

### ES.1 Introduction

The Federal Transit Administration (FTA) and the Santa Clara Valley Transportation Authority (VTA) have prepared this combined Supplemental Environmental Impact Statement (SEIS), Subsequent Environmental Impact Report (SEIR), and Draft 4(f) Evaluation in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). There are two alternatives evaluated in this document in accordance with NEPA: the No Build Alternative and the BART Extension Alternative. FTA is the lead agency for the NEPA analysis in this document and VTA is the implementing agency. BART is a cooperating agency for the NEPA analysis in this document. There are three alternatives evaluated in this document in accordance with CEQA: the No Build Alternative, the BART Extension Alternative, and the BART Extension with Transit-Oriented Joint Development (TOJD) Alternative. VTA is the lead agency for the CEQA analysis in this document. BART is a responsible agency for the CEQA analysis in this document.

In November 2001, the VTA and BART District governing boards approved a Comprehensive Agreement regarding the institutional, project implementation, and financial issues related to the BART Extension. BART will operate and maintain the system consistent with the Comprehensive Agreement. VTA has full responsibility for the funding of all capital improvements, operating costs, and maintenance costs of the BART Extension.

### ES.2 Overview

As described above, there are two alternatives evaluated in this document in accordance with NEPA: the No Build Alternative and the BART Extension Alternative.

1. The NEPA No Build Alternative consists of planned transit improvements, but does not include the 6-mile BART Extension to Santa Clara.
2. The NEPA BART Extension Alternative consists of a 6-mile extension of the BART system from the Berryessa BART Station, currently under construction, through downtown San Jose to the Santa Clara Caltrain Station.

There are three alternatives evaluated in this document in accordance with CEQA: the No Build Alternative, the BART Extension Alternative, and the BART Extension with TOJD Alternative.

1. The CEQA No Build Alternative is the same as the NEPA No Build Alternative.

2. The CEQA BART Extension Alternative is the same as the NEPA BART Extension Alternative described above.
3. The CEQA BART Extension with TOJD Alternative consists of the 6-mile BART Extension as described above (see NEPA BART Extension Alternative) as well as TOJD at the BART Extension's four stations and at two ventilation structure sites.

The proposed TOJD is not included in the NEPA Build Alternative because the TOJD is a potential future independent action by VTA, and the TOJD project serves a separate purpose and need than the BART Extension Alternative and is included to support local and regional land use planning. A specific TOJD development plan or private developer has not been identified at this time and any proposed TOJD project would be separately funded, and would not include federal funding. The TOJD may be constructed at the same time as the BART Extension Alternative or later in time, dependent on the availability of funding and subject to market forces. However, the design of the stations and structures would not preclude TOJD. Because no federal action is involved, VTA's TOJD, which is consistent with city general plans and approved area plans, would be considered in the cumulative background conditions for NEPA purposes.

VTA will coordinate TOJD project entitlements from local planning agencies as a separate action from this project. In October, 2016, VTA was awarded a \$1.52 million Fiscal Year 2016 Pilot Program for Transit-Oriented Development (TOD) Planning grant for the Phase II Project. The Pilot Program supports comprehensive planning efforts of local communities. Under the Pilot Program requirements, agencies and local communities who receive funds through this planning program must examine ways to improve economic development and ridership, foster multimodal connectivity and accessibility, improve transit access, identify infrastructure needs, and enable mixed-use development near transit stations. The Pilot Program funds will be used to support a study on concepts and future opportunities for TOD along the alignment. After the VTA Board of Directors defines the scope of work and approves the selection of a consultant, the study will take approximately a year to complete.

The 6-mile BART Extension under the NEPA BART Extension Alternative, CEQA BART Extension Alternative, and CEQA BART Extension with TOJD Alternative would begin at the terminus of the Phase I Project east of U.S. Highway 101 (U.S. 101) and south of Mabury Road in the City of San Jose and extend to the City of Santa Clara. Figure ES-1 shows the regional location of the BART Extension.

The BART Extension would include an approximately 5-mile tunnel, or subway, through downtown San Jose. Four stations are under consideration: Alum Rock/28<sup>th</sup> Street, Downtown San Jose, Diridon, and Santa Clara. Two options are under consideration for both the Downtown San Jose and Diridon Stations. Figure ES-2 shows a map of the BART Extension. The BART Extension would take approximately 8 years for design, construction, testing, and start-up activities. Depending upon funding availability, initial revenue service on the BART Extension is targeted to begin in late 2025/2026. The CEQA BART Extension with TOJD Alternative consists of the 6-mile BART Extension as described above in

addition to TOJD at the four BART stations and at the two ventilation structure sites. The locations of the TOJD are shown on Figure ES-3. The alternatives listed above are described in detail in Chapter 2, *Alternatives*.

## ES.3 Why Supplemental EIS and Subsequent EIR Document?

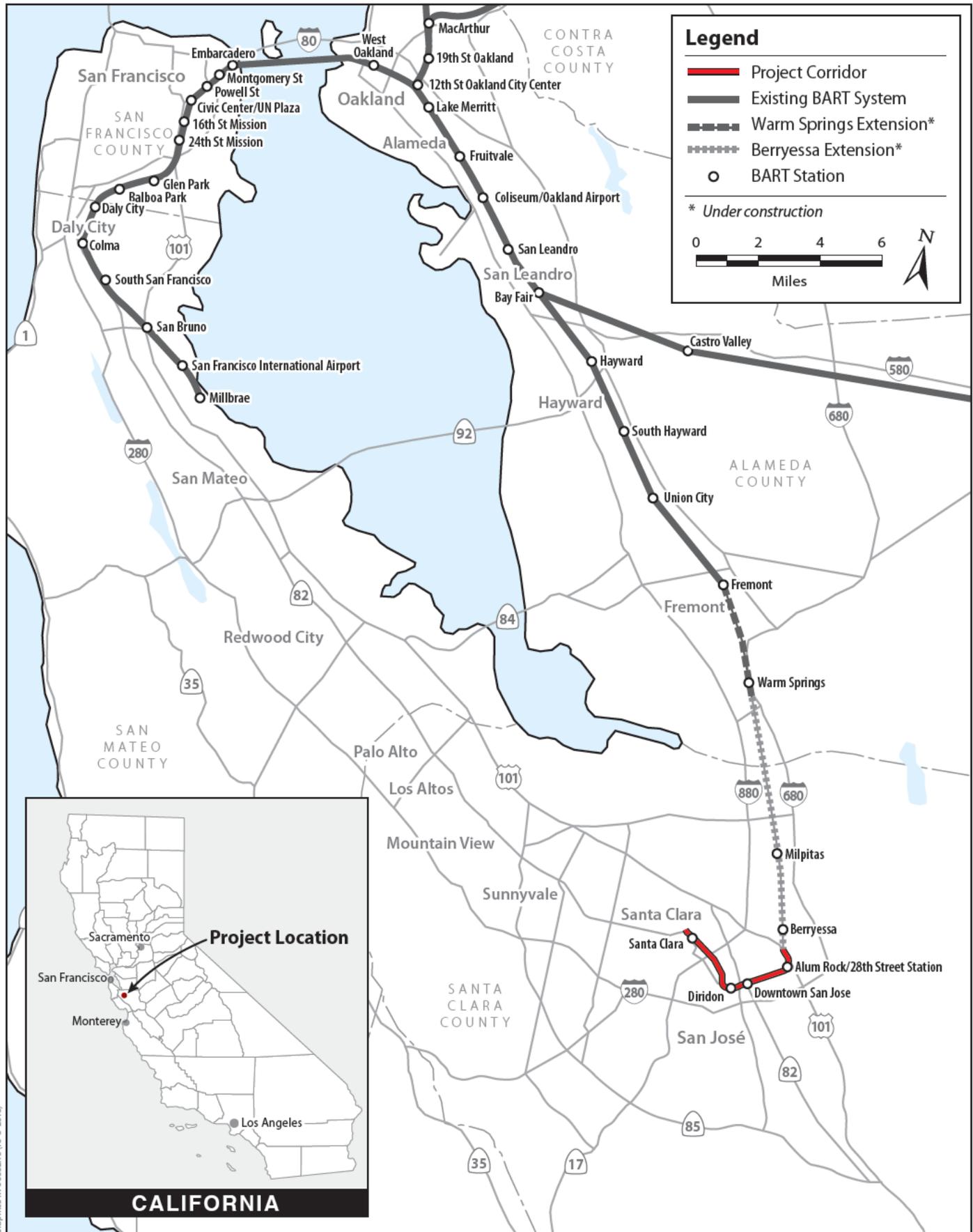
The extension of BART into Santa Clara County is the outcome of various prior studies that have evaluated transportation needs in the BART Silicon Valley corridor and major capital improvements intended to expand transit service.

In 2001, a Major Investment Study (MIS) was conducted, and the VTA Board of Directors approved a locally preferred alternative that would extend BART service from Fremont through Milpitas, San Jose, and into Santa Clara. The alternative came to be designated the Silicon Valley Rapid Transit Corridor Project (SVRTCP). To study the environmental impacts of this alternative, a combined Draft Environmental Impact Statement/ Environmental Impact Report (Draft EIS/EIR) and Draft 4(f) Evaluation was prepared in accordance with the requirements of NEPA and CEQA and released for public review in March 2004. Following the start of the public review period for the Draft EIS/EIR, on April 6, 2004, the NEPA Notice of Intent to prepare an EIS was published for the BART Warm Springs Extension, a 5.4-mile project extending from the downtown Fremont BART Station to south Fremont, terminating at the proposed Warm Springs Station. The Warm Springs Extension is a required precursor project to the SVRTCP.

The project was determined not ripe for NEPA review because it was in the early stages of planning as evidenced by the on-going planning for the Warm Springs Extension Project, which is a predecessor to the SVRTCP. Funding for the operations and construction of the SVRTCP was still being explored at that time. VTA continued with the environmental process under CEQA in order to advance planning. As a result of this action, VTA also withdrew the SVRTCP from FTA's New Starts project qualification and funding program. This included formal withdrawal from the FTA preliminary engineering phase of project development.

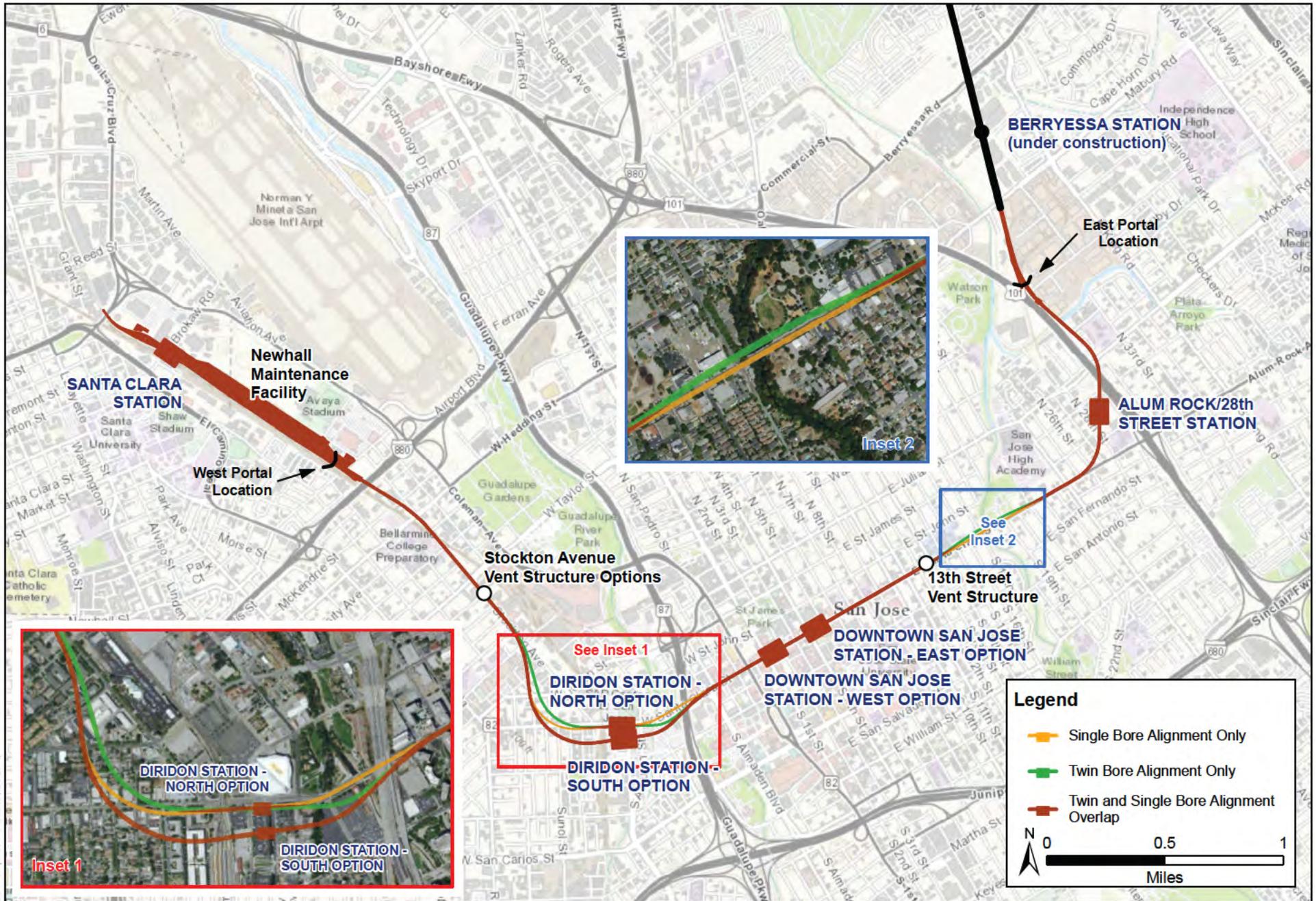
VTA did, however, continue the environmental review process under CEQA. A Final EIR was prepared and certified by the VTA Board of Directors in December 2004. A Final Supplemental EIR (updating the 2004 EIR to address project design refinements) was certified by the VTA Board of Directors in June 2007.

In mid-2007, VTA requested FTA approval to begin the NEPA process again, and FTA concurred. On September 21, 2007, FTA published in the *Federal Register* a Notice of Intent to Prepare an EIS on the project. VTA and FTA held public scoping meetings in October 2007 to solicit comments on the scope of project improvements and issues for evaluation as part of the environmental studies.



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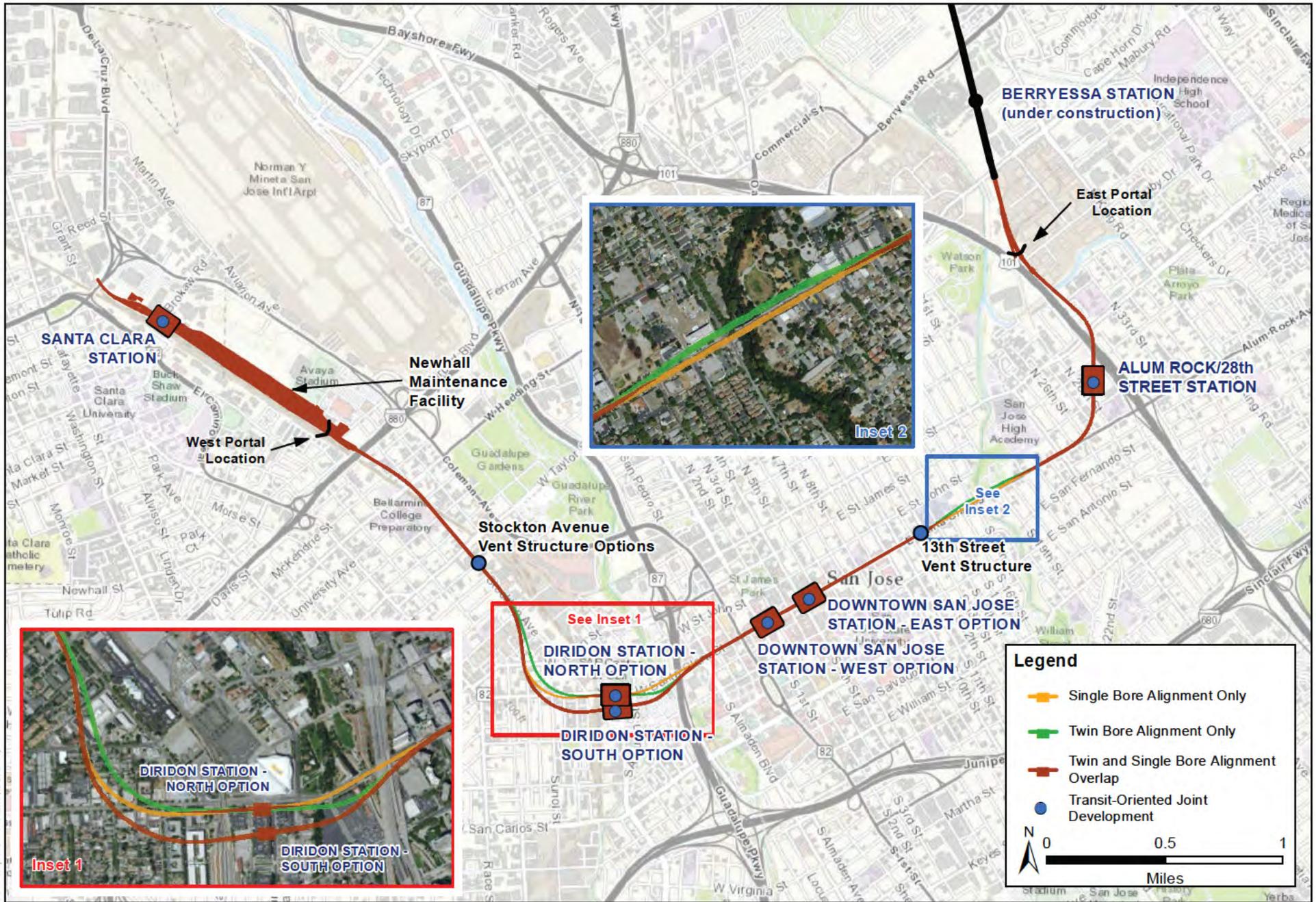
**Figure ES-1**  
**Regional Location**  
 VTA's BART Silicon Valley-Phase II Extension Project



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Source: Station and Track, VTA 2014; Basemap, ESRI 2015

**Figure ES-2**  
**BART Extension Alternative**  
 VTA's BART Silicon Valley – Phase II Extension Project



Source: Station and Track, VTA 2014; Basemap, ESRI 2015

**Figure ES-3**  
**BART Extension (with Station options) and Transit-Oriented Joint Development Alternative**  
 VTA's BART Silicon Valley–Phase II Extension Project

A Draft EIS was released for public comment in March 2009, and a Final EIS was published in March 2010. On June 24, 2010, the FTA issued a Record of Decision (ROD) on the first phase of the project, an approximately 10-mile segment from Warm Springs to Berryessa—designated the Berryessa Extension Project. This formally approved Phase I to move forward into detailed design and construction. The decision reflected the fact that VTA had funding committed or in the pipeline for an initial 10-mile segment of a full 16-mile SVRTCP. Funding for the full 16-mile project was, at the time, not committed or in the immediate pipeline.

VTA proceeded to complete design and initiated construction on this initial segment, which is referred to in this document as the Phase I Project. The remaining approximately 6 miles of the originally contemplated project is referred to in this document as the BART Extension. Because a considerable period of time has elapsed since preparation and publication of the Final EIS on the SVRTCP and because the project is now focused on the remaining approximately 6 miles for completion, a Supplemental Environmental Impact Statement to the 2010 document is being prepared.

To ensure that the previously issued 2007 SEIR was fully consistent with the 2010 Final EIS, a Draft 2<sup>nd</sup> Supplemental EIR was prepared and issued for public review in November 2010. A Final 2<sup>nd</sup> Supplemental EIR was published in March 2011. The 2<sup>nd</sup> SEIR focused on the Phase I Extension as the planned project.

The CEQA EIR and NEPA EIS processes now need to be brought up to date because several years have passed since the prior documents were approved, background conditions have changed, some regulatory settings have changed, and there are new options to be evaluated. In addition, for CEQA purposes, there is a new alternative with TOJD. Therefore, VTA, with FTA concurrence, has elected to prepare a combined Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR) on the remaining approximately 6-mile BART Extension. A Subsequent EIR has been prepared instead of a Supplemental EIR because substantial changes have been made to the project (primarily the introduction of transit-oriented joint development) which requires major revisions of the previous EIR due to the involvement of new significant environmental impacts and increases in the severity of previously identified significant impacts. In 2015, as preparation of the updated documents was underway, VTA decided to add a land use development component to the CEQA BART Extension with TOJD Alternative in order to maximize transit-oriented development potential; to encourage ridership; to fulfill the local and regional goals to integrate transit-oriented development at transit stations; and to integrate the planning, design, and construction of both the BART Extension and land use development.

In late 2015, VTA submitted application materials to FTA, requesting entry into New Starts Project Development, the first phase of the New Starts Capital Investment Grant Program. In March 2016, VTA received approval to enter New Starts Project Development for the NEPA Build Alternative. Completion of project development activities allows VTA to request approval to advance the project into New Starts Engineering.

## ES.4 Public and Agency Involvement

Refer to Chapter 10, *Agency and Community Participation*, for more information on public and agency involvement. A summary of consultation of public agencies conducted for the BART Extension is provided in Section 10.2, *Summary of Public Agency Coordination*. Section 10.6, *Chronology of Coordination*, outlines the timeline of all public outreach, public meetings, and coordination activities.

### ES.4.1 Scoping

On January 30, 2015, VTA issued the Notice of Preparation for the SEIS/SEIR. VTA conducted three formal environmental scoping meetings to gather input and comments prior to the development of the SEIS/SEIR. Meetings were held on February 12, 17, and 19, 2015, in downtown San Jose, east San Jose, and Santa Clara. Each public scoping meeting included a sign-in/open house portion of the meeting, where the public could view informational display boards of the BART Extension alignment and concept exhibits for the proposed stations, and a presentation portion of the meeting during which VTA staff provided an overview of the BART Extension and environmental process.

### ES.4.2 Areas of Controversy

Written and oral comments received during the scoping process are available in the technical report titled *Environmental Scoping Report*. The report is available on VTA's website at [www.vta.org/bart](http://www.vta.org/bart) and on file at VTA's offices (3331 N. First Street, Building. B, San José, CA 95134).

Comments regarding environmental impacts focused on the following areas.

- Disruption to businesses in downtown San Jose and at Diridon during construction.
- Socioeconomic impacts from business displacements.
- Access to stations for automobiles, pedestrians, and bicycles.
- Construction traffic impacts on surrounding roadways, bicycle and pedestrian facilities, the state highway system, and at the SAP Center.
- Noise and air quality impacts of construction and operations on the surrounding land uses.
- Construction and operations vibration and noise impacts on the Church of Five Wounds.

## ES.5 Public Circulation of Draft SEIS/SEIR

Notice of the Draft SEIS/SEIR will be published in the *Federal Register* on January 6, 2017. The public comment period will end February 20, 2017. Public hearings will be held January 25, 26, and 30, 2017, at the locations noted below to take comments from interested parties

and the public regarding the alternatives, impacts, and proposed mitigation measures. The times and locations of the public hearings will be announced in direct mailings, on VTA's website, in display advertisements in local newspapers of general circulation in the area, and in the *Federal Register*. Responses will be provided in the Final SEIS/SEIR for all substantive comments received in writing prior to the close of the public comment period or entered into the public record at the public hearings. VTA and FTA will consider all of the public comments in concert with the information presented in this document prior to selection of a preferred alternative.

The dates, times, and locations of the public hearings are:

- East San Jose Public Hearing  
Wednesday, January 25, 2017 (6:00 p.m. to 8:00 p.m.)  
Mexican Heritage Plaza, Gallery Room  
1700 Alum Rock Avenue, San Jose, CA
- Santa Clara Public Hearing  
Thursday, January 26, 2017 (6:00 p.m. to 8:00 p.m.)  
Santa Clara Senior Center, Room 222  
1303 Fremont Street, Santa Clara, CA
- Downtown San Jose Public Hearing  
Monday, January 30, 2017 (6:00 p.m. to 8:00 p.m.)  
City of San Jose – City Hall, Rooms 118–120  
200 East Santa Clara Street, San Jose, CA

## ES.6 Issues to be Resolved

The issues to be resolved include the following:

- Two station options: Downtown San Jose Station East or West Option
- Two station options: Diridon Station South or North Option
- Four location options for the Stockton Avenue Ventilation Structure on the east side of Stockton Avenue between Schiele Avenue and West Taylor Street.
- Selection of underground station entrances for Alum Rock/28<sup>th</sup> Street, Downtown San Jose, and Diridon Stations
- Two tunnel construction methodology options: the Twin-Bore or Single-Bore Option (see Table ES-3 for a comparison of impacts for these tunnel construction methodology options).

## ES.7 Impacts and Mitigation Measures

### ES.7.1 NEPA

Short-term adverse effects that would occur during the construction of the NEPA BART Extension Alternative (BART Extension) are summarized in Table ES-1, along with proposed mitigation, and the level of impact after mitigation. Table ES-2 summarizes the adverse, long-term effects from operation of the BART Extension under NEPA, proposed mitigation, and the level of impact after mitigation.

Where project features have not changed, construction and operation impacts for the NEPA BART Extension Alternative are generally similar as those identified in the 2010 FEIS. For new facilities, station and tunnel options, or new locations, impacts are generally similar or less than those previously described in the 2010 FEIS except for Transportation (construction), Air Quality (construction), and Noise (construction).

Impacts in Tables ES-1 and ES-2 are described as they relate to all features, or as they relate to specified portions of the alignment. *Tables ES-1 and ES-2 show the adverse effects only.* Any environmental effects that would not be adverse are not discussed in the tables. Refer to Chapter 4, *NEPA Alternatives Analysis of Operations*, and Chapter 5, *NEPA Alternatives Analysis of Construction*, for the criteria for determining adverse effects and detailed description of all potential effects from the NEPA No Build Alternative and the NEPA BART Extension Alternative and proposed mitigation measures.

The level of impacts after mitigation under the NEPA BART Extension Alternative analyzed in this document must be compared to the level of impacts after mitigation in the 2010 FEIS to satisfy the Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report requirements.

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>5.5.2 Transportation</b>				
<p><b>Vehicular Traffic, Bicyclists, and Pedestrians:</b> Lane and roadway closures would require vehicular traffic, bicyclists, and pedestrians traveling within and through the construction areas to use alternate routes, increasing their travel distance and time.</p>	<p>Alum Rock/28<sup>th</sup> Street Station; Downtown San Jose Station (East and West Options); Diridon Station (South and North Options), Santa Clara Station, Newhall Maintenance Facility, and West Tunnel Portal</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options )</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan</p> <p>Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan</p>	<p>Adverse (Twin-Bore and Single-Bore Options )</p>
<p><b>Vehicular Traffic, Bicyclists, and Pedestrians:</b> Lane and roadway closures would require vehicular traffic, bicyclists, and pedestrians traveling within and through the construction areas to use alternate routes, increasing their travel distance and time.</p>	<p>13<sup>th</sup> Street and Stockton Street Ventilation Structures</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options )</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan</p> <p>Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan</p>	<p>Not Adverse (Twin-Bore and Single-Bore Options )</p>
<p><b>Transit-Bus:</b> Long-term closure of transit stops and route detours required during construction would decrease performance and affect local bus service.</p>	<p>Downtown San Jose Station (East and West Options), Diridon Station (South and North Options)</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan</p> <p>Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan</p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Transit-Light Rail:</b> Construction activities may require closure and interruption of VTA’s light rail service through downtown San Jose, affecting performance.</p>	<p>Downtown San Jose Station West Option</p> <p><i>Tunnel Option: Twin-Bore only</i></p>	<p>Adverse (Twin-Bore Option)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan</p> <p>Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan</p>	<p>Adverse (Twin-Bore Option)</p>
<p><b>Transit-Heavy Rail:</b> Construction activities would temporarily affect existing easternmost Caltrain track at Diridon Station and thereby affect Caltrain and other operations.</p>	<p>Diridon Station (North Option)</p> <p><i>Tunnel Option: Twin-Bore only</i></p>	<p>Adverse (Twin- Bore Option)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan</p>	<p>Adverse (Twin- Bore Option)</p>
<p><b>Parking:</b> On-street and off-street parking spaces would be removed during construction.</p>	<p>Downtown San Jose Station (East and West Options), Diridon Station (South and North Options)</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan</p> <p>Mitigation Measure TRA-CNST-C: Develop and Implement a Parking Management Plan</p>	<p>Not Adverse (Twin-Bore and Single-Bore Options)</p>

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>5.5.3 Air Quality</b>				
<p><b>Exhaust Emissions:</b> Construction equipment and truck exhaust emissions would exceed the Bay Area Air Quality Management District (BAAQMD) significance threshold for nitrogen oxides (NO<sub>x</sub>).</p>	<p>All project features <i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure AQ-CNST-A: Implement Dust Control Measures                      Mitigation Measure AQ-CNST-B: Use U.S. Environmental Protection Agency (EPA) Tier 4 or cleaner engines                      Mitigation Measure AQ-CNST-C: Maintain Construction Equipment                      Mitigation Measure AQ-CNST-D: Minimize Idling Times                      Mitigation Measure AQ-CNST-E: Use Equipment Meeting ARB Certification Standards                      Mitigation Measure AQ-CNST-F: Ensure Heavy-Duty Diesel Trucks Will Comply with EPA Emissions Standards                      Mitigation Measure AQ-CNST-G: Use Low-Sulfur Fuel                      Mitigation Measure AQ-CNST-H: Locate Construction Areas Away from Sensitive Receptors                      Mitigation Measure AQ-CNST-I: Use Low-Volatile Organic Compound (VOC) Coatings</p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>5.5.4 Biological Resources and Wetlands</b>				
<b>Tree Removal:</b> Construction activities would require removal of trees, which may result in an adverse effect on nesting birds.	Entire alignment including all stations  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure AES-CNST-A: Replace Trees	Not Adverse (Twin-Bore and Single-Bore Options)
<b>Nesting Birds:</b> Construction activities along the entire alignment may result in adverse effects on nesting birds.	Entire alignment including all stations  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure BIO-CNST-A: Avoid Nesting Bird Season Mitigation Measure BIO-CNST-B: Conduct Preconstruction/Predisturbance Surveys for Nesting Birds	Not Adverse (Twin-Bore and Single-Bore Options)
<b>Roosting Bats:</b> Construction staging areas along the alignment may result in adverse effects on roosting bats.	Entire alignment including all stations  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Measure BIO-CNST-C: Conduct Preconstruction Surveys for Roosting Bat and Implement Protective Measures	Not Adverse (Twin-Bore and Single-Bore Options)
<b>Riparian Habitat:</b> Construction near riparian areas may result in temporary and permanent adverse effects on riparian habitat.	SR 87 CSA near Guadalupe River and Diridon Station South and North Options near Los Gatos Creek  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure BIO-CNST-D: Protect Riparian Habitat	Not Adverse (Twin-Bore and Single-Bore Options)
<b>Tricolored Blackbirds:</b> Construction staging may result in an adverse effect on tricolored blackbirds.	SR 87 CSA along Guadalupe River and at Diridon Station near Los Gatos Creek  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure BIO-CNST-E: Conduct Preconstruction Tricolored Blackbird Nesting Surveys and Determine Appropriate Action	Not Adverse (Twin-Bore and Single-Bore Options)

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Burrowing Owls:</b> The Santa Clara Valley Habitat Plan has designated the area surrounding the Newhall Maintenance Facility as a western burrowing owl survey area, and construction activities may have an adverse effect on burrowing owls.</p>	<p>Newhall Maintenance Facility</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-F: Conduct Preconstruction/Predisturbance Western Burrowing Owl Surveys and Determine Appropriate Action</p>	<p>Not Adverse (Twin-Bore and Single-Bore Options)</p>
<p><b>5.5.5 Community Facilities and Public Services</b></p>				
<p><b>Emergency Vehicles:</b> Construction-period lane and street closures may require emergency vehicles to take detours, which would delay response times.</p>	<p>All project features</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan                      Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan                      Mitigation Measure TRA-CNST-C: Develop and Implement a Parking Management Plan                      Mitigation Measure TRA-CNST-D: Coordinate with Fire and Police Services during Construction</p>	<p>Not Adverse (Twin-Bore and Single-Bore Options)</p>
<p><b>5.5.6 Cultural Resources</b></p>				
<p><b>Archaeological Resources:</b> Construction may adversely affect unknown archaeological resources and human remains.</p>	<p>Area of potential effect of all project features</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure CUL-CNST-A: Implement Programmatic Agreement and Archaeological Resources Treatment Plan</p>	<p>Not Adverse (Twin-Bore and Single-Bore Options)</p>

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Vibration:</b> Historic buildings in the vicinity of cut-and-cover station excavation activities may be exposed to excessive vibration.</p>	<p>Alum Rock/28<sup>th</sup> Street Station, Downtown San Jose (East and West Options) and Diridon (South and North Options)</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure NV-CNST-P: Conduct Construction Vibration Monitoring                      Mitigation Measure NV-CNST-Q: Perform Vertical Direction Vibration Monitoring                      Mitigation Measure NV-CNST-R: Require Monitoring of Vibration for Peak Particle Velocity</p>	<p>Not Adverse (Twin-Bore and Single-Bore Options)</p>
<p><b>Noise:</b> Construction noise has the potential to affect an historic property.</p>	<p>Alum Rock/28<sup>th</sup> Street Station</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure NV-CNST-C: Construct Temporary Noise Barriers</p>	<p>Not Adverse (Twin-Bore and Single-Bore Options)</p>
<p><b>Surface Settlement:</b> Surface settlement during tunnel boring activities may adversely affect historic buildings.</p>	<p>Tunnel alignment</p> <p><i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure GEO-CNST-B: Implement Preconstruction Condition Surveys along the Tunnel Alignment                      Mitigation Measure GEO-CNST-C: Monitor Ground Surface during Tunneling Activities                      Mitigation Measure GEO-CNST-D: Monitor Settlement Effects around Cut-and-Cover Excavations</p>	<p>Not Adverse (Twin-Bore and Single-Bore Options)</p>

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>5.5.9 Geology, Soils, and Seismicity</b>				
<b>Liquefaction:</b> Liquefaction potential is moderate to high and may damage project facilities along the alignment and in station areas.	All features <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-A: Incorporate Design Specifications to Minimize Effects from Liquefaction Hazards	Not Adverse (Twin-Bore and Single-Bore Options)
<b>Surface Settlement:</b> Surface settlement has the potential to damage structures and utilities along the alignment.	All project features <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-B: Implement Preconstruction Condition Surveys along the Tunnel Alignment Mitigation Measure GEO-CNST-C: Monitor Ground Surface during Tunneling Activities Mitigation Measure GEO-CNST-D: Monitor Settlement Effects around Cut-and-Cover Excavations Mitigation Measure GEO- NST-E: Implement Preconstruction Condition Surveys for Utilities Mitigation Measure GEO-CNST-F: Minimize Excavation Bottom Failure Impacts	Not Adverse (Twin-Bore and Single-Bore Options)
<b>Stability:</b> Excavation bottom stability or disturbance may result from bottom heave, piping, or blow-out.	All project features <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-F: Minimize Excavation Bottom Failure Impacts Mitigation Measure GEO-CNST-G: Minimize Disturbance of Sensitive Deposits at the Excavation Subgrade	Not Adverse (Twin-Bore and Single-Bore Options)

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>Expansive Soils:</b> Expansive soils are a concern for the proposed system facilities, parking, and vehicular and pedestrian access at the stations and other sites.	All project features  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-H: Incorporate Design Specifications to Minimize Effects from Expansive Soils	Not Adverse (Twin-Bore and Single-Bore Options)
<b>Paleontological Resources:</b> Potential for discovery and destruction of previously unknown paleontological resources or unique geologic features during construction.	All project features  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-I: Stop Construction if Paleontological Resources are Discovered and Determine Appropriate Action	Not Adverse (Twin-Bore and Single-Bore Options)
<b>5.5.11 Hazards and Hazardous Materials</b>				
<b>Contamination:</b> Disturbance of contaminated materials during construction of all features may pose a potential threat to human health and the environment.	All features  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure HAZ-CNST-A: Prepare and Implement Remedial Action Plans	Not Adverse (Twin-Bore and Single-Bore Options)
<b>5.5.12 Noise and Vibration</b>				
<b>Noise.</b> Construction noise would exceed noise criteria for sensitive receptors.	Alum Rock/28 <sup>th</sup> Street Station, 13 <sup>th</sup> Street Ventilation Structure, Downtown San Jose (East and West Options); Diridon Station (South and North Options), Stockton Street Ventilation Structure, and Newhall Maintenance Facility  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-CNST-A: Incorporate FTA Criteria Compliant Construction Noise and Vibration Specifications Mitigation Measure NV-CNST-B: Locate Equipment as Far as Feasible from Sensitive Sites Mitigation Measure NV-CNST-C: Construct Temporary Noise Barriers Mitigation Measure NV-CNST-D: Operate Equipment to Minimize Annoying Noises Mitigation Measure NV-CNST-E:	Adverse for Downtown San Jose (East and West Options) and Diridon Station (South and North Options) (Twin-Bore and Single-Bore Options)  Not Adverse for Alum Rock/28 <sup>th</sup> Street Station, 13 <sup>th</sup> Street Ventilation Structure, Stockton Street

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
			Route Construction Trucks along Truck Routes Least Disturbing to Residents Mitigation Measure NV-CNST-F: Secure Steel and Concrete Plates over Excavated Holes and Trenches Mitigation Measure NV-CNST-G: Use Best Available Practices to Reduce Excess Noise and Vibration Mitigation Measure NV-CNST-H: Adhere to Local Jurisdiction Construction Time Periods, to the Extent Feasible Mitigation Measure NV-CNST-I: Perform Preconstruction Ambient Noise Measurements at East and West Portal CSAs Mitigation Measure NV-CNST-J: Submit a Noise Control Plan and a Noise Monitoring Plan Mitigation Measure NV-CNST-K: Require Minimum Qualifications for the Acoustical Engineer Mitigation Measure NV-CNST-L: Prohibit Operation of Noise-Generating Equipment Prior to Acceptance of Noise Monitoring Plan and Noise Control Plan Mitigation Measure NV-CNST-M: Install permanent Noise Monitors at the Downtown San Jose and Diridon	Ventilation Structure, and Newhall Maintenance Facility (Twin-Bore and Single-Bore Options)

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
			Station during all Construction Phases Mitigation Measure NV-CNST-N: Ensure Equipment is Pre-certified to Meet Noise Limits Mitigation Measure NV-CNST-O: Implement a Complaint Resolution Procedure	
<p><b>Groundborne Noise:</b> Soils excavated by the tunnel boring machines would be removed by a muck train or conveyor system that may cause groundborne noise impacts.</p>	Tunnel construction  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-CNST-P: Conduct Construction Vibration Monitoring Mitigation Measure NV-CNST-Q: Perform Vertical Direction Vibration Monitoring Mitigation Measure NV-CNST-R: Require Monitoring of Vibration for Peak Particle Velocity Mitigation Measure NV-CNST-S: Implement Measures to Reduce Vibration from Muck Extraction and Supply Trains	Not Adverse (Twin-Bore and Single-Bore Options)
<p><b>Vibration:</b> Historic buildings in the vicinity of cut-and-cover station excavation activities may be exposed to excessive vibration.</p>	Alum Rock/28 <sup>th</sup> Street Station, Downtown San Jose (East and West Options) and Diridon (South and North Options)  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-CNST-P: Conduct Construction Vibration Monitoring Mitigation Measure NV-CNST-Q: Perform Vertical Direction Vibration Monitoring Mitigation Measure NV-CNST-R: Require Monitoring of Vibration for Peak Particle Velocity	Not Adverse (Twin-Bore and Single-Bore Options)

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>5.5.15 Socioeconomics</b>				
<b>Business Access:</b> Construction activities would restrict vehicles, bicyclists, and pedestrians access to nearby businesses.	All project features <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan Mitigation Measure TRA-CNST-C: Develop and Implement a Parking Management Plan Mitigation Measures AQ-CNST-A through AQ-CNST-I Mitigation Measures NV-CNST-A through NV-CNST-S	Adverse for Downtown San Jose (East and West Options) (Twin-Bore and Single-Bore Options)  Not Adverse for all other features (Twin-Bore and Single-Bore Options)
<b>5.5.17 Visual Quality and Aesthetics</b>				
<b>Tree Removal:</b> Construction activities would require removal of trees.	Entire alignment <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure AES-CNST-A: Replace Trees	Not Adverse (Twin-Bore and Single-Bore Options)
<b>5.5.18 Water Resources, Water Quality, and Floodplains</b>				
<b>Surface Water:</b> Construction activities may result in surface water impacts.	All project features <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure BIO-CNST-D: Protect Riparian Habitat	Not Adverse (Twin-Bore and Single-Bore Options)

**Table ES-1: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Construction**

NEPA Effect	BART Facility and Tunnel Option	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>5.5.19 Environmental Justice</b>				
<p><b>Minority and Low-Income Populations:</b> Construction would have direct and indirect adverse effects on low-income and minority populations in the vicinity of the alignment.</p>	<p>All project features <i>Tunnel Option: Both options</i></p>	<p>Adverse (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measures AQ-CNST-A through AQ-CNST-I Mitigation Measure HAZ-CNST-A Mitigation Measures NV-CNST-A through NV-CNST-O Mitigation Measures TRA-CNST-A through TRA-CNST-D Mitigation Measure AES-CNST-A</p>	<p>Not Adverse/Not disproportionately high and adverse (Twin-Bore and Single-Bore Options)</p>

**Table ES-2: Summary of Adverse Effects and Proposed Mitigation Measures of the NEPA BART Extension Alternative – Operation**

NEPA Effect	BART Facility	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>4.12 Noise and Vibration</b>				
<b>Ancillary Facilities:</b> Noise from ancillary facilities may exceed the City of San Jose’s residential noise limit.	Ventilation Structures, Traction Power Substations, Emergency Backup Generators  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-A: Implement Noise Reduction Treatments at Ancillary Facilities	Not Adverse (Twin-Bore and Single-Bore Options)
<b>Train Operations:</b> Groundborne noise from train operations may exceed FTA noise criteria.	All features  <i>Tunnel Option: Both options</i>	Adverse (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-B: Reduce Groundborne Noise Levels	Not Adverse (Twin-Bore and Single-Bore Options)

Table ES-3 compares the adverse effects after mitigation between the Twin-Bore and Single-Bore Options. Only resource areas that are adverse after mitigation are listed here. Please see Chapters 4 and 5 for a detailed discussion of the impacts of the Twin-Bore and Single-Bore Options.

**Table ES-3: Comparison of Adverse Effects After Mitigation for Tunnel Construction Methodology Options (Twin-Bore and Single-Bore) for NEPA BART Extension Alternative**

Resource Issue	Twin-Bore Option	Single-Bore Option
Construction Transportation – Vehicular Traffic, Bicyclists, and Pedestrians (Alum Rock/28 <sup>th</sup> Street, Downtown San Jose, and Diridon Stations)	<i>Adverse Effect After Mitigation:</i> Construction of the Twin-Bore Option would require more extensive cut-and-cover activities over a greater area within public roadways at the Alum Rock/28 <sup>th</sup> Street Station, Downtown San Jose Station (East and West Options), downtown crossover, and Diridon Station (South and North Options) resulting in <i>greater</i> disruption to vehicular traffic, bicyclists, and pedestrians compared to the Single-Bore Option. The effect would remain adverse after mitigation.	<i>Adverse Effect After Mitigation:</i> Construction of the Single-Bore Option would require less extensive cut-and-cover activities over a smaller area within public roadways at the Alum Rock/28 <sup>th</sup> Street Station, Downtown San Jose Station (East and West Options), downtown crossover, and Diridon Station (South and North Options) resulting in less disruption to vehicular traffic, bicyclists, and pedestrians compared to the Twin-Bore Option. However, the effect would still remain adverse after mitigation.
Construction Transportation – Vehicular Traffic, Bicyclists, and Pedestrians (Newhall Maintenance Facility, West Tunnel Portal, and Santa Clara Station)	<i>Adverse Effect After Mitigation:</i> Construction of the Twin-Bore Option would increase traffic from construction vehicles resulting in disruptions to vehicular traffic, bicyclists, and pedestrians at the Newhall Maintenance Facility, West Tunnel Portal, and Santa Clara Station. This effect would be similar for construction under both options. The effect would remain adverse after mitigation.	<i>Adverse Effect After Mitigation:</i> Construction of the Single-Bore Option would increase traffic from construction vehicle, resulting in disruptions to vehicular traffic, bicyclists, and pedestrians at the Newhall Maintenance Facility, West Tunnel Portal, and Santa Clara Station. This effect would be similar under both options. The effect would remain adverse after mitigation.
Construction Transit – Local Bus (Downtown San Jose Station)	<i>Adverse Effect After Mitigation:</i> Construction of the Downtown San Jose Station (East and West Options) and downtown crossover under the Twin-Bore Option would cause extensive disturbance to major roadways in the downtown area, including road closures, which would adversely affect local bus service in the Downtown San Jose Station area. This effect would be greater for construction of the Twin-Bore Option as compared to the Single-Bore Option. The effect would remain adverse after mitigation.	<i>Adverse Effect After Mitigation:</i> Construction of the Downtown San Jose Station (East and West Options) and downtown crossover under the Single-Bore Option would cause traffic disruption. Although, the disruption to roadways and to local bus service would be less than under the Twin-Bore Option, the effect would remain adverse after mitigation.

**Table ES-3: Comparison of Adverse Effects After Mitigation for Tunnel Construction Methodology Options (Twin-Bore and Single-Bore) for NEPA BART Extension Alternative**

Resource Issue	Twin-Bore Option	Single-Bore Option
Construction Transit – Local Bus (Diridon Station)	<i>Adverse Effect After Mitigation:</i> Construction of the Diridon Station (South and North Options) would cause relocation of the existing transit center and extensive disturbance to major roadways in the downtown area, which would adversely affect local bus service in the Diridon Station area. This effect would remain adverse after mitigation.	<i>Adverse Effect After Mitigation:</i> Construction of the Diridon Station (South and North Options) would cause relocation of the existing transit center and extensive disturbance to major roadways in the downtown area, which would adversely affect local bus service in the Diridon Station area. This effect would remain adverse after mitigation.
Construction Transit – Light Rail (Downtown San Jose Station West)	<i>Adverse Effect After Mitigation:</i> Construction of the Downtown San Jose Station West Option and downtown crossover under the Twin-Bore Option would cause extensive disturbance to VTA’s light rail service under the Twin-Bore Option. The effect would remain adverse after mitigation.	<i>No Effect:</i> Construction of the Downtown San Jose Station West Option and crossover for the Single-Bore Option would have no effect on VTA’s light rail service.
Construction Transit – Heavy Rail (Diridon Station North)	<i>Adverse Effect After Mitigation:</i> For construction of the Diridon Station North Option, an existing Caltrain track (easternmost track) would be temporarily affected during construction. This would result in a temporary shift of Caltrain service onto other tracks and disruption to Caltrain and other service. The effect would remain adverse after mitigation.	<i>No Effect:</i> Construction of the Diridon Station North Option under the Single-Bore Option would have no effect on the easternmost Caltrain track and, therefore, would not cause a change in or disruption to Caltrain or other service.
Construction – Air Quality and GHG	<i>Adverse Effect After Mitigation:</i> Cut-and-cover excavation activities for the three underground stations under the Twin-Bore Option would be greater than under the Single-Bore Option. NO <sub>x</sub> is anticipated to exceed acceptable thresholds during construction of the Twin-Bore Option, and NO <sub>x</sub> exceedances are greater for the Twin-Bore Option than for the Single-Bore Option. The effect would remain adverse after mitigation.	<i>Adverse Effect After Mitigation:</i> Although cut-and-cover excavation activities for the three underground stations under the Single-Bore Option would be less than under the Twin-Bore Option, NO <sub>x</sub> would still exceed acceptable thresholds and would be considered adverse. However, the exceedances would not be as severe under the Single-Bore Option. The effect would remain adverse after mitigation.

**Table ES-3: Comparison of Adverse Effects After Mitigation for Tunnel Construction Methodology Options (Twin-Bore and Single-Bore) for NEPA BART Extension Alternative**

Resource Issue	Twin-Bore Option	Single-Bore Option
Construction Noise (Downtown and Diridon Stations)	<i>Adverse Effect After Mitigation:</i> Construction noise would exceed acceptable noise criteria for sensitive receptors after mitigation at the Downtown San Jose Station (East and West Options) and Diridon Station (South and North Options) for the Twin-Bore Option. The effect would remain adverse after mitigation.	<i>Adverse Effect After Mitigation:</i> Construction noise would exceed acceptable noise criteria for sensitive receptors after mitigation at the Downtown San Jose Station (East and West Options) and Diridon Station (South and North Options) for the Single-Bore Option. The effect would remain adverse after mitigation.
Construction Socioeconomics (Downtown San Jose Station)	<i>Adverse Effect After Mitigation:</i> Construction would cause disruption to vehicular traffic and pedestrians around the Downtown San Jose Station (East and West Options), which would cause adverse effects on businesses. The severity of the impacts would be greater under the Twin-Bore Option due to the more extensive cut-and-cover station and crossover construction, which would require extensive street and lane closures. The effect would remain adverse after mitigation.	<i>Adverse Effect After Mitigation:</i> Construction would cause disruption to vehicular traffic and pedestrians around the Downtown San Jose Station (East and West Options), which would cause adverse effects on businesses. The impacts would be less severe for the Single-Bore Option due to the less-extensive cut-and-cover station and crossover construction required for the Single-Bore Option as compared to the Twin-Bore Option. The effect would remain adverse after mitigation.

## ES.7.2 CEQA

Tables ES-4 through ES-7 summarize the significant construction and operational impacts and proposed mitigation of the CEQA BART Extension Alternative and the CEQA BART Extension with TOJD Alternative and level of impact of these alternatives after mitigation. *Tables ES-4 and ES-7 show the significant impacts only.* The criteria for determining significant impacts are provided in each topical section. Refer to Chapter 6, *CEQA Alternatives Analysis of Construction and Operation*, for a detailed description of all potential impacts from the CEQA BART Extension Alternative and the CEQA BART Extension with TOJD Alternative and proposed mitigation measures. The comparison of level of significance after mitigation for all significant impacts between the CEQA BART Extension Alternative and the 2004 FEIR and Supplemental EIRs is included in the last column of Tables ES-4 through ES-7.

### **CEQA BART Extension Alternative compared to the 2004 FEIR and Supplemental EIRs (after mitigation)**

Where project features have not changed, impacts are generally at a similar level of impact after mitigation when compared to those previously described in the 2004 FEIR and Supplemental EIRs.

For new facilities, station and tunnel options, or new locations, impacts are generally at a similar or lesser level of impact after mitigation when compared to those previously described in the 2004 FEIR and Supplemental EIRs except for Transportation (construction), Air Quality (construction), and Noise (construction). Operational impacts would be similar to those previously described in the 2004 FEIR and 2007 Supplemental EIR.

### **CEQA BART Extension with TOJD Alternative compared to the 2004 FEIR and Supplemental EIRs (after mitigation)**

With the addition of the TOJD, there would be greater impacts compared to those previously described in the 2004 FEIR and 2007 Supplemental EIR. Construction impacts of the BART Extension with TOJD Alternative would be similar to the BART Extension Alternative but greater (significant and unavoidable) for reactive organic gas (ROG). Operational impacts of the BART Extension with TOJD Alternative would be similar to the BART Extension Alternative but greater for ROG (significant and unavoidable), Traffic (significant and unavoidable), and Greenhouse Gases (significant and unavoidable).

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.2 Transportation</b>			
<p><b><i>Vehicular Traffic, Bicyclists, and Pedestrians: Conflict with a transportation plan, ordinance, or policy; Conflict with the Congestion Management Program; and Conflict with transit, bicycle, or pedestrian policies, plans, or programs.</i></b>                      Construction has the potential to affect vehicular traffic, bicyclists, and pedestrians due to lane and street closures, and detours at Alum Rock/28<sup>th</sup> Street, 13<sup>th</sup> Street Ventilation Structure, Downtown San Jose (East and West Options), Diridon Stations (South and North Options), Stockton Street Ventilation Structure, West Tunnel Portal, Newhall Maintenance Facility, and Santa Clara Station.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan                      Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan                      Mitigation Measure TRA-CNST-C: Develop and Implement a Parking Management Plan</p>	<p>Significant and Unavoidable for Alum Rock/28<sup>th</sup> Street, Downtown San Jose (East and West Options), Diridon Stations (South and North Options), West Tunnel Portal, Newhall Maintenance Facility, and Santa Clara Station (Twin-Bore and Single-Bore Options)</p> <p>Less than Significant for 13<sup>th</sup> Street Ventilation Structure and Stockton Street Ventilation Structure (Twin-Bore and Single-Bore Options)</p>
<p><b><i>Transit-Bus: Conflict with a transportation plan, ordinance, or policy; Conflict with the Congestion Management Program; and Conflict with transit, bicycle, or pedestrian policies, plans, or programs.</i></b> For Downtown San Jose Station (East and West Options) and Diridon Station (North and South Options) long-term closure of transit stops and route detours required during construction would decrease performance and affect local bus service.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan                      Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan</p>	<p>Significant and Unavoidable (Twin-Bore and Single-Bore Options)</p>

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Transit-Light Rail: Conflict with a transportation plan, ordinance, or policy; Conflict with the Congestion Management Program; and Conflict with transit, bicycle, or pedestrian policies, plans, or programs.</b> Construction activities for the Downtown San Jose Station West Option require closure and interruption of VTA’s light rail service through downtown San Jose, affecting performance.</p>	<p>Significant (Twin-Bore Option only)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan</p>	<p>Significant and Unavoidable (Twin-Bore Option only)</p>
<p><b>Transit-Heavy Rail: Conflict with a transportation plan, ordinance, or policy; Conflict with the Congestion Management Program; and Conflict with transit, bicycle, or pedestrian policies, plans, or programs.</b> Construction activities for the Diridon Station North Option would temporarily affect existing Caltrain easternmost track at Diridon Station and thereby affect Caltrain and other operations.</p>	<p>Significant (Twin- Bore Option only)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan</p>	<p>Significant and Unavoidable (Twin-Bore Option only)</p>
<p><b>Result in inadequate emergency access.</b> Construction activities throughout the alignment may have a temporary impact on emergency vehicle access when construction causes temporary access or egress limitations.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-CNST-D: Coordinate with Fire and Police Services during Construction</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.3. Air Quality</b>			
<p><b>Violate an air quality standard or contribute to an air quality violation.</b>                      During construction, NO<sub>x</sub> emissions would exceed BAAQMD thresholds and may contribute to air quality degradation and impede the region’s ability to attain air quality standards for all features.</p>	<p>Significant                      (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure AQ-CNST-A: Implement Dust Control Measures                      Mitigation Measure AQ-CNST-B: Use EPA Tier 4 or Cleaner Engines                      Mitigation Measure AQ-CNST-C: Maintain Construction Equipment                      Mitigation Measure AQ-CNST-D: Minimize Idling Times                      Mitigation Measure AQ-CNST-E: Use Equipment Meeting ARB Certification Standards                      Mitigation Measure AQ-CNST-F: Ensure Heavy-Duty Diesel Trucks Will Comply with EPA Emissions Standards                      Mitigation Measure AQ-CNST-G: Use Low-Sulfur Fuel                      Mitigation Measure AQ-CNST-H: Locate Construction Areas Away from Sensitive Receptors</p>	<p>Significant and Unavoidable for NO<sub>x</sub> emissions                      (Twin-Bore and Single-Bore Options)</p>
<p><b>Cause a cumulatively considerable net increase in a criteria pollutant.</b>                      Cumulative NO<sub>x</sub> emissions would exceed BAAQMD thresholds and may contribute to air quality degradation and impede the region’s ability to attain air quality standards for all project features</p>	<p>Significant                      (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measures AQ-CNST-A through AQ-CNST-H (described above)</p>	<p>Significant and Unavoidable for NO<sub>x</sub> emissions                      (Twin-Bore and Single-Bore Options)</p>

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.4 Biological Resources and Wetlands</b>			
<p><b><i>Nesting Birds: Adversely affect a special-status species or habitat.</i></b> Construction activities along the entire alignment and at all stations may result in a significant impact on nesting birds.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-A: Avoid Nesting Bird Season Mitigation Measure BIO-CNST-B: Conduct Preconstruction/Predisturbance Surveys for Nesting Birds</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b><i>Roosting Bats: Adversely affect a special-status species or habitat.</i></b> Construction staging areas along the entire alignment and at all stations may result in a significant impact on roosting bats.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Measure BIO-CNST-C: Conduct Preconstruction Surveys for Roosting Bat and Implement Protective Measures</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b><i>Tri-colored Blackbirds: Adversely affect a special-status species or habitat.</i></b> Construction activities at the SR 87 CSA near the Guadalupe River and at Diridon Station near the Los Gatos Creek may result in a significant impact on tricolored blackbirds.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-E: Conduct Preconstruction Tricolored Blackbird Nesting Surveys</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b><i>Burrowing Owls: Adversely affect a special-status species or habitat.</i></b> Construction activities for Newhall Maintenance Facility may result in a significant impact on burrowing owls.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-F: Conduct Preconstruction Burrowing Owl Surveys and Determine Appropriate Action</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b><i>Adversely affect a sensitive natural community.</i></b> Construction activities at the CSA near Lower Silver Creek, the SR 87 CSA near the Guadalupe River, and construction of the systems facilities at Diridon Station near Los Gatos Creek may result in a significant impact on riparian habitat adjacent to the facilities.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-D: Protect Riparian Habitat</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Interfere with wildlife movement or impede use of wildlife nursery sites.</b> Construction noise and disturbance along the alignment and at all stations may interfere with nesting birds.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-A: Avoid Nesting Bird Season Mitigation Measure BIO-CNST-B: Conduct Preconstruction/Predisturbance Surveys for Nesting Birds</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</b> Landscaping trees would be removed during construction along the alignment including all stations.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure AES-CNST-A: Replace Trees Removed during Construction</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>Conflict with an adopted habitat conservation plan, or local policies or ordinances protecting biological resources.</b> Construction activities in the vicinity of Guadalupe Creek (construction staging areas neat SR 87) and Los Gatos Creek (system facilities at Diridon Station South Option) may result in a significant impact on tricolored blackbirds. Construction activities for Newhall Maintenance Facility may result in a significant impact on burrowing owls.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-E: Conduct Preconstruction Tricolored Blackbird Nesting Surveys Mitigation Measure BIO-CNST-F: Conduct Preconstruction Burrowing Owl Surveys and Determine Appropriate Action</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>6.6 Cultural Resources</b></p>			
<p><b>Noise: Cause an adverse change in the significance of a historic resource as defined in § 15064.5.</b> Construction noise has the potential to affect the historic property near Alum Rock/28<sup>th</sup> Street Station.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure NV-CNST-C: Construct Temporary Noise Barriers</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b><i>Vibration: Cause an adverse change in the significance of a historic resource as defined in § 15064.5.</i></b> Historic buildings in the vicinity of cut-and-cover station excavation activities may be exposed to excessive vibration near Alum Rock/28<sup>th</sup> Street Station, Downtown San Jose (East and West Options) and Diridon (South and North Options).</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure NV-CNST-P: Conduct Construction Vibration Monitoring                      Mitigation Measure NV-CNST-Q: Perform Vertical Direction Vibration Monitoring                      Mitigation Measure NV-CNST-R: Require Monitoring of Vibration for Peak Particle Velocity</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b><i>Surface Settlement: Cause an adverse change in the significance of a historic resource as defined in § 15064.5.</i></b> Historic buildings could be affected due to surface settlement during tunneling and cut-and-cover activities in the vicinity.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure GEO-CNST-B: Implement Preconstruction Condition Surveys along the Tunnel Alignment                      Mitigation Measure GEO-CNST-C: Monitor Ground Surface during Tunneling Activities                      Mitigation Measure GEO-CNST-D: Monitor Settlement Effects around Cut-and-Cover Excavations.</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b><i>Archaeological Resources. Cause an adverse change in the significance of an archaeological resource as defined in § 21803.2. Disturb human remains, including those interred outside of formal cemeteries.</i></b> Construction has the potential to cause significant impact on unknown archaeological resources and human remains.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure CUL-CNST-A: Implement Programmatic Agreement and Archaeological Resources Treatment Plan</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.8 Geology, Soils, and Seismicity</b>			
<b>Liquefaction: Expose people or structures to potential seismic hazards.</b> Liquefaction potential is moderate to high and may damage project facilities along the alignment and in station areas.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-A: Incorporate Design Specifications to Minimize Effects from Liquefaction Hazards	Less than Significant (Twin-Bore and Single-Bore Options)
<b>Surface Settlement: Be located on a geologic unit that is unstable or that would become unstable.</b> Surface settlement has the potential to damage structures and utilities along the alignment.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-B: Implement Preconstruction Condition Surveys along the Tunnel Alignment Mitigation Measure GEO-CNST-C: Monitor Ground Surface during Tunneling Activities Mitigation Measure GEO-CNST-D: Monitor Settlement Effects around Cut-and-Cover Excavations Mitigation Measure GEO-CNST-E: Implement Preconstruction Condition Surveys for Utilities Mitigation Measure GEO-CNST-F: Minimize Excavation Bottom Failure Impacts	Less than Significant (Twin-Bore and Single-Bore Options)
<b>Stability: Be located on a geologic unit that is unstable or that would become unstable.</b> Excavation bottom stability or disturbance may result from bottom heave, piping, or blow-out.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-F: Minimize Excavation Bottom Failure Impacts Mitigation Measure GEO-CNST-G: Minimize Disturbance of Sensitive Deposits at the Excavation Subgrade	Less than Significant (Twin-Bore and Single-Bore Options)

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Expansive Soils: Be located on expansive soil, creating risks to life or property.</b> System facilities, parking, and vehicular and pedestrian access at the stations and other sites are in areas of potential expansive soils.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure GEO-CNST-H: Incorporate Design Specifications to Minimize Effects from Expansive Soils</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>Paleontological Resources: Destroy a unique paleontological resource or unique geologic feature.</b> Excavation depths involved during construction throughout the alignment may result in the discovery and destruction of previously unknown paleontological resources.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure GEO-I: Stop Construction if Paleontological Resources Are Discovered and Determine Appropriate Action</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>6.10 Hazards and Hazardous Materials</b></p>			
<p><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.</b> Disturbance of contaminated materials during construction of all features may pose a potential threat to human health and the environment.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure HAZ-CNST-A: Prepare and Implement Remedial Action Plans</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Be located on a site that 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.</b> Disturbance of hazardous materials that may be present in the soil and ballast beneath the alignment during construction activities, such as excavation and dewatering, may pose a potential threat to human health and the environment.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure HAZ-CNST-A: Prepare and Implement Remedial Action Plans</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<b>6.11 Land Use</b>			
<p><b>Conflict with any applicable habitat conservation plan or natural community conservation plan.</b> Construction near the Newhall Maintenance Facility would conflict with the western burrowing owl survey area covered by the SCVHP.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measures BIO-CNST-E and BIO-CNST-F (described under 6.4, Biological Resources and Wetlands)</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<b>6.12 Noise and Vibration</b>			
<p><b>Expose persons to or generate noise in excess of local or agency standards; and temporarily or periodically increase ambient noise levels.</b> Construction at the Alum Rock/28<sup>th</sup> Street and Downtown San Jose Station Options may exceed nighttime noise criterion for residences. Construction activities for 13<sup>th</sup> Street and Stockton Avenue Ventilation Facilities would</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measures NV-CNST-A through NV-CNST-O</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
exceed daytime noise criterion for residences.			
<p><b>Expose persons to or generate noise in excess of local or agency standards.</b> Construction at Downtown San Jose Station (East and West Options) and Diridon Station (South and North Options) would exceed noise criterion for residences.</p>	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-CNST-A through NV-CNST-O	Significant and Unavoidable (Twin-Bore and Single-Bore Options)
<p><b>Expose persons to or generate excessive groundborne vibration or groundborne noise.</b> Residences may be exposed to temporary vibration impacts from TBM. Soils excavated by the TBM would be removed by a muck train or conveyor system and may cause groundborne noise impacts.</p>	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-CNST-P: Conduct Construction Vibration Monitoring Mitigation Measure NV-CNST-Q: Perform Vertical Direction Vibration Monitoring Mitigation Measure NV-CNST-R: Require Monitoring of Vibration for Peak Particle Velocity Mitigation Measure NV-CNST-S: Implement Measures to Reduce Vibration from Muck Extraction and Supply Trains Procedure	Less than Significant (Twin-Bore and Single-Bore Options)

**Table ES-4: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.14 Visual Quality and Aesthetics</b>			
<b>Tree Removal: Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.</b> Construction activities would require removal of trees along the entire alignment.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure AES-CNST-A: Replace Trees	Less than Significant (Twin-Bore and Single-Bore Options)
<b>6.15 Water Resources, Water Quality, and Floodplains</b>			
<b>Degrade water quality or violate water quality standards.</b> Construction activities may result in temporary increases in sediment loads and potential stormwater contamination, accidental spills of hazardous materials, and surface and groundwater impacts.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure BIO-CNST-D: Protect Riparian Habitat	Less than Significant (Twin-Bore and Single-Bore Options)
<b>Deplete groundwater supplies or interfere with groundwater recharge.</b> Construction for underground stations and tunnels would require temporary dewatering, which may reduce the volume of water in the local aquifer table.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure HAZ-CNST-A: Prepare and Implement Remedial Action Plans	Less than Significant (Twin-Bore and Single-Bore Options)

**Table ES-5: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Operation**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.8 Geology, Soils, and Seismicity</b>			
<b>Liquefaction: Expose people or structures to potential seismic hazards.</b> Liquefaction potential is moderate to high and may damage project facilities along the alignment and in station areas.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-A: Incorporate Design Specifications to Minimize Effects from Liquefaction Hazards	Less than Significant (Twin-Bore and Single-Bore Options)
<b>6.10 Hazards and Hazardous Materials</b>			
<b>Be located on a site that 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.</b> Disturbance of contaminated soil and/or ballast during maintenance activities, direct contact, or inhalation of dust and potential vapor intrusion of groundwater contaminants may impact maintenance works, passengers, and offsite residents.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure HAZ-CNST-A: Prepare and Implement Remedial Action Plans	Less than Significant (Twin-Bore and Single-Bore Options)
<b>6.12 Noise and Vibration</b>			
<b>Ancillary Facilities: Expose persons to or generate noise in excess of local or agency standards.</b> Noise from ancillary facilities including ventilation structures, traction power substations, and emergency backup generators may exceed the noise criterion.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-A: Implement Noise Reduction Treatments at Ancillary Facilities	Less than Significant (Twin-Bore and Single-Bore Options)

**Table ES-5: Summary of Significant Impacts and Proposed Mitigation Measures of the CEQA BART Extension Alternative – Operation**

<b>CEQA Impact</b>	<b>Significance before Mitigation</b>	<b>Mitigation</b>	<b>Significance after Mitigation</b>
<b>Train Operations: Expose persons to or generate excessive groundborne vibration or groundborne noise.</b> Operation of the train within the tunnel may exceed FTA groundborne noise criteria throughout the alignment.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-B: Reduce groundborne noise levels	Less than Significant (Twin-Bore and Single-Bore Options)
<b>6.13 Utilities and Service Systems</b>			
<b>Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which may cause significant environmental effects.</b> Wastewater generated at the stations and Newhall Maintenance Facility may contribute to capacity deficiencies within offsite sewer systems.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure UTIL-A: Prepare a San Jose Water Supply Infrastructure Capacity Assessment. Mitigation Measure UTIL-B: Prepare a Santa Clara Water Supply Infrastructure Capacity Assessment Mitigation Measure UTIL-C: Prepare a San Jose Sewer Capacity Assessment Mitigation Measure UTIL-D: Prepare a Santa Clara Sewer Capacity Assessment	Less than Significant (Twin-Bore and Single-Bore Options)
<b>6.15 Water Resources, Water Quality, and Floodplains</b>			
<b>Degrade water quality or violate water quality standards.</b> Operation of new facilities may increase existing pollutants in storm drains and introduce new pollutants.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure WQ-A: Design and Implement Stormwater Control Measures	Less than Significant (Twin-Bore and Single-Bore Options)

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.2 Transportation</b>			
<p><b><i>Vehicular Traffic, Bicyclists, and Pedestrians: Conflict with a transportation plan, ordinance, or policy; Conflict with the Congestion Management Program; and Conflict with transit, bicycle, or pedestrian policies, plans, or programs.</i></b>                      Construction has the potential to affect vehicular traffic, bicyclists, and pedestrians due to lane and street closures, and detours at Alum Rock/28<sup>th</sup> Street Station, 13<sup>th</sup> Street Ventilation Structure, Downtown San Jose Station (East and West Options), Diridon Station (South and North Options), Stockton Street Ventilation Structure, West Tunnel Portal, Newhall Maintenance Facility and Santa Clara Station.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan                      Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan                      Mitigation Measure TRA-CNST-C: Develop and Implement a Parking Management Plan</p>	<p>Significant and Unavoidable for Alum Rock/28<sup>th</sup> Street, Downtown San Jose (East and West Options), Diridon Stations (South and North Options), West Tunnel Portal, Newhall Maintenance Facility, and Santa Clara Station.                      (Twin-Bore and Single-Bore Options)</p> <p>Less than Significant for 13<sup>th</sup> Street Ventilation Structure and Stockton Street Ventilation Structure,                      (Twin-Bore and Single-Bore Options)</p>
<p><b><i>Transit-Bus: Conflict with a transportation plan, ordinance, or policy; Conflict with the Congestion Management Program; and Conflict with transit, bicycle, or pedestrian policies, plans, or programs.</i></b> For Downtown San Jose Station (East and West Options) and Diridon Station (North and South Options) long-term closure of transit stops and</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan                      Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan</p>	<p>Significant and Unavoidable (Twin-Bore and Single-Bore Options)</p>

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
route detours required during construction would decrease performance and affect local bus service.			
<p><b>Transit-Light Rail: Conflict with a transportation plan, ordinance, or policy; Conflict with the Congestion Management Program; and Conflict with transit, bicycle, or pedestrian policies, plans, or programs.</b>                      Construction activities for the Downtown San Jose Station West Option would require closure and interruption of VTA’s light rail service through downtown San Jose, affecting performance.</p>	<p>Significant                      (Twin-Bore Option only)</p>	<p>Mitigation Measure TRA-CNST-A: Develop and Implement a Construction Education and Outreach Plan                      Mitigation Measure TRA-CNST-B: Develop and Implement a Construction Transportation Management Plan</p>	<p>Significant and Unavoidable                      (Twin-Bore Option only)</p>
<p><b>Transit- Heavy Rail: Conflict with a transportation plan, ordinance, or policy; Conflict with the Congestion Management Program; and Conflict with transit, bicycle, or pedestrian policies, plans, or programs.</b>                      Construction at the Diridon Station North Option would temporarily impact existing easternmost Caltrain track at Diridon Station and thereby affect Caltrain and other operations.</p>	<p>Significant                      (Twin- Bore Option only)</p>	<p>Mitigation Measure TRA-CNST-A. Develop and Implement a Construction Education and Outreach Plan</p>	<p>Significant and Unavoidable                      (Twin-Bore Option only)</p>

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Result in inadequate emergency access.</b> Construction activities may have a temporary impact on emergency vehicle access when construction requires temporary access or egress limitations.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-CNST-D. Coordinate with Fire and Police Services during Construction</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>6.3 Air Quality</b></p>			
<p><b>Violate an air quality standard or contribute to an air quality violation.</b> During construction, NO<sub>x</sub> and reactive organic gas (ROG) emissions would exceed BAAQMD thresholds for all project features.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measures AQ-CNST-A through AQ-CNST-H (described above ) Mitigation Measure AQ-I: Use Low-VOC coatings</p>	<p>Significant and Unavoidable (Twin-Bore and Single-Bore Options)</p>
<p><b>Cause a cumulatively considerable net increase in a criteria pollutant.</b> Cumulative construction NO<sub>x</sub> and ROG emissions would exceed BAAQMD thresholds for all project features.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measures AQ-CNST-A through AQ-CNST-I (described above)</p>	<p>Significant and Unavoidable (Twin-Bore and Single-Bore Options)</p>
<p><b>Expose sensitive receptors to substantial pollutant concentrations.</b> Annual increase in PM<sub>2.5</sub> concentrations and cancer risk would exceed the BAAQMD significance thresholds during construction of the Alum Rock/28<sup>th</sup> Street Station and TOJD.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure AQ-CNST-B (described above)</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.4 Biological Resources and Wetlands</b>			
<b><i>Nesting Birds: Adversely affect a special-status species or habitat.</i></b> - Construction activities along the entire alignment and at all stations may result in a significant impact on nesting birds.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure BIO-CNST-A: Avoid Nesting Bird Season Mitigation Measure BIO-CNST-B: Conduct Preconstruction/Predisturbance Surveys for Nesting Birds	Less than Significant (Twin-Bore and Single-Bore Options)
<b><i>Roosting Bats: Adversely affect a special-status species or habitat.</i></b> Construction staging areas along the entire alignment and at all stations may result in a significant impact on roosting bats.	Significant (Twin-Bore and Single-Bore Options)	Measure BIO-CNST-C: Conduct Preconstruction Surveys for Roosting Bat and Implement Protective Measures	Less than Significant (Twin-Bore and Single-Bore Options)
<b><i>Tri-colored Blackbirds: Adversely affect a special-status species or habitat.</i></b> Construction activities at the SR 87 CSA near the Guadalupe River and at Diridon Station near the Los Gatos Creek may result in a significant impact on tricolored blackbirds.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure BIO-CNST-E: Conduct Preconstruction Tricolored Blackbird Nesting Surveys	Less than Significant (Twin-Bore and Single-Bore Options)
<b><i>Burrowing Owls. Adversely affect a special-status species or habitat.</i></b> Construction activities for Newhall Maintenance Facility may result in a significant impact on burrowing owls.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure BIO-CNST-F: Conduct Preconstruction Burrowing Owl Surveys and Determine Appropriate Action	Less than Significant (Twin-Bore and Single-Bore Options)

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Adversely affect a sensitive natural community.</b> Construction activities at the CSA near Lower Silver Creek, the SR 87 CSA near the Guadalupe River, and construction of the systems facilities at Diridon Station near Los Gatos Creek may result in a significant impact on riparian habitat adjacent to the facilities.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-D: Protect Riparian Habitat</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>Interfere with wildlife movement or impede use of wildlife nursery sites.</b> Construction noise and disturbance along the alignment and at all stations may interfere with nesting birds.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-A: Avoid Nesting Bird Season Mitigation Measure BIO-CNST-B: Conduct Preconstruction/Predisturbance Surveys for Nesting Birds</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.</b> Landscaping trees would be removed during construction along the alignment including all stations.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure AES-CNST-A: Replace Trees Removed during Construction</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>Conflict with an adopted habitat conservation plan, or local policies or ordinances protecting biological resources.</b> Construction activities in the vicinity of Guadalupe Creek (construction staging areas near SR 87) and Los Gatos Creek (system facilities at Diridon Station South Option) may result in a significant</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-E: Conduct Preconstruction Tricolored Blackbird Nesting Surveys Mitigation Measure BIO-CNST-F: Conduct Preconstruction Burrowing Owl Surveys and Determine Appropriate Action</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
impact on tricolored blackbirds. Construction activities for Newhall Maintenance Facility may result in a significant impact on burrowing owls.			
<b>6.6 Cultural Resources</b>			
<b>Noise. Cause an adverse change in the significance of a historic resource as defined in § 15064.5.</b> Construction noise has the potential to affect the historic property near Alum Rock/28 <sup>th</sup> Street Station.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-CNST-C: Construct Temporary Noise Barriers	Less than Significant (Twin-Bore and Single-Bore Options)
<b>Vibration. Cause an adverse change in the significance of a historic resource as defined in § 15064.5.</b> Historic buildings in the vicinity of cut-and-cover station excavation activities may be exposed to excessive vibration near Alum Rock/28 <sup>th</sup> Street Station, Downtown San Jose (East and West Options) and Diridon (South and North Options).	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-CNST-P: Conduct Construction Vibration Monitoring Mitigation Measure NV-CNST-Q: Perform Vertical Direction Vibration Monitoring Mitigation Measure NV-CNST-R: Require Monitoring of Vibration for Peak Particle Velocity	Less than Significant (Twin-Bore and Single-Bore Options)
<b>Surface Settlement. Cause an adverse change in the significance of a historic resource as defined in § 15064.5.</b> Historic buildings could be affected due to surface settlement during tunneling and cut-and-cover activities in the vicinity.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measures GEO-CNST-B through GEO-CNST-D.	Less than Significant (Twin-Bore and Single-Bore Options)

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Archaeological Resources. Cause an adverse change in the significance of an archaeological resource as defined in § 21803.2. Disturb human remains, including those interred outside of formal cemeteries.</b> Construction has the potential to cause significant impact on unknown archaeological resources and human remains.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure CUL-CNST-A: Implement Programmatic Agreement and Archaeological Resources Treatment Plan</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>6.8 Geology, Soils, and Seismicity</b></p>			
<p><b>Liquefaction. Expose people or structures to potential seismic hazards.</b> Liquefaction potential is moderate to high and may damage project facilities along the alignment and in station areas.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure GEO-CNST-A: Incorporate Design Specifications to Minimize Effects from Liquefaction Hazards</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>Surface Settlement. Be located on a geologic unit that is unstable or that would become unstable.</b> Surface settlement has the potential to damage structures and utilities along the alignment.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure GEO-CNST-B: Implement Preconstruction Condition Surveys along the Tunnel Alignment                      Mitigation Measure GEO-CNST-C: Monitor Ground Surface during Tunneling Activities                      Mitigation Measure GEO-CNST-D: Monitor Settlement Effects around Cut-and-Cover Excavations                      Mitigation Measure GEO-CNST-E: Implement Preconstruction Condition Surveys for Utilities                      Mitigation Measure GEO-CNST-F: Minimize Excavation Bottom Failure Impacts</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>Stability. Be located on a geologic unit that is unstable or that would become unstable.</b> Excavation bottom stability or disturbance may result from bottom heave, piping, or blow-out.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-F: Minimize Excavation Bottom Failure Impacts Mitigation Measure GEO-CNST-G: Minimize Disturbance of Sensitive Deposits at the Excavation Subgrade	Less than Significant (Twin-Bore and Single-Bore Options)
<b>Expansive Soils. Be located on expansive soil, creating risks to life or property.</b> System facilities, parking, and vehicular and pedestrian access at the stations and other sites are in areas of potential expansive soils.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-H: Incorporate Design Specifications to Minimize Effects from Expansive Soils	Less than Significant (Twin-Bore and Single-Bore Options)
<b>Paleontological Resources. Destroy a unique paleontological resource or unique geologic feature.</b> Excavation depths involved during construction throughout the alignment may result in the discovery of previously unknown paleontological resources.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure GEO-CNST-I: Stop Construction if Paleontological Resources Are Discovered and Determine Appropriate Action	Less than Significant (Twin-Bore and Single-Bore Options)
<b>6.10 Hazards and Hazardous Materials</b>			
<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.</b> Disturbance of contaminated materials during construction may pose a potential threat to human health and the environment.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure HAZ-CNST-A: Prepare and Implement Remedial Action Plans	Less than Significant (Twin-Bore and Single-Bore Options)

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Be located on a site that 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.</b> The disturbance of hazardous materials that may be present in the soil and ballast beneath the alignment during construction activities, such as excavation and dewatering, may pose a potential threat to human health and the environment.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure HAZ-CNST-A: Prepare and Implement Remedial Action Plans</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>6.11 Land Use</b></p>			
<p><b>Conflict with any applicable habitat conservation plan or natural community conservation plan.</b> Construction at the Newhall Maintenance Facility would conflict with the western burrowing owl survey area, and the Diridon Station and SR 87 CSA is within the tricolored blackbird survey area near Guadalupe River and Los Gatos Creek, both covered by the SCVHP.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-CNST-E and BIO-CNST-F (described under 6.4, Biological Resources)</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.12 Noise and Vibration</b>			
<p><b>Expose persons to or generate noise in excess of local or agency standards; and Temporarily or periodically increase ambient noise levels.</b> Construction at the Alum Rock/28<sup>th</sup> Street and Downtown San Jose Station Options may exceed nighttime noise criterion for residences. Construction activities for 13<sup>th</sup> Street and Stockton Avenue Ventilation Facilities would exceed daytime noise criterion for residences.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measures NV-CNST-A through NV-CNST-O</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>Expose persons to or generate noise in excess of local or agency standards.</b> Construction at Downtown San Jose Station (East and West Options) and Diridon Station (South and North Options) would exceed noise criterion for residences.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measures NV-CNST-A through NV-CNST-O</p>	<p>Significant and Unavoidable (Twin-Bore and Single-Bore Options)</p>

**Table ES-6: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Construction**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Expose persons to or generate excessive groundborne vibration or groundborne noise.</b> Residences may be exposed to temporary vibration impacts from TBM operations. Soils excavated by the TBM would be removed by a muck train or conveyor system and may cause groundborne noise impacts.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure NV-CNST-P: Conduct Construction Vibration Monitoring Mitigation Measure NV-CNST-Q: Perform Vertical Direction Vibration Monitoring Mitigation Measure NV-CNST-R: Require Monitoring of Vibration for Peak Particle Velocity Mitigation Measure NV-CNST-S: Implement Measures to Reduce Vibration from Muck Extraction and Supply Trains Procedure</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>6.14 Visual Quality and Aesthetics</b></p>			
<p><b>Tree Removal: Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway.</b> Construction activities would require removal of trees along the entire alignment.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure AES-CNST-A: Replace Trees</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>6.15 Water Resources, Water Quality, and Floodplains</b></p>			
<p><b>Degrade water quality or violate water quality standards.</b> Construction activities may result in temporary increases in sediment loads and potential stormwater contamination, accidental spills of hazardous materials, and surface and groundwater impacts.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure BIO-D: Protect Riparian Habitat</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-7: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Operation**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.2 Transportation</b>			
<p><b>Conflict with a transportation plan, ordinance, or policy; and Conflict with a congestion management program.</b> Traffic impacts at four intersections near the Santa Clara Station in 2035: De La Cruz Boulevard and Central Expressway (City of Santa Clara and CMP intersection), Coleman Avenue and Brokaw Road (City of Santa Clara intersection), Lafayette Street and Lewis Street (City of Santa Clara intersection), Coleman Avenue and I-880 Southbound Ramps (City of San Jose and CMP intersection intersection).</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure TRA-A: Implement Intersection Improvements at De La Cruz Boulevard and Central Expressway                      Mitigation Measure TRA-B: Implement Intersection Improvements at Coleman Avenue and Brokaw Road                      Mitigation Measure TRA-C: Implement Intersection Improvements at Lafayette Street and Lewis Street                      Mitigation Measure TRA-D: Implement Intersection Improvements to Coleman Avenue and I-880 Southbound Ramps</p>	<p>Significant and Unavoidable only for De La Cruz Boulevard and Central Expressway in 2035. Less than significant for other intersections.                      (Twin-Bore and Single-Bore Options)</p>
<b>6.3 Air Quality</b>			
<p><b>Violate an air quality standard or contribute to an air quality violation; and cause a cumulatively considerable net increase in a criteria pollutant.</b> ROG emissions from the use of consumer products would exceed the BAAQMD significance thresholds. Significant emissions of ROG would be related to residential consumer product use (e.g., aerosol sprays) at the TOJDs.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure AQ-CNST-I: Use Low-VOC Coatings</p>	<p>Significant and Unavoidable (Twin-Bore and Single-Bore Options)</p>

**Table ES-7: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Operation**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.8 Geology, Soils, and Seismicity</b>			
<p><b>Liquefaction. Expose people or structures to potential seismic hazards.</b> Liquefaction potential is moderate to high and may damage project facilities along the alignment and in station areas.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure GEO-CNST-A: Incorporate Design Specifications to Minimize Effects from Liquefaction Hazards</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<b>6.9 Greenhouse Gas Emissions</b>			
<p><b>Generate GHG emissions, either directly or indirectly.</b> TOJD at four stations would result in a net increase in long-term (2035) GHG emissions.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure GHG-A: Implement Energy Efficiency Measures                      Mitigation Measure GHG-B: Participate in Food Waste Programs                      Mitigation Measure GHG-C: Utilize Electrical Landscaping Equipment                      Mitigation Measure GHG-D: Provide Preferential Parking for Electric Vehicles                      Mitigation Measure AQ-CNST-I: Use Low-VOC Coatings</p>	<p>Significant and Unavoidable (Twin-Bore and Single-Bore Options)</p>
<p><b>Conflict with a plan, policy or regulation intended to reduce greenhouse gas emissions.</b> TOJD at four stations emissions would be inconsistent with the goals in EO S-3-05 and EO B-30-15.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure GHG-A: Implement Energy Efficiency Measures                      Mitigation Measure GHG-B: Participate in Food Waste Programs                      Mitigation Measure GHG-C: Utilize Electrical Landscaping Equipment                      Mitigation Measure GHG-D: Provide Preferential Parking for Electric Vehicles                      Mitigation Measure AQ-CNST-I: Use Low-VOC Coatings</p>	<p>Significant and Unavoidable (Twin-Bore and Single-Bore Options)</p>

**Table ES-7: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Operation**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.10 Hazards and Hazardous Materials</b>			
<p><b>Be located on a site that 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.</b> Disturbance of contaminated soil and/or ballast during maintenance activities, direct contact, or inhalation of dust and potential vapor intrusion of groundwater contaminants may impact maintenance works, passengers, and offsite residents</p>	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure HAZ-CNST-A: Prepare and Implement Remedial Action Plans	Less than Significant (Twin-Bore and Single-Bore Options)
<b>6.12 Noise and Vibration</b>			
<p><b>Ancillary Facilities. Expose persons to or generate noise in excess of local or agency standards.</b> Noise from ancillary facilities including ventilation structures, traction power substations, and emergency backup generators may exceed the noise criterion.</p>	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-A: Implement Noise Reduction Treatments at Ancillary Facilities	Less than Significant (Twin-Bore and Single-Bore Options)
<p><b>Train Operations. Expose persons to or generate excessive groundborne vibration or groundborne noise.</b> Operation of the train within the tunnel may exceed FTA groundborne noise criteria throughout the alignment.</p>	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure NV-B: Reduce groundborne noise levels	Less than Significant (Twin-Bore and Single-Bore Options)

**Table ES-7: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Operation**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<p><b>Expose people in the area to excessive airport noise.</b> Residential uses proposed as part of TOJD may be exposed to noise from San Jose Mineta International Airport in excess of 65 CNEL.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure NV-C: Implement Acoustical Design of Residential Uses</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>6.13 Utilities and Service Systems</b></p>			
<p><b>Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which may cause significant environmental effects.</b> Wastewater generated may contribute to capacity deficiencies within offsite sewer systems.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure UTIL-A: Prepare a San Jose Water Supply Infrastructure Capacity Assessment.                      Mitigation Measure UTIL-B: Prepare a Santa Clara Water Supply Infrastructure Capacity Assessment                      Mitigation Measure UTIL-C: Prepare a San Jose Sewer Capacity Assessment                      Mitigation Measure UTIL-D: Prepare a Santa Clara Sewer Capacity Assessment</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>
<p><b>6.14 Visual Quality and Aesthetics</b></p>			
<p><b>Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.</b> Several of the TOJD buildings would be taller than the surrounding built environment, particularly at the Alum Rock/28<sup>th</sup> Street, Diridon, and Santa Clara Station areas where TOJD would range between 4 and 11 stories high and include reflective surfaces, such as windows, that may create glare.</p>	<p>Significant (Twin-Bore and Single-Bore Options)</p>	<p>Mitigation Measure AES-A: Minimize Light and Glare</p>	<p>Less than Significant (Twin-Bore and Single-Bore Options)</p>

**Table ES-7: Summary of Significant Impacts and Proposed Mitigation Measures of CEQA BART Extension with TOJD Alternative – Operation**

CEQA Impact	Significance before Mitigation	Mitigation	Significance after Mitigation
<b>6.15 Water Resources, Water Quality, and Floodplains</b>			
<b>Degrade water quality or violate water quality standards.</b> Operation of new facilities may increase existing pollutants in storm drains and introduce new pollutants.	Significant (Twin-Bore and Single-Bore Options)	Mitigation Measure WQ-A: Design and Implement Stormwater Control Measures	Less than Significant (Twin-Bore and Single-Bore Options)