

## **1.1 Introduction**

The Federal Transit Administration (FTA) and the Santa Clara Valley Transportation Authority (VTA) have prepared this combined Supplemental Environmental Impact Statement (SEIS) and Subsequent Environmental Impact Report (SEIR) for the BART Silicon Valley Phase II Extension (Phase II) Project in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). There are two alternatives evaluated in this document in accordance with NEPA: the No Build Alternative and the BART Extension Alternative. The BART Extension Alternative consists of a 6-mile Bay Area Rapid Transit (BART) extension from the Berryessa/~~North San Jose~~ BART Station through downtown San Jose to the Santa Clara Caltrain Station. There are three alternatives evaluated in this document in accordance with CEQA: the No Build Alternative, the BART Extension Alternative, and the BART Extension with TOJD Alternative. The CEQA No Build Alternative is the same as the NEPA No Build Alternative. The CEQA BART Extension Alternative is also the same as the NEPA BART Extension Alternative described above. The additional CEQA BART Extension with TOJD Alternative consists of the 6-mile BART Extension as described above in addition to transit-oriented joint development (TOJD) at the four BART stations and two ventilation structure sites. The BART Extension with TOJD Alternative is not connected and has independent utility from the BART Extension Alternative. The alternatives listed above are described in detail in Chapter 2, *Alternatives*.

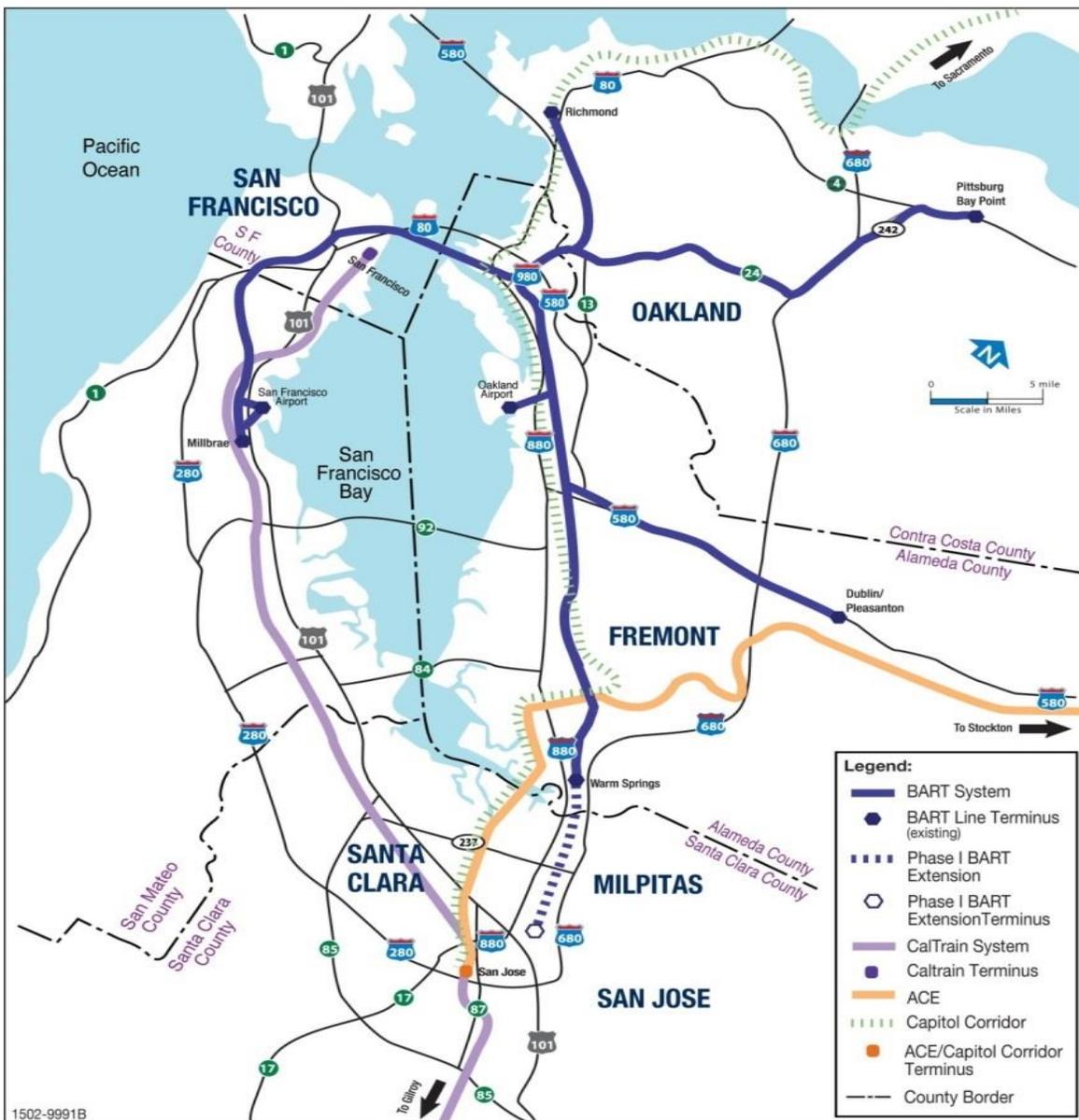
Changes and corrections to the text of the Draft SEIS/SEIR in response to public comments and/or design changes are indicated by underline text for additions and strikeout for deletions. See Table 2-B in Volume I, Chapter 2, *Alternatives*, for a summary of changes to tunnel methodologies since the release of the Draft SEIS/SEIR. Comments received on the Draft SEIS/SEIR are provided in Volume II, Chapter 3, *Response to Comments*, of this Final SEIS/SEIR. Any changes since the Draft SEIS/SEIR have been analyzed in this Final SEIS/SEIR.

### **1.1.1 Regional Transportation Network**

The regional transportation network is shown in Figure 1-1. VTA is the primary transit operator in Santa Clara County, but various other rail and bus operators provide transit services to major activity and employment centers in the county and from the county to centers throughout the greater San Francisco Bay Area. Caltrain provides frequent service between downtown San Jose and downtown San Francisco; Altamont Corridor Express (ACE) commuter trains connect downtown San Jose and Santa Clara with Fremont and the

Livermore-Amador Valley in Alameda County and also with Central Valley communities; Capitol Corridor intercity service connects downtown San Jose with communities in the East Bay of the San Francisco Bay Area and ultimately Sacramento and Auburn; and Amtrak intercity service serves downtown San Jose.

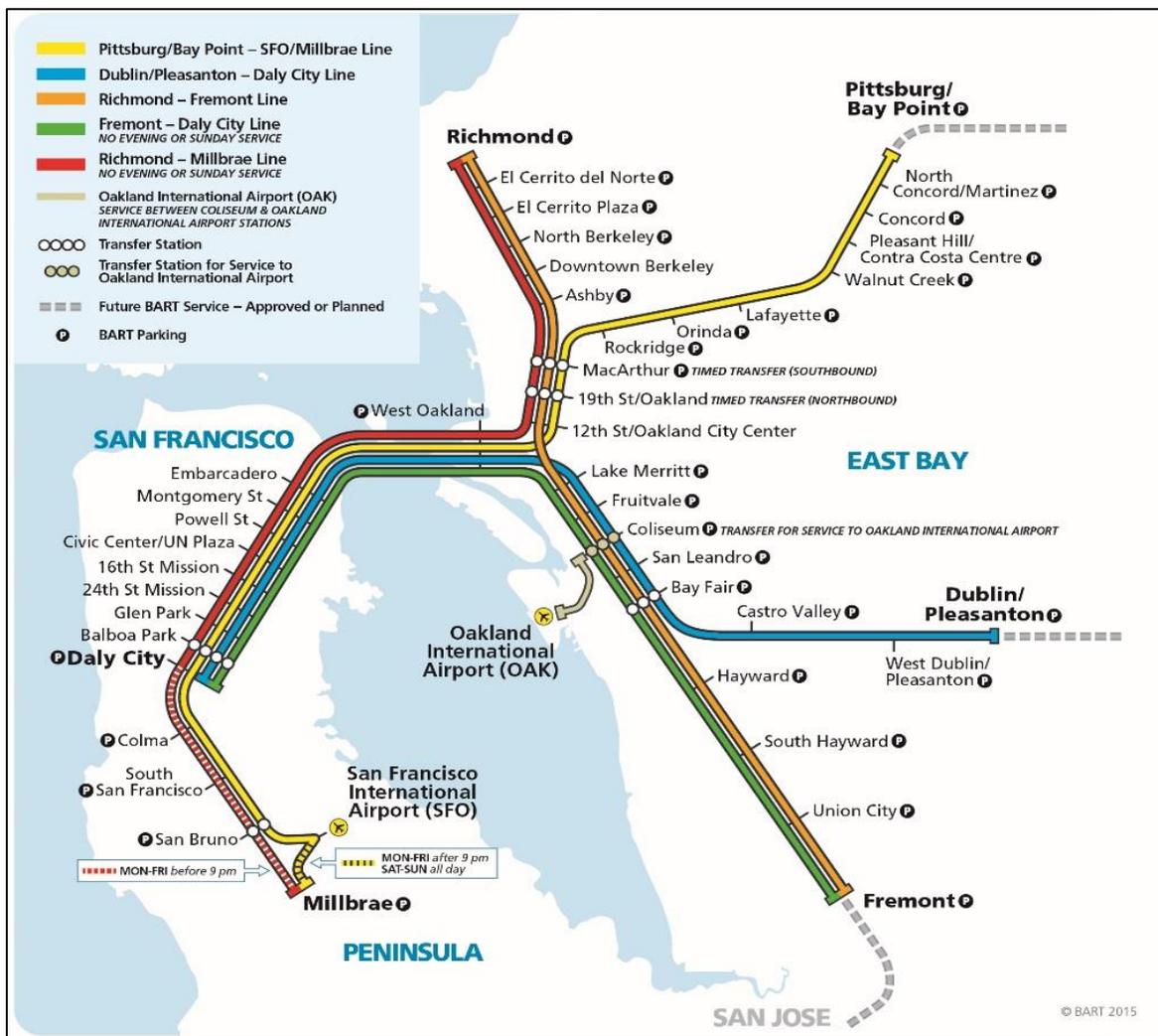
**Figure 1-1: Regional Transportation Network**



The BART network serves the San Francisco Bay Area counties of Alameda, Contra Costa, San Francisco, and San Mateo. It currently consists of a 104-mile, 44-station regional rail system that extends south to central Fremont in Alameda County (see Figure 1-2). A 5.4-mile, single-station extension of the BART system is currently under construction to

provide service to Warm Springs in southern Fremont, just north of the Santa Clara County limit. BART service to Warm Springs is projected to begin in 2016 began service in March 2017. An initial extension of BART service into Santa Clara County, referred to as VTA’s BART Silicon Valley—Berryessa Extension Project, or Phase I Project, is also currently under construction and projected to open in ~~late 2017~~ 2018. The Phase I Project consists of an approximately 10-mile extension of the BART system from Warm Springs into eastern Santa Clara County. The Phase I Project will connect to the track south of the Warm Springs Station in Fremont and proceed in the former Union Pacific Railroad (UPRR) corridor through Milpitas to the Berryessa neighborhood of San Jose near U.S. Highway 101. It includes two stations: one in Milpitas near Montague Expressway (Milpitas Station) and one in the Berryessa neighborhood of San Jose (Berryessa/North San Jose Station).

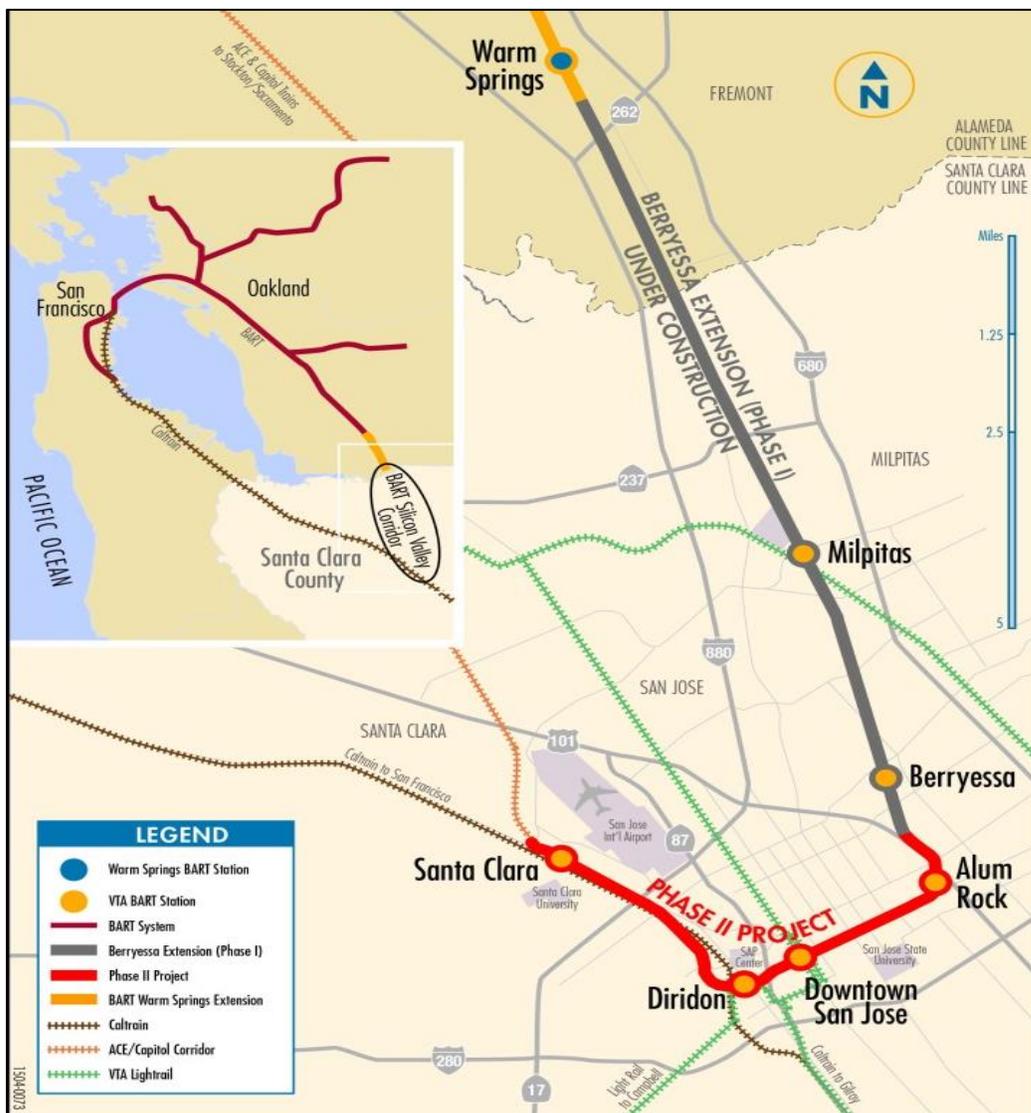
Figure 1-2: BART System Map



## 1.1.2 Overview of the BART Extension

The NEPA and CEQA BART Extension Alternative and the CEQA BART Extension with TOJD Alternative include a 6-mile extension of the BART system in Santa Clara County as shown in Figure 1-3. The BART Extension would extend the BART system from the Phase I terminus in the Berryessa neighborhood of San Jose for approximately 6 miles through central San Jose and terminate in the City of Santa Clara. The alignment would include an approximately 5-mile tunnel, or subway, through downtown San Jose. Four stations are under consideration: Alum Rock/28<sup>th</sup> Street, Downtown San Jose, Diridon, and Santa Clara. Two options for the location of the Downtown San Jose Station and for the Diridon Station are currently under consideration. Depending upon funding availability, initial revenue service on the BART Extension Alternative is targeted to begin in late 2025/2026.

**Figure 1-3: BART Extension**



## 1.2 Purpose and Need for Transportation Improvements

The overall project goal of this major transit improvement project is to improve transit services and increase intermodal connectivity, thereby improving mobility and accessibility. Meeting this overall project purpose would address a variety of related transportation needs in the corridor and benefit communities of the greater Bay Area.

### 1.2.1 Purpose

The purpose of the BART Extension Alternative is as follows:

- Improve public transit service in this corridor by providing increased transit capacity and faster, convenient access to and from major Santa Clara County employment and activity centers for corridor residents and populations throughout the Bay Area and from communities that can access the BART regional rail network. Santa Clara County residents will be provided improved access to employment and activity centers in Alameda, Contra Costa, and San Francisco counties, including the Bay Area's major employment concentration in downtown San Francisco.
- Enhance regional connectivity by expanding and interconnecting BART rapid transit service with VTA light rail, Amtrak, ACE, Caltrain, and VTA bus services in Santa Clara County; improve intermodal transit hubs where rail, bus, auto, bicycle, and pedestrian links meet.
- Support transportation solutions that will maintain the economic vitality and continuing development of Silicon Valley by expanding multimodal options and reducing reliance on single auto commute trips. Increasing the use of transit is critical to moving workers through highly congested travel corridors that serve major employment centers.
- Improve mobility options to employment, education, medical, and retail centers for corridor residents, in particular low-income, youth, elderly, disabled, and ethnic minority populations.
- Support local and regional land use plans and facilitate efforts of the Cities of San Jose and Santa Clara to direct business and residential investments in the Alum Rock neighborhood of east-central San Jose, downtown San Jose, Diridon Station, in the vicinity of the existing Santa Clara Caltrain Station, and elsewhere in the BART Extension alignment.

Improved transit in the corridor is consistent with the goals established in prior studies (see Section 1.4, *BART Extension Project History*) and supports the long-range *Valley Transportation Plan 2040* (VTP 2040). The primary goal of VTP 2040 is to provide transportation facilities and services that support and enhance Santa Clara County's high quality of life and vibrant economy. Another goal is to improve regional air quality by

reducing auto emissions and to help alleviate human-made contributions to climate change by reducing greenhouse gas emissions.

Corridor transportation improvements would support goals identified in MTC's *Plan Bay Area*, which include improving access and thereby preserving economic vitality by concentrating future development around transit nodes and along transit corridors. Several areas along the BART Extension alignment, including all of the station areas, are designated priority development areas in *Plan Bay Area* and are targeted for higher-density development in corridor cities' general plans. Priority development areas are defined as locally designated areas within existing communities that provide infill development opportunities, and are easily accessible to transit, jobs, shopping and services.

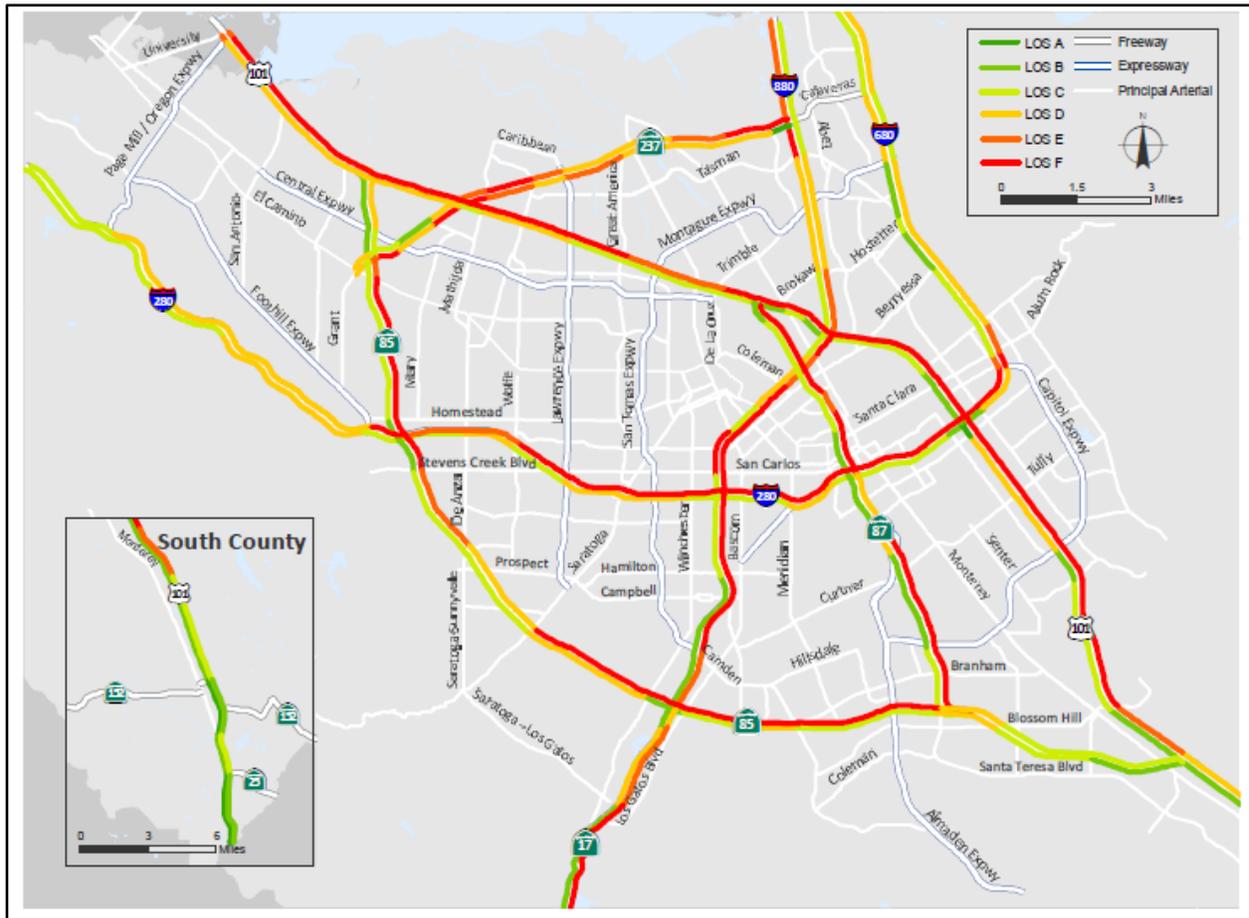
## 1.2.2 Need

Sustaining Silicon Valley's economic vitality is key to maintaining the leadership of the United States in many key global industries. Besides being the nation's center of computer-related technology services, the region includes major concentrations of biotechnology, bioengineering, and renewable energy firms. It is the venture capital center of the world for private investing in these and other promising industries. The Valley, however, faces several challenges that could constrain its continued expansion. One is the efficient movement of goods and people to, from, and within the Valley as a result of historical low density land use developments with the automobile as the primary mode of travel.

Various existing deficiencies in the regional transportation network are contributing to the worsening mobility. These include severely congested roadways that slow travel speeds to barely tolerable levels and gaps in public transit systems that discourage individuals from shifting out of their autos to higher-capacity trains and buses. As shown in Figure 1-4, already in 2012 at the start of the recent economic boom, many freeways and expressways were experiencing very poor operations during commute periods. Levels of service (LOS), where LOS F represents conditions of high delay and stop and go travel, have progressively deteriorated in the past 4 years. Roadway congestion has degraded traffic operations on urban arterials as well as the major thruways, leading to not just slower auto travel speeds but deteriorating bus transit speeds as well. This further discourages mode shifting to transit because buses fail to achieve travel time benefits relative to automobiles. Figure 1-5 tracks the steady decline in VTA average bus speed over the last 20 years.

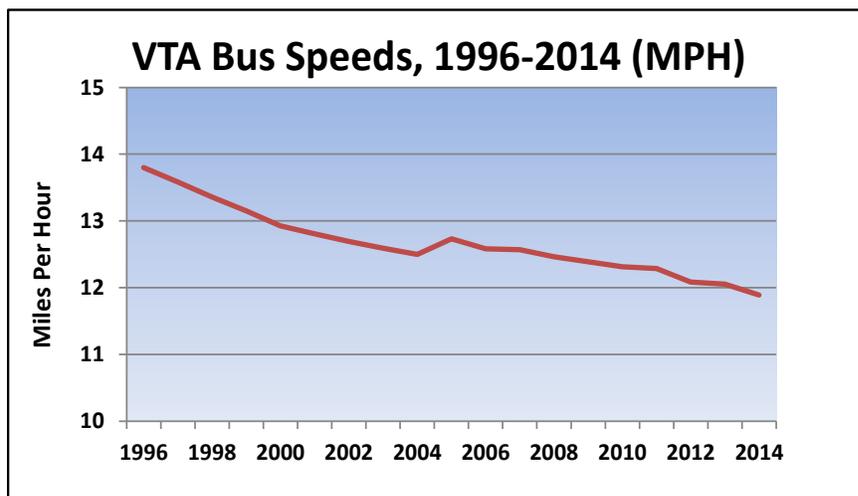
The growing transportation needs of businesses and residents have prompted VTA to pursue various transportation improvements, with a strong focus on transit infrastructure given the reality that no new expressway or freeway corridors are included in the regional transportation plan due to environmental and public policy concerns. The current construction of the Phase I Project to East San Jose is a major accomplishment but is only a first step in implementing a broader vision to link high-capacity transit modes within Santa

**Figure 1-4: Freeway Congestion, A.M. Peak Period (3 Hours), 2012**



Source: 2013 Congestion Management Plan, Santa Clara VTA, October 2013

**Figure 1-5: Deteriorating Bus Transit Travel Times**



Source: VTA annual reports and National Transit Database

Clara County and expand mobility options for Santa Clara County and Bay Area residents. By continuing BART to downtown San Jose and Santa Clara, the BART Extension Alternative would close the gap in the region’s rail systems remaining after the Phase I Project is completed in 2018late 2017.

### 1.2.2.1 Continuing Rapid Growth in Travel Demand

Growth in travel demand is occurring due to the rapid increases in population and employment in Santa Clara County and the Bay Area in general. The major economic downturn of 2008 and 2009 dampened economic and housing development in the county. However, the resurgence of high-tech and other industries from 2010 onward has generated increased travel and the return of severe congestion on major roadways.

In the second half of 2013, jobs in Santa Clara County again reached pre-recession levels and have been growing ever since. Population trends are similar, with most growth now from in-migration. Employment and population growth is projected to continue into the foreseeable future and will generate additional travel demand and further worsen congestion.

Table 1-1 summarizes existing and projected population levels for Santa Clara County and the corridor cities of San Jose and Santa Clara through which the BART Extension Alternative alignment would pass. Population growth is projected to increase by 29 to 32 percent in Santa Clara County and the cities of San Jose and Santa Clara. However, a more dramatic increase in population of 100 percent is projected for the San Jose Business District. This absolute and relative growth is expected to be greater than either San Francisco (28,400 increase or 33 percent) or Oakland (14,400 increase or 70 percent) business districts.

**Table 1-1: Population Growth, 2015 to 2035**

Jurisdiction	2015	2035	Population Increase	% Change
Santa Clara County	1,889,488	2,444,745	555,257	29%
<i>City of San Jose</i>	<i>998,270</i>	<i>1,317,634</i>	<i>319,364</i>	<i>32%</i>
<i>San Jose Business District</i>	<i>29,938</i>	<i>59,902</i>	<i>29,964</i>	<i>100%</i>
<i>City of Santa Clara</i>	<i>121,644</i>	<i>158,212</i>	<i>36,568</i>	<i>30%</i>

Source: Association of Bay Area Governments, Projections 2013.

Substantial job growth is also projected as shown in Table 1-2 with almost 200,000 new jobs in Santa Clara County. The San Jose Business District has the most concentrated as well as the highest number of employment opportunities of the communities along the alignment of the BART Extension Alternative: 44,579 jobs currently and projected to reach 70,310 jobs by 2035. The San Jose Business District has a projected 58 percent increase in jobs from 2015 to 2035. And, over 50 percent of these jobs would be within ½ mile of the BART Extension stations.

**Table 1-2: Jobs Growth, 2015 to 2035**

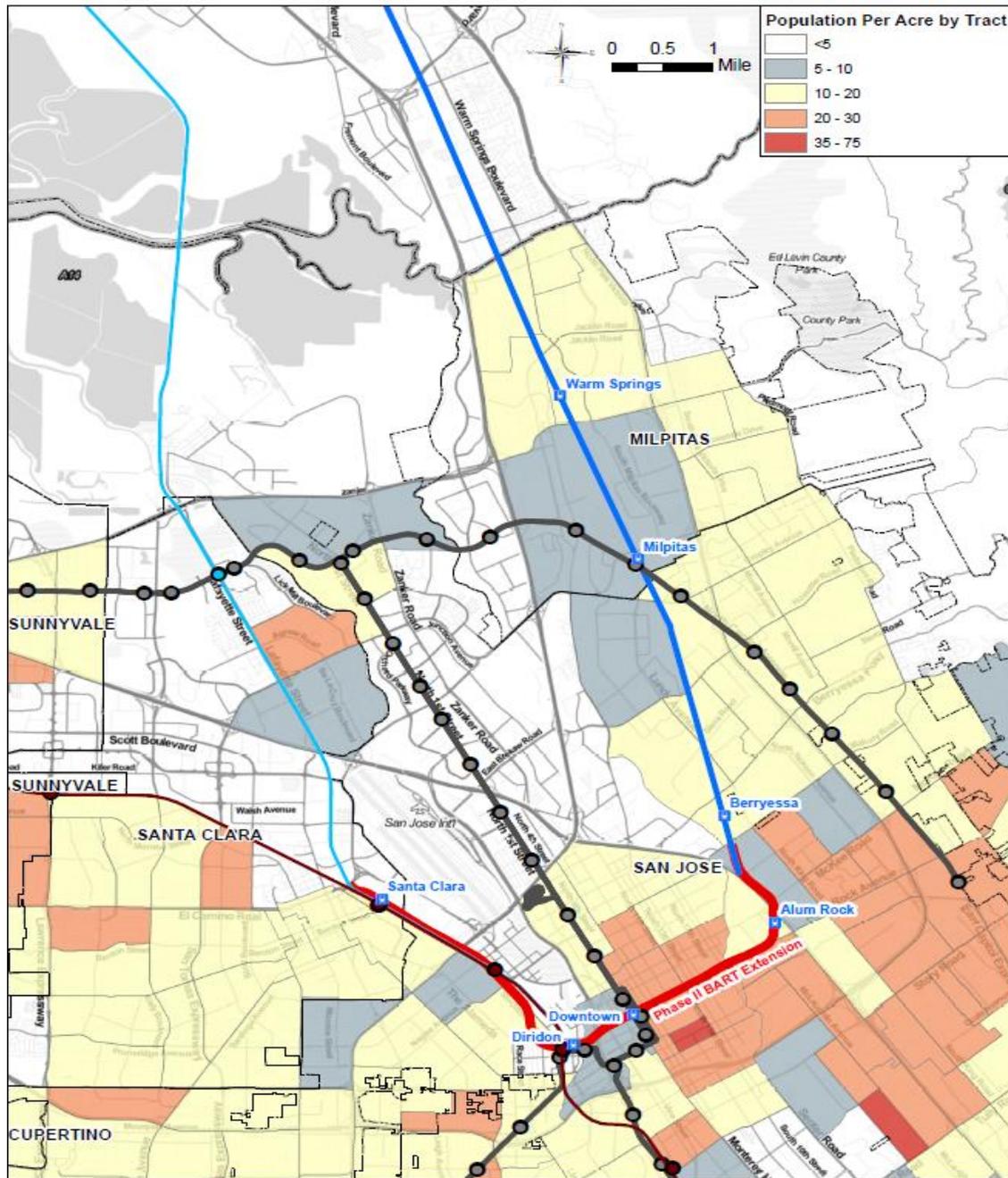
<b>Jurisdiction</b>	<b>2015</b>	<b>2035</b>	<b>Job Increase</b>	<b>% Change</b>
Santa Clara County	1,006,567	1,198,073	191,506	19%
<i>City of San Jose</i>	<i>419,253</i>	<i>513,209</i>	<i>93,956</i>	<i>22%</i>
<i>San Jose Business District</i>	<i>44,579</i>	<i>70,310</i>	<i>25,731</i>	<i>58%</i>
<i>City of Santa Clara</i>	<i>114,028</i>	<i>132,354</i>	<i>18,326</i>	<i>16%</i>
Source: Association of Bay Area Governments, Projections 2013. These numbers were used for modeling purposes, including ridership projections, and will be updated with future FTA submittals.				

Growth by itself does not equate to increased transit use. Concentrating development in central areas will make transit use more convenient and tend to reduce reliance on automobiles. Roadway congestion and limits on parking are other preconditions for transit use. Overall, higher densities of population, employment, and other activities equate to higher transit use.

The areas of northern Santa Clara County that include the Phase I and Phase II Projects lack high population and employment densities. This has been an impediment to higher VTA bus and light rail ridership. As shown in Figures 1-6 and 1-7, population per acre and jobs per acre are low except in certain districts and corridors, including downtown San Jose, the North First Street corridor in north San Jose (currently served by VTA light rail), and the U.S. 101 corridor through northwest Santa Clara County (currently served by Caltrain commuter rail). This condition is changing, however. With land use plans and transportation infrastructure investments that propose to focus development in priority development areas, consistent with the objectives of the regional transportation plan and county and city plans, both population and employment densities are expected to increase sharply in these districts and corridors.

The BART Extension would directly serve priority development areas described above in Section 1.2.1, or connect conveniently to other transit modes that serve them directly. The BART Extension is a critical transit infrastructure investment if efforts to reshape future development and accommodate future population and employment growth are to be successful.

Figure 1-6: 2010 Population Density



Source: VTA based on U.S. Census 2010, American Community Survey

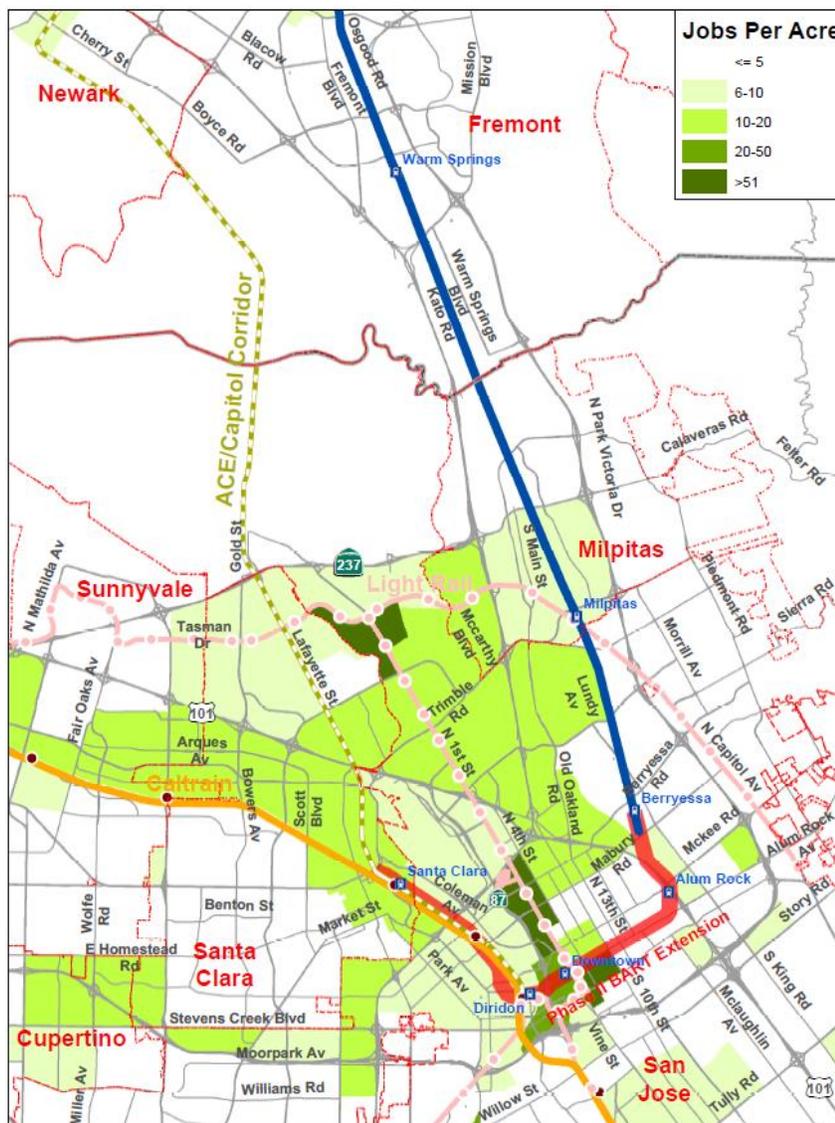
### 1.2.2.2 Incomplete Regional Transit Connectivity

Despite the extensive existing transit network—a combination of light rail, commuter rail, and express and local bus—that serves Santa Clara County, critical gaps exist that limit travel. These gaps can discourage transit use. The most evident need is for improved connectivity between high-capacity, high-speed transit systems that move substantial numbers of commuters.

A particular problem is access from light rail and commuter rail networks to the BART regional rail system, which offers an existing rapid, regional spine line along the eastern side of San Francisco Bay. That system connects to central and eastern Alameda and Contra Costa Counties where substantial numbers of Silicon Valley workers live due to the lower cost of housing compared to Santa Clara County. The Phase I Project from south Fremont to east San Jose will connect with light rail in Milpitas, thereby closing a portion of the gap in the regional rail network.

The BART Extension is needed to fully close the gap by connecting to Caltrain in downtown San Jose and Santa Clara and to the main north-south light rail spine along North First Street in central San Jose.

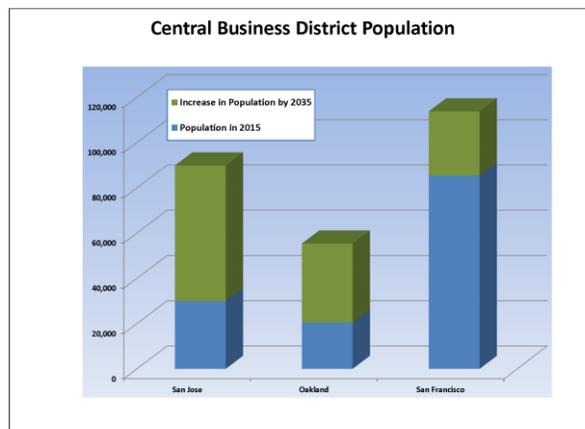
**Figure 1-7: 2010 Employment Density**



Source: VTA based on U.S. Census 2010, American Community Survey

The BART Extension would connect directly, without transfers, the three main central business districts in the Bay Area, including San Francisco, which has the highest number of jobs and population (Figures 1-8 and 1-9). When the Phase II Project is complete, the 126-mile BART system would be accessible from central and east San Jose. These are areas with concentrated low income, low mobility populations, and more affordable housing (see Figure 1-10). Central San Jose, including downtown, has the highest proportion of legally binding affordable housing, relative to total housing stock, in the county.

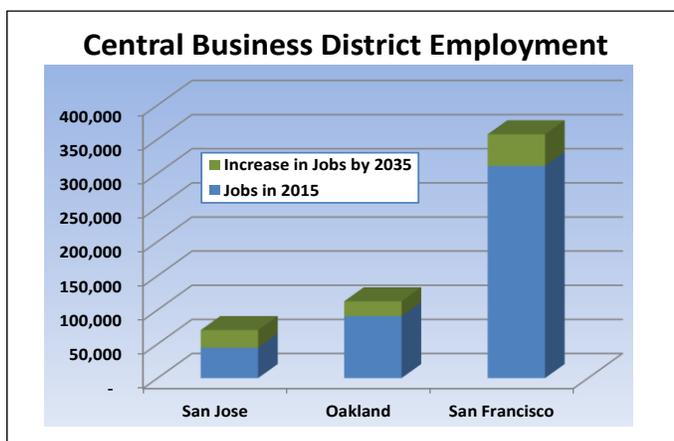
**Figure 1-8: Growing Downtown Populations**



Source: VTA based on Association of Bay Area Governments, Projections 2013

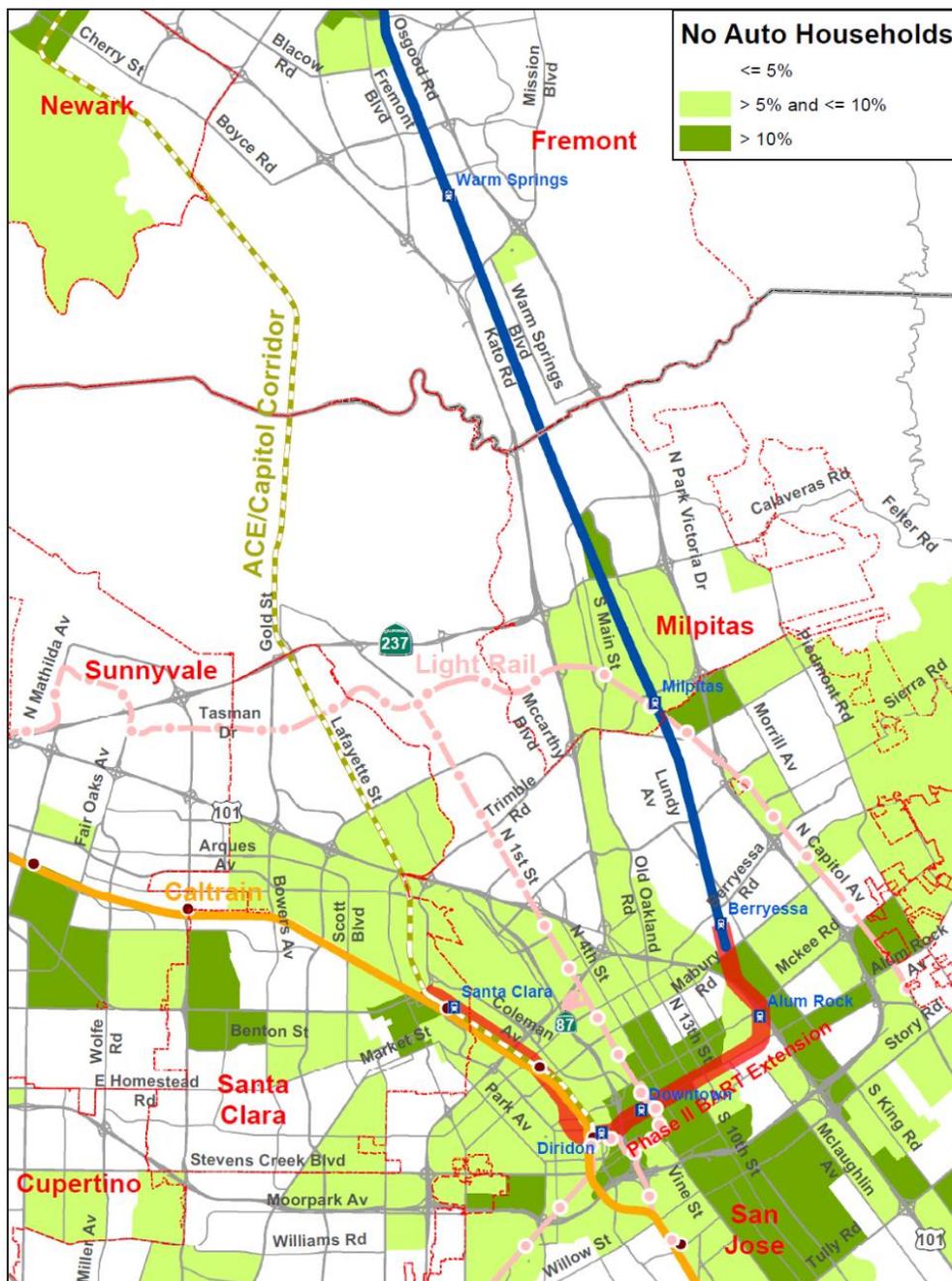
The downtown San Jose connection to light rail would allow BART riders to access light rail along North First Street, and vice versa. North First Street is the city’s focus for higher density development, both residential and employment, apart from the downtown central business district. The downtown connection to Caltrain at the Diridon and Santa Clara Stations would allow BART riders convenient access to the San Francisco Peninsula, including the City of San Francisco. High speed rail access is proposed to serve the intermodal Diridon Station within 15 years.

**Figure 1-9: Growing Downtown Jobs**



Source: VTA based on Association of Bay Area Governments, Projections 2013

**Figure 1-10: Households with Limited Mobility, 2010**



Source: VTA based on U.S. Census, American Community Survey 2010-2014.

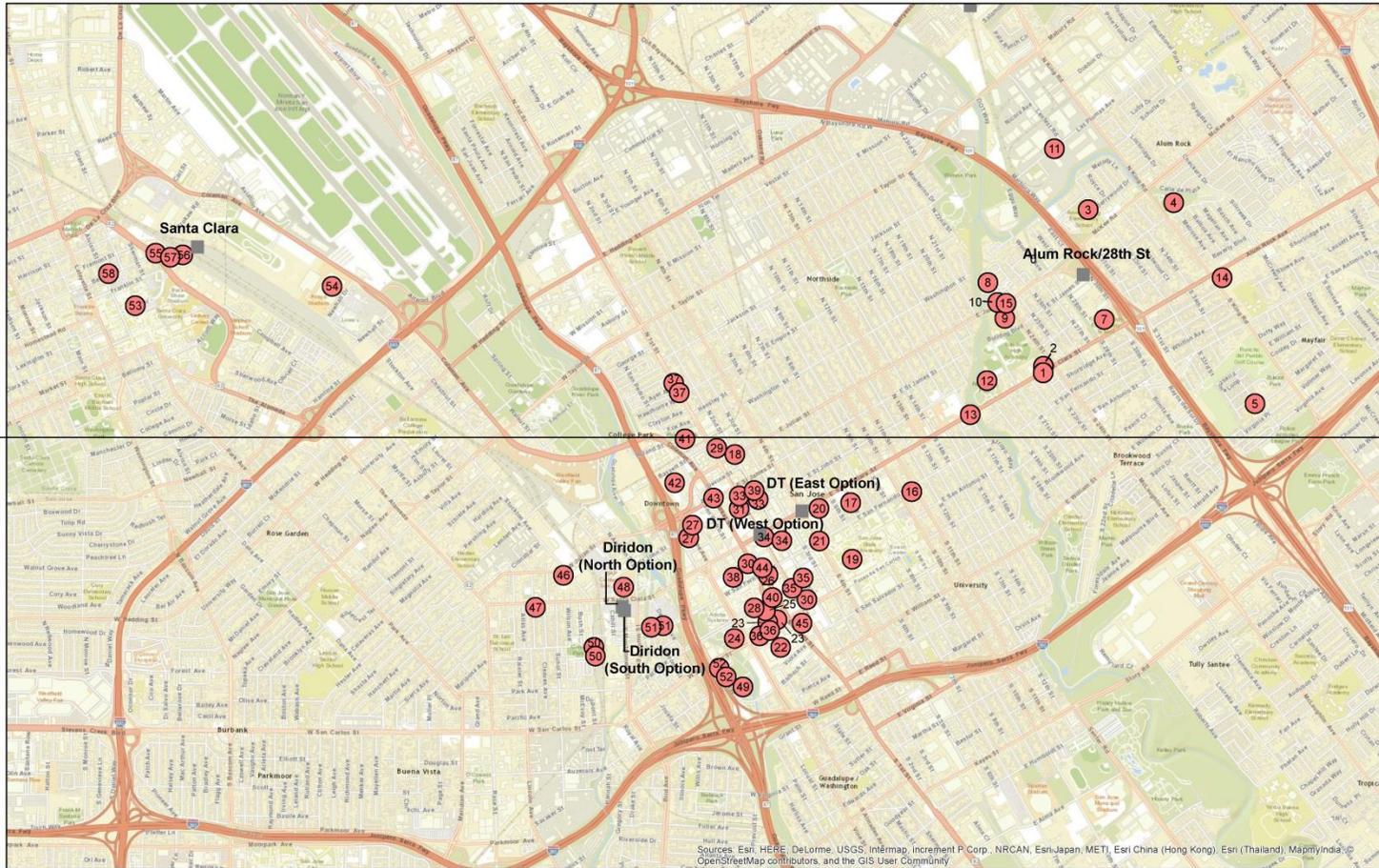
While Diridon Station is the most prominent activity center that would be served by an extension of BART regional rail from the Berryessa/North San Jose Station, a number of other centers would be directly accessible (i.e., within walking distance) from stations along the extension. These are listed in Table 1-3 and depicted in Figure 1-11.

**Table 1-3: Activity Centers within the Vicinity of the BART Extension Alternative Stations**

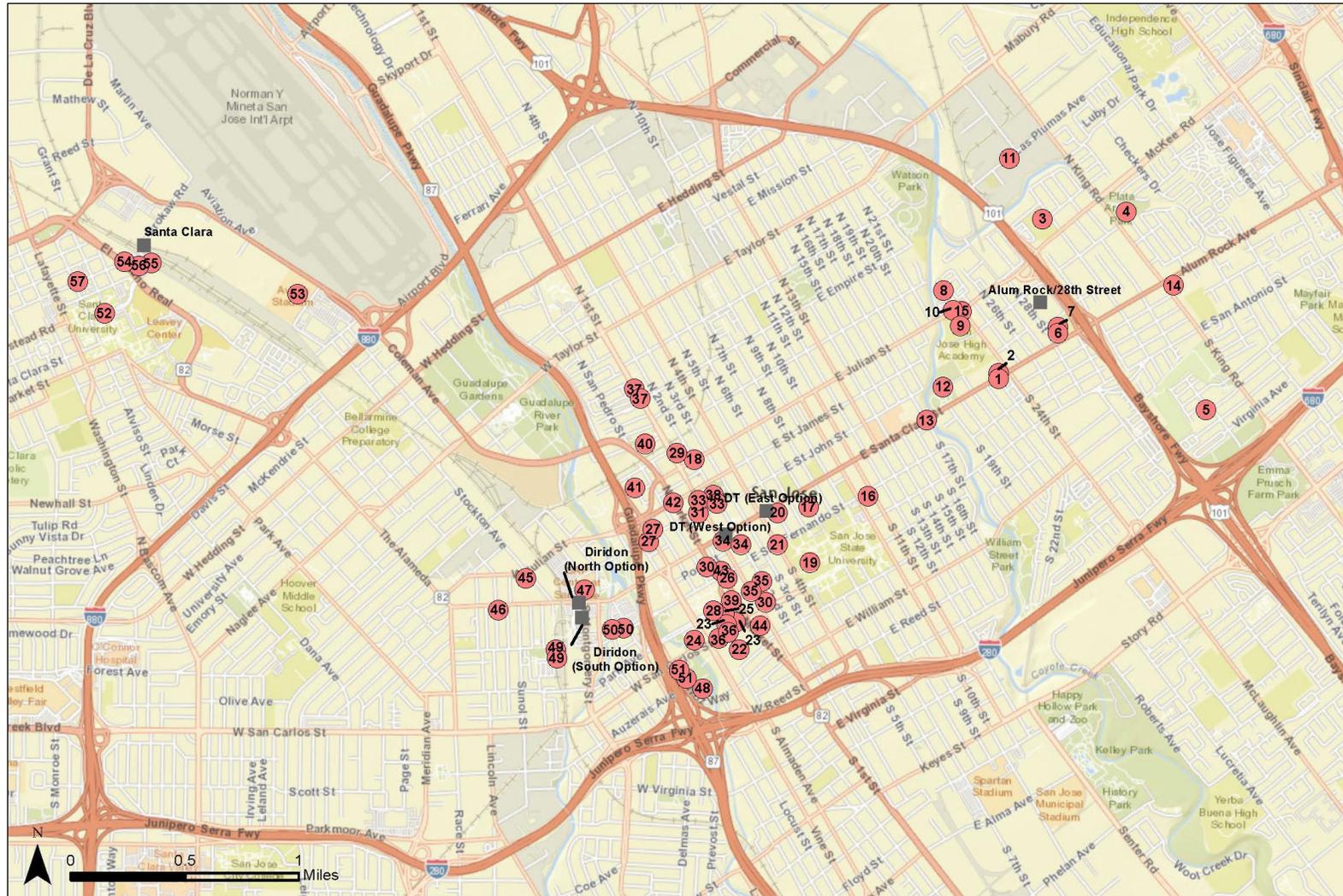
<b>Alum Rock/28<sup>th</sup> Street Station</b>
1. East San Jose Carnegie Branch Library
2. Portuguese Community Center
3. East Valley Social Services Agency
4. Plato Arroyo Park
5. Rocketship Discovery Prep
6. Cristo Rey Jesuit High School
7. <del>Five Wounds Middle School</del> <u>Five Wounds Portuguese National Church</u>
8. San Jose Community High School and Middle School
9. San Jose High Academy Plus High School
10. Sunrise Middle School
11. San Jose Fire Station 34
12. Roosevelt Park
13. San Jose Fire Station 8
14. Mexican Heritage Plaza
15. San Jose High Neighborhood Clinic
<b>Downtown San Jose Station</b>
16. Grace Community Center
17. San Jose State University Police
18. St James Health Center
19. San Jose State University (32,713 total enrollment in 2014)
20. San Jose City Hall
21. Martin Luther King, Jr. Library
22. San Jose Convention Center
23. San Jose Civic and Montgomery Theatres
24. San Jose Center for the Performing Arts
25. The Tech Museum of Innovation
26. San Jose Museum of Art
27. Santa Clara Superior Court (Notre Dame Avenue and Terraine Street facilities)
28. Santa Clara Family Court
29. Santa Clara County Law Library
30. U.S. Social Security Administration and Internal Revenue Service offices
31. U.S. Postal Service (San Jose main office)
32. San Jose Central Business District (office and retail)
33. St. James Light Rail Stations
34. Santa Clara Light Rail Stations
35. San Antonio Light Rail Stations
36. Convention Center Light Rail Stations
37. Japantown/Ayer Light Rail Stations
<del>38. Greyhound Bus Terminal</del>
<del>39</del> 38. St James Park
<del>38</del> 39. Plaza de Cesar Chavez Park

3940. Ryland Park
4041. San Jose Police Department Impound
4142. San Jose Fire Station 1
4243. Saint Joseph Cathedral Basilica
4344. California Theatre
<b>Diridon Station</b>
4445. On Lok Senior Health Services Center
4546. Billy Defrank Community Center
4647. SAP Center at San Jose (sports and events arena; 17,500 seated capacity)
4748. Children’s Discovery Museum
4849. Diridon Transit Center (VTA bus and light rail, Caltrain, Altamont Commuter Express rail, Capitol Corridor intercity rail, Amtrak intercity/interstate rail, and other)
4950. San Fernando Light Rail Stations
5051. Children’s Discovery Museum Rail Light Rail Station
<b>Santa Clara Station</b>
5152. Santa Clara University (9,015 total enrollment in 2014)
5253. Avaya Stadium (open air soccer and other sports venue; 18,000 seated capacity)
5354. Santa Clara Police Department
5455. South Bay Railroad Museum
5556. Santa Clara Caltrain Station
5657. Santa Clara Fire Station 1

**Figure 1-11: Activity Centers within the Vicinity of the BART Extension Alternative Stations**

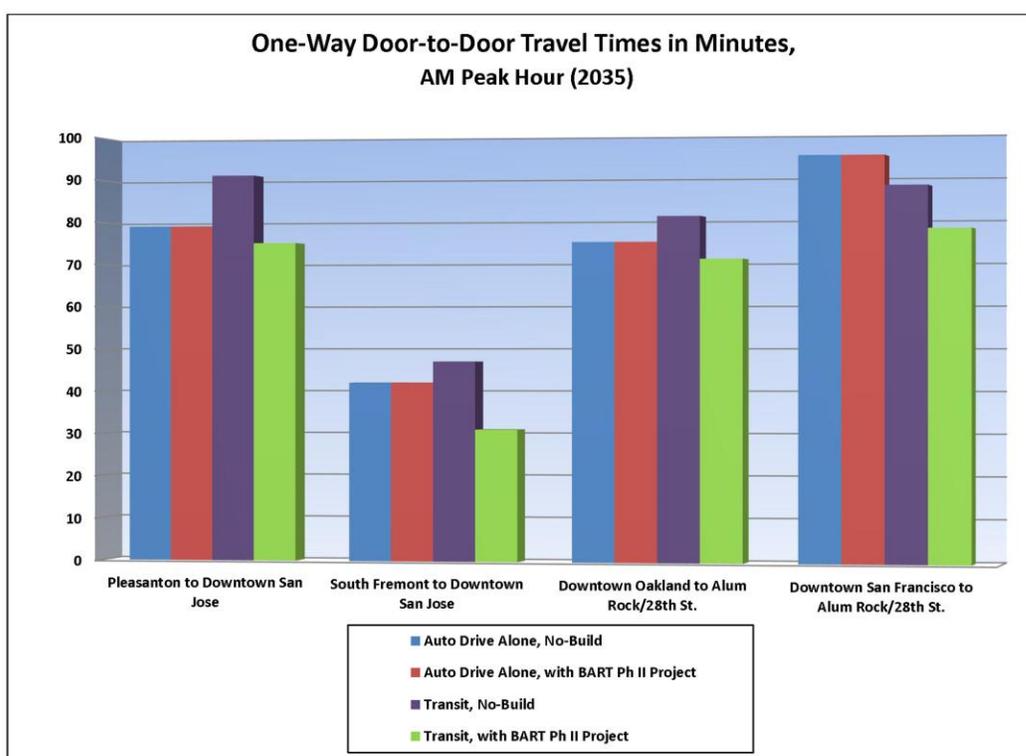


**Figure 1-11: Activity Centers within the Vicinity of the BART Extension Alternative Stations (Revised)**



Closing a major gap in the regional rail network would have the added benefit of improving local access through an important corridor. Ultimately, the improved connectivity, speed, and reliability of transit (offered by constructing a transit improvement project in dedicated right-of-way) would generate travel time savings for users. It is these savings that will encourage a mode shift to transit from auto. As shown in Figure 1-12, direct regional rail access to central San Jose would reduce 2035 transit travel times so they are 5 to 10 minutes, or more, faster than for autos during the AM peak hour for key travel markets, with similar benefits in the PM peak hour. Without transit improvements, transit travel time would take several minutes longer than auto travel and not be an attractive alternative.

**Figure 1-12: Travel Time With and Without the BART Extension Alternative**



Source: VTA Travel Model

### 1.2.2.3 Support for Transit Investments

Santa Clara County residents have continually expressed their support for transportation improvements by passing local funding measures, such as the Measure A Transit Improvement Program, which was approved by 70.3 percent of voters in 2000. That measure implemented a ½-cent local transit sales tax that extends to 2036 and provides funding for various transit projects, including the majority of local resources for the Phase I Project. Measure A will likely be one of the major local funding sources for the BART Extension should policymakers determine to move forward with the extension. In 2008, county voters

approved by 66.8 percent a 1/8-cent sales tax referred to as Measure B to fund the operating costs of BART extensions in Santa Clara County. Other transportation measures have been passed to support strictly roadway improvements.<sup>1</sup> Local funding measures have been supplemented by regional, state, and federal funding. Among the sources of federal support is FTA New Starts capital grant funding.

In June 2016, the VTA Board of Directors unanimously adopted the framework and funding amounts to place an additional ½-cent 30-year sales tax measure, designated as Measure B, on the November 8, 2016, ballot to help fund transportation priorities. An extensive 18-month public outreach process gathered input and suggestions on transportation needs. Through this process, a list of categories and transportation projects that best improve mobility in Santa Clara County was approved, including a plan to use \$1.5 billion for the BART Phase II Extension. Measure B, which required a two-thirds majority vote, to pass was approved by voters in November 2016 and ~~becomes~~became effective in April 2017.

VTA's mission is to provide sustainable, accessible, community-focused transportation options that are innovative and environmentally responsible, and that promote the vitality of the region. As a result, VTA strives to provide a multimodal and balanced transportation system, serving businesses, local residents, Bay Area commuters, and visitors to Silicon Valley. Construction of the BART Extension would require various sources of local, state, and federal resources.

## 1.3 CEQA Objectives

VTA is the CEQA lead agency proposing TOJD as part of the BART Extension with TOJD Alternative. The Cities of San Jose and Santa Clara and BART would be responsible agencies for this alternative. The proposed TOJD is not included in the NEPA Build Alternative because the TOJD is a potential future independent action by VTA and is included to proactively facilitate and promote local and regional land use planning as described below. No specific TOJD development plan or private developer has been identified and any proposed TOJD project would be separately funded, and would not include federal funding. The TOJD may be constructed at the same time as the BART Extension Alternative or later in time, dependent on the availability of funding and subject to market forces. However, the design of the stations and structures would not preclude TOJD. Refer to Chapter 2, *Alternatives*, for a detailed description of the TOJD under the CEQA BART Extension with TOJD Alternative.

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<sup>1</sup> Measure A provides funding for transit projects. The 2008 Measure B will fund the operations of BART in Santa Clara County. In 2010 voters approved a second Measure B that increased the motor vehicle license fee by \$10 annually. The fee revenues can only be used for “programs and projects that have a relationship or benefit to the owners of motor vehicles paying the fee and the programs and projects must be consistent with the regional transportation plan.”

Under the CEQA BART Extension with TOJD Alternative, TOJD is proposed at the four BART Extension stations (Alum Rock/28<sup>th</sup> Street, Downtown San Jose, Diridon, and Santa Clara) and retail at the two mid-tunnel ventilation facility locations along the alignment to increase transit ridership and support the expected population and jobs growth described above. VTA's primary objective for the proposed TOJD is to encourage transit ridership and support land use development patterns that make the most efficient and feasible use of existing infrastructure and public services while promoting a sense of community as envisioned by the San Jose and Santa Clara General Plans and relevant adopted specific plans. These plans include the *Five Wounds Urban Village Plan* (City of San Jose 2013), the City of San Jose *Diridon Station Area Plan* (City of San Jose 2014), and the *Santa Clara Area Station Plan* prepared by VTA and the Cities of Santa Clara and San Jose (2010). Additionally, the Metropolitan Transportation Commission's *Resolution 3434 Transit-Oriented Development Policy* includes provisions for housing and ridership for land within a 1/2-mile radius of each station along the BART Extension to San Jose and Santa Clara. The TOJD would be consistent with the regional plans of the Metropolitan Transportation Commission (MTC), the Association of Bay Area Governments (ABAG), VTA, and BART as well as the local plans of San Jose and Santa Clara. The TOJD would encourage higher-density, mixed-use development adjacent to proposed transit stations and thus offers the benefit of increasing ridership throughout the BART system.

The BART Extension with TOJD Alternative would also support efficient growth and sustainable development patterns necessary to reduce the impacts of population growth and to achieve the Sustainable Communities Strategy included in the San Francisco Bay Area's regional transportation plan, *Plan Bay Area, Strategy for a Sustainable Region* (July 18, 2013).

Overall, the benefits of TOJD include: providing mobility choices, increasing public safety, increasing transit ridership, reducing rates of vehicle miles traveled (VMT), increasing households' disposable income, reducing air pollution and energy consumption rates, conserving resource lands and open space, playing a role in economic development, contributing to more affordable housing, and decreasing local infrastructure costs.

## 1.4 BART Extension Project History

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

Prior studies hereby incorporated by reference include:

- *Fremont-South Bay Corridor Final Report* (VTA 1994)
- *Commuter Rail Study, Fremont-South Bay Corridor, Final Report* (VTA 1999)
- *Major Investment Study (MIS)* (VTA 2001)

- *Silicon Valley Rapid Transit Corridor – BART Extension to Milpitas, San Jose and Santa Clara, Draft Environmental Impact Statement/Environmental Impact Report and Draft 4(f) Evaluation (including supporting appendices and technical reports) (VTA 2004)*
- *Silicon Valley Rapid Transit Corridor – BART Extension to Milpitas, San Jose and Santa Clara, Final Environmental Impact Report (including supporting appendices and technical reports) (VTA 2004)*
- *Silicon Valley Rapid Transit Corridor – BART Extension to Milpitas, San Jose and Santa Clara, Draft Supplemental Environmental Impact Report (including supporting appendices and technical reports) (VTA 2007)*
- *Silicon Valley Rapid Transit Corridor – BART Extension to Milpitas, San Jose and Santa Clara, Final Supplemental Environmental Impact Report (including supporting appendices and technical reports) (VTA 2007)*
- *Silicon Valley Rapid Transit Corridor – Draft Environmental Impact Statement and Draft Section 4(f) Evaluation (including supporting appendices and technical reports) (VTA 2009)*
- *Silicon Valley Rapid Transit Corridor –Final Environmental Impact Statement and Final Section 4(f) Evaluation (including supporting appendices and technical reports) (VTA 2010)*
- *Wrigley Creek Improvement Project – Final Initial Study / Mitigated Negative Declaration (including supporting appendices and technical reports) (VTA 2010)*
- *BART Silicon Valley, Phase I – Berryessa Extension, Draft 2<sup>nd</sup> Supplemental Environmental Impact Reports (including supporting appendices and technical reports) (VTA 2010)*
- *BART Silicon Valley, Phase I – Berryessa Extension, Final 2<sup>nd</sup> Supplemental Environmental Impact Report (including supporting appendices and technical reports) (VTA 2011)*
- *Upper Penitencia Creek Improvement Project – Initial Study / Mitigated Negative Declaration (including supporting appendices and technical reports) (VTA 2011)*

These studies constitute a comprehensive, systematic study of transportation conditions in the BART Silicon Valley corridor, including existing and future needs. They also established transportation goals and objectives that guide the development of transportation solutions that address identified needs.

The studies satisfied federal requirements for system and corridor-level transportation needs assessment that existed at the time the proposed improvements were first contemplated. The 2001 MIS served as a federal alternatives analysis of the various transportation investment options for the BART Silicon Valley Rapid Transit Corridor. Although the federal project development process no longer requires agencies to formally proceed through alternatives analysis, it was expected that proposed sponsors of a major transit investment will conduct

system level planning studies that establish the purpose and need for the investment and identify a locally preferred project alternative. The 2001 MIS served as the foundational study for the VTA's BART Silicon Valley Program and continues to be important for that reason.

Eleven alternatives were identified that potentially addressed these goals and corridor needs. They were analyzed for consistency in meeting goals and needs, capital and operating costs, possible environmental effects, and eight performance measures. Results of the MIS were reviewed by the VTA Board of Directors, which on November 9, 2001, approved a locally preferred alternative that would extend BART service from Fremont through Milpitas, San Jose, and into Santa Clara. The alternative came to be designated the Silicon Valley Rapid Transit Corridor Project (SVRTCP).

A combined Draft Environmental Impact Statement/Environmental Impact Report (Draft EIS/EIR) and Draft 4(f) Evaluation for the 16-mile SVRTCP was prepared in accordance with the requirements of NEPA and CEQA and released for public comment in March 2004. Subsequent to the start of the public review period for the Draft EIS/EIR, the NEPA Notice of Intent to prepare an EIS was published for the BART Warm Springs Extension, a 5.4-mile project extending from the downtown Fremont BART Station to south Fremont, terminating at the proposed Warm Springs Station. The Warm Springs Extension is a required precursor project to the SVRTCP.

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

A Final EIR was prepared and certified by the VTA Board of Directors in December 2004. A Final Supplemental EIR (updating the 2004 EIR to address project design refinements) was certified by the VTA Board of Directors in June 2007.

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

A Draft EIS was released for public comment in March 2009, and a Final EIS was published in March 2010. On June 24, 2010, the FTA issued a Record of Decision (ROD) on the first phase of the project, an approximately 10-mile segment from Warm Springs to Berryessa—designated the Phase I Project. This formally approved the Phase I Project to move forward

into detailed design and construction. The decision reflected the fact that VTA had funding committed or in the pipeline for an initial 10-mile segment of the full 16-mile SVRTCP. Funding for the full 16-mile project was, at the time, not committed or in the immediate pipeline.

VTA proceeded to complete design and initiated construction on this initial segment (Phase I Project). The remaining approximately 6 miles is referred to in this document as the Phase II Project. This document analyzes alternatives as described in Chapter 2. Because it has been over 6 years since preparation and publication of the 2010 Final EIS on the SVRTCP, and because the project is now focused on the remaining approximately 6 miles for completion, a Supplemental Environmental Impact Statement to the 2010 document is being prepared.

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

The CEQA EIR and NEPA EIS processes now need to be brought up to date since the Phase II Project was last addressed in the 2007 Supplemental EIR and 2010 SEIS. Since the prior documents were adopted, background conditions have changed, regulatory settings have changed, and there are new alternatives to be evaluated. Therefore, VTA, with FTA concurrence, has elected to prepare a combined Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report (SEIS/SEIR) on the remaining approximately 6-mile BART Extension. A Subsequent EIR has been prepared instead of a Supplemental EIR because substantial changes have been made, such as the addition of the CEQA BART Extension with TOJD Alternative, which require major revisions to the previous EIR due to the involvement of new significant environmental effects and substantial increases in the severity of previously identified significant effects. In 2015, as preparation of the updated documents was underway, VTA decided to add a land use development component, the CEQA BART Extension with TOJD Alternative, in order to maximize transit-oriented development potential, to increase ridership, to fulfill the local and regional goals to integrate transit-oriented development at transit stations, and to ~~integrate~~ coordinate the planning, design, and construction of both the land use development and the BART Extension.

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

The New Starts Engineering phase involves formal oversight and eventual project evaluation and rating. Successful completion of the New Starts process would result in a Full Funding Grant Agreement with FTA and ultimately construction. The Final SEIS/SEIR and an amended ROD on a preferred project would need to be completed before FTA would make

a determination on advancing a project into engineering. These FTA actions and approvals would establish the basis for federal funding for the NEPA BART Extension Alternative. FTA is the lead agency for the NEPA analysis in this document and will evaluate the BART Extension Alternative for entry into the New Starts Process. The land use development under the CEQA BART Extension with TOJD Alternative evaluated in this document is independent from FTA's New Starts Funding Program.

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

## 1.5 Organization of this Document

This Final SEIS/SEIR contains the following volumes, the contents of these are detailed below:

- Volume I: Final SEIS/SEIR
- Volume II: Responses to Comments
- Volume III: Appendices

The contents of Volume I ~~this document~~ include the following chapters from the Draft SEIS/SEIR with underline (for additions) and strikeout (for deletions) for changes since the Draft SEIS/SEIR was released for public review:

**Executive Summary.** This chapter provides an overview of the alternatives and the impacts and mitigation of each alternative.

**Chapter 1: Purpose and Need.** This chapter describes the purpose and need for the BART Extension Alternative and project objectives for the CEQA BART Extension with TOJD Alternative.

**Chapter 2: Alternatives.** This chapter describes all NEPA and CEQA alternatives, including the NEPA and CEQA No Build Alternative and BART Extension Alternative and the CEQA BART Extension with TOJD Alternative (consisting of the BART Extension and TOJD) and any changes since the release of the Draft SEIS/SEIR. This chapter also includes the

Recommended Project Description/Locally Preferred Alternatives including a timeline for future decision on options.

**Chapter 3: NEPA and CEQA Transportation Operation Analysis.** This chapter describes existing conditions and identifies transportation impacts and mitigation measures for all of the alternatives. The NEPA and CEQA construction transportation impacts are addressed in Chapter 5.

**Chapter 4: NEPA Alternatives Analysis of Operations.** This chapter describes the existing conditions associated with the environmental issue areas other than transportation, specifically, air quality; biological resources and wetlands; community facilities; cultural and historic resources; electromagnetic fields; energy; geology, soils, and seismicity; hazardous materials; land use; noise and vibration; safety and security; socioeconomics; utilities; visual quality and aesthetics; water resources; and environmental justice. This chapter addresses the environmental impacts that would result from operation of the NEPA No Build and BART Extension Alternatives and discusses mitigation measures under NEPA to reduce or eliminate such impacts.

**Chapter 5: NEPA Alternatives Analysis of Construction.** This chapter describes the construction activities that would occur during implementation of the NEPA No Build and BART Extension Alternatives. This chapter addresses the environmental impacts that would result from construction activities and discusses mitigation measures under NEPA to reduce or eliminate such impacts. This chapter should also be referred to for the CEQA construction transportation impacts and mitigation measures as they are similar to the NEPA construction transportation impacts and mitigation measures.

**Chapter 6: CEQA Alternatives Analysis of Construction and Operation.** This chapter describes construction and operational impacts of the CEQA Alternatives for the environmental issue areas other than transportation, specifically, air quality; biological resources and wetlands; community facilities; cultural and historic resources; energy; geology, soils, and seismicity; hazardous materials; land use; noise and vibration; safety and security; utilities; visual quality and aesthetics; and water resources. Mitigation measures are also identified where required.

**Chapter 7: Other NEPA and CEQA Considerations.** This chapter addresses irreversible and irretrievable commitment of resources, cumulative impacts, and growth-inducing impacts. The environmentally superior alternative is also identified.

**Chapter 8: Section 4(f) Evaluation.** This chapter complies with Section 4(f) of the Department of Transportation Act to ensure that special efforts are made to protect public parks and recreations lands, wildlife and waterfowl refuges, and historic sites.

**Chapter 9: NEPA Financial Considerations.** This chapter presents cost information and an evaluation of the costs as well as a proposed financial plan of the NEPA alternatives.

**Chapter 10: Agency and Community Participation.** This chapter identifies the process for consultation and coordination with federal, state, regional, and local agencies, as well as with elected officials, community leaders, organizations, and other individuals within the vicinity. This chapter also includes a summary of the agency and community participation conducted since the Major Investment Study/Alternatives Analysis process in 2001.

**Chapter 11: Distribution of the SEIS/SEIR.** This chapter identifies the process for making the Draft SEIS/SEIR available for public circulation, including a list of the various agencies, organizations, and individuals who were notified of its release.

**Chapter 12: Definitions, Abbreviations, and Acronyms.** This chapter provides a list and description of the various definitions, abbreviations, and acronyms that are used throughout the Draft SEIS/SEIR.

**Chapter 13: References.** This chapter provides a list of the working papers, technical reports, and other documents used in preparing the Draft SEIS/SEIR.

**Chapter 14: List of Preparers.** This chapter identifies the contributors to the document, including the FTA, VTA, and consultant team staff involved in the preparation of the Draft SEIS/SEIR.

The contents of Volume II include the following chapters:

**Chapter 1: Introduction.** This chapter provides the purpose of the Final SEIS/SEIR, information on certification of the SEIS/SEIR and project selection, and an overview of the agency and community participation.

**Chapter 2: Responses to Comments.** This chapter includes a list of commenters that commented on the Draft SEIS/SEIR and responses to comments.

The contents of Volume III include the following Appendices:

**Appendix A: Notice of Preparation**

**Appendix B: Project Plans and Profiles**

Appendix B.1 – Twin-Bore Tunnel Plans and Profiles

Appendix B. 2 – Single-Bore Tunnel Plans and Profiles

**Appendix C: BART Station Site Plan Concepts**

**Appendix D: Cultural Resources Area of Potential Effects Maps**

Appendix D.1 – Architectural/Built Resources Area of Potential Effects Map

Appendix D.2 – Archaeological Resources Area of Potential Effects Map

Appendix D.3 – Draft Programmatic Agreement