementation of mitigation measures, the Project would result in less than significant impacts relative to the following environmental factors (listed by EIR/EA section):

- Air Quality and Greenhouse Gas Emissions
- Biological Resources and Wetlands
- Cultural Resources
- Geology, Soils, Seismicity
- Hazardous Materials
- Utilities and Service Systems
- Noise and Vibration
- Environmental Justice

Implementation of any of the Build Alternatives would result in significant and unavoidable impacts in one environmental topic area: Transportation and Traffic. Traffic impacts would result from Project operation under Alternatives 3 and 4. Impacts would be minimized by implementation of mitigation, but impacts would remain significant and unavoidable due to significantly increased delays at some intersections on and off the Project corridor.

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Table ES-3. Summary of Environmental Impacts and Mitigation Measures (CEQA and NEPA)

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
Section 4.2/5.2 Aesthetics and Visual Quality				
Impact AES-1: Potentially result in a substantial adverse effect on a scenic vista or scenic resources along a scenic highway	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact AES-2: Degrade the existing visual character or quality of the Project corridor and its surroundings	No Impact	*Construction* Less than significant with mitigation MM AES-A: Maintain clean construction areas and prevent light spillover *Operation* Less than significant with mitigation MM BIO-B: Replace trees removed by the Project	*Construction* Less than significant with mitigation See MM for Alternative 2 *Operation* Less than significant with mitigation See MM for Alternative 2	*Construction* Less than significant with mitigation See MM for Alternative 2 *Operation* Less than significant with mitigation See MM for Alternative 2
Impact AES-3: Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area	No Impact	*Construction* Less than significant with mitigation MM AES-A: Maintain clean construction areas and prevent light spillover *Operation* Less than significant with mitigation MM AES-B: Reduce effects of new lighting on residential properties	*Construction* Less than significant with mitigation See MMs for Alternative 2 *Operation* Less than significant with mitigation See MM for Alternative 2	*Construction* Less than significant with mitigation See MMs for Alternative 2 *Operation* Less than significant with mitigation See MM for Alternative 2
Section 4.3/5.3 Air Quality and Greenhouse Gas Emissions				
Impact AQG-1: Conflict with or obstruct implementation of the applicable air quality plan	Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact AQG-2a: Violate any air quality standard or contribute substantially to an existing or projected air quality violation during construction	No Impact	*Construction* Less than significant with mitigation MM AQG-A: Implement BAAQMD basic and additional construction mitigation measures to reduce construction-related dust	*Construction* Less than significant with mitigation MM AQG-A: Implement BAAQMD basic and additional construction mitigation measures to reduce construction-related dust MM AQG-B: Implement BAAQMD basic and additional construction mitigation measures to control construction-related exhaust emission MM AQG-C: Use clean diesel-powered equipment during construction to control construction-related NO_X emissions MM AQG-D: Use modern fleet for onroad material delivery and haul trucks during construction	*Construction* Less than significant with mitigation See MMs for Alternative 3
Impact AQG-2b: Violate any air quality standard or contribute substantially to an existing or projected air quality violation during operation	Less than significant	*Operation* Less than significant	*Operation* Less than significant	*Operation* Less than significant

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
Impact AQG-3a: Expose sensitive receptors to substantial pollutant concentrations during construction	No Impact	*Construction* Less than significant with mitigation MM AQG-B: Implement BAAQMD basic and additional construction mitigation measures to control construction-related exhaust emission MM AQG-C: Use clean diesel-powered equipment during construction to control construction-related NO_X emissions MM AQG-D: Use modern fleet for onroad material delivery and haul trucks during construction	Construction Less than significant with mitigation See MMs for Alternative 2	*Construction* Less than significant with mitigation See MMs for Alternative 2
Impact AQG-3b: Expose sensitive receptors to substantial pollutant concentrations during operation	Less than significant	*Operation* Less than significant	*Operation* Less than significant	*Operation* Less than significant
Impact AQG-4: Create objectionable odors affecting a substantial number of people	Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact AQG-5a: Result in a cumulatively considerable net increase during construction of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)	No Impact	*Construction* Less than significant with mitigation MM AQG-A: Implement BAAQMD basic and additional construction mitigation measures to reduce construction-related dust MM AQG-B: Implement BAAQMD basic and additional construction mitigation measures to control construction-related exhaust emission MM AQG-C: Use clean diesel-powered equipment during construction to control construction-related NO_X emissions MM AQG-D: Use modern fleet for onroad material delivery and haul trucks during construction	*Construction* Less than significant with mitigation See MMs for Alternative 2	*Construction* Less than significant with mitigation See MMs for Alternative 2
Impact AQG-5b: Result in a cumulatively considerable net increase during operation of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)	Less than significant	*Operation* Less than significant	*Operation* Less than significant	*Construction and Operation* Less than significant
Impact AQG-6a: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment during construction	No Impact	*Construction* Less than significant with mitigation MM AQG-E: Implement BAAQMD recommended BMPs to reduce GHG emissions	*Construction* Less than significant with mitigation See MM for Alternative 2	*Construction* Less than significant with mitigation See MM for Alternative 2

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
Impact AQG-6b: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment during operation	Less than significant	*Operation* Less than significant	*Operation* Less than significant	*Operation* Less than significant
Impact AQG-7: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases	Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Section 4.4/5.4 Biological Resources				
Impact BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or U.S. Fish and Wildlife Service	No Impact	*Construction and Operation* Less than significant with mitigation AMM HYD-A: Comply with the NPDES General Construction Permit and Caltrans' MS4 Permit (prevent contaminants from entering waterways)MM BIO-A: Conduct preconstruction surveys for nesting birds MM BIO-B: Replace trees removed by Project	*Construction and Operation* Less than significant with mitigation See AMM and MMs for Alternative 2	*Construction and Operation* Less than significant with mitigation See AMM and MMs for Alternative 2
Impact BIO-2: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Section 4.5/5.5 Cultural Resources				
Impact CUL-1: Cause a substantial adverse change in the significance of a historical resource	No Impact	No Impact	No Impact	No Impact
Impact CUL-2: Cause a substantial adverse change in the significance of an archaeological resource	No Impact	*Construction and Operation/Maintenance* Less than significant with mitigation MM CUL-A: Conduct archaeological training MM CUL-B. Stop work if archeological deposits are identified MM CUL-C: Implement inadvertent archaeological discovery controls during construction MM CUL-D: Conduct archaeological monitoring of ground-disturbing activities associated with the Project in areas as determined by FTA, VTA, and SHPO	*Construction and Operation/Maintenance* Less than significant with mitigation See MMs for Alternative 2	*Construction and Operation/Maintenance* Less than significant with mitigation See MMs for Alternative 2
Impact CUL-3: Disturb human remains, including those interred outside of formal cemeteries	No Impact	*Construction and Operation/Maintenance* Less than significant with mitigation MM CUL-E: Comply with state and county procedures for the treatment of human remains discoveries	*Construction and Operation/Maintenance* Less than significant with mitigation See MM for Alternative 2	*Construction and Operation/Maintenance* Less than significant with mitigation See MM for Alternative 2
Section 4.6/5.6 Energy				

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
Impact ENG-1: Lead to a wasteful, inefficient, and unnecessary usage of direct energy	Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact ENG-2: Lead to a wasteful, inefficient, and unnecessary usage of indirect energy	Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact ENG-3: Place a significant demand on regional energy supply or require significant additional capacity	Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact ENG-4: Significantly increase peak and base period electricity demand	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Section 4.7/5.7 Geology, Soils, Seismicity				
Impact GEO-1: Expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact GEO-3: Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact GEO-4: Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property	No Impact	*Construction and Operation* Less than significant with mitigation MM GEO-A: Prepare a Geotechnical Design Report	*Construction and Operation* Less than significant with mitigation See MM for Alternative 2	*Construction and Operation* Less than significant with mitigation See MM for Alternative 2
Section 4.8/5.8 Hazards and Hazardous Materials				
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	No Impact	*Construction* Less than significant with mitigation MM HAZ-A: Manage removal of traffic striping and pavement markers MM HAZ-B: Manage removal of AC and PCC grindings AMM HYD-A: Comply with the NPDES General Construction Permit and Caltrans' MS4 Permit	*Construction* Less than significant with mitigation See MMs and AMM for Alternative 2	*Construction* Less than significant with mitigation See MMs and AMM for Alternative 2

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
		Operation Less than significant	*Operation* Less than significant	*Operation* Less than significant
Impact HAZ-2: Emit hazardous emissions or involve handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school	No Impact	*Construction and Operation* Less than significant AMM HYD-A: Comply with the NPDES General Construction Permit and Caltrans' MS4 Permit	*Construction and Operation* Less than significant See AMM for Alternative 2	*Construction and Operation* Less than significant See AMM for Alternative 2
Impact HAZ-3: 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, create a significant hazard to the public or the environment	No Impact	*Construction and Operation* Less than significant with mitigation MM HAZ-C: Perform a Preliminary Site Investigation MM HAZ-D: Implement a Construction Risk Management Plan	*Construction and Operation* Less than significant impact with mitigation. See MMs for Alternative 2	*Construction and Operation* Less than significant impact with mitigation. See MMs for Alternative 2
Impact HAZ-4: Impair implementation of or physically interfere with emergency response plan or emergency evacuation plan	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Section 4.9/5.9 Hydrology and Floodplain/ Water Quality and Stormwater Runoff				
Impact HYD-1: Violate any water quality standards or waste discharge requirements, or otherwise degrade water quality	No Impact	*Construction* Less than significant AMM HYD-A: Comply with the NPDES General Construction Permit and Caltrans' MS4 Permit *Operation* Less than significant AMM HYD-B: Implement permanent pollution prevention design measures	*Construction* Less than significant See AMM for Alternative 2 *Operation* Less than significant See AMM for Alternative 2	*Construction* Less than significant See AMM for Alternative 2 *Operation* Less than significant See AMM for Alternative 2
Impact HYD-2: Substantially deplete groundwater supplies or substantially interfere with groundwater recharge	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact HYD-3: Alter existing drainage patterns in a manner that would result in substantial erosion, siltation onsite or offsite, or flooding onsite or offsite	No Impact	*Construction* Less than significant AMM HYD-A: Comply with the NPDES General Construction Permit and Caltrans' MS4 Permit *Operation* Less than significant	*Construction* Less than significant See AMM for Alternative 2 *Operation* Less than significant	*Construction* Less than significant See AMM for Alternative 2 *Operation* Less than significant
Impact HYD-4: Create or contribute to runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff	No Impact	*Construction and Operation* Less than significant AMM HYD-A: Comply with the NPDES General Construction Permit and Caltrans' MS4 Permit	*Construction and Operation* Less than significant See AMM for Alternative 2	*Construction and Operation* Less than significant See AMM for Alternative 2
Impact HYD-5: Place structures that would impede or redirect flood flows within a 100-year flood hazard area	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
Section 4.10/5.10 Land Use and Planning				
Impact LUP-1: Conflict with any applicable land use plan (including an airport land use plan), policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect	Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Section 4.11/5.11 Noise and Vibration				
Impact NOI-1: Expose persons to or generate noise levels in excess of applicable standards	Less than significant	*Construction* Less than significant with mitigation MM NOI-A: Employ noise-reducing practices during construction MM NOI-B: Prior to construction, initiate a complaint/response tracking program *Operation* Less than significant	*Construction* Less than significant with mitigation See MMs for Alternative 2 *Operation* Less than significant	*Construction* Less than significant with mitigation See MMs for Alternative 2 *Operation* Less than significant
Impact NOI-2: Expose persons to or generate excessive groundborne vibration or groundborne noise levels	No Impact	*Construction* Less than significant with mitigation MM NOI-C: Employ vibration-reducing practices during construction *Operation* Less than significant	*Construction* Less than significant with mitigation See MM for Alternative 2 *Operation* Less than significant	*Construction* Less than significant with mitigation See MM for Alternative 2 *Operation* Less than significant
Impact NOI-3: Generate a substantial permanent increase in existing ambient noise levels in the project vicinity	Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact NOI-4: Create a substantial temporary or periodic increase in existing ambient noise levels in the project vicinity	No Impact	*Construction* Less than significant with mitigation MM NOI-A: Employ noise-reducing practices during construction MM NOI-B: Prior to construction, initiate a complaint/response tracking program	*Construction* Less than significant with mitigation See MMs for Alternative 2	*Construction* Less than significant with mitigation See MMs for Alternative 2
Section 4.12/5.12 Transportation and Traffic				
Impact TRA-1a: Disrupt existing or planned transit services during construction	No Impact	*Construction* Less than significant	*Construction* Less than significant	*Construction* Less than significant
Impact TRA-1b: Substantially increase transit travel times or create inconsistencies with adopted plans from Project operation	No Impact	*Operation* Beneficial	*Operation* Beneficial	*Operation* Beneficial
Impact TRA-2a: Substantially disrupt existing or future traffic operations during construction	No Impact	*Construction* Less than significant	*Construction* Less than significant	*Construction* Less than significant

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
Impact TRA-2b: Conflict or create inconsistencies with regional traffic plans or substantially disrupts regional traffic operations from Project operation	No Impact	*Operation* Less than significant	*Operation* Less than significant	*Operation* Less than significant
Impact TRA-2c: Conflict or create inconsistencies with local traffic plans or substantially disrupt local traffic operations from Project operation	No Impact	*Operation* Less than significant	*Operation* Significant and unavoidable MM TRA-A: Implement signal optimization, traffic signal installation, and roadway striping improvements at impacted intersections. The following intersections would be subject to significant and unavoidable impacts under the Build Alternatives 3a and 3b in 2018: *Sunnyvale:* Fremont Ave/Sunnyvale-Saratoga Rd (P.M. only) *Santa Clara:* Lawrence Expy/Cabrillo Ave, Bowers Ave/Monroe St (P.M. only), San Tomas Expy/Benton St (P.M. only)	*Operation* Significant and unavoidable See MM for Alternative 3. The following intersections would be subject to significant and unavoidable impacts under Build Alternative 4a in 2018: *Santa Clara:* Lawrence Expy/Cabrillo Ave, San Tomas Expy/Benton St (P.M. only) The following intersections would be subject to significant and unavoidable impacts under Build Alternative 4b in 2018: *Palo Alto:* Alma St/Charleston Rd (P.M. only) *Santa Clara:* Lawrence Expy/Cabrillo Ave, San Tomas Expy/Benton St (P.M. only) The following intersections would be subject to significant and unavoidable impacts under Build Alternative 4c in 2018: *Palo Alto:* El Camino Real at Page Mill Rd/Oregon Expy (P.M. only) Alma St/Churchill Ave (P.M. only), *Santa Clara:* Lawrence Expy/Cabrillo Ave, Bowers Ave/Monroe St (P.M. only), San Tomas Expy/Benton St (P.M. only)

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
Impact TRA-3a: Disrupt existing or planned bicycle and pedestrian facilities during construction	No Impact	*Construction* Less than significant	*Construction* Less than significant	*Construction* Less than significant
Impact TRA-3b: Substantially interfere with existing or planned bicycle and pedestrian facilities or create inconsistencies with adopted plans	No Impact	*Operation* Beneficial	*Operation* Beneficial	*Operation* Beneficial
Impact TRA-4: Result in inadequate emergency vehicle circulation	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact TRA-5: Result in secondary impacts on traffic congestion or air quality due to removal of on-street parking	No Impact	*Operation* Less than significant	*Operation* Less than significant	*Operation* Less than significant
Impact TRA-6: Substantially increase transit travel times or create inconsistencies with adopted plans from Project operation (Cumulative)	No Impact	*Operation* Beneficial	*Operation* Beneficial	*Operation* Beneficial
Impact TRA-7a: Conflict or create inconsistencies with regional traffic plans or substantially disrupt regional traffic operations from Project operation (Cumulative)	No Impact	*Operation* Less than significant	*Operation* Less than significant	*Operation* Less than significant
Impact TRA-7b: Conflict or create inconsistencies with local traffic plans or substantially disrupt local traffic operations from Project operation (Cumulative)	No Impact	*Operation* Less than significant	*Operation* Significant and unavoidable MM TRA-A: Implement signal optimization, traffic signal installation, and roadway striping improvements at impacted intersections The following on *Project corridor intersections* would be subject to significant and unavoidable impacts under Build Alternatives 3a and 3b in 2040: *Santa Clara:* El Camino Real at Kiely Blvd/Bowers Ave (P.M. only), San Tomas Expy, and Scott Blvd (P.M. only) In addition, the cities of *Sunnyvale* and *Santa Clara* would have *diversion route intersections* subject to significant and unavoidable impacts under Build Alternatives 3a and 3b in 2040. Refer to Table 4.12-20 for a list of all intersections.	*Operation* Significant and unavoidable See MM for Alternative 3 The following on *Project corridor intersections* would be subject to significant and unavoidable impacts under Build Alternative 4a in 2040: *Santa Clara:* El Camino Real at San Tomas Expy and Scott Blvd (P.M. only) The following on *Project corridor intersections* would be subject to significant and unavoidable impacts under Build Alternative 4b in 2040: *Mountain View:* El Camino Real at Showers Dr/Los Altos Sq (P.M. only) *Santa Clara:* El Camino Real at San Tomas Expy and Scott Blvd (P.M. only)

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
				The following on *Project corridor intersections* would be subject to significant and unavoidable impacts under Build Alternative 4c in 2040: *Palo Alto:* El Camino Real at Embarcadero Rd/Galvez St (P.M. only), Page Mill Rd/Oregon Expy *Santa Clara:* El Camino Real at San Tomas Expy and Scott Blvd (P.M. only) In addition, the cities of *Palo Alto*, *Mountain View*, *Sunnyvale* and *Santa Clara* would have *diversion route intersections* subject to significant and unavoidable impacts under Build Alternatives 4a, 4b, and 4c in 2040. Alternative 4a would have a significant impact on the operation of 18 intersections; Alternative 4b would have a significant impact on the operation of 29 intersections; and Alternative 4c would have a significant impact on the operation of 37 intersections. Refer to Table 4.12-20 for a list of all intersections.
Section 4.13/5.13 Utilities and Service Systems				
Impact UTL-1: Result in substantial disruption to utilities or service systems	No Impact	*Construction* Less than significant with mitigation MM UTL-A: Coordinate with utility service providers prior to construction of BRT stations *Operation* Less than significant	*Construction* Less than significant with mitigation See MM for Alternative 2 *Operation* Less than significant	*Construction* Less than significant with mitigation See MM for Alternative 2 *Operation* Less than significant
Impact UTL-2: Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant
Impact UTL-3: Comply with federal, state, and local statutes and regulations related to solid waste	No Impact	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant	*Construction and Operation* Less than significant

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
5.14 Socioeconomics				
Displacement. None of the alternatives would include displacement of people or housing. Construction easements may be required, however these would be temporary and not result in displacements of people, housing, or businesses. Therefore there is no potential for an adverse effect related to displacement.	No adverse effect is anticipated.	No adverse effect is anticipated.	No adverse effect is anticipated.	No adverse effect is anticipated.
Labor Force. None of the alternatives would result in the loss of employment, or impact the labor force. However, any of the Build Alternatives could result in a beneficial change Therefore there is no potential for an adverse effect related to loss of employment/labor force.	No adverse effect is anticipated.	No adverse effect is anticipated. Potential beneficial change.	No adverse effect is anticipated. Potential beneficial change.	No adverse effect is anticipated. Potential beneficial change.
Community Cohesion. None of the alternatives would have permanent effects on long-term community character or cohesion. Implementation of **MM BIO-B** under the Build Alternatives would address potential adverse effects related to loss of trees/effect to community cohesion. No adverse effect related to community cohesion is anticipated.	No adverse effect is anticipated.	Mitigation Measure **MM BIO-B** would address the potential impacts of tree loss.	Mitigation Measure **MM BIO-B** would address the potential impacts of tree loss.	Mitigation Measure **MM BIO-B** would address the potential impacts of tree loss.
Section 5.15 Environmental Justice				
Aesthetics and Visual Quality. No effects that would be predominately borne by a minority or low-income population or that would result in effects appreciably more sever or greater in magnitude on an environmental justice population than a non-environmental justice population is anticipated. Implementation of **MM AES-A** and **MM BIO- B** under the Build Alternatives would address potential adverse effects related to aesthetics and visual quality.	No adverse effect is anticipated.	**MM AES-A** and **MM BIO-B** would address the potential impacts to visual quality during construction and operation.	**MM AES-A** and **MM BIO-B** would address the potential impacts to visual quality during construction and operation.	**MM AES-A** and **MM BIO-B** would address the potential impacts to visual quality during construction and operation.
Air Quality and GHG Emissions. No effects that would be predominately borne by a minority or low-income population or that would result in effects appreciably more sever or greater in magnitude on an	No adverse effect is anticipated.	**MM AQG-A, MM AQG-B, MM AQG-C,** and **MM AGQ-D** would address potential impacts to air quality during construction.	**MM AQG-A, MM AQG-B, MM AQG-C,** and **MM AGQ-D** would address potential impacts to air quality during construction.	**MM AQG-A, MM AQG-B, MM AQG-C,** and **MM AGQ-D** would address potential impacts to air quality during construction.

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
environmental justice population than a non-environmental justice population is anticipated. Implementation of **MM AQG-A** through **D** under the Build Alternatives would address potential adverse effects related to air quality and GHG emissions.				
Hazards and Hazardous Materials. No effects that would be predominately borne by a minority or low-income population or that would result in effects appreciably more sever or greater in magnitude on an environmental justice population than a non-environmental justice population is anticipated. Implementation of **MM HAZ-A** through **C** under the Build Alternatives would address potential adverse effects related to hazards and hazardous materials.	No adverse effect is anticipated.	**MM HAZ-A, MM HAZ-B,** and **MM HAZ-C** would address potential impacts related to hazards and hazardous materials during construction.	**MM HAZ-A, MM HAZ-B,** and **MM HAZ-C** would address potential impacts related to hazards and hazardous materials during construction.	**MM HAZ-A, MM HAZ-B,** and **MM HAZ-C** would address potential impacts related to hazards and hazardous materials during construction.
Hydrology and Floodplain/Water Quality and Stormwater Runoff. No effects that would be predominately borne by a minority or low-income population or that would result in effects appreciably more sever or greater in magnitude on an environmental justice population than a non-environmental justice population is anticipated. Implementation of **AMM HYD-A** under the Build Alternatives would address potential adverse effects related to water quality.	No adverse effect is anticipated.	**AMM HYD-A** would address potential impacts related to water quality during construction.	**AMM HYD-A** would address potential impacts related to water quality during construction.	**AMM HYD-A** would address potential impacts related to water quality during construction.

Environmental Area/Impacts	Alternative 1 (No Build)	Alternative 2	Alternative 3	Alternative 4
Noise and Vibration. No effects that would be predominately borne by a minority or low-income population or that would result in effects appreciably more sever or greater in magnitude on an environmental justice population than a non-environmental justice population is anticipated. Implementation of **MM NOI-A** through **C** under the Build Alternatives would address potential adverse effects related to noise and vibration.	No adverse effect is anticipated.	**MM NOI-A, MM NOI-B,** and **NOI-C** would address potential noise and vibration impacts during construction.	**MM NOI-A, MM NOI-B,** and **NOI-C** would address potential noise and vibration impacts during construction.	**MM NOI-A, MM NOI-B,** and **NOI-C** would address potential noise and vibration impacts during construction.
Transportation and Traffic. No effects that would be predominately borne by a minority or low-income population or that would result in effects appreciably more sever or greater in magnitude on an environmental justice population than a non-environmental justice population is anticipated. Implementation of **MM TRA-A** under the Build Alternatives would address potential adverse effects related to traffic and circulation.	No adverse effect is anticipated.	**MM TRA-A** would address potential traffic and circulation impacts.	**MM TRA-A** would address potential traffic and circulation impacts.	**MM TRA-A** would address potential traffic and circulation impacts.
Parking. No effects that would be predominately borne by a minority or low-income population or that would result in effects appreciably more sever or greater in magnitude on an environmental justice population than a non-environmental justice population is anticipated. Therefore, no adverse effects related to parking are anticipated.	No adverse effect is anticipated.	No adverse effect is anticipated.	No adverse effect is anticipated.	No adverse effect is anticipated.