

Executive Summary

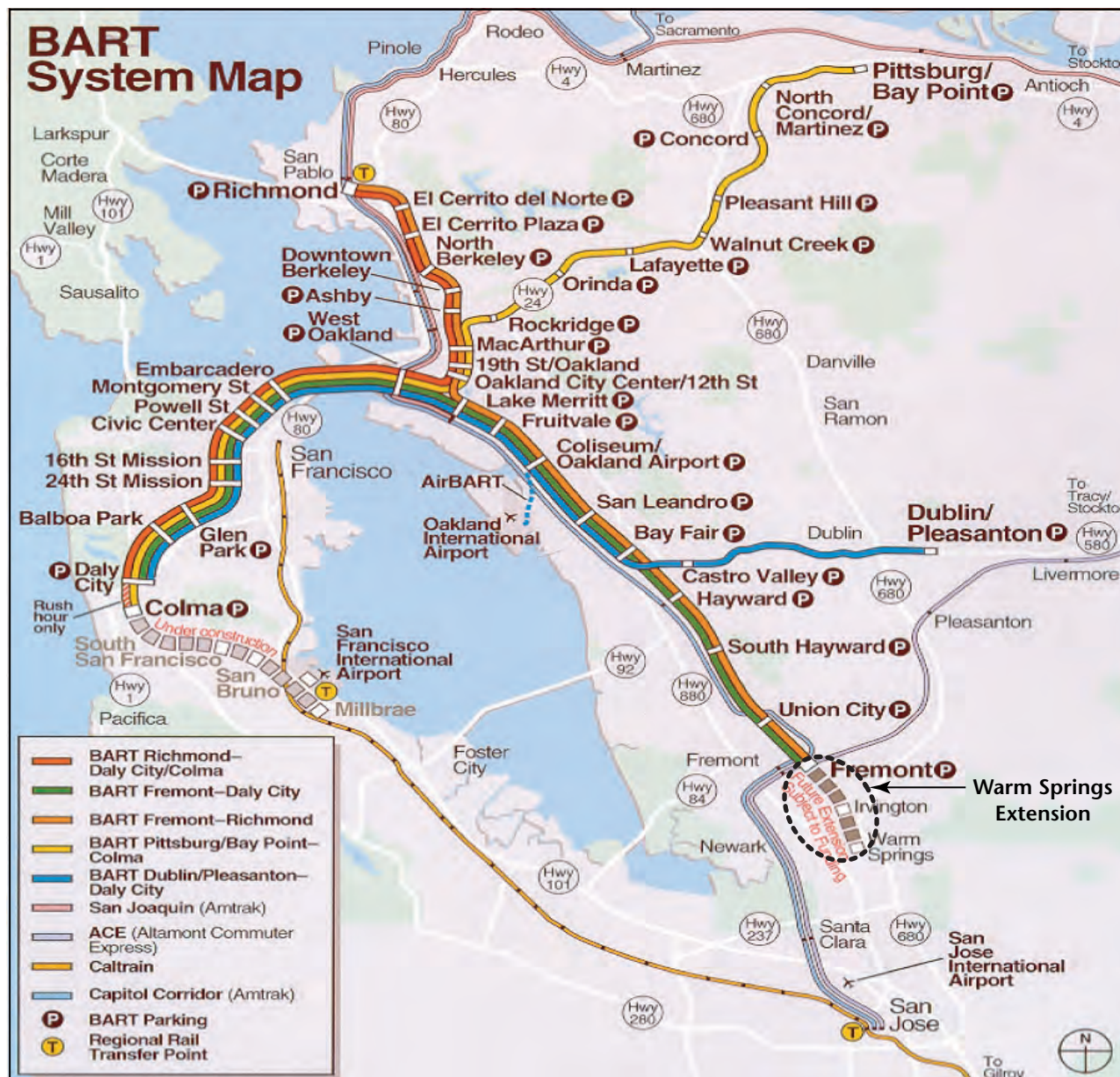
Project Background

The San Francisco Bay Area Rapid Transit District (BART) has been in operation since 1972 and currently operates in four Bay Area counties: San Francisco, Alameda, Contra Costa, and San Mateo. The most recent extensions to the BART system are the extensions to Dublin/Pleasanton in eastern Alameda County, to Pittsburg/Bay Point in eastern Contra Costa County, and to Colma in San Mateo County. BART is currently completing construction on a four-station extension from Colma to the San Francisco International Airport in San Mateo County, with a terminus in Millbrae, California.

In response to public support for the extension of BART in southern Alameda County, BART is proposing a 5.4-mile extension of the BART system south from the existing Fremont BART Station to a proposed new station in the Warm Springs district of the City of Fremont (Fremont). (See Figure ES-1.) An optional station at Irvington is also being considered.

In 1991, BART prepared an environmental impact report (EIR) for the Warm Springs Extension (WSX) analyzing a series of alternatives for extending BART to the Warm Springs area. In 1992, the BART Board of Directors certified the Final EIR and adopted a project for the WSX (referred to herein as the Adopted Project). As then proposed, the Adopted Project consisted of a 5.4-mile, two-station extension of the existing BART system, with stations at Irvington and Warm Springs and an aerial BART alignment over Lake Elizabeth in Fremont Central Park. In addition, the BART Board also approved a subway alignment under Lake Elizabeth as a design option. Following certification of the WSX EIR and adoption of the project in 1992, BART initiated preliminary engineering. However, the 1992 Adopted Project was not constructed because sufficient funds were not available.

Public support remained strong for the extension of rail transit service from Fremont to southern Alameda County, and BART and other transit agencies continued to study both the 1992 Adopted Project corridor and the larger regional corridor. In 1994, the Metropolitan Transportation Commission (MTC) prepared the *Fremont-South Bay Corridor Report*, which analyzed several alternatives for transit service in the regional corridor, including a BART alignment. In 2000, BART and the Santa Clara Valley Transportation Authority (VTA) collaborated in preparing the *BART Extension Study from Fremont to Milpitas, San Jose and Santa Clara*, which again examined a BART alignment along the Union Pacific (UP) railroad right-of-way. Based on these two studies and enabled by funding from the Santa Clara County 1996 Measure B sales tax transportation improvement program, VTA purchased the former Western Pacific (WP)-Milpitas line, which extends approximately 15 miles from Fremont to San Jose, from UP in December 2002.



020411.02 (3/03)

Source: Bay Area Rapid Transit 2003.

Figure ES-1
BART System Map

In 2000, the voters of Alameda County reauthorized Alameda County's transportation sales tax (Measure B) to provide funding for a series of transportation-related projects, including a BART extension from Fremont to Warm Springs. A revised WSX project now is being proposed. This project, referred to herein as the Proposed Project, consists of a 5.4-mile extension of the existing BART system, with a new station at Warm Springs, an optional station at Irvington, and a subway alignment under Fremont Central Park and Lake Elizabeth. This project is the subject of this SEIR.

There is considerable public support for extending BART to Warm Springs because the Proposed Project offers a potential means of addressing local and regional roadway congestion and delay and because the Proposed Project offers other potential benefits in the areas of land use, air quality, transportation, and energy, as described below under *Benefits of the Proposed Project*.

Project Purpose

When the extension was proposed in 1991, congestion on Interstate 880 (I-880), the major regional travel corridor linking Santa Clara, Alameda, and Contra Costa was already severe. Congestion levels on I-880 have worsened dramatically over the last decade, and escalating traffic volumes have reached unacceptable levels.

Transportation has become a critical issue for people living and working in the southern Alameda County and northern Santa Clara County portions of the San Francisco Bay Area. The surge in population, including a nearly 20% increase over the past decade in the city of Fremont alone, has overwhelmed roadways with thousands of additional cars. Meanwhile, employment growth in the Silicon Valley during the late 1990s created a situation where workers are moving to Alameda County and beyond to find affordable housing. In 2000, it was estimated that there were approximately 400,000 weekday automobile trips between the East Bay and Santa Clara County. By 2025, this number is expected to exceed 500,000 vehicle trips (MTC).

Highway improvements have not been able to keep up with the demand for more capacity. Interstate 880 is congested beyond the peak travel period, despite a major widening project in central Fremont. In 2001, over 160,000 cars traversed this roadway in each direction. Interstate 680, parallel to Interstate 880 on the east side of Fremont, has also emerged as one of the Bay Area's most congested traffic corridors with over 140,000 cars per day on the Sunol Grade (Caltrans).

Currently, the existing public transportation system does not attract enough riders to divert significant numbers of people from automobiles. The BART system, the heavy rail network linking the area with the rest of the East Bay, San Francisco, and northern San Mateo County, now terminates in the central Fremont. Reaching residential and employment centers in southern Alameda County and Santa Clara County via transit from the Fremont BART Station is often inconvenient and time-consuming. The speed and reliability of transit services connected to BART are reduced by having to travel long distances on congested freeways or surface streets.

The proposed Warm Springs Extension, a 5.4-mile BART extension south from the existing Fremont Station to the Warm Springs District of Fremont, would improve the regional transit network. By shortening the travel distance for connecting transit services to and from points to the south, the project would cut transit travel times and improve reliability. These enhancements are expected to generate additional transit ridership and reduce overall traffic congestion.

Over the long run, the Warm Springs Extension would help accommodate future growth in employment and population in a sustainable manner, reducing pressure to expand roads and supporting the region's efforts to meet state and federal air quality standards. The proposed Warm Springs and optional Irvington station areas also would provide opportunities for future transit-oriented development. Such development would increase ridership, improve transit's operating efficiency, and reduce demand for automobile travel. Finally, the project would facilitate a future rapid transit extension into Santa Clara County.

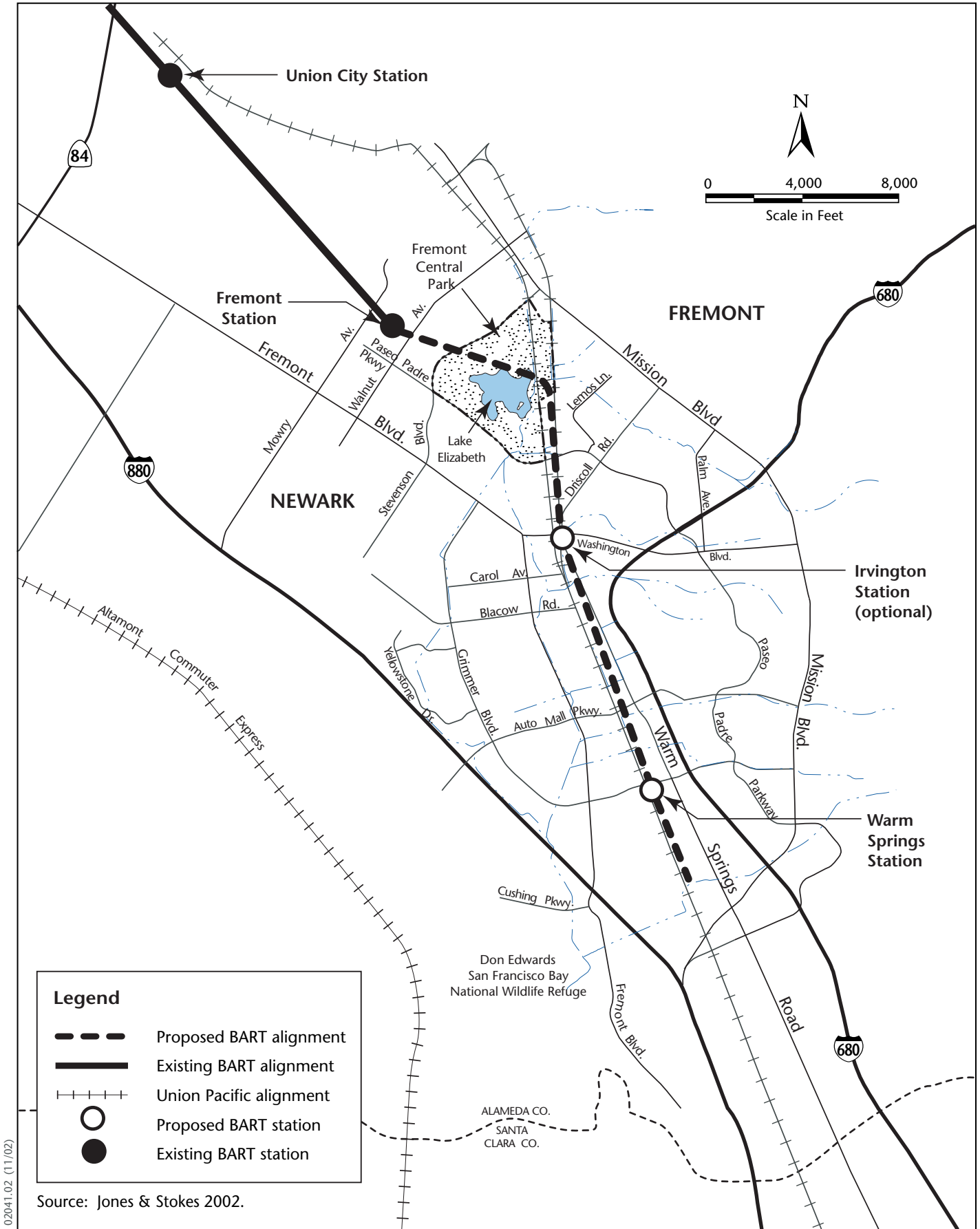
Project Description

The Proposed Project alignment would generally parallel portions of the UP railroad corridor, which contains the former Western Pacific (WP) and Southern Pacific (SP) railroad tracks,¹ and Interstates 680 and 880 in southern Alameda County (see Figure ES-2). The initial segment would begin on an embankment at the southern end of the existing elevated Fremont BART Station. The alignment would pass over Walnut Avenue on an aerial structure and descend into a cut-and-cover subway north of Stevenson Boulevard. The alignment would continue southward in the subway structure under Fremont Central Park and the eastern arm of Lake Elizabeth, and surface to at grade between the former WP and SP alignments north of Paseo Padre Parkway. Paseo Padre Parkway will be reconfigured as a vehicular underpass as part of the Washington Boulevard and Paseo Padre Parkway Railroad Grade Separations Project, referred to herein as the *city's grade separations project*. The alignment would pass over Paseo Padre Parkway on a bridge structure, and then continue southward at grade, passing under a grade-separated Washington Boulevard. Washington Boulevard will be reconfigured as a vehicular overpass as part of the city's grade separations project. From Washington Boulevard, the Proposed Project alignment would continue at grade along the former WP alignment south to a terminus station at Warm Springs and South Grimmer Boulevards in the Warm Springs district. A summary of the Proposed Project is presented in Table ES-1.

Use of a Supplemental Environmental Impact Report

This SEIR is being prepared to assess the environmental impacts of the construction and operation of the proposed extension of the BART system to Warm Springs, pursuant to the California Environmental Quality Act and the State CEQA Guidelines, sections 15000–15387, Title 14 of the California Code of Regulations (referred to herein as CEQA Guidelines). CEQA requires all state and local government agencies, including transit districts, to consider the environmental consequences of projects over which they have discretionary authority. The decision of the BART Board of Directors to proceed with the extension of the BART system to Warm Springs constitutes a project under CEQA.

¹ Until December 2002, the WP and SP were both owned by UP. For clarity in this SEIR, the tracks on the eastern side of the UP right-of-way will be referred to as the former WP tracks, and the tracks on the western side of the UP right-of-way will be referred to as the former SP tracks.



Legend

- Proposed BART alignment
- Existing BART alignment
- - - - Union Pacific alignment
- Proposed BART station
- Existing BART station

Source: Jones & Stokes 2002.

Figure ES-2
2003 Proposed Project

Table ES-1. 2003 Proposed Project Summary

Item	Description
Proposed Project	
Estimated Construction Start	2004
Begin Revenue Service	2008
Length of Alignment	5.4 miles
–Embankment	0.2 mile
–Overpass	0.1 mile
–Subway	1.0 mile
–At grade	3.3 miles
–Retained cut/fill	0.8 mile
Warm Springs Station Intermodal Facilities	34 acres 2,040 parking spaces 7 bus bays
Ancillary Facilities	
–Traction Power (electrical substations, gap breaker stations)	
–Train Control and Communications	
–Subway Ventilation Structure(s)	
–Pumping/Emergency Access	
–Vehicle Maintenance	
Estimated Ridership in 2025	
Total Transit Trips	7,200
New BART Trips Systemwide	8,200
Cost	
–Capital	\$634 million
–Operating (annual average)	\$9.17 million
Optional Irvington Station	
Irvington Intermodal Facilities	18 acres 960 parking spaces 5 bus bays
Estimated Ridership in 2025 with Irvington Station	
Total New Transit Trips	9,100
New BART Trips Systemwide	10,800
Cost	
–Capital	\$710 million
–Operating (annual average)	\$10.67 million
Source: San Francisco Bay Area Rapid Transit District	

Because of the passage of time and changes to the alignment of the 1992 Adopted Project, this SEIR is being prepared to supplement the EIR that was certified in 1992 for the WSX project. The focus of this SEIR is to update and supplement the prior EIR, based on changes to the 1992 Adopted Project, changes in the project setting, and new information related to the project that was not known at the time the original EIR was certified and the project was adopted. This SEIR is being prepared pursuant to Section 15163 of the CEQA Guidelines. In accordance with that section, it focuses only on the additional information necessary to make the previous EIR adequately apply to the project and to the changed circumstances.

Scope of this Supplemental Environmental Impact Report

The purpose of this SEIR is to disclose any significant effects that might occur as a result of changes to the project or its circumstances or brought to light by new information related to the project discovered since certification of the 1992 EIR. In March 2002, BART circulated a Notice of Preparation (NOP) for the Proposed Project, consistent with section 15082 of the CEQA Guidelines. A copy of the NOP and the Initial Study checklist are included as Appendix A to this document. As a result of a review of the subjects analyzed in the 1992 EIR and in response to the scoping process, BART has determined that the environmental resource areas listed below will be analyzed in this SEIR. The environmental analysis incorporated herein identifies the environmental impacts of the Proposed Project on those resource areas, as well as the mitigation measures proposed to reduce the impacts to less-than-significant levels. Operational and construction-related impacts are considered for each resource area. The resource areas are listed below in the order in which they appear in the 1992 EIR and in which they appear in this document. The names are those that appear in this document; the names in parentheses are those that appear in the 1992 EIR.

- Hazards and Hazardous Materials, construction only.
- Hydrology and Water Quality.
- Biological Resources (Ecosystems).
- Land Use and Planning (Land Use and Economic Activity).
- Population, Employment, and Housing (Land Use and Economic Activity).²
- Aesthetics (Visual and Aesthetic Quality).
- Cultural Resources.
- Transportation.
- Noise and Vibration.
- Air Quality.

² The 1992 EIR analyzed land use, population, and housing in one chapter entitled “Land Use and Economic Activity.” These resource areas have been analyzed in two chapters in this SEIR.

- Energy.
- Alternatives Analysis.

BART has determined that the following topics will not be discussed in this SEIR because they were adequately analyzed in the 1992 EIR, and no component of the 2003 Proposed Project warranted their revised evaluation.

- Geology, Soils, and Seismicity.
- Hazards and Hazardous Materials (operations).
- Safety and Security.
- Utilities.

In addition to the analysis of environmental resource areas, this SEIR addresses all of the topics addressed by the 1992 EIR. Growth-inducing impacts are addressed in Chapter 4; and significant unavoidable impacts are addressed in Chapter 6. The cumulative impacts of the 2003 Proposed Project have been assessed and are presented in the analysis of the environmental resource areas (Sections 3.2 through 3.12) and summarized in Chapter 6.

Potential Impacts and Mitigation Measures

The environmental analysis incorporated in this SEIR identifies the environmental impacts of the Proposed Project, the level of the impact, and the proposed mitigation measures. The analysis in the SEIR focused on updating and supplementing the information contained in the 1992 EIR, based on changes that have been made to the project, changes that have occurred in the project setting, and any new information related to the project that was not known at the time the original EIR was published and the project was adopted. This report identifies the following types of impacts.

- **No impact:** A finding of *no impact* is made when the analysis concludes that the Proposed Project would not affect the resource or issue area in any way.
- **Less than significant:** An impact is considered *less than significant* if the analysis concludes that the impacts of the Proposed Project would not exceed established or defined thresholds.
- **Significant:** An impact is considered *significant* or *potentially significant* (not clear whether a significant impact would occur) if the analysis concludes that the Proposed Project could have a substantial adverse impact on the resource or issue area by exceeding an established or defined threshold. For example, air emissions that exceed federal ambient air quality standards or elimination of a rare or endangered species would be a significant adverse impact. In cases where an impact is *potentially significant*, the analysis conservatively assesses reasonably foreseeable potential impacts, but the discussion acknowledges that there is uncertainty regarding the extent of the impact. Mitigation (defined below) can be implemented to reduce a *significant impact* to a *less-than-significant* level, such that no substantial adverse change in the environment is expected to result.
- **Significant and unavoidable:** An impact is considered *significant and unavoidable* if the analysis concludes that the Proposed Project effects exceed established or defined thresholds

could have a substantial adverse effect on the resource or issue area, and no mitigation is available to reduce this impact to a less-than-significant level.

- **Beneficial:** *Beneficial* effects include impacts that enhance or improve an existing environmental condition.

As required by the CEQA Guidelines, this SEIR examines the expected individual and cumulative impacts of the Proposed Project. Table ES-2 at the end of this chapter describes significant, adverse impacts of the Proposed Project and mitigation measures identified to reduce those impacts to a less-than-significant level, where such measures are available.

In most cases, impacts would be less than significant after implementation of mitigation measures. Some impacts, however, cannot be feasibly mitigated to a less-than-significant level and would remain *significant and unavoidable*. Those impacts are listed below.

- **Impacts BIO-Cume2 and BIO-Cume6** – Potential for loss of ruderal forb-grassland habitat (Proposed Project, and with optional Irvington Station).
- **Impact BIO-Cume4** – Potential to contribute to cumulative regional impacts on the Western Burrowing Owl.
- **Impact A5** – Potential visual impacts of soundwalls.
- **Impact A6** – Temporary visual disturbances caused by construction.
- **Impacts TRN4, TRN8, and TRN11** – Change in V/C and LOS at the intersection of Osgood road/Durham Road/Auto Mall Parkway (Proposed Project, and with optional Irvington Station).
- **Impacts TRN7, TRN14, TRN19, and TRN-Cume6** – Change in V/C and LOS at the intersection of Mission Boulevard/Warm Springs Boulevard (Proposed Project, and with optional Irvington Station).
- **Impacts TRN20 and TRN21** – Change in LOS on northbound I-880 just south of Mission Boulevard (Proposed Project, and with optional Irvington Station).
- **Impact N2** – Exposure of vibration-sensitive land uses to groundborne vibration from BART trains.
- **Impacts E3 and E-Cume2** – Effects of Proposed Project on peak- and base-period electricity demand (Proposed Project, and with optional Irvington Station).
- **1992 EIR Impact 1A** – Ground rupture during a major earthquake.

Project Benefits

Based on the analysis and conclusions set forth in this SEIR, project-related benefits would occur in the areas of land use, transportation, air quality, and energy. Following is a summary of project benefits.

Land Use

As discussed in Section 3.5 (*Land Use*), through its *Strategic Plan* and System Expansion Criteria, BART encourages intensification of land uses surrounding BART facilities to enhance increased transit opportunities and ridership. Land Use intensification surrounding the proposed Warm Springs Station and optional Irvington Station sites is not part of the Proposed Project. Rather, land use intensification through transit-oriented development (TOD) and access planning surrounding future station sites will be addressed through a comprehensive community-based process to be undertaken by the City of Fremont in coordination with BART and other stakeholders in 2003. To the extent that the Proposed Project does successfully encourage development, a beneficial effect would result maximizing opportunities to foster “smart growth” in the vicinity of the proposed future station sites.

Transportation

As discussed in Section 3.9 (*Transportation*), the Proposed Project would have beneficial impacts on transportation by enhancing transit opportunities within the project area, which would relieve overall traffic congestion to some degree.

The Proposed Project would result in an increase in new transit trips, particularly for trips destined for, originating in, or passing through southern Alameda County. Transit person trips would increase with the Proposed Project in comparison to the No Project Alternative in both 2010 and 2025. The Proposed Project would increase new transit ridership by 4,700 daily trips in 2010 and 7,200 daily trips in 2025. The optional Irvington Station would increase new transit ridership to a total of 5,700 and 9,100 daily trips in 2010 and 2025 respectively. This increase in transit trips indicates a shift in use from automobile to transit.

Air Quality

As discussed in Section 3.11 (*Air Quality*), a reduction in the emission of reactive organic gases, oxides of nitrogen, and particulate matter ≤ 10 microns in diameter from mobile sources during project operation would result in regional air quality benefits. Such benefits would result from decreases in auto and bus vehicle miles traveled (VMTs) as compared to No-Project conditions. Implementation of the Proposed Project also would reduce greenhouse gas emissions. In addition, the Proposed Project would reduce toxic air contaminants because such emissions are directly correlated with VMT. These three air quality benefits would be augmented if the optional Irvington Station were constructed, due to the additional riders related to the Irvington Station.

Energy

As discussed in Section 3.12 (*Energy*), the Proposed Project would result in an overall decrease in Bay Area transportation energy consumption in 2010 and in 2025 as compared to No-Project conditions. The decrease in energy consumption would result from a project-related decrease in annual automobile and bus VMT. This decrease in VMT would translate into gains in energy efficiency, which would be a net benefit. The net energy benefit would be augmented if the optional Irvington Station were constructed, due to the additional riders related to the Irvington Station.

Alternatives Analyzed in this Supplemental Environmental Impact Report

The alternatives described and analyzed in the alternatives analysis (Chapter 5) include the 2003 No-Project Alternative and the Proposed Bus Alternative.

2003 No-Project Alternative

As described in Chapter 5, the purpose of evaluating the No-Project Alternative is to allow decision-makers to compare the impacts of the Proposed Project with the impacts of not approving the project. For the purposes of this SEIR, the No-Project Alternative does not include a BART extension to Warm Springs and assumes that transit services will continue at current (2003) levels, except for limited improvements in service frequency. These conditions are based upon current plans and are consistent with available infrastructure and community services. This would include current transit services provided by BART, Alameda Contra Costa Transit District (AC Transit), and VTA. Programmed highway improvements are also included in this alternative.

The No-Project Alternative would not have certain impacts that would occur with implementation of the Proposed Project, such as potential disturbances to hazardous materials, increased storm water flows, temporary loss of flood storage, potential soil erosion and sedimentation, disturbance to biological species or habitat, residential and business displacements, visual impacts, disturbances of sensitive archaeological resources, and vibration effects. However, unlike the Proposed Project, the No Project Alternative would not address continuing long-term traffic congestion, and traffic-related air quality and energy benefits would not be realized; nor would it serve projected growth in the project area.

Proposed Bus Alternative

Although bus alternatives had been previously analyzed in earlier studies, a Bus Rapid Transit (BRT) alternative was not analyzed in the 1992 EIR. Changes in the circumstances underlying the previous environmental analysis, including technological advancements in bus operations that would provide enhanced bus service, have occurred since 1992. The proposed Bus Alternative was developed in consultation with the two bus service providers in the project area, AC Transit and VTA, to offer a bus system that would provide transit service at a level similar to the Proposed Project, to the extent possible. The proposed Bus Alternative was developed using BRT components, with two transit centers—one at the site of the proposed Warm Springs BART Station, and one at the site of the optional Irvington Station—as well as three additional bus stops along the enhanced bus routes. Enhanced bus features and the conceptual operating plan, ridership projections, and estimated capital costs, are described in Chapter 5 (*Alternatives Analysis*).

The proposed Bus Alternative would avoid or reduce some of the impacts associated with the Proposed Project, such as temporary loss of flood storage capacity, impacts to wetland and riparian habitat, disturbance of archaeological sites, temporary visual impacts to Fremont Central Park, and noise and vibration impacts. The proposed Bus Alternative would have the potential to disturb hazardous materials during construction and a more extensive impact on hydrology and water quality than the Proposed Project. In addition, the Bus Alternative would have a significant, unavoidable impact on sensitive species (burrowing owl) and a significant visual impact (bus flyover at Paseo

Padre Parkway and UP alignment). The Bus Alternative also would have fewer total displacements than the Proposed Project but would have more residential displacements. Due to lower ridership, the proposed Bus Alternative would not achieve the same level of beneficial effects of the Proposed Project, such as reduction in roadway traffic volumes, increased transit ridership, reductions in air pollution emissions, and reduction in regional energy consumption. In addition, while the proposed Bus Alternative would offer a high quality service, it would not be as successful as the Proposed Project in promoting transit-oriented development, and in supporting smart, efficient and desirable growth patterns.

Goals and Objectives

BART's goals and objectives for the Warm Springs Extension are presented in Tables 1-1, 1-2, and 1-3 of Chapter 1 (*Introduction*). The Proposed Project would meet these goals and objectives for the reasons discussed below. A more detailed discussion of goals and objectives is provided in Chapter 5 (*Alternatives Analysis*).

- **Improve Public Transportation Service to Increase Mobility** – The Proposed Project would maximize transit ridership and new transit trips compared to the No-Project and Bus Alternatives. The optional Irvington Station would also provide an additional increase over and above that generated by the Proposed Project (see Table ES-1). Increased ridership responds to several objectives, including relieving congestion on the highway network and street system by providing choices among transportation modes (automobile, bus, rail); maximizing the use of public transportation, particularly during peak-commute periods; and providing adequate facilities (stations, parking, etc.) to serve transfers between modes and between regional and local transit services.
- **Improve Environmental Quality** – As patrons transfer from auto travel to transit travel, there is a corresponding reduction in the number of automobile miles traveled that results in regional energy savings and the conservation of non-renewable energy. The Proposed Project also would promote displacement of air-polluting auto trips and support regional plans to meet state and federal air quality standards to a greater degree than other alternatives.
- **Provide Compatibility with Adjacent Land Uses and Planned Development** – The Proposed Project and the optional Irvington Station would be consistent with local land use policies that designate the station locations as areas for focused development. In particular, the Proposed Project would be consistent with the City of Fremont's land use and redevelopment goals, and the *Fremont General Plan* specifically reserves a transit corridor for BART.
- **Provide Transportation Services that Make Efficient and Effective Use of Financial Resources and that Are Financially Attainable** – The proposed Bus Alternative would require less capital investment than the Proposed Project, but it would not be as effective as the Proposed Project in maximizing new transit trips or the associated environmental benefits of reduced traffic congestion and energy consumption and improved air quality. Financing of the Proposed Project is attainable. The Proposed Project is an element of Alameda County Measure B in 2000, which was approved by voters in 2000 and provides sales tax revenues to fund a BART extension to southern Alameda County. The optional Irvington Station, which would be built when funds become available, responds to System Expansion goals for developing transportation plans that can be implemented incrementally based on need and funding availability.

- **Provide Transportation Services Equitably to all Segments of the Population** – The proposed BART stations are designed as inter-modal transit hubs, providing locations where rail, bus, automobile, bicycle, and pedestrian links meet. This increases mobility for the transportation-disadvantaged, including the elderly and disabled.
- **Support Community Goals and Institutional Objectives** – The Proposed Project is included in MTC’s Regional Transportation Expansion Policy, which identifies and prioritizes transit projects, as a Tier 1 recommended rail expansion project. As noted above, the City of Fremont’s General Plan specifically reserves a transit corridor for the Proposed Project, and the City’s goals for enhanced transit service and for the station areas are also best supported by the Proposed Project.
- **Provide Comprehensive Station Design** – Consistent with the BART *Strategic Plan* and System Expansion Criteria, the Proposed Project is designed to enhance multi-modal access to the BART system by automobile, bus, shuttle, taxi service, bicyclists, and pedestrians.
- **Provide Comprehensive Land Use Planning and Potential for Transit-Oriented Development** – The Proposed Project responds to BART’s System Expansion Criteria by demonstrating a commitment to transit-supportive growth and development, which is designed to maximize ridership by supporting smart, efficient, and desirable growth patterns. The proposed stations are designed to accommodate future transit-oriented development, both on-site and off-site, in conjunction with the Proposed Project.

Public Review Process

Notice of Preparation

When one or more state agencies will be a responsible agency or trustee agency, a Notice of Preparation (NOP) must be filed with the State Clearinghouse (CEQA Guidelines, Section 15082 [d]). The NOP is provided to appropriate state agencies and invites them to comment during the scoping period, which is a minimum of 30 days following the filing of the NOP. An NOP for the BART WSX SEIR was filed on March 5, 2002. The state agencies that received copies of the NOP through the State Clearinghouse include Caltrans and the California Department of Fish and Game (CDFG). In addition, copies of the NOP were provided to local agencies, including MTC, the Alameda County Congestion Management Agency (ACCMA), AC Transit, and VTA.

Public Scoping Meeting

A public scoping meeting for the Proposed Project was held on March 25, 2002, at the Fremont Main Library. The purpose of the meeting was to solicit comments to help determine the scope of the WSX SEIR. Notices were published beforehand in local newspapers announcing the time, date, location, and purpose of the meeting. In addition, invitations to the meeting and copies of the NOP were distributed to an extensive mailing list of stakeholders throughout Fremont, southern Alameda County, and northern Santa Clara County. More than 100 people attended the public scoping meeting. Comments received in response to the NOP and at the public scoping meeting have been considered, where applicable.

Areas of Known Controversy and Issues to Be Resolved

CEQA Guidelines Section 15123 (b) requires that areas of controversy known to the lead agency be identified, including issues raised by other agencies and the public. The following areas of concern were raised in comments made on the NOP.

Areas of Controversy

- Analysis of other alternatives, including bus, taxi, and limousine service from Fremont Station to Warm Springs. Alternatives should include standard rail, commuter rail, light rail, and commuter bus, as well as providing more lanes to I-880 and I-680.
- Analysis of an underground alignment between Fremont BART Station and Central Park.
- Effects of Hayward fault on Irvington Station.
- Effects of Proposed Project on the flood storage capacity of Lake Elizabeth.
- Proposed Project's relation to future transit-oriented development (TOD).
- Incentives for non-automobile station access and paid station parking.
- Stations as intermodal centers.
- Impacts of Proposed Project on historic Gallegos Winery ruins.
- Noise impacts and location of potential sound walls.
- Effects of subway construction on park recreation activities.

Issues to be Resolved

- Selection of a WSX alternative.
- Adoption and funding of the optional Irvington Station.
- Scheduling and coordination with Fremont's grade separations project and UP Railroad.
- Location of replacement habitat for biological impacts.
- Land use planning efforts in the vicinity of proposed Warm Springs and optional Irvington Stations.
- Site-specific implementation of noise control measures.
- Site-specific implementation of vibration control measures.

How to Comment on the Draft Supplemental Environmental Impact Report

A 45-day public review period is being held to receive comments on the DSEIR and will extend from March 25, 2003, to May 9, 2003. BART will hold a public hearing on April 14, 2003 to receive public testimony on the DSEIR. The public hearing will be held at 6:30 at Parkmont Elementary

School, located at 2601 Parkside Drive, Fremont. In addition, comments can be made on the DSEIR in writing and sent to BART at the address listed below before the end of the comment period.

During the public review period, written comments should be submitted to the following address.

San Francisco Bay Area Rapid Transit District
Attention: Richard C. Wenzel, P.E.
WSX Environmental Project Director
P.O. Box 12688, MS 1KB-6
Oakland, CA 94604-2688

Following the close of the public comment period, responses to substantive written and oral comments on the DSEIR will be prepared and published as a separate document. The DSEIR and the document containing the responses to the comments will together constitute the Final SEIR (FSEIR). The FSEIR, together with the 1992 EIR, will be considered by the BART Board of Directors prior to taking action on the Proposed Project.

The DSEIR and related documents can be reviewed at the following locations.

Fremont Main Library
2400 Stevenson Boulevard
Fremont, CA 94538

Metropolitan Transportation Commission (MTC) – Association of
Bay Area Governments (ABAG) Library
101 8th Street
Oakland, CA 94607-4700

San Francisco Bay Area Rapid Transit District
1000 Broadway, Suite 620
Oakland, CA 94607-4099

The Executive Summary of the DSEIR will also be available online at BART's website, located at www.bart.gov.

References Cited in this Chapter

Metropolitan Transportation Commission (MTC). May 2001. *Travel Forecasts for the San Francisco Bay Area: 1990-2025, Auto Ownership, Trip Generation and Trip Distribution, Data Summary*.

Caltrans. 2001 Traffic Volumes. State of California, Department of Transportation, Traffic Operations Division.

Metropolitan Transportation Commission. 1994. *Fremont-South Bay Corridor Final Report*. Prepared by DKS Associates. Oakland, CA.

San Francisco Bay Area Rapid Transit District and Santa Clara Valley Transportation Authority.
2000. *BART Extension Study from Fremont to Milpitas, San Jose and Santa Clara*. Prepared
by Parsons Brinckerhoff in association with Apex Strategies, CCS Planning and Engineering,
Inc., DKS Associates, Hatch Mott MacDonald, and the Seville Group Inc. Oakland, CA.

Table ES-2. Summary of Impacts and Mitigation Measures

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Hazards and Hazardous Materials</p> <p>Impact HazMat1 – Previous uses of the project alignment may have resulted in the release of hazardous materials into the soil or groundwater. Construction may result in exposure of workers or the public to these materials resulting in adverse health effects.</p>	<p>Mitigation Measure HazMat1 – Develop a work plan for additional site characterization. BART will retain the services of a Registered Geologist or Professional Engineer to develop a Work Plan for additional sites characterization along portions of the Proposed Project alignment where grading, excavation, or dewatering is likely to occur.</p> <p>Construction activity in contaminated areas, including excavation and grading, will be conducted with a site-specific health and safety plan prepared by a qualified professional. The plan will provide safety guidelines, delineation of action levels for personal protective gear, and emergency response procedures. The plan would be reviewed by all construction workers prior to commencement of construction.</p> <p>To mitigate significant impacts associated with exposure to hazardous materials during construction, BART will develop a soil management plan for approval by the appropriate regulatory agencies. Contaminated solids or groundwater excavated or extracted during construction activities would be managed in accordance with the approved soil management plan and regulatory agency oversight. Remediation of soils could include excavation and on-or off –site treatment/disposal or in-place treatment of the affected soils. Remediation of groundwater could include in-situ treatment or extraction and treatment. Disposal options for contaminated soil and groundwater (i.e., on- or off-site treatment and/or disposal) would depend on the specific chemicals present and the levels of contamination. The steps in such a process include the following.</p> <ol style="list-style-type: none"> 1. Develop a Work Plan for additional site characterization. 2. Undertake additional soil sampling in areas of known contamination to further define the horizontal and vertical extent of contamination. 3. Conduct groundwater testing in locations where dewatering activities may be required to identify any potential groundwater contamination for water management purposes. 4. Develop and obtain approval of a soil management plan to address proper handling of contaminated materials. 	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>5. Handle contaminated soils in accordance with the approved soil management plan.</p> <p>6. Construction work with contaminated soils shall utilize dust control measures (AIR2) and sediment and erosion control measures (H7) to prevent exposure to workers, the public, and the environment. Where appropriate, air monitoring will be conducted to measure the effectiveness of the control measures.</p> <p>7. Manage groundwater discharges in accordance with construction stormwater, pre-treatment, or NPDES permits as appropriate.</p> <p>8. Document the remediation work for submittal to the local and state agencies overseeing implementation of the soil management plan.</p> <p>If any unidentified contaminated materials are encountered during construction or an accident results in the release of hazardous materials, halt work to ascertain the immediacy and nature of the material. If necessary, clear the area to provide safety to workers and the public. Take measures to isolate the release and determine a course of action for cleanup, treatment, and/or disposal of contaminated materials. Notify public emergency services and regulatory agencies as appropriate. Prior to construction near the underground fuel pipelines, the exact location of lines should be accurately established (e.g., accurate maps from the owner or operator or geophysical surveys). Potential hazards associated with rupture of the pipelines or discovery of hazardous materials releases from the pipelines should be included in the site health and safety plan.</p>	
<p>Impact HazMat 2 – Potential handling of hazardous materials within 0.25 miles of an existing school.</p> <p>Impact HazMat3 – Potential for demolition or renovation of existing structures to expose workers to lead-based paint and asbestos-containing materials.</p>	<p>Mitigation Measure HazMat1 – Develop a work plan for additional site characterization. This mitigation measure is described above.</p> <p>Mitigation Measure HazMat3 – Survey and properly handle materials from structures that may contain asbestos and lead-based paint. Prior to demolition or renovation of structures built before 1978, a survey for the presence of ACM will be conducted. The survey will be conducted by Asbestos Hazard Emergency Response Act (AHERA) – certified personnel, trained according to state and federal regulations. Structures will also be surveyed for the presence of lead-based paint. If the results of the survey detect the presence of lead-based paint, construction will be performed in accordance with the Lead in Construction Standard, 8CCR Section 5132.1. (8 Cal. Code of Regulations Section 5132.1). ACM will be removed in</p>	<p>Less than significant with mitigation incorporated</p> <p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact HazMat4 – Previous uses of the optional Irvington Station area may have resulted in the release of hazardous materials into the soil or groundwater. Construction may result in exposure of workers or the public to these materials resulting in adverse health effects.</p>	<p>accordance with the requirements of Cal OSHA (8 Cal. Code of Regulations 5129) and the Bay Area Air Quality Management District.</p> <hr/> <p>Mitigation Measure HazMat1 –Develop a work plan for additional site characterization. This mitigation measure is described above.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Hydrology and Water Quality Impact H1 – Alteration of flooding conditions due to changes in infiltration rates, drainage patterns, or the rate and amount of surface runoff.</p>	<hr/> <p>Mitigation Measure H1 – Design and implement a stormwater management system to safely convey stormwater. BART will design and implement a stormwater management system and will develop and implement a stormwater management plan to convey flows up to and including the 100-year design storm. The stormwater management system will be incorporated into plans and specifications for the Proposed Project, and BART will submit the Proposed Project designs to ACFCD for approval to ensure that the Proposed Project does not exacerbate either upstream or downstream flooding conditions. The ACFCD publishes guidelines with which design of drainage systems are to comply. In addition, any work that would encroach on structures or areas owned or operated by the ACFCD would require approval from the ACFCD. The stormwater management plan may recommend use of stormwater detention facilities to temporarily store the increased flows from storms up to and including the 15-year storm, and to discharge the flows at approximately predevelopment levels.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact H3 – Loss of flood storage capacity at Tule Pond South.</p>	<hr/> <p>Mitigation Measure H3 –Mitigate the loss of flood storage capacity by providing an equal or greater amount of lost storage capacity at the same location. To maintain existing flood storage capacity, BART will expand Tule Pond and/or create an additional flood storage facility (e.g., detention pond) at the same location. The storage capacity will be at least as large as the loss of storage resulting from implementation of the project (see Figure 2-4a in Chapter 2 [<i>Project Description</i>]).</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact H4 – Delivery of increased pollutant loads to urban drainages from expanded impervious areas.</p>	<hr/> <p>Mitigation Measure H4 – Incorporate design features and implement best management practices (BMPs) for postconstruction water quality protection. BART will incorporate design features for postconstruction water quality protection into the stormwater management system described in Mitigation Measure H1 above, and will ensure that appropriate water quality protection BMPs are implemented during operation of the Proposed Project. Design features may include, but will not necessarily be limited to, water quality inlets, grassy swales, oil-water separators, and wet ponds. These</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact H7 – Potential for accelerated erosion and discharge of sediment into water bodies as a result of ground-disturbing activities.</p>	<p>structures remove hydrocarbons, dissolved pollutants, and particulate matter using a range of mechanisms, including particulate settling, biological uptake, flocculation, and filtration. BART will monitor and maintain water quality design features as necessary for the life of the Proposed Project.</p> <p>In addition to physical structures, BMPs may include programs designed to educate staff and reduce potential impacts to water quality. Likewise, BART may incorporate operational elements that will reduce or eliminate potential sources of point- and non-point source pollutants. Implementation of BMPs to protect water quality will be specified in the SWPPP associated with their NPDES General Permit. In addition, BART may receive assistance in defining and implementing those BMPs via the Clean Water Program’s storm water quality management plan.</p> <p>Mitigation Measure H7 –Ensure the implementation of NPDES permit conditions. As required by the NPDES General Permit for Discharges of Storm Water Associated with Construction Activities, BART will ensure that specific erosion and sediment control measures are implemented during Proposed Project construction to prevent accelerated erosion stemming from grading and other ground-disturbing activities. Measures include, but are not limited to, the following.</p> <p><i>Erosion Control Measures:</i></p> <ul style="list-style-type: none"> ▪ Temporary and permanent seeding of disturbed areas and stockpiles. ▪ Use of erosion control blankets. ▪ Stabilization of construction area entrances and exits. ▪ Dust suppression (e.g., watering exposed surfaces and stockpiles of soils and/or excavated material, covering stockpiles with plastic tarps). <p><i>Sediment Control Measures:</i></p> <ul style="list-style-type: none"> ▪ Use of straw rolls, sediment fences, straw bales, and/or sediment traps to prevent sediment-laden runoff from leaving the construction area. ▪ Use of temporary dikes to redirect or control runoff. <p>These measures would be installed before October 15 and monitored throughout the winter rainy season (October 15–March 15). The measures and monitoring requirements required under the NPDES General Permit would minimize the potential for accelerated erosion and sedimentation.</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact H8 – Water quality degradation at Lake Elizabeth, Mission Creek, Tule Pond, and Cañada de Aliso during construction.</p>	<p>Without proper implementation of these measures, however, this impact is considered significant. In addition, BART may receive assistance in defining and implementing those BMPs via the Clean Water Program’s storm water quality management plan. BART will verify that an NOI and a SWPPP have been filed before allowing construction to begin. BART will routinely inspect the project site to verify that the BMPs specified in the SWPPP are properly installed and maintained. BART will immediately notify the contractor if there is a noncompliance issue and require compliance.</p> <hr/> <p>Mitigation Measure H8(a) – Implement water quality control measures to prevent release of sediment. BART will ensure that water quality control measures, such as turbidity barriers/curtains, are in place before construction activities begin in these areas, and prior to cofferdam installation. The barriers have pores that are large enough to allow water to pass through, but the pores are small enough to trap most sediments that may be suspended in the water. Measures will be installed on the west side of the cofferdam in Lake Elizabeth to prevent the release of disturbed lake-bottom sediments into the majority of the lake. Additional turbidity barriers/curtains or other appropriate measures will be installed at the outlet to Mission Creek to retain entrained lake-bottom sediments. BART may also use additional technologies to reduce potential impacts to water quality. These technologies may include, but not be limited to, the use of sheet piles instead of using an earthen cofferdam.</p> <p>BART will ensure that construction activities related to dewater or the runoff of stormwater from Lake Elizabeth, Mission Creek, Tule Pond, and Cañada de Aliso will incorporate BMPs to minimize impacts to water quality. BMPs may include, but not be limited to the use of sediment barriers (e.g. silt curtains), limiting the amount of exposed soils, and incorporating settling basins prior to discharge of water.</p> <p>Mitigation Measure H8(b) – Comply with City of Fremont MS-4 Permit. BART will conduct any dewatering activities associated with the construction or operation of the Proposed Project according to the Waste Discharge Requirements for Facility-Wide Municipal Storm Water Discharges from Storm Sewer System and Non-Storm Water Discharges from the City of Fremont (MS4 Permit) issued by the San Francisco Bay RWQCB.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact H9 – Release of hazardous substances that violate water quality standards.</p>	<hr/> <p>Mitigation Measure H9 – Implement hazardous materials spill prevention and control plan. As part of its NPDES General Permit for Construction Activities, BART will be required to develop and implement a</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact H11 – Temporary reduction in flood storage capacity at Lake Elizabeth.</p>	<p>Hazardous Material Spill Prevention and Control Plan related to the use of construction equipment for the Proposed Project. The Hazardous Material Spill Prevention and Control Plan would describe storage procedures and construction site housekeeping practices and identify the parties responsible for monitoring and spill response. The measures and monitoring procedures required under the NPDES General Permit would minimize the potential for release of hazardous materials to the environment. BART will ensure the filing of the NOI for the NPDES permit and developing and implementing a Hazardous Materials Spill Prevention and Control Plan. BART will review the Hazardous Materials Spill Prevention and Control Plan before allowing construction to begin. BART will routinely inspect the project site to verify that the BMPs specified in the Hazardous Materials Spill Prevention and Control Plan are properly installed and maintained. BART will immediately notify the contractor if there is a noncompliance issue.</p> <hr/> <p>Mitigation Measure H11(a) – Limit construction of cut-and-cover subway to the dry season. BART will close the cofferdam after April 1 and will complete construction and breach the cofferdam by November 1. Using this construction method, there would only be a small reduction in flood storage during the flood season (fill above the normal water level) and the construction period would be maximized.</p> <p>If Proposed Project construction at Lake Elizabeth cannot be completed between April 1 and November 1, Mitigation Measure H11(b) will be implemented.</p> <p>Mitigation Measure H11(b) – Create additional flood storage capacity equal to or greater than the temporary reduction in flood storage during construction. One or more of the following solutions could be employed to provide additional flood storage to offset the temporary reduction of flood storage during construction activities.</p> <ul style="list-style-type: none"> ▪ Actively manage the level of water within Lake Elizabeth to provide additional storage capacity equal to the storage loss. ▪ Construct a second temporary cofferdam on the east side of the open trenching activities during construction and divert flows back into the eastern arm of Elizabeth Lake. ▪ Construct additional storage facilities (e.g., detention basin) at the same location to provide additional storage capacity. 	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact H12 – Alteration of flooding conditions due to changes in infiltration rates, drainage patterns, or the rate and amount of surface runoff as a result of implementation of optional Irvington Station.</p>	<p>One or more of these solutions would be incorporated with the review and permission of the City of Fremont and the ACFCO.</p> <hr/> <p>Mitigation Measure H1 – Design and implement a stormwater management system to safely convey stormwater. This mitigation measure is described above.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Biological Resources Impact BIO3 – Permanent loss of wetland habitat.</p>	<p>Mitigation Measure BIO3 – Restore, create, and protect wetland habitat to mitigate loss of wetland habitat. In order to ensure that implementation of the Proposed Project results in no net loss of wetland habitat functions and values, BART will compensate for the loss of wetland habitat at Tule Pond South and south of the Warm Springs Station site through a combination of onsite restoration/creation and offsite protection and enhancement of at least 0.79 acre of wetland habitat. The size and location(s) of the area(s) to be restored/created will be determined based on appropriate mitigation ratios derived in consultation with the Corps. A mitigation plan will be prepared by a wetland biologist experienced in mitigation and restoration. The plan will be implemented under the biologist’s guidance. Subject to approval by the Corps, the wetland mitigation plan will address temporary and permanent impacts (temporary impacts are addressed under Impact BIO11). Factors that will be considered in developing an effective mitigation plan in consultation with the Corps include the following.</p> <ul style="list-style-type: none"> ▪ Function and values: Wildlife species, percentage of vegetative cover and/or density, approximate plant height; plant and animal species diversity, root development, and canopy stratification. ▪ Hydrological regime: Sources of water, discharge points, areas affected by seasonal flooding, direction of flow, and size of watershed. <p>Specific measurable criteria for the above factors will be incorporated into the plan in conformance with applicable regulatory requirements and the Corps’ Guidelines. Such criteria cannot be specifically identified at this stage, however, because the Corps has not visited the site.</p> <p>Prior to any work that could disturb wetland or creek habitat within the Proposed Project corridor, BART will obtain the following permits as required.</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
Impact BIO4 – Loss of riparian forest habitat.	<ul style="list-style-type: none"> ▪ U.S. Army Corps of Engineers – Nationwide or individual permit as required under Clean Water Act Section 404. ▪ San Francisco Bay Regional Water Quality Control Board – Water quality certification or waiver under Clean Water Act Section 401. ▪ California Department of Fish and Game – Streambed Alteration Agreement. 	
	<p>Consultation with these agencies will govern how the temporary disturbance of wetland and creek habitats will be mitigated.</p> <hr/> <p>Mitigation Measure BIO4 – Enhance, recreate, or restore riparian forest to compensate for the loss of riparian forest habitat. BART will compensate for the permanent loss of riparian forest habitat at Tule Pond South and east of Mission Creek through onsite restoration/creation of 0.5 acre of forested riparian habitat west of the existing Tule Pond South site (Figure 3.4-1a). Compensation will be provided at a minimum ratio of 1:1 (1 acre restored or created for every acre removed). Restoration activities will occur after construction.</p> <p>BART will retain a qualified restoration ecologist to develop a conceptual restoration and monitoring plan that describes how riparian habitat will be enhanced or recreated and monitored over a minimum period of time. BART will be responsible for ensuring that the restoration and monitoring plan is implemented.</p> <p>After restoration and revegetation are completed, monitoring will be conducted for a minimum of 5 years to ensure that the success criteria identified below are met and to identify any necessary remedial actions. The revegetation/restoration plan for riparian habitats will be considered successful when the following criteria are met.</p> <ul style="list-style-type: none"> ▪ The restored site is composed of a mix of species similar to that removed during the construction activity. ▪ The restored site has at least 75% of the absolute cover of native vegetation present in areas immediately adjacent to the construction corridor. ▪ Plantings are self-sustaining without human support (e.g., weed control, rodent and deer control, irrigation). 	

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact BIO5 – Disturbance or loss of potential habitat for California red-legged frog habitat.</p>	<ul style="list-style-type: none"> ▪ Functions and values of the restored habitat are comparable to those of adjacent undisturbed riparian habitat. <p>Remedial action will be required if any of the above criteria are not met during the monitoring period. The purpose of the remedial action will be to ensure that the above criteria are met.</p>	
	<p>Mitigation Measure BIO5(a) – Avoid and minimize impacts to California red-legged frog habitat.</p> <ul style="list-style-type: none"> ▪ Prior to the initial site investigation and subsequent ground-disturbing activities, a qualified biologist will provide worker awareness training to all project personnel in recognition of California red-legged frog and its habitat. ▪ A qualified biologist will conduct pre-construction surveys within the project area no earlier than 2 days before ground-disturbing activities. ▪ No activities will occur after October 15 or the onset of the rainy season, whichever occurs first, until May 1, except for during periods greater than 72 hours without precipitation. Activities can only resume after site inspection by a qualified biologist. The rainy season is defined as “a frontal system that results in depositing 0.25 inches or more of precipitation in one event.” ▪ Vehicles to and from the project site will be confined to existing roadways to minimize disturbance of habitat. ▪ Prior to movement of heavy equipment in the project area, a qualified biologist will verify that the route is clear of California red-legged frogs. ▪ If a California red-legged frog is encountered during excavations or any project activities, activity will cease until the frog is removed and relocated by a USFWS-approved biologist. Any incidental take will be reported to USFWS immediately by telephone. ▪ If suitable wetland habitat is disturbed or removed, BART will restore the suitable habitat back to its original value by covering bare areas with mulch and revegetating all cleared areas with wetland species that are currently found in the project area. <p>Mitigation Measure BIO5(b) – Compensate for permanent removal of California red-legged frog habitat through protection or enhancement of California red-legged frog habitat. Any permanent removal of habitat</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact BIO6 – Loss of occupied Western Burrowing Owl habitat and direct impacts on Western Burrowing Owls.</p>	<p>identified by USFWS as suitable to support California red-legged frog will be mitigated through protection of suitable California red-legged frog habitat elsewhere, at a 3:1 ratio. The location and size of the compensation habitat will be determined through consultation with USFWS.</p> <hr/> <p>Mitigation Measure BIO6 – Implement on- and offsite replacement of Western Burrowing Owl habitat. BART will ensure that the loss of Western Burrowing Owl habitat in the Proposed Project corridor is compensated by the provision of replacement habitat either on-site or off-site. Habitat replacement will be based on a biological analysis of the requirements of the owls at this site, or CDFG-approved guidelines (California Department of Fish and Game 1995).</p> <p>Location of the compensation habitat will be identified in conjunction with CDFG through a mitigation agreement. Compensation habitat may be located either on-site or off-site, depending on approval from CDFG. If necessary, BART will construct two artificial burrows for each occupied burrow lost or rendered unsuitable as a result of construction activities. BART will retain a qualified biologist to build and monitor the artificial burrows. BART will ensure that the mitigation habitat (including artificial burrows) is maintained for owls in perpetuity.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact BIO9 – Removal of trees.</p>	<hr/> <p>Mitigation Measure BIO9(a) – Conduct a tree survey to assess tree resources impacted by the Proposed Project. BART will retain a certified arborist to conduct a tree survey of the Proposed Project corridor, including potential contractor laydown areas, and identify and evaluate trees, including any landmark trees as identified by the City of Fremont, that will be removed. If the arborist’s survey does not identify any protected trees or known landmark trees that would be removed or damaged as a result of the Proposed Project, no further mitigation is necessary. However, if the Proposed Project would remove or damage any tree(s), Mitigation Measure BIO9(b) as described below will also be implemented.</p> <p>Mitigation Measure BIO9(b) – Compensate for removal of protected trees. For any tree with a trunk diameter in excess of 4 inches measured at 4 feet above ground level that is removed as a result of the Proposed Project, BART will ensure that replacement trees are planted in the Proposed Project corridor. At a minimum, each removed tree that meets the 4-inch size standard will be replaced with either (i) one replacement tree of 24-inch box size, or (ii) three replacement trees of 15-gallon size. Replacement trees will belong to a native species such as coast live oak (<i>Quercus agrifolia</i>),</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>California buckeye (<i>Aesculus californica</i>), California bay laurel (<i>Umbellularia californica</i>), or other appropriate species native to the Fremont area. Trees will be planted in close proximity to removal sites, in locations suitable for the replacement species. Selection of replacement sites and installation of replacement plantings will be supervised by a qualified botanist. Newly planted trees will be monitored by a qualified botanist at least once a year for 5 years. Each year, any trees that do not survive will be replaced. Any trees planted as remediation for failed plantings will be planted as stipulated here for original plantings, and will be monitored for a period of 5 years following installation. Tree replacement will occur after project construction.</p>	
<p>Impact BIO10 – Temporary disturbance of ruderal forb-grassland.</p>	<p>Mitigation Measure BIO10(a) – Minimize and avoid ruderal forb-grassland habitat. The following minimization and avoidance measures will be implemented in order to ensure pre-project conditions in areas where ruderal forb-grassland habitat is temporarily disturbed.</p> <ul style="list-style-type: none"> ▪ Remove as little vegetation as possible. ▪ Replace top soil and replant the grassland habitat, using a mixture of native perennial and annual grasses and forbs. ▪ Minimize construction activities in sensitive habitat areas. <p>Mitigation Measure BIO10(b) – Minimize erosion of stockpiled soil. During construction, measures necessary to prevent erosion and pollution from the excavated and stockpiled soil, such as the use of geotextiles, will be implemented.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact BIO11 – Temporary disturbance of open water habitat.</p>	<p>Mitigation Measure BIO11 – Restore disturbed vegetation and install erosion barriers.</p> <ul style="list-style-type: none"> ▪ Destroyed vegetation will be replaced and the channels restored to previous condition following construction. ▪ Require the construction contractor to use erosion barriers in order to prevent construction materials and excavated soil from entering any of the open water areas. 	<p>Less than significant with mitigation incorporated</p>
<p>Impact BIO12 – Temporary disturbance of wetland and creek habitat.</p>	<p>Mitigation Measure BIO12(a) – Avoid or minimize disturbance of wetlands and creeks. At a minimum, mitigation for this impact will include the following measures.</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>All environmentally sensitive areas will be staked and flagged in the field and marked on construction drawings before construction begins. BART’s construction contractor(s) will avoid construction activities in and adjacent to creeks and saturated or ponded wetlands during the wet season (winter and spring) to the maximum extent possible. Wetlands and creek habitats on and near active Project construction sites will be protected by installing environmentally sensitive area fencing (orange construction barrier fencing) at least 20 feet outboard of the edge of the ordinary high-water mark; depending on site-specific conditions and permit requirements, the buffer may be wider than 20 feet to prevent erosion and sedimentation impacts on wetland habitats. Construction specifications for the Proposed Project will include language that specifically prohibits construction-related activities, including vehicle laydown and operation, storage of materials and equipment, and other ground-disturbing activities in fenced environmentally sensitive areas.</p> <p>BART will retain qualified biologists and/or resource specialists to monitor construction activities near wetlands and creeks. Monitors will be hired and trained prior to construction, and will be responsible for preconstruction surveying, staking and fencing sensitive resources, onsite monitoring, documenting compliance and violations, coordinating with contract compliance inspectors, and performing postconstruction documentation.</p> <p>Contractors will ensure that woody debris, soils, and any other materials that are inadvertently deposited below the ordinary high-water mark of drainages are removed. Removal will be accomplished by qualified personnel, in a manner that minimizes disturbance of drainage bed and banks.</p> <p>If it is not possible to avoid ground-disturbing activities in or adjacent to environmentally sensitive areas, including creeks and/or saturated or ponded wetlands, the following measures will be implemented to minimize disturbance.</p> <ul style="list-style-type: none"> ▪ When working in or adjacent to creeks or wetlands, contractors will use geotextile cushions or other appropriate materials (e.g., timber pads, prefabricated equipment pads) to minimize damage to the substrate and vegetation and increase the likelihood of successful restoration. ▪ When working upslope of creeks or wetlands, contractors will use geotextile mats, excelsior blankets, or other soil stabilization products to 	

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>minimize the potential for construction to contribute to erosion and sedimentation that could affect wetland water quality.</p> <ul style="list-style-type: none"> ▪ Contractors will stabilize exposed slopes and streambanks immediately on completion of ground-disturbing activities, using a nonvegetative material that will bind the soil initially and break down within a few years. <p>BART will ensure that all measures stipulated here, and all relevant permit conditions, are incorporated into contract specifications and implemented by the construction contractor.</p> <p>Mitigation Measure BIO12(b) – Restore disturbed wetland and creek habitat. In order to ensure that implementation of the Proposed Project results in no net loss of wetland and creek habitat functions and values, BART will ensure that wetlands and creeks disturbed during construction activities are restored and/or revegetated. BART will comply with any measures required by the Corps as part of the Section 404 permitting process.</p> <p>In addition, BART will retain a qualified restoration ecologist to develop a restoration/ revegetation plan for wetlands and creeks adversely affected by construction activities, in conjunction with resource and regulatory agency staff. The restoration/revegetation plan will include design specifications, an implementation plan, maintenance requirements, and a monitoring program.</p> <p>After restoration and revegetation are completed, monitoring will be conducted for a minimum of 5 years to ensure that the success criteria identified below are met and to identify any necessary remedial actions. Annual monitoring reports will be submitted to the Corps and the San Francisco Bay RWQCB. The reports will summarize the data collected during each monitoring period, describe the progress of the restored habitats relative to the success criteria outlined below, and discuss any remedial actions performed.</p> <p>The revegetation/restoration plan for wetland and creek habitats will be considered successful when the following criteria are met.</p> <ul style="list-style-type: none"> ▪ The restored site is composed of a mix of species similar to that removed during the construction activity. 	

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<ul style="list-style-type: none"> ▪ The restored site has at least 75% of the absolute cover of native vegetation present in areas immediately adjacent to the construction corridor. ▪ Plantings are self-sustaining without human support (e.g., weed control, rodent and deer control, irrigation). ▪ Functions and values of the restored habitat are comparable to those of adjacent undisturbed wetland and creek habitats. <p>Remedial action will be required by BART if any of the above criteria are not met during the monitoring period. The purpose of the remedial action will be to ensure that the above criteria are met.</p> <p>Mitigation Measure BIO12(c) – Compensate for temporary loss of wetland and creek habitat. To compensate for the temporary loss of wetland and creek habitat during construction, BART will implement Mitigation Measure BIO3 (Restore, create, and protect wetland habitat to mitigate loss of wetland habitat). As discussed in this mitigation measure, the size of the area(s) to be restored/created will be determined based on appropriate mitigation ratios derived in consultation with the Corps.</p>	
<p>Impact BIO13 – Temporary disturbance of riparian forest habitat.</p>	<p>Mitigation Measure BIO13(a) – Minimize disturbance of riparian habitats. BART’s construction contractor(s) will avoid construction activities in and adjacent to riparian habitats to the maximum extent possible. Riparian habitats on and near active Project construction sites will be protected by installing environmentally sensitive area fencing (orange construction barrier fencing) outboard of (upslope from) the edge of the riparian zone. Depending on site-specific conditions, the buffer may be wider than 20 feet, as needed to protect the area from erosion. The locations of fences will be marked in the field with stakes and flags and will be shown on the construction drawings.</p> <p>If it is not possible to avoid work in riparian areas, BART’s construction contractor(s) will minimize impacts on riparian forest vegetation by trimming vegetation rather than removing entire shrubs or trees wherever practicable. Shrubs will be cut at least 1 foot above ground level to leave the root systems intact and allow for more rapid regeneration. Cutting will be limited to the minimum area necessary in the construction zone. To protect migratory birds, no removal of woody riparian vegetation will take place during the breeding season (March 1–August 1).</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>Mitigation Measure BIO13(b) – If it is not possible to avoid work in riparian areas, restore disturbed riparian forest areas. BART will ensure that the riparian forest disturbed during construction activities is restored and/or revegetated.</p> <p>BART will retain a qualified restoration ecologist to develop a revegetation plan for riparian forest adversely affected by construction activities. The revegetation plan will include design specifications, an implementation plan, maintenance requirements, and a monitoring program. To help develop the plan, the restoration ecologist shall qualitatively sample the riparian vegetation in the Proposed Project corridor prior to construction. Revegetation will be implemented immediately following disturbance in substantially disturbed areas, or as appropriate for site conditions, based on the evaluation of the restoration ecologist and input from agency staff. Weeds will be vigorously controlled within and adjacent to the restoration site to ensure that no new noxious weeds are introduced into the area.</p> <p>Monitoring will be conducted by BART for a minimum of 5 years to document the degree of success in achieving the success criteria identified below and to identify any necessary remedial actions. The reports will summarize the data collected during each monitoring period, describe the progress of restored habitats relative to the success criteria outlined below, and discuss any remedial actions performed.</p> <p>The revegetation plan for riparian habitat will be considered successful when the following criteria are met.</p> <ul style="list-style-type: none"> ▪ The riparian habitat established is composed of a mix of native species similar to that removed by the construction. ▪ The absolute cover of riparian vegetation is at least 75% of that in adjacent riparian areas not impacted by construction. ▪ The health and vigor of riparian vegetation in the planted areas is similar to that of individuals of the same species in adjacent riparian areas, based on a qualitative comparison of leaf turgor, stem caliber, leaf cover and foliage density. ▪ Plantings are self-sustaining without human support (e.g., weed control, rodent control, or irrigation). 	

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact BIO15 – Temporary disturbance of habitat for Western Burrowing Owl.</p>	<p>Mitigation Measure BIO15 – Conduct preconstruction surveys for nesting and wintering Burrowing Owls and implement measures to avoid or minimize impacts if owls are present. If construction activities are scheduled to occur during the breeding season (approximately February 1–August 31), BART, in consultation with CDFG, will retain a qualified biologist to conduct a preconstruction survey within 1–2 weeks of the onset of construction activities. If active Western Burrowing Owl nests are found, biologists will establish a 250-foot buffer zone around the active burrow(s). The buffer zone(s) will be delineated with highly visible temporary construction fencing. No construction activities will occur until a qualified biologist has determined that the young have fledged.</p> <p>Preconstruction surveys will also be conducted if activities are scheduled to occur during the nonbreeding season (September 1–January 31). If Western Burrowing Owls are found, BART will either implement avoidance measures or will passively relocate the owls. Avoidance will involve establishing a 160-foot no-disturbance buffer zone that will be delineated with highly visible temporary construction fencing. Passive relocation will involve installation of one-way doors in the entrances of all burrows in areas where construction is slated to occur. One-way doors will be installed at least 48 hours before construction begins, and will be monitored for 1 week. Following the monitoring period, the burrows will be excavated to prevent reoccupation by owls.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact BIO16 – Temporary noise disturbance of nesting common and special-status raptors.</p>	<p>Mitigation Measure BIO16 – Conduct a preconstruction survey for nesting raptors and implement measures to avoid or minimize impacts if nesting special-status raptors are present. No mitigation is required if construction occurs during the nonbreeding season (August 16–February 28). However, if construction activities occur between March 1 and August 15, BART will retain a qualified biologist to conduct a preconstruction survey for special-status raptor species in the Proposed Project corridor, including contractor laydown areas. The survey will be conducted during the calendar year in which the activity is slated to begin, to determine whether nesting special-status birds of prey would be affected. The results of the survey will be considered valid only for the season in which the survey was conducted; if phased construction is planned, an additional survey or surveys may be required.</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>If the survey does not identify any nesting special-status raptor species in the area potentially affected by the proposed activity, no further mitigation is required.</p> <p>If nesting special-status raptors are found during a preconstruction survey, the biologist will identify and establish a buffer area around each active raptor nest. No construction activities will take place inside the buffer area until the biologist has determined that the young have fledged or the parents are no longer attempting to nest. The size of the buffer area will be determined in consultation with CDFG, based on site conditions. Examples of approved buffers include the following.</p> <ul style="list-style-type: none"> ▪ Northern Harrier – minimum 200-foot radius around active nest. ▪ Cooper’s Hawk – minimum 500-foot radius around active nest. ▪ White-tailed Kite – minimum of 500-foot radius around active nest. 	
<p>Impact BIO18 – Temporary disturbance of nesting swallows.</p>	<p>Mitigation Measure BIO18 – Avoid construction during swallow nesting season or remove empty nests and prevent new nesting. No mitigation is required if construction in potential swallow nesting habitat occurs entirely outside the swallow nesting season (March 1–August 1). However, if construction activities will occur in potential swallow nesting habitat during the nesting season, BART will retain a qualified wildlife biologist to inspect known and potential nest sites during the nonbreeding season (September 1–February 28). Abandoned nests will be removed. If swallows begin constructing new nests during the breeding season, a qualified wildlife biologist will remove the nests before nesting swallows complete nest construction. Construction in nesting swallow habitat will not begin before September 1, or until after USFWS issues appropriate removal permits.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact BIO19 – Temporary disturbance of potential California tiger salamander upland estivation habitat.</p>	<p>Mitigation Measure BIO13(a) – Minimize disturbance of riparian habitats. This mitigation measure is described above.</p> <p>Mitigation Measure BIO19(a) – Conduct preconstruction surveys for California tiger salamander and implement measures to avoid or minimize impacts if salamanders are present. Prior to any construction activity, BART will retain a qualified biologist to conduct a preconstruction survey for California tiger salamander in New Marsh. The presence/absence surveys will be based on USFWS or CDFG approved protocols. Surveys for adult salamanders will occur during and following the first rains of the 2003/2004 rainy season as adults are moving between estivation sites and</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>New Marsh. Surveys for larval salamanders will be conducted in New Marsh during spring 2004. If it is determined that salamanders are present, Mitigation Measure 19(b) will be implemented. If salamanders are absent from New Marsh, and the resource agencies concur with this finding, no further mitigation will be required.</p> <p>Mitigation Measure BIO19(b) – Implement measures to avoid and minimize disturbance and mortality of California tiger salamander.</p> <ul style="list-style-type: none"> ▪ A construction work area will be delineated along the Proposed Project corridor in the vicinity of New Marsh. All construction activities will be restricted to the area within the delineated work area. The work area will begin 200 feet from New Marsh, thereby creating a 200-foot no-disturbance buffer zone around New Marsh. The contractor will identify the outer extent (i.e., width) of the work area. A qualified biologist will determine the length of the work area based on habitat characteristics and topography. The areas outside of the designated work area will be identified on construction drawings as an “Environmentally Sensitive Areas.” ▪ Barrier fencing will be installed along the perimeter of both sides of the work area. Drift fencing will be installed along the base of the barrier fencing to ensure that no salamanders enter the work area from New Marsh or from estivation sites. To minimize disruption of migratory movements, pit traps will be installed periodically along the drift fence to capture migrating salamanders. During the migratory period (generally during the rainy season while salamanders move between the upland estivation sites and the breeding pond), a qualified biologist will monitor the traps and move any captured salamanders to the opposite side of the work area. This process will protect New Marsh and immediately adjacent uplands, minimize the disruption of migratory movements, and ensure construction activities are not interrupted within the work area. The process will not require biological monitoring within the work area. 	
<p>Impact BIO22 – Removal of protected trees from Irvington Station site.</p>	<p>Mitigation Measure BIO9(a) – Conduct a tree survey to assess tree resources impacted by the Proposed Project. This mitigation measure is described above.</p> <p>Mitigation Measure BIO9(b) – Compensate for removal of protected trees. This mitigation measure is described above.</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
Impact BIO23 – Temporary noise disturbance of common and special-status nesting raptors at site of optional Irvington Station.	Mitigation Measure BIO16 – Conduct a preconstruction survey for nesting raptors and implement measures to avoid or minimize impacts if nesting special-status raptors are present. This mitigation measure is described above.	Less than significant with mitigation incorporated
Impact BIO-Cume2 – Potential for loss of ruderal forb-grassland habitat.	None available	Significant and unavoidable
Impact BIO-Cume4 – Potential to contribute to cumulative regional impacts on the Western Burrowing Owl.	None available	Significant and unavoidable
Impact BIO-Cume6 – Potential for loss of ruderal forb-grassland habitat.	None available	Significant and unavoidable
Land Use and Planning		
Impact LU3 – Creation of construction impacts, such as traffic and circulation obstructions; noise, dust, and other pollutants; and safety issues.	<p>Mitigation Measure LU3 – Limit construction-related impacts on land uses adjacent to the project alignment in Fremont Central Park. The following measures will be implemented to limit short-term construction impacts related to the loss of parking associated with the softball/baseball fields at Fremont Central Park and the temporary disruption of walking paths around Lake Elizabeth.</p> <ul style="list-style-type: none"> ▪ A dog-run facility will be provided. ▪ A temporary pedestrian bridge will be constructed over the cut-and-cover subway construction just north of Lake Elizabeth. ▪ Access across the BART construction zone between the parking lots for the softball fields will be provided whenever games are scheduled. ▪ A public pathway across the construction zone from the neighborhood to the east will be maintained during construction whenever feasible. ▪ Mitigation measures applicable to Fremont Central Park are noted in other sections of the SEIR (e.g., <i>Hydrology and Water Quality</i> and <i>Biological Resources</i>) to reduce impacts on the park. ▪ Temporary walking paths around Lake Elizabeth will be created and maintained throughout the construction period. The walking paths will be well signed, and any paths closed for public safety and security will be well marked. At least one public pathway across the construction zone near Lake Elizabeth will be maintained at all times to accommodate 	Less than significant with mitigation incorporated

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>people who walk or ride bicycles to the park from the residential areas immediately east of the railroad corridor.</p> <ul style="list-style-type: none"> ▪ BART and the construction contractor will work with ACFCWCD to develop and implement a program to maintain Lake Elizabeth’s flood control function or provide alternative temporary storage, if necessary, during the construction period. ▪ BART and the construction contractor will work with the City of Fremont to find the most suitable locations and durations for construction storage. 	
<p>Population and Housing Impact POP3 – Displacement of existing businesses or housing, especially affordable housing.</p>	<p>Mitigation Measure POP3 – Acquire property and relocate residences and businesses. BART’s Real Estate Services Department will implement an acquisition and relocation program that meets the requirements of applicable state and federal acquisition and relocation laws. Acquisition will involve compensation at fair market value for properties, and relocation assistance would include, but is not limited to, down payments or rental supplements, moving costs, business reestablishment reimbursement, and goodwill offers as appropriate. All benefits will be provided in accordance with the Federal Uniform Relocation and Real Properties Acquisition Policies Act, and applicable state law.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact POP7 – Substantial diminishment in access to and parking at businesses and residences.</p>	<p>Mitigation Measure POP7 – Maintain access, traffic control, and parking supply during construction. BART will develop and implement a traffic and access control plan in consultation with the City of Fremont, local business associations, and local neighborhood and homeowners’ associations. Before construction begins, BART and its contractors will verify that the traffic and access control plan avoids restriction of access and that flaggers are used to direct traffic in potentially congested zones such as the Washington Boulevard and Osgood Road area. Construction workers and contractors will be advised to carpool and park on-site when feasible to reduce temporary impacts to parking for adjacent residences and businesses. Movement of heavy equipment and supplies to and from construction sites will be scheduled during non-peak travel times. Similarly, temporary lane closures due to work on aerial or below-grade structures will be scheduled for non-peak travel times. Access to businesses and residences will be maintained throughout construction phases, and existing parking supply will not be reduced.</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact POP 10 – Displacement of existing businesses or housing as a result of the optional Irvington Station, especially affordable housing.</p>	<p>Mitigation Measure POP3 – Acquire property and relocate residences and businesses. This mitigation measure is described above.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact POP 12 – Disruption or division of the physical arrangement of an existing community in the vicinity of the Irvington Station site such that social interaction within the community is severely hampered.</p>	<p>Mitigation Measure POP7 – Maintain access, traffic control, and parking supply during construction. This mitigation measure is described above.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact POP14 – Substantial diminishment in access to and parking at businesses and residences near Irvington Station site.</p>	<p>Mitigation Measure POP7 – Maintain access, traffic control, and parking supply during construction. This mitigation measure is described above.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact POP-Cume2 – Potential to restrict access and egress to existing businesses, residences, and community facilities or to reduce parking supply.</p>	<p>Mitigation Measure POP-Cume2 – Coordinate access and traffic control during construction of cumulative projects. BART will work with the City of Fremont and entities constructing other projects if necessary to ensure that the Proposed Project’s traffic management plan is adjusted to accommodate any overlapping construction traffic from multiple projects. BART will require its contractors to prepare a Traffic Management Plan (TMP) that designates truck and equipment access routes to the construction site. Contractors will be required to limit construction vehicle and equipment traffic to designated access routes. The TMP will be coordinated with the contractor’s construction sequence so that general timeframes when construction vehicles will use designated roadways within the Proposed Project area (months from contractor’s start of construction activities) can be estimated.</p> <p>BART will approve the contractor’s TMP and submit a copy of the approved TMP to the City of Fremont. The city can use the TMP when reviewing building permit applications for development projects within the Proposed Project area should the combined projects create the potential for construction traffic generated congestion to block access to existing development.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact POP-Cume4 – Potential for construction of the Irvington Station to restrict access and egress to existing businesses, residences, and community facilities or to reduce parking supply.</p>	<p>Mitigation Measure POP-Cume2 – Coordinate access and traffic control during construction of cumulative projects. This mitigation measure is described above.</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Aesthetics Impact A1 – Reconfiguration of Tule Pond, resulting in change of a well-defined landscape feature.</p>	<p>Mitigation Measure A1 – Protect and replace vegetation near Tule Pond. BART will implement the following mitigation measures to reduce the impacts of the removal and reconfiguration of portions of Tule Pond.</p> <ul style="list-style-type: none"> ▪ Minimize vegetation loss and replace vegetation lost during construction. Install fencing and other measures to protect the portions of Tule Pond that will be preserved, as outlined in Section 3.4 (<i>Biological Resources</i>). ▪ Add plantings to screen views of the embankment south of Walnut Avenue. On completion of the project, BART’s contractors will stabilize exposed slopes and wetland banks to encourage the reestablishment of currently existing vegetation types. ▪ Ensure that all landscaping plans are consistent with the existing vegetation of the area. A qualified landscape architect retained by BART’s contractors will approve all landscaping plans for the area. 	<p>Less than significant with mitigation incorporated</p>
<p>Impact A3 – Potential adverse effects on visual quality and character of Fremont Central Park from proposed ventilation structures.</p>	<p>Mitigation Measure A3 – Implement measures to conceal the ventilation structures. In designing and placing ventilation structures in Fremont Central Park, BART will implement the following mitigation measures.</p> <ul style="list-style-type: none"> ▪ Coordinate with the City of Fremont in developing criteria for design of the structures to be placed in the park. BART will ensure that the final designs of the structures and the plantings will be consistent with visual resources of the immediate project vicinity, including park maintenance facilities and landscaping. ▪ Use surface treatments forms, textures, and colors that reflect Fremont’s architectural character and that help blend the ventilation structures and ancillary equipment into the surroundings. ▪ Establish plantings (e.g., trees and shrubs) along the edges of buildings and any fencing. The plantings will be consistent with the character of existing vegetation in the park. 	<p>Less than significant with mitigation incorporated</p>
<p>Impact A4 – Introduction of new elements associated with the proposed Warm Springs Station.</p>	<p>Mitigation Measure A4 – Ensure design of proposed Warm Springs Station is consistent with existing environment. In developing detailed architectural and landscape plans for the proposed Warm Springs Station, BART will take the following steps.</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<ul style="list-style-type: none"> ▪ Design the proposed Warm Springs Station so that it is compatible with the scale and massing of other buildings in the surrounding environment, including the commercial facilities to the north and the light industrial uses to the north and south. ▪ Provide landscaping within the parking areas to visually interrupt the expanses of paving, provide shade, provide protected circulation areas for pedestrians, and minimize glare from parked automobiles. ▪ Trees and plantings will be planted to function as wayfinding elements in conjunction with lighting. ▪ All plantings should be xeric/drought-tolerant and located to maximize the likelihood of sustainability (i.e., taking into account soil, drainage, sun/shadow, etc. considerations). ▪ Artificial lighting should accommodate pedestrians and bicyclists as well as vehicles and be installed in a manner that minimizes spillover light. 	
<p>Impact A5—Potential visual impacts due to soundwalls.</p>	<p>Preferred Mitigation Measure A5(i) -Screen views of soundwalls with landscaping. Where right-of-way widths allow, BART will provide xeric/drought-tolerant landscaping (e.g., trees, vines and/or shrubs) to screen views of soundwalls where significant visual impacts occur. Landscaping would generally reduce visual impacts associated with proposed soundwalls to a less-than-significant level. However, in certain cases the resulting visual impacts may still be significant.</p> <p>Alternative Mitigation Measure A5(ii) -Provide surface treatments. If the right- of-way width is insufficient to permit landscaping, an alternative mitigation will be implemented whereby the outside of the walls (residential side) will be designed with a surface treatment that is compatible with the surrounding residential architecture. In some cases, for example, where surface treatment is used rather than landscaping or where soundwalls are placed on top of berms, resulting visual impacts may still be significant.</p>	<p>Significant and unavoidable with mitigation incorporated</p>
<p>Impact A6 – Temporary visual disturbances caused by construction.</p>	<p>Mitigation Measure A6 – Take measures to conceal temporary construction activities. BART will implement the following mitigation measures to reduce temporary visual impacts during construction.</p> <ul style="list-style-type: none"> ▪ Fencing will be installed to shield views of construction activities from Stevenson Boulevard, Fremont Central Park, Osgood Road, and Grimmer 	<p>Significant and unavoidable with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact A7 – Introduction of new elements or demolition of existing structures in area of optional Irvington Station.</p>	<p>Boulevard. Fencing installed by BART contractors will be sufficiently tall to hide all excavation, grading, and trenching activities and materials.</p> <ul style="list-style-type: none"> ▪ Major construction activities will be followed immediately with paving and landscaping. Fencing materials will remain in place until finish work (e.g., plantings, site cleanup) has been completed. 	
	<p>Mitigation Measure A7(a) – Ensure design of an optional Irvington Station is consistent with existing environment. In developing detailed architectural and landscape plans for the optional Irvington Station, BART will take the following steps.</p> <ul style="list-style-type: none"> ▪ Design the optional Irvington Station so that it is compatible with the scale and massing of other buildings in the surrounding environment. Provide landscaping within the parking areas to visually interrupt the expanses of paving, provide shade, provide protected circulation areas for pedestrians, and minimize glare from parked automobiles. ▪ Trees and plantings will be planted to function as wayfinding elements in conjunction with lighting. ▪ All plantings should be xeric/drought-tolerant and located to maximize the likelihood of sustainability (i.e., taking into account soil, drainage, sun/shadow, etc. considerations). ▪ Artificial lighting should accommodate pedestrians and bicyclists as well as vehicles and be installed in a manner that minimizes spillover light. <p>Mitigation Measure A7(b) – Incorporate Gallegos Winery site into design of optional Irvington Station. In developing detailed architectural and landscape plans for the optional Irvington Station, BART will take the following mitigation measures.</p> <ul style="list-style-type: none"> ▪ BART will work with the City of Fremont to ensure that the final designs are consistent with the city’s goals for preserving the Gallegos Winery ruins. ▪ The design and layout of the parking lot area east of Osgood Road will be designed so as to avoid physical encroachment on the Gallegos Winery ruins. ▪ BART will work with the City of Fremont to develop design guidelines to ensure the final landscaping/plantings design of the parking lot and 	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Cultural Resources Impact CR1 – Potential for damage to William Y. Horner House. Impact CR2 – Potential for substantial adverse change in the significance of archaeological resources: site CA-Ala-343.</p>	<p>near the Gallegos Winery ruins are consistent with the visual resources of the immediate project vicinity.</p> <ul style="list-style-type: none"> ▪ Artificial lighting will be installed in a manner that minimizes spillover light, using such design features as capping, shielding, and ground-level bollards. 	<p>Less than significant with mitigation incorporated</p>
	<p>Mitigation Measure N2 – Implement vibration-reducing measures at vibration-sensitive land uses in the Proposed Project corridor. This mitigation measure is described below under <i>Noise and Vibration</i>.</p>	<p>Less than significant with mitigation incorporated</p>
	<p>Mitigation Measure CR2(a) – Conduct subsurface testing to assess and minimize potential impacts on prehistoric and historic archaeological resources at CA-Ala-343 and vicinity. To establish the presence or absence and the integrity of CA-Ala-343 deposits in the project area, BART will ensure that a focused subsurface testing program is designed and implemented in areas south of Tule Pond and north of Stevenson Boulevard that have not previously been subject to subsurface archaeological investigations. BART will retain qualified archaeologists to conduct the investigation, which will follow standard professional practice for the evaluation of cultural resources. Before the investigation begins, a work plan will be prepared, including Native American protocols for the project, a research design, and methods of conducting the study.</p> <p>Following test excavations, a technical report will be prepared to document the results of the investigation. The technical report will be submitted to BART and also placed on file at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University. If significant archaeological deposits are discovered, the report will define the Proposed Project’s expected impacts and present specific recommendations for subsequent actions. Consideration will be given to preserving significant archaeological deposits in the project area by avoiding the deposits or otherwise protect them from impacts, if feasible. If preservation alternatives are not possible or feasible, the following additional mitigation measure will be required to reduce significant impacts to less than significant.</p> <p>Mitigation Measure CR2(b) – Conduct data recovery for CA-Ala-343 and vicinity. If historically significant archaeological deposits that cannot be avoided or otherwise protected are found within the Proposed Project area,</p>	

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact CR3 – Potential for disturbance of previously unknown cultural deposits or human remains during ground-disturbing activities.</p>	<p>BART will ensure that data recovery is implemented by qualified archaeologists in accordance with standard professional practices. If archaeological deposits that indicate the presence or probable likelihood of Native American human remains are discovered, the data recovery plan will be prepared and implemented in consultation with appropriate representatives of the Native American community. The objective of archaeological data recovery will be to adequately recover the scientifically consequential information from and about the historical resource. The results of the study will be deposited with the California Historical Resources Regional Information Center.</p> <hr/> <p>Mitigation Measure CR3 – Stop work if buried cultural deposits are encountered during construction activities. If buried cultural resources such as chipped or ground stone, quantities of bone or shell material, or historic debris or building foundations are inadvertently discovered during ground-disturbing activities, the construction contractor will ensure that work is stopped within a 100-foot radius of the find until a qualified archaeologist can assess the significance of the find. If, after evaluation by a qualified archaeologist, an archaeological site or other find is identified as meeting the criteria for inclusion in the NRHP or the CRHR, BART will ensure that a qualified archaeologist is retained to develop and implement an adequate program for investigation, avoidance if feasible, and data recovery for the site, with Native American consultation, if appropriate. If human skeletal remains are inadvertently encountered during construction of the Proposed Project, the contractor will contact the Alameda County Coroner immediately. If the County Coroner determines that the remains are Native American, s/he will contact the NAHC, as required by Section 7050.5[c] of the California Health and Safety Code, and the County Coordinator of Indian Affairs. A qualified archaeologist will also be contacted immediately.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact CR6 – Potential substantial adverse change in the significance of archaeological resources as a result of Irvington Station option: Gallegos Winery.</p>	<p>Mitigation Measure CR6(a) – Conduct subsurface archaeological testing to evaluate and minimize impacts on the Gallegos Winery if optional Irvington Station is constructed. To establish the presence or absence and the integrity of archaeological deposits associated with the Gallegos Winery, BART will ensure that a focused subsurface testing program is designed and implemented for the Irvington Station study area (including the parking facility and a 15-foot surrounding buffer zone). BART will retain qualified archaeologists to conduct the investigation, which will follow standard professional practice for the evaluation of historical archaeological resources. Before the investigation begins, a work plan will be prepared, including a</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>research design and methods for conducting the study, including a delineation of the anticipated extent of subsurface remains in the proposed project area.</p> <p>Following test excavations, a technical report will be prepared to document the results of the investigation. The technical report will be submitted to BART and also placed on file at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University. If significant archaeological deposits are discovered, the report will define the Proposed Project’s expected impacts and present specific recommendations for subsequent actions. Consideration will be given to preserving significant archaeological deposits in the project area by avoiding the deposits or otherwise protect them from impacts, if feasible. If preservation alternatives are not possible or feasible, the following additional mitigation measure will be required to reduce significant impacts to a less-than-significant level.</p> <p>Mitigation Measure CR6(b) – Conduct data recovery in the Gallegos Winery study area. If historically significant archaeological deposits that cannot be avoided or otherwise protected are found within the optional Irvington Station and parking facility area, BART will ensure that data recovery is implemented by qualified archaeologists in accordance with standard professional practices. The objective of archaeological data recovery will be to adequately recover the scientifically consequential information from and about the historical resource. The results of the study will be deposited with the California Historical Resources Regional Information Center.</p>	
<p>Impact CR-Cume1 – Potential for damage to archaeological resources.</p>	<p>Mitigation Measure CR2(a) – Conduct subsurface testing to assess and minimize potential impacts on prehistoric and historic archaeological resources at CA-Ala-343 and vicinity. This mitigation measure is described above.</p> <p>Mitigation Measure CR2(b) – Conduct data recovery for CA-Ala-343 and vicinity. This mitigation measure is described above.</p> <p>Mitigation Measure CR3 – Stop work if buried cultural deposits are encountered during construction activities. This mitigation measure is described above.</p> <p>Mitigation Measure CR6(a) – Conduct subsurface archaeological testing to evaluate and minimize impacts on the Gallegos Winery if optional</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>Irvington Station is constructed. This mitigation measure is described above.</p>	
	<p>Mitigation Measure CR6(b) – Conduct data recovery in the Gallegos Winery study area. This mitigation measure is described above.</p>	
Transportation	None available	Significant and unavoidable
<p>Impact TRN4 – 2010 change in V/C and LOS at the intersection of Osgood Road/Durham Road/Auto Mall Parkway.</p>	None available	Significant and unavoidable
<p>Impact TRN5 – 2010 change in V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway.</p>	<p>Mitigation Measure TRN5 – Improve 2010 V/C and LOS at I-680 southbound ramps/Durham Road/Auto Mall Parkway intersection. The intersection operations could be improved to a V/C ratio of 0.75 and LOS C in the a.m. peak hour, and a V/C ratio of 0.89 and LOS D in the p.m. peak hour with the conversion of an eastbound through lane to a shared right-turn/through lane (to create another right-turn lane). This measure could be accommodated within the existing right-of-way, although the southernmost eastbound through lane would need to be restriped to accommodate the measure. Although not achieving the goal of a V/C ratio of 0.85, the measure would result in LOS D operations, which reduce the impact to a less-than-significant level.</p>	Less than significant with mitigation incorporated
<p>Impact TRN6 – 2010 change in V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard.</p>	<p>Mitigation Measure TRN6 – Improve V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard. The intersection operations could be improved to a V/C ratio of 0.84 and LOS D in the a.m. peak hour, and a V/C ratio of 0.79 and LOS C in the p.m. peak hour with the addition of a second northbound left-turn lane, a second eastbound left-turn lane, and an exclusive eastbound right-turn lane, and conversion of the northbound right-turn lane to a shared right-turn/through lane. The mitigation for the northbound approach could be accommodated within the existing right-of-way. With the conversion of the northbound right-turn lane to a shared right-turn/through lane, a second left-turn lane could be accommodated. The northbound approach would need to be restriped. To accommodate the mitigation for the eastbound approach, right-of-way would need to be acquired on the south side of Grimmer Boulevard. The west leg of the intersection would need to be restriped to accommodate the second eastbound left-turn lane and the exclusive eastbound right-turn lane.</p>	Less than significant with mitigation incorporated
<p>Impact TRN7 – 2010 change in V/C and LOS at the intersection of Mission Boulevard/Warm Springs Boulevard.</p>	None available	Significant and unavoidable

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
Impact TRN8 – 2025 change in V/C and LOS at the intersection of Osgood Road/Durham Road/Auto Mall Parkway.	None available	Significant and unavoidable
Impact TRN9 – 2025 change in V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway.	Mitigation Measure TRN5 – Improve V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway. The intersection operations for 2025 could be improved to a V/C ratio of 0.84 and LOS D in the a.m. peak hour, and a V/C ratio of 0.90 and LOS D in the p.m. peak hour with implementation of Mitigation Measure TRN5 as described above.	Less than significant with mitigation incorporated
Impact TRN10 – 2025 change in V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard.	Mitigation Measure TRN6 – Improve V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard. The intersection operations could be improved to a V/C ratio of 0.83 and LOS D in the a.m. peak hour, and a V/C ratio of 0.86 and LOS D in the p.m. peak hour with implementation of Mitigation Measure TRN6 as described above.	Less than significant with mitigation incorporated
Impact TRN11 – 2010 change in V/C and LOS at the intersection of Osgood Road/Durham Road/Auto Mall Parkway.	None available	Significant and unavoidable
Impact TRN12 – 2010 change in V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway.	Mitigation Measure TRN5 – Improve V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway. The intersection operations could be improved to a V/C ratio of 0.75 and LOS C in the a.m. peak hour, and a V/C ratio of 0.89 and LOS D in the p.m. peak hour with implementation of Mitigation Measure TRN5 as described above.	Less than significant with mitigation incorporated
Impact TRN13 – 2010 change in V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard.	Mitigation Measure TRN6 – Improve V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard. . The intersection operations could be improved to a V/C ratio of 0.84 and LOS D in the a.m. and p.m. peak hours with implementation of Mitigation Measure TRN6 as described above.	Less than significant with mitigation incorporated
Impact TRN14 – 2010 change in V/C and LOS at the intersection of Mission Boulevard/Warm Springs Boulevard.	None available	Significant and unavoidable
Impact TRN15 – 2010 change in V/C and LOS at the intersection of Osgood Road/Driscoll Road/Washington Boulevard.	Mitigation Measure TRN15 – Improve V/C and LOS at the intersection of Osgood Road/Driscoll Road/Washington Boulevard. The intersection operations could be improved to a V/C ratio of 0.83 and LOS D in the a.m. peak hour with the conversion of the second southbound left lane to a third through lane, conversion of the southbound right-turn lane to a shared through/right-turn lane (to create four southbound through lanes), and conversion of a westbound left-turn lane to a shared left-turn/through lane (creating two westbound left turn lanes). The proposed changes to the southbound and westbound approaches could be accommodated within the	Less than significant with mitigation incorporated

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
Impact TRN17 – 2025 change in V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway.	existing right-of-way, although the approaches would need to be restriped. This measure would require widening the west side of Warm Springs Boulevard along the BART frontage to accommodate four southbound receiving lanes. Mitigation Measure TRN5 – Improve V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway. The intersection operations could be improved to a V/C ratio of 0.90 and LOS D in the p.m. peak hour with implementation of Mitigation Measure TRN5 as described above.	Less than significant with mitigation incorporated
Impact TRN18 – 2025 change in V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard.	Mitigation Measure TRN6 – Improve V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard. The intersection operations could be improved to a V/C ratio of 0.86 and LOS D in the a.m. peak hour and a V/C ratio of 0.84 and LOS D in the p.m. peak hour with implementation of Mitigation Measure TRN6 as described above.	Less than significant with mitigation incorporated
Impact TRN19 – 2025 change in V/C and LOS at the intersection of Mission Boulevard/Warm Springs Boulevard.	None available	Significant and unavoidable
Impact TRN20 – 2025 change in V/C and LOS on northbound I-880 just south of Mission Boulevard.	None available	Significant and unavoidable
Impact TRN21 – 2025 change in V/C and LOS on northbound I-880 just south of Mission Boulevard.	None available	Significant and unavoidable
Impact TRN23 – Reduced parking supply at Fremont Station resulting in spillover into residential or commercial areas.	Mitigation Measure TRN23 – Provide additional parking and implement parking monitoring program. (A) If neither the Irvington Station nor SVRTC has commenced construction by 2010, BART will provide an additional 170 parking spaces at the Warm Springs Station. (B) To determine whether substantial spillover parking occurs, BART will institute a monitoring program on streets adjacent to the Fremont and Warm Springs Stations. A baseline survey of parking conditions in the vicinity of the station will be conducted prior to commencement of the Proposed Project. The baseline survey will establish parking conditions in the vicinity of the station during weekday morning hours. Monitoring will be conducted during the first six months of operation of the Proposed Project to verify if spillover parking is occurring. Such monitoring will be based on field surveys and any complaints received by BART and local parking authorities. After the first six months of operation of the station, BART Community Relations staff will respond to parking	Less than significant with mitigation incorporated

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact TRN24 – Reduced parking supply at Fremont and Irvington Stations resulting in spillover into residential or commercial areas.</p>	<p>complaints and BART will investigate such complaints to verify parking concerns.</p> <p>If a parking spillover problem is confirmed by this monitoring, BART staff will assist the City of Fremont in implementing a parking management program. The program will incorporate appropriate parking control measures based on BART’s Parking Management Toolkit (See Appendix N). The Toolkit identifies a detailed process for understanding local parking issues, evaluating parking conflicts, and implementing specific parking control measures. These measures could include time limits and time-based restrictions, increased enforcement, or parking fees. The parking management program would be implemented by the City of Fremont. BART staff will assist the city to ensure that the parking control measures, adapted as appropriate for site-specific conditions, are implemented and are achieving the necessary effect. BART staff would also continue discussions as necessary with the city to help adjust any parking control measures in response to issues that may arise during implementation of such measures.</p> <p>Mitigation Measure TRN24 – Implement parking monitoring program. To determine whether substantial spillover parking occurs if the optional Irvington Station has commenced construction by 2010, BART will institute a monitoring program on streets adjacent to the Fremont and Irvington Stations and, if necessary, provide parking management assistance as described above in Mitigation Measure TRN23, part (B).</p>	<p>Less than significant</p>
<p>Impact TRN25 – Construction-period traffic impacts.</p>	<p>Mitigation Measure TRN25 – Develop and implement a construction phasing and traffic management plan.</p> <p>(A) BART will prepare and implement a construction phasing and traffic management plan that defines how traffic operations (including construction equipment and worker traffic) are managed and maintained during each phase of construction. The plan will be developed in consultation with the City of Fremont, Caltrans, AC Transit, and VTA, and will be coordinated with the plan to maintain access and parking for businesses and residences described in Mitigation Measure POP7. To the maximum practical extent, the plan will include the following measures.</p> <ul style="list-style-type: none"> ▪ Plan, schedule, and coordinate construction activities to reduce effects on AC Transit and VTA bus lines, so that additional buses or larger buses are not required on any route to maintain on-time performance. 	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<ul style="list-style-type: none"> ▪ Specify predetermined haul routes from staging areas to construction sites and disposal areas by agreement with the City of Fremont prior to construction. The routes will follow streets and highways that provide the safest route and have the least feasible impact on traffic. ▪ Identify construction activities that, due to concerns regarding traffic safety or congestion, must take place during off-peak traffic hours. Any road closures will be done at night under ordinary circumstances. If unforeseen circumstances require road closure during the day, the City of Fremont will be consulted. ▪ Provide a detour plan for lane closures and for the diversions of Walnut Avenue, Stevenson Boulevard, and South Grimmer Boulevard, and require information be provided to the public on lane closures and detours using signs, press releases, and other media tools. ▪ Identify a telephone number that the public can call for information on construction scheduling, phasing, and duration, as well as for complaints. Such information will also be posted on BART’s website. ▪ Provide safe access and circulation routes for vehicles, bicycles, and pedestrians during construction at the Fremont BART Station. ▪ Provide parking replacement where construction results in temporary displacement of parking in Fremont Central Park. ▪ Coordinate, to the extent feasible, with the city’s grade separations project to reduce traffic disruption. 	
	<p>(B) To reduce to the greatest extent possible the total duration of construction where the BART alignment crosses Paseo Padre Parkway and the corresponding potential for traffic disruption, elements of the BART bridge structure should be constructed at the same time as the city’s grade separations project.</p>	
	<p>Mitigation Measure POP7 – Maintain access, traffic control, and parking supply during construction. The impact would be less than significant with implementation of Mitigation Measure POP7 as described above.</p>	

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
Impact TRN26 – Construction-period traffic impacts in the vicinity of the optional Irvington Station.	Mitigation Measure TRN25 – Develop and implement a construction phasing and traffic management plan. This mitigation measure is described above.	Less than significant with mitigation incorporated
Impact TRN-Cume2 – Contribution to cumulative change in 2025 in V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway.	Mitigation Measure POP7 – Maintain access, traffic control, and parking supply during construction. This mitigation measure is described above. Mitigation Measure TRN5 – Improve V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway. The intersection operations could be improved to a V/C ratio of 0.90 and LOS D in the p.m. peak hour with implementation of Mitigation Measure TRN5 as described above.	Less than significant with mitigation incorporated
Impact TRN-Cume3 – Contribution to cumulative change in 2025 V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard.	Mitigation Measure TRN6 – Improve V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard. The intersection operations could be improved to a V/C ratio of 0.86 and LOS D in the a.m. peak hour, and a V/C ratio of 0.88 and LOS D in the p.m. peak hour with implementation of Mitigation Measure TRN6 as described above.	Less than significant with mitigation incorporated
Impact TRN-Cume4 – Contribution to cumulative change in 2025 V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway.	Mitigation Measure TRN5 – Improve V/C and LOS at the intersection of I-680 southbound ramps/Durham Road/Auto Mall Parkway. The intersection operations could be improved to a V/C ratio of 0.89 and LOS D in the p.m. peak hour with implementation of Mitigation Measure TRN5 as described above.	Less than significant with mitigation incorporated
Impact TRN-Cume5 – Contribution to cumulative change in 2025 V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard.	Mitigation Measure TRN6 – Improve V/C and LOS at the intersection of Osgood Road/Warm Springs Boulevard/South Grimmer Boulevard. The intersection operations could be improved to a V/C ratio of 0.88 and LOS D in the a.m. and p.m. peak hours with implementation of Mitigation Measure TRN6.	Less than significant with mitigation incorporated
Impact TRN-Cume6 – 2025 change in V/C and LOS at the intersection of Mission Boulevard/Warm Springs Boulevard.	None available	Significant and unavoidable
Impact TRN-Cume7 – Contribution to cumulative change in 2025 V/C and LOS at the intersection of Osgood Road/Driscoll Road/Washington Boulevard.	Mitigation Measure TRN-Cume7 – Improve V/C and LOS at the intersection of Osgood Road/Driscoll Road/Washington Boulevard. The intersection operations can be improved to a V/C ratio of 0.45 and LOS A for the a.m. peak hour with the conversion of the southbound right-turn lane to a shared through/right-turn lane (to create four southbound through lanes) and conversion of a westbound left-turn lane to a shared left-turn/through lane (to create two left-turn lanes). Although there would be a slight decrease in the V/C ratio in the p.m. peak hour, the intersection would still operate at LOS D. The proposed changes to the southbound and westbound approaches can be accommodated within the existing right-of-way, although the approaches	Less than significant with mitigation incorporated

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
<p>Impact TRN-Cume8 – Reduced parking supply at Fremont Station resulting in spillover into residential or commercial areas.</p>	<p>would need to be restriped. This measure would require widening on the west side of Warm Springs Boulevard along the BART frontage to accommodate four southbound receiving lanes.</p> <hr/> <p>Mitigation Measure TRN-Cume8 – Provide additional parking and implement parking monitoring program.</p> <p>(A) If SVRTC has commenced construction by 2010 but the Irvington Station has not, BART will provide an additional 120 parking spaces at the Warm Springs Station.</p> <p>(B) To determine whether substantial spillover parking occurs, BART will institute a monitoring program on streets adjacent to the Fremont Station and, if necessary, will provide parking management assistance, as above described in Mitigation Measure TRN23, part (B).</p>	<p>Less than significant with mitigation incorporated</p>
<p>Impact TRN-Cume9 – Cumulative contribution to reduced parking supply at Fremont and Irvington Stations resulting in spillover into residential or commercial areas.</p>	<hr/> <p>Mitigation Measure TRN-Cume9 – Implement parking monitor program.</p> <p>To determine whether substantial spillover parking occurs if the optional Irvington Station and SVRTC have both commenced construction by 2010, BART will implement a monitoring program on streets adjacent to the Fremont and Irvington Stations and, if necessary, provide parking management assistance as described above in Mitigation Measure TRN23, part (B).</p>	<p>Less than significant</p>
<p>Impact TRN-Cume10 – Cumulative contribution to construction-related impacts.</p>	<hr/> <p>Mitigation Measure TRN-Cume10 – Adjust the construction traffic management plan described above in Mitigation Measure TRN25. If construction of the Proposed Project and SVRTC overlap, the construction traffic management plan identified in Mitigation Measure TRN25 will be adjusted to account for the SVRTC construction schedule. BART will ensure that the plan as adjusted satisfies the goals identified in Mitigation Measure TRN25.</p>	<p>Less than significant with mitigation incorporated</p>
<p>Noise and Vibration</p> <p>Impact N1 – Exposure of noise-sensitive land uses to noise from BART trains in the Proposed Project corridor.</p>	<hr/> <p>Mitigation Measure N1 – Implement noise-reducing measures at noise-sensitive land uses in the Proposed Project corridor. BART will design and implement noise-reducing measures such that noise from train operations does not exceed the operational noise limits listed in Table 3.10-3. The measures may include but are not limited to the following.</p> <ul style="list-style-type: none"> ▪ Noise Barriers – Construction of barriers is a common approach to reducing noise impacts from surface transportation sources. The primary requirements for an effective noise barrier are that (1) the barrier must be high enough and long enough to break the line-of-sight between the sound source and the receiver; (2) the barrier must be of an impervious material with a minimum surface density of 4 lb/sq. ft.; and (3) the 	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>barrier must not have any gaps or holes between the panels or at the bottom. Because numerous materials meet these requirements, the selection of materials for noise barriers is usually dictated by aesthetics, durability, cost, and maintenance considerations. Depending on the proximity of the barrier to the tracks and on the track elevation, transit system noise barriers typically range in height from between 4 and 8 feet.</p> <ul style="list-style-type: none"> ▪ Building Sound Insulation – Sound insulation of residences and institutional buildings to improve the outdoor-to-indoor noise reduction has been widely applied around airports and has seen limited application for transit projects. Although this approach has no effect on noise in exterior areas, it may be the best choice for sites where noise barriers are not feasible or desirable, and for buildings where indoor sensitivity is of greatest concern. Substantial improvements in building sound insulation (on the order of 5 to 10 dBA) can often be achieved by adding an extra layer of glazing to the windows, by sealing any holes in exterior surfaces that act as sound leaks, and by providing forced ventilation and air-conditioning so that windows do not need to be opened. ▪ Special Trackwork at Crossovers – Because the impacts of wheels over rail gaps at track crossover locations increases noise by about 6 dBA, crossovers are a major source of noise impact when they are located in sensitive areas. If crossovers cannot be relocated away from residential areas, another approach is to use spring-rail or moveable point crossovers in place of standard crossovers. These special types of crossovers eliminate the gap in the track caused by crossovers in the main traffic direction, thereby eliminating the additional noise associated with crossovers. 	
<p>Impact N2 – Exposure of vibration-sensitive land uses to groundborne vibration from BART trains.</p>	<p>Mitigation Measure N2 – Implement vibration-reducing measures at vibration-sensitive land uses in the Proposed Project corridor. BART will design and implement vibration-reducing measures such that groundborne vibration from train operations does not exceed the operational vibration limits listed in Table 3.10-6. The measures may include but are not limited to the following.</p> <ul style="list-style-type: none"> ▪ Ballast Mats – Rail trackways consist of ballast and ties. Ballast is the aggregate rock material that lies between the crosspieces of wood or concrete that support the rails. A ballast mat consists of a pad made of rubber or rubber-like material placed on an asphalt or concrete base with the normal ballast, ties, and rail above. The reduction in ground-borne 	<p>Significant and unavoidable</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<p>vibration provided by a ballast mat depends strongly on the frequency content of the vibration and on the design and support of the mat. Ballast mats will only work in locations where there is ballast and tie track.</p> <ul style="list-style-type: none"> ▪ Resilient Fasteners and/or Resiliently Supported Ties – A number of resilient fastening systems for reducing vibration are available. However, many resilient fasteners are suitable for direct fixation only and would not work for ballast and tie track. Resilient fasteners reduce the amount of vibration energy that is transferred into the track substructure and are effective in reducing ground-borne vibration in frequencies above 30 Hz. ▪ Special Trackwork at Crossovers – Because the impacts of wheels over rail gaps at track crossover locations increases vibration by about 10 dBA, crossovers are a major source of vibration impact when they are located in sensitive areas. If crossovers cannot be relocated away from residential areas, another approach is to use spring-rail or moveable point crossovers instead of standard crossovers. These special types of crossovers eliminate the gap in the track caused by crossovers in the main traffic direction, thereby eliminating the additional vibration associated with crossovers. 	
<p>Impact N3 – Exposure of noise-sensitive land uses to noise from ancillary equipment.</p>	<p>Mitigation Measure N3 – Design and construct electrical substations, vent shafts, and other ancillary facilities to reduce noise. Electrical substations, vent shafts, and other ancillary facilities to reduce noise will be designed so that noise generated by these facilities does not exceed limits specified in Table 3.10-4. Measures to be employed may include but are not limited to the following.</p> <ul style="list-style-type: none"> ▪ Orient noise-generating components away from noise-sensitive land uses or locating buildings between noise-generating components and noise-sensitive land uses. ▪ Use acoustically rated vents to reduce noise. ▪ Construct local barriers or enclosures around noise-generating components. 	<p>Less than significant with mitigation incorporated</p>
<p>Impact N4 –Exposure of noise-sensitive land uses to construction noise.</p>	<p>Mitigation Measure N4(a) – Employ noise-reducing construction practices. The construction contractor will employ noise-reducing construction practices such that construction noise does not exceed the limits specified in Table 3.10-5 at occupied land uses. Measures to be employed may include but are not limited to the following.</p>	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<ul style="list-style-type: none"> ▪ Avoid nighttime construction in residential areas. ▪ Use equipment with enclosed engines and/or high performance mufflers. ▪ Locate stationary equipment as far as possible from noise-sensitive uses. ▪ Construct noise barriers, such as temporary walls or piles of excavated material between noise activities and noise sensitive uses. ▪ Re-route construction-related traffic along roads that will result in the least amount of disturbance to residences. ▪ Where pile driving is planned within 1,200 feet of residences, or within 650 feet of hotels or in-use outdoor recreation areas, use cast-in-drilled-hole (CIDH) piles, pre-drilled piles, soil-mix wall technology, shielded pile drivers, vibratory pile drivers. (Shielded pile drivers or vibratory pile drivers can be used only where geotechnical conditions allow.) <p>Mitigation Measure N4(b) – Disseminate essential information to residences and implement a complaint response/tracking program. BART will notify residences within 500 feet of a construction area of the construction schedule in writing, prior to construction. BART and the construction contractor will designate a noise-disturbance coordinator who will be responsible for responding to complaints regarding construction noise. The coordinator will determine the cause of the complaint and will ensure that reasonable measures are implemented to correct the problem. A contact telephone number for the noise disturbance coordinator will be conspicuously posted on construction site fences and will be included in the written notification of the construction schedule sent to nearby residents.</p>	
<p>Impact N5 – Exposure of vibration-sensitive land uses to construction vibration.</p>	<p>Mitigation Measure N5 – Employ vibration-reducing construction practices. The construction contractor will employ vibration-reducing construction practices such that construction vibration does not exceed 80 VdB (more than 1 hour per day), 90 VdB (less than 1 hour per day), or 100 VdB (less than 10 minutes per day), or the peak particle velocity damage threshold of 0.20 inches per second for fragile buildings or structures. The Horner House at 3101 Driscoll Road is the only historic structure in close proximity to the project area that is potentially in the fragile category. Measures to be employed may include but are not limited to the following.</p> <ul style="list-style-type: none"> ▪ Locate vibration-generating equipment as far as possible from vibration-sensitive land uses. 	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
Impact N-Cume1 – Operational contribution to significant cumulative noise impacts.	<ul style="list-style-type: none"> ▪ Avoid simultaneous operation of multiple pieces of vibration-generating equipment. ▪ Avoid nighttime construction in residential areas. ▪ Avoid construction processes that generate high vibration levels (for example vibration from pile driving can be reduced or eliminated by using pre-drilled holes or using pushed piles). ▪ Avoid the use of vibratory rollers near vibration-sensitive uses. 	Less than significant with mitigation incorporated
	Mitigation Measure N1 – Implement noise-reducing measures at noise-sensitive land uses in the Proposed Project corridor. This mitigation measure is described above.	
Air Quality Impact AIR6 – Temporary increase in construction-related emissions during grading and construction activities.	Mitigation Measure AIR6 – Implement dust and vehicle emissions control measures. BART will implement or require the contractor to implement the following basic measures to control dust emissions during construction. <ul style="list-style-type: none"> ▪ Water all active construction areas at least twice daily, or more as required to control dust. ▪ Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least 2 feet of freeboard. ▪ Pave, apply water daily to, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. ▪ Sweep (with water sweepers) all paved access roads, parking areas, and staging areas at construction sites, as needed. ▪ Sweep streets (with water sweepers) if soil is visible on adjacent public streets, as needed. ▪ Hydroseed or apply (nontoxic) soil stabilizers to inactive construction areas (previously graded areas that will be inactive for 10 days or more). ▪ Enclose, cover, water twice daily, or apply (nontoxic) soil binders to exposed stockpiles (dirt and sand). 	Less than significant with mitigation incorporated

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
	<ul style="list-style-type: none"> ▪ Limit traffic speeds on unpaved roads to 15 miles per hour (mph). ▪ Install sandbags or other erosion control measures to prevent silt runoff to public roadways, as needed. ▪ Reduce idling of internal combustion engines to an absolute minimum to the greatest extent feasible. ▪ Maintain construction equipment properly and tune engines to minimize exhaust emissions. 	
<p>Impact AIR12 – Temporary increase in construction-related emissions during grading and construction activities related to the optional Irvington Station.</p>	<p>Mitigation Measure AIR6 – Implement dust and vehicle emissions control measures. This mitigation measure is described above.</p>	
<p>Energy</p>		
<p>Impact E3 – Effects of Proposed Project on peak- and base-period electricity demand.</p>	<p>None available</p>	<p>Significant and unavoidable</p>
<p>Impact E4 – Effects of Proposed Project construction on the consumption of nonrenewable energy resources.</p>	<p>Mitigation Measure E4 – Develop and implement construction energy conservation plan. BART will require the contractors to adopt construction energy conservation measures including, but not limited to, those listed below.</p> <p>Use energy-efficient equipment and incorporate energy-saving techniques in the construction of the Proposed Project.</p> <ul style="list-style-type: none"> ▪ Avoid unnecessary idling of construction equipment. ▪ Consolidate material delivery as much as possible to ensure efficient vehicle utilization. ▪ Schedule delivery of materials during non-rush hours to maximize vehicle fuel efficiency. ▪ Encourage construction workers to carpool. ▪ Maintain equipment and machinery, especially those using gasoline and diesel, in good working condition. 	<p>Less than significant with mitigation incorporated</p>

Table ES-2. Continued

Impact	Mitigation Measure	Significance Determination with Mitigation Incorporation
Impact E7 – Effects of the Proposed Project with Irvington Station on peak- and base-period electricity demand.	None available	Significant and unavoidable
Impact E8 – Effects of Proposed Project construction on the consumption of nonrenewable energy resources.	Mitigation Measure E4 – Develop and implement construction energy conservation plan. This mitigation measure is described above.	Less than significant with mitigation incorporated
Impact E-Cume2 – Contributions of the Proposed Project (without and with the optional Irvington Station) to peak- and base-period electricity demand.	None available	Significant and unavoidable
Impact E-Cume3 – Effects of Proposed Project construction on the consumption of nonrenewable energy resources.	Mitigation Measure E4 – Develop and implement construction energy conservation plan. This mitigation measure is described above.	Less than significant with mitigation incorporated