

## 4.18 Environmental Justice

### 4.18.1 Introduction

This section describes the affected environment and environmental consequences related to environmental justice from operations of the NEPA Alternatives. The following sources of information were used to prepare the analysis in this section.

- *American Community Survey* (U.S. Census Bureau 2010–2014).
- *American Fact Finder* (U.S. Census Bureau 2010).
- *Bay Area Projections 2013* (Association of Bay Area Governments 2013).
- *Unemployment Rate and Labor Force* (California Employment Development Department 2015).
- *VTA's BART Silicon Valley—Phase II Extension Project Socioeconomics and Environmental Justice Technical Memorandum* (Circlepoint 2016).

### 4.18.2 Environmental and Regulatory Setting

#### 4.18.2.1 Environmental Setting

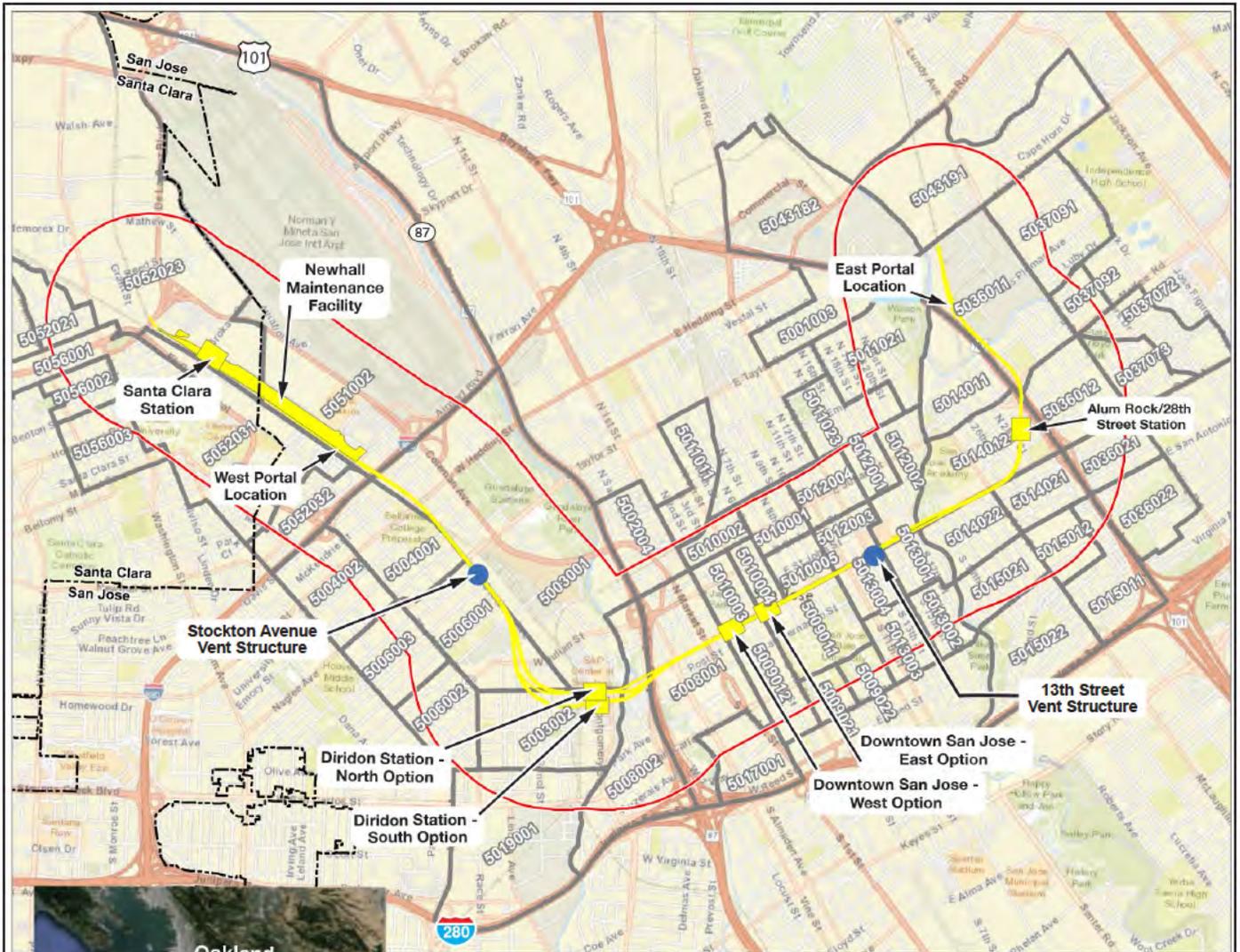
This section discusses the existing conditions related to environmental justice along the BART Extension alignment (including staging areas).

An environmental justice community is a particular geographic area that meets certain socioeconomic and demographic thresholds. Environmental justice populations can either qualify based on their minority population and/or income status.

The study area represents U.S. Census Block Groups (59 block groups) located within 0.5 mile of the alignment.<sup>1</sup> Figure 4.18-1 depicts the study area block groups.

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<sup>1</sup> A census tract is a geographic region within a county. The census tract is broken into smaller block groups, which provide specific data for a more refined geography. Block groups are generally the size of several city blocks, and are therefore a useful geography boundary to represent a community.



**Legend**

- BART Extension Alignment
- 0.5-Mile Study Area
- Census Block Groups
- Vent Structure
- Station



Graphics: 0033213 (02-1-2016)

Source: Circlepoint, 2016.

**Figure 4.18-1**  
**Study Area**  
VTA's BART Silicon Valley-Phase II Extension Project

## Minority Populations

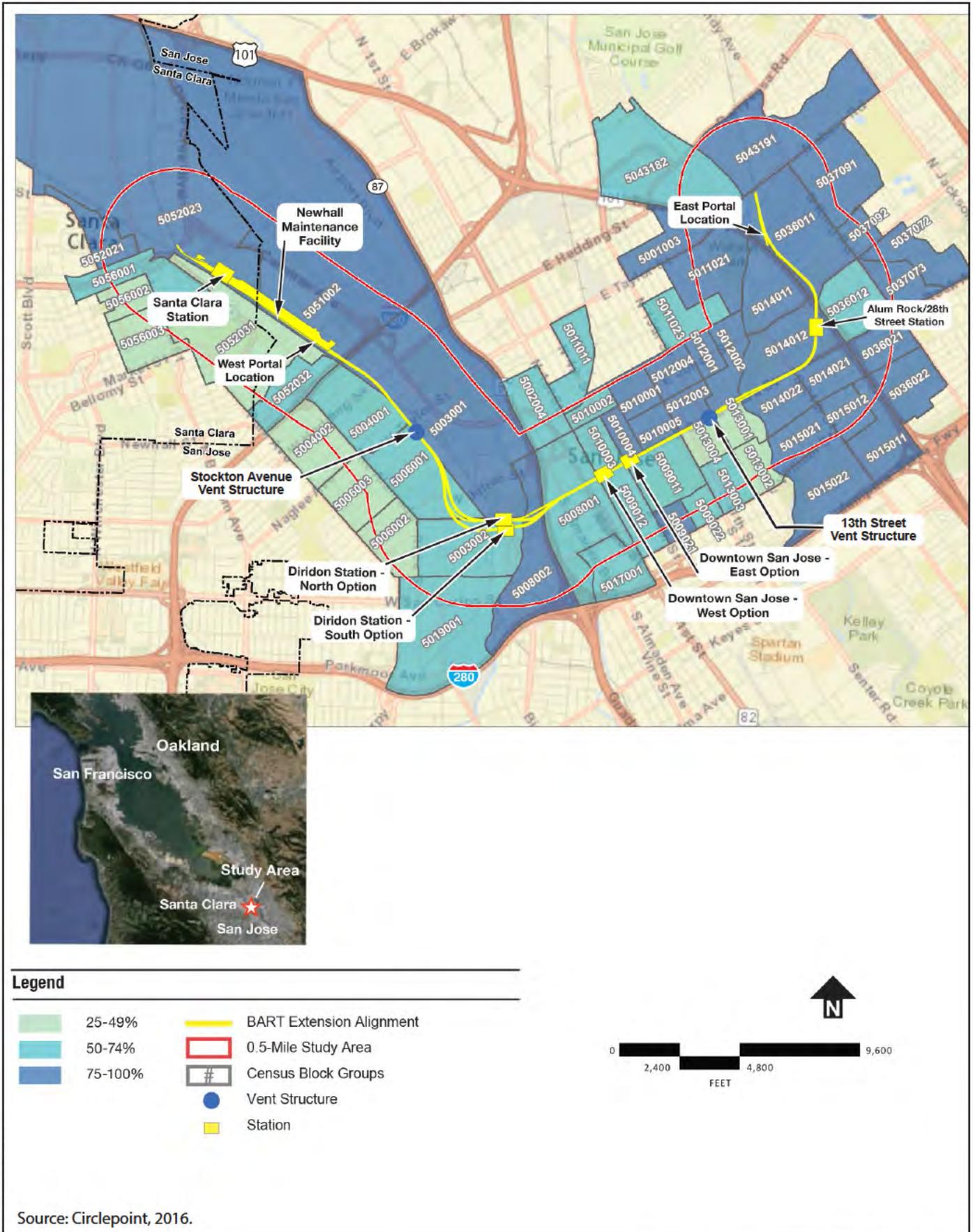
San Jose and Santa Clara are generally diverse populations, representing a variety of races and ethnicities as shown in Table 4.18-1. The study area provides a more localized assessment of the community demographics within the areas immediately surrounding the BART Extension alignment. Table 4.18-2 further summarizes these demographics by outlining the percent minority. The study area minority population is slightly higher than in San Jose and Santa Clara. Figure 4.18-2 depicts the minority percent distribution.

**Table 4.18-1: Demographic Profile of the Study Area and Region**

Population	San Jose	Santa Clara	Study Area
Total Population	945,942 (100%)	116,468 (100%)	89,896 (100%)
<i>Hispanic or Latino (of any race)</i>	<i>313,636 (33%)</i>	<i>22,589 (19%)</i>	<i>39,252 (44%)</i>
<i>Not Hispanic or Latino</i>	<i>632,306 (67%)</i>	<i>93,879 (81%)</i>	<i>50,644 (56%)</i>
White	271,382 (29%)	42,026 (36%)	24,357 (27%)
Black or African American	27,508 (2%)	2,929 (3%)	3,329 (4%)
American Indian and Alaska Native	2,255 (0.2%)	240 (0.2%)	245 (0.2%)
Asian	300,022 (32%)	43,531 (38%)	19,735 (22%)
Native Hawaiian and Other Pacific Islander	3,492 (0.4%)	604 (0.5%)	377 (0.4%)
Some Other Race	1,820 (0.2%)	321 (0.3%)	252 (0.3%)
Two or More Races	25,827 (3%)	4,228 (4%)	2,349 (3%)
Source: U.S. Census 2010			

**Table 4.18-2: Minority Percent**

Location	Percent Minority
San Jose	71%
Santa Clara	64%
Study Area	73%
Source: U.S. Census 2010	



**Figure 4.18-2**  
**Minority Percent Distribution**  
 VTA's BART Silicon Valley-Phase II Extension Project

Table 4.18-3 summarizes the minority percent for each U.S. census block group within the study area. The minority percentage of block groups that exceed the minority percentage of the city (San Jose at 71 percent and Santa Clara at 64 percent) in which they are located are shown in **bold**. The block groups in bold represent the populations with the greatest minority populations within the study area and are considered environmental justice populations. Accordingly, these environmental justice populations are shown in Figure 4.18-5, and the aboveground BART Extension features within these block group geographic boundaries are considered in the effects analysis in Section 4.18.4.2, *BART Extension Alternative*.

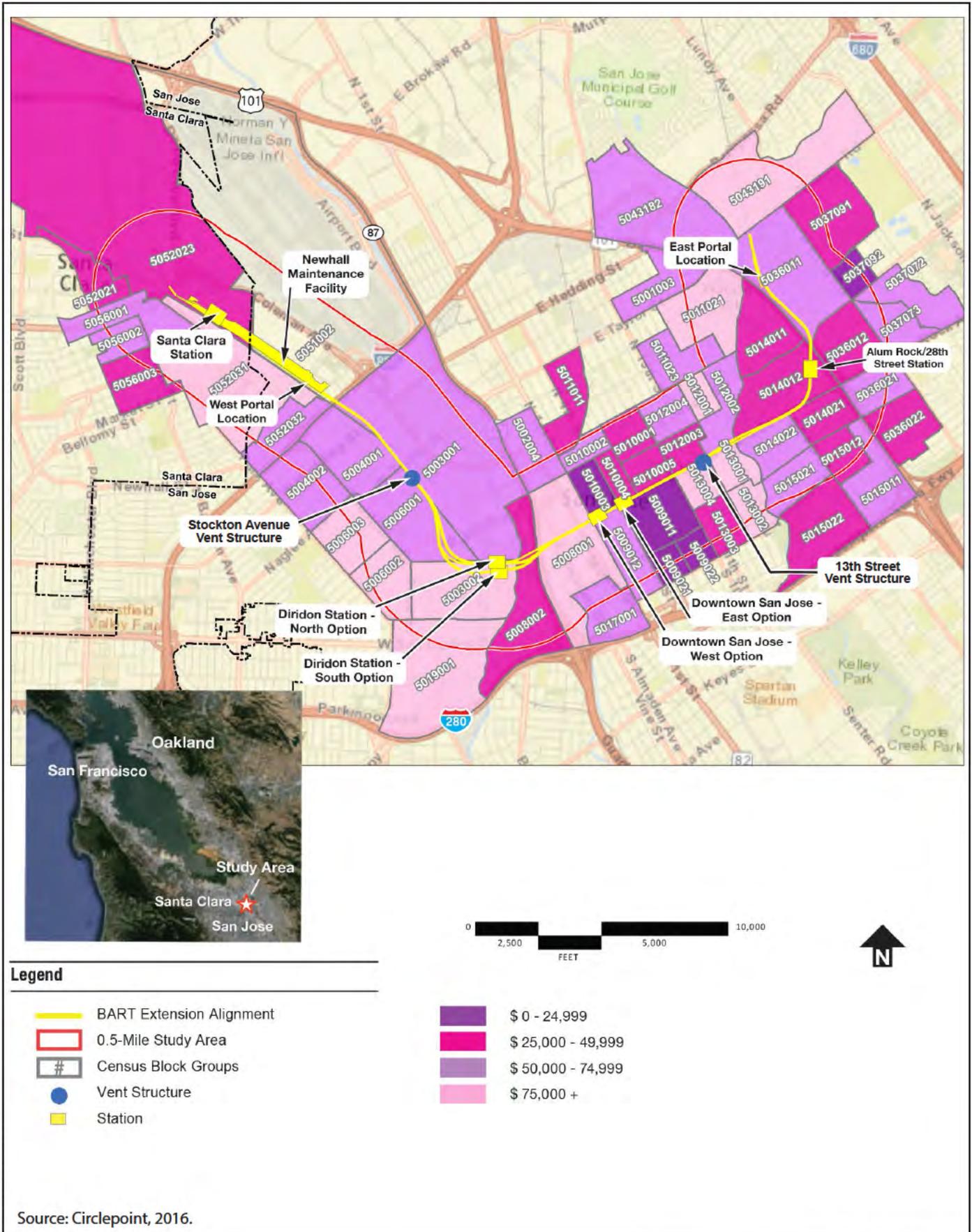
**Table 4.18-3: Study Area Minority Percent Distribution**

<b>Block Group</b>	<b>Minority Percent</b>
<b>San Jose Block Groups</b>	
<b>Block Group 3, Census Tract 5001</b>	<b>87%</b>
Block Group 4, Census Tract 5002	51%
<b>Block Group 1, Census Tract 5003</b>	<b>77%</b>
Block Group 2, Census Tract 5003	53%
Block Group 1, Census Tract 5004	58%
Block Group 2, Census Tract 5004	49%
Block Group 1, Census Tract 5006	60%
Block Group 2, Census Tract 5006	30%
Block Group 3, Census Tract 5006	41%
Block Group 1, Census Tract 5008	58%
<b>Block Group 2, Census Tract 5008</b>	<b>75%</b>
<b>Block Group 1, Census Tract 5009.01</b>	<b>73%</b>
Block Group 2, Census Tract 5009.01	59%
<b>Block Group 1, Census Tract 5009.02</b>	<b>83%</b>
Block Group 2, Census Tract 5009.02	64%
<b>Block Group 1, Census Tract 5010</b>	<b>86%</b>
<b>Block Group 2, Census Tract 5010</b>	<b>72%</b>
<b>Block Group 3, Census Tract 5010</b>	<b>73%</b>
<b>Block Group 4, Census Tract 5010</b>	<b>75%</b>
<b>Block Group 5, Census Tract 5010</b>	<b>75%</b>
Block Group 1, Census Tract 5011.01	68%
<b>Block Group 1, Census Tract 5011.02</b>	<b>78%</b>
<b>Block Group 3, Census Tract 5011.02</b>	<b>73%</b>
<b>Block Group 1, Census Tract 5012</b>	<b>79%</b>
<b>Block Group 2, Census Tract 5012</b>	<b>82%</b>
<b>Block Group 3, Census Tract 5012</b>	<b>77%</b>
<b>Block Group 4, Census Tract 5012</b>	<b>79%</b>
Block Group 1, Census Tract 5013	44%
Block Group 2, Census Tract 5013	34%
Block Group 3, Census Tract 5013	60%

<b>Block Group</b>	<b>Minority Percent</b>
Block Group 4, Census Tract 5013	48%
<b>Block Group 1, Census Tract 5014.01</b>	<b>92%</b>
<b>Block Group 2, Census Tract 5014.01</b>	<b>83%</b>
<b>Block Group 1, Census Tract 5014.02</b>	<b>75%</b>
<b>Block Group 2, Census Tract 5014.02</b>	<b>87%</b>
<b>Block Group 1, Census Tract 5015.01</b>	<b>96%</b>
<b>Block Group 2, Census Tract 5015.01</b>	<b>93%</b>
<b>Block Group 1, Census Tract 5015.02</b>	<b>83%</b>
<b>Block Group 2, Census Tract 5015.02</b>	<b>92%</b>
Block Group 1, Census Tract 5017	70%
Block Group 1, Census Tract 5019	68%
<b>Block Group 1, Census Tract 5036.01</b>	<b>78%</b>
<b>Block Group 2, Census Tract 5036.01</b>	<b>72%</b>
<b>Block Group 1, Census Tract 5036.02</b>	<b>88%</b>
<b>Block Group 2, Census Tract 5036.02</b>	<b>95%</b>
<b>Block Group 2, Census Tract 5037.07</b>	<b>95%</b>
<b>Block Group 3, Census Tract 5037.07</b>	<b>90%</b>
<b>Block Group 1, Census Tract 5037.09</b>	<b>98%</b>
<b>Block Group 2, Census Tract 5037.09</b>	<b>97%</b>
Block Group 2, Census Tract 5043.18	56%
<b>Block Group 1, Census Tract 5043.19</b>	<b>91%</b>
<b>Block Group 2, Census Tract 5051</b>	<b>78%</b>
Block Group 2, Census Tract 5052.03	55%
<b>Santa Clara Block Groups</b>	
<b>Block Group 1, Census Tract 5052.02</b>	<b>75%</b>
<b>Block Group 3, Census Tract 5052.02</b>	<b>83%</b>
Block Group 1, Census Tract 5052.03	49%
Block Group 1, Census Tract 5056	51%
Block Group 2, Census Tract 5056	47%
Block Group 3, Census Tract 5056	44%
Source: U.S. Census 2010	
Note: Bolded text identifies an environmental justice block group because the minority percentage exceeded the minority percentage of the city in which they are located (San Jose: 71%; Santa Clara: 64%)	

## Low-Income Populations

The study area contains a high percentage of low-income individuals. An environmental justice low-income population refers to the median household income compared to the Department of Health and Human Services (HHS) poverty guidelines within geographic proximity to the alignment. The average household size is 2.9 persons per household (averaged to 3), which correlates to the HHS poverty guideline threshold of \$20,090. Figure 4.18-3 depicts the ranges of median household income amongst the population.



**Figure 4.18-3**  
**Median Household Income**  
 VTA's BART Silicon Valley-Phase II Extension Project

Table 4.18-4 identifies the low-income population of the entire study area as well as within San Jose and Santa Clara. Approximately 13 percent of individuals living within the study area are low-income. The study area average is slightly more than the San Jose and Santa Clara overall averages. Figure 4.18-4 depicts the low-income percent ranges within the study area. Table 4.18-5 outlines the census block groups that are considered low income. The low-income percentage of block groups that exceed the low-income percentage of the city in which they are located are shown in **bold**. The block groups in bold represent the populations with the greatest low-income populations within the study area and are considered environmental justice populations. Accordingly, these environmental justice populations are shown in Figure 4.18-5, and the aboveground BART Extension features within these block group geographic boundaries are considered in the effects analysis in Section 4.18.4.2, *BART Extension Alternative*.

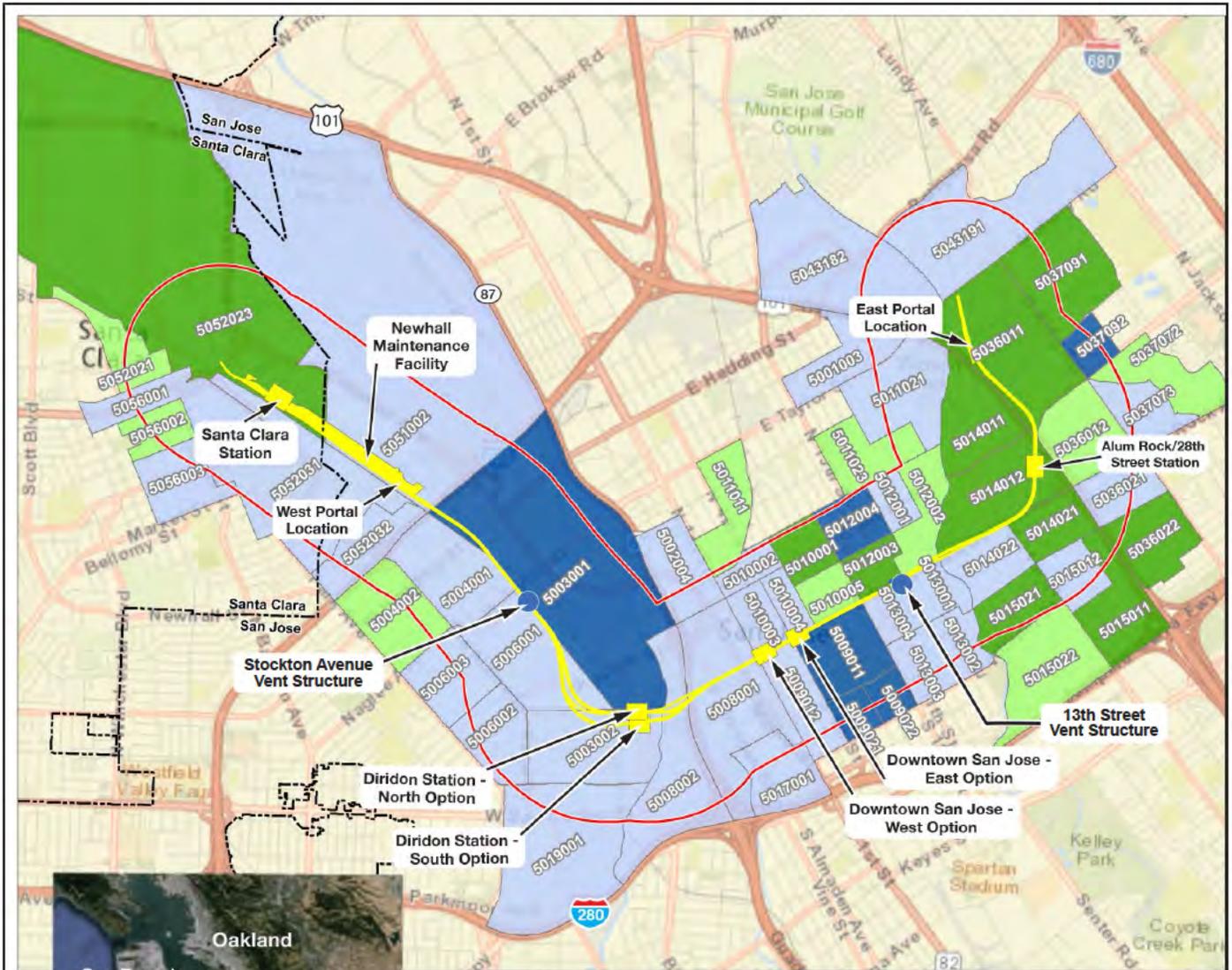
**Table 4.18-4: Low-Income Population**

<b>Geographic Area</b>	<b>Low-Income Percent</b>
San Jose	12%
Santa Clara	9%
Study Area	13%
Source: American Community Survey (ACS), U.S. Census 2010–2014	

**Table 4.18-5: Study Area Low-Income Percent Distribution**

<b>Block Groups</b>	<b>Low-Income Percent</b>
<b>San Jose Block Groups</b>	
Block Group 3, Census Tract 5001	0%
Block Group 4, Census Tract 5002	2%
<b>Block Group 1, Census Tract 5003</b>	<b>37%</b>
Block Group 2, Census Tract 5003	3%
Block Group 1, Census Tract 5004	0%
<b>Block Group 2, Census Tract 5004</b>	<b>21%</b>
Block Group 1, Census Tract 5006	4%
Block Group 2, Census Tract 5006	0%
Block Group 3, Census Tract 5006	4%
Block Group 1, Census Tract 5008	6%
Block Group 2, Census Tract 5008	4%
<b>Block Group 1, Census Tract 5009.01</b>	<b>48%</b>
Block Group 2, Census Tract 5009.01	9%
<b>Block Group 1, Census Tract 5009.02</b>	<b>43%</b>
<b>Block Group 2, Census Tract 5009.02</b>	<b>43%</b>
<b>Block Group 1, Census Tract 5010</b>	<b>23%</b>
Block Group 2, Census Tract 5010	0%
Block Group 3, Census Tract 5010	8%
Block Group 4, Census Tract 5010	0%
<b>Block Group 5, Census Tract 5010</b>	<b>18%</b>
<b>Block Group 1, Census Tract 5011.01</b>	<b>16%</b>
Block Group 1, Census Tract 5011.02	2%
<b>Block Group 3, Census Tract 5011.02</b>	<b>15%</b>
Block Group 1, Census Tract 5012	5%
<b>Block Group 2, Census Tract 5012</b>	<b>16%</b>
<b>Block Group 3, Census Tract 5012</b>	<b>22%</b>
<b>Block Group 4, Census Tract 5012</b>	<b>34%</b>
Block Group 1, Census Tract 5013	0%
Block Group 2, Census Tract 5013	0%
Block Group 3, Census Tract 5013	0%
Block Group 4, Census Tract 5013	11%
<b>Block Group 1, Census Tract 5014.01</b>	<b>21%</b>
<b>Block Group 2, Census Tract 5014.01</b>	<b>21%</b>
<b>Block Group 1, Census Tract 5014.02</b>	<b>26%</b>
Block Group 2, Census Tract 5014.02	10%
<b>Block Group 1, Census Tract 5015.01</b>	<b>23%</b>
Block Group 2, Census Tract 5015.01	9%
<b>Block Group 1, Census Tract 5015.02</b>	<b>21%</b>

<b>Block Groups</b>	<b>Low-Income Percent</b>
<b>Block Group 2, Census Tract 5015.02</b>	<b>13%</b>
Block Group 1, Census Tract 5017	0%
Block Group 1, Census Tract 5019	9%
<b>Block Group 1, Census Tract 5036.01</b>	<b>23%</b>
<b>Block Group 2, Census Tract 5036.01</b>	<b>20%</b>
Block Group 1, Census Tract 5036.02	10%
<b>Block Group 2, Census Tract 5036.02</b>	<b>23%</b>
<b>Block Group 2, Census Tract 5037.07</b>	<b>19%</b>
Block Group 3, Census Tract 5037.07	8%
<b>Block Group 1, Census Tract 5037.09</b>	<b>30%</b>
<b>Block Group 2, Census Tract 5037.09</b>	<b>47%</b>
Block Group 2, Census Tract 5043.18	0%
Block Group 1, Census Tract 5043.19	4%
Block Group 2, Census Tract 5051	0%
Block Group 2, Census Tract 5052.03	0%
<b>Santa Clara Block Groups</b>	
<b>Block Group 1, Census Tract 5052.02</b>	<b>16%</b>
<b>Block Group 3, Census Tract 5052.02</b>	<b>28%</b>
Block Group 1, Census Tract 5052.03	6%
Block Group 1, Census Tract 5056	0%
<b>Block Group 2, Census Tract 5056</b>	<b>12%</b>
Block Group 3, Census Tract 5056	5%
Source: ACS, U.S. Census 2010–2014	
Note: Bolded text identifies an environmental justice block group because the low-income percentage exceeded the low-income percentage of the city they are located (San Jose: 12%; Santa Clara: 9%)	



**Legend**

- 0-10%
- 11-20%
- 21-30%
- 31+%
- BART Extension Alignment
- 0.5-Mile Study Area
- Census Block Groups
- Vent Structure
- Station



Graphics: 0033213 (02-1-2016)

Source: Circlepoint, 2016.

**Figure 4.18-4**  
**Percent Below Poverty**  
VTA's BART Silicon Valley-Phase II Extension Project

The study area is 73 percent minority. For comparison, the Cities of San Jose and Santa Clara are 71 and 64 percent minority, respectively. As the majority of the study area is within the City of San Jose, the study area minority demographics do not deviate largely from the City of San Jose minority demographics.

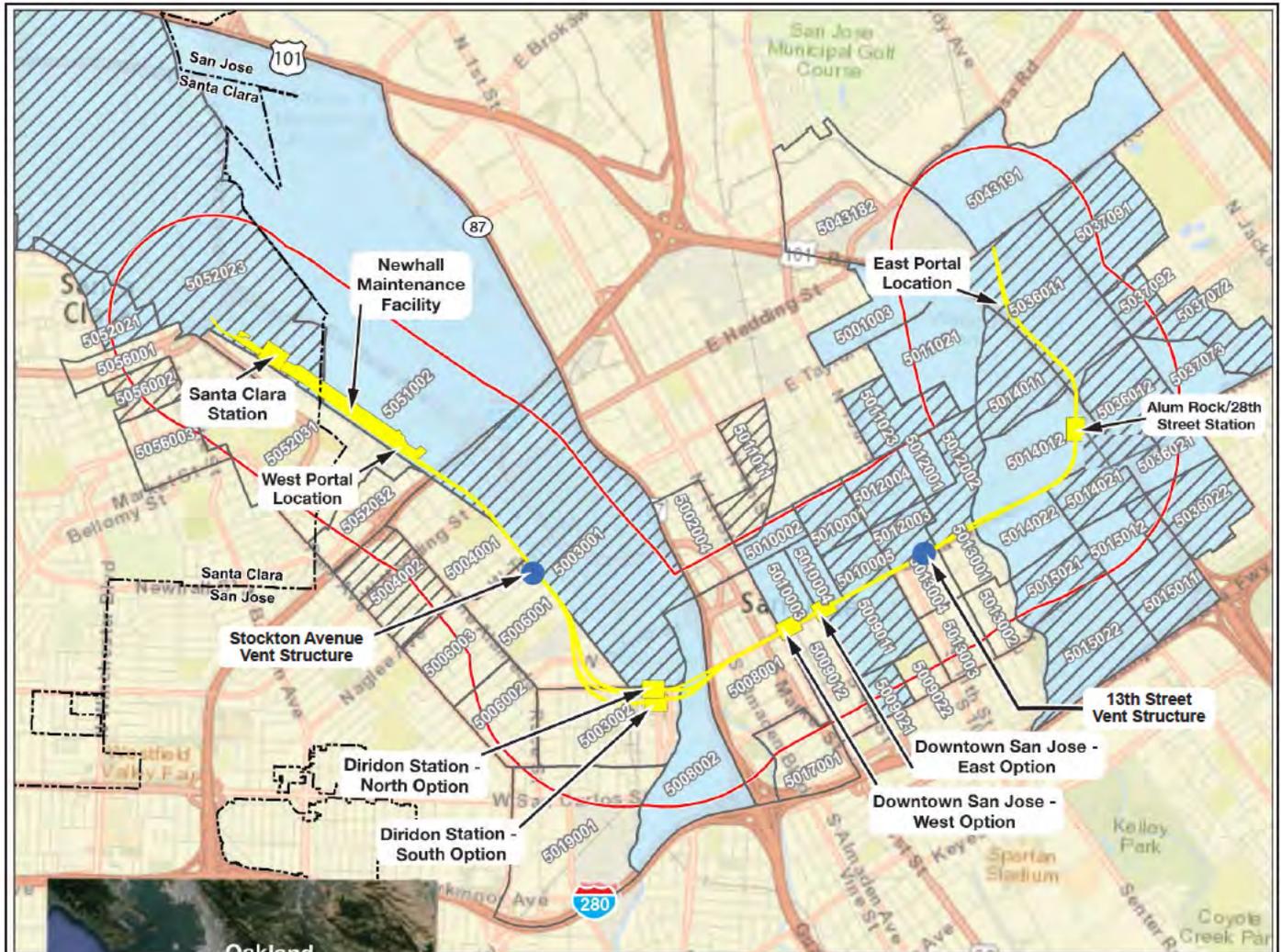
The average median household income of the overall study area is \$61,063 per year, and 13 percent of the study area is considered to be low income. For comparison, the Cities of San Jose and Santa Clara median household income is \$83,787 and \$93,840 per year, respectively; the percent low income is 12 and 9 percent, respectively.

## Environmental Justice Populations

Figure 4.18-5 summarizes the geographic locations (census block groups) of the populations with the greatest concentrations of minority and low-income percentages within the study area and are considered to be environmental justice populations. Such environmental justice determinations were based on the minority and low-income criteria outlined above in the *Minority Population* and *Low-Income* subsections. If the minority population percentage exceeded the threshold of the city in which they are located (San Jose at 71 percent and Santa Clara at 64 percent) or if the low-income population exceeded the threshold of the city (San Jose at 12 percent and Santa Clara at 9 percent), the population would be considered an environmental justice population. If the population did not exceed such thresholds, the population would not be considered an environmental justice population.

As described above, the census block groups identified in bold in Tables 4.18-3 and 4.18-5 exceed the minority and low-income population percentage thresholds of the city in which they are located and are therefore considered environmental justice populations. These environmental justice populations are shown in Figure 4.18-5. The minority environmental justice populations are shown in blue, and the low-income environmental justice populations are shown with a cross hatching. The section below describes each of the BART Extension elements and the environmental justice populations that surround each elements.

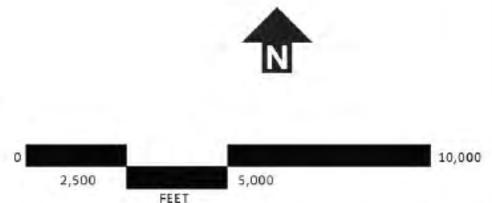
Potential adverse effects on these populations are analyzed in Section 4.18.4, *Environmental Consequences and Mitigation Measures*, along with whether such effects would be disproportionately high and adverse.



**Legend**

- BART Extension Alignment
- 0.5-Mile Study Area
- Census Block Groups
- Environmental Justice Minority Block Groups
- Environmental Justice Low-Income Block Group
- Station
- Vent Structure

Note: Identified environmental justice block groups in this figure exceeded the low-income and/or minority percentages of the city they are located.



Source: Circlepoint, 2016.

**Figure 4.18-5**  
**Environmental Justice Communities**  
VTA's BART Silicon Valley-Phase II Extension Project

### **BART Extension Alignment from East to West**

At the eastern end of the BART Extension Alternative, the extension would be at grade where it would connect to the Phase I Extension before diving underground into a tunnel and crossing under U.S. 101 and into the underground station at Alum Rock/28<sup>th</sup> Street Station. Aboveground station elements at the Alum Rock/28<sup>th</sup> Street Station would include station entrances, systems facilities, and a parking garage. The area surrounding the aboveground tracks on the east side of U.S. 101 is almost entirely industrial, and the area surrounding the proposed Alum Rock/28<sup>th</sup> Street Station contains mostly residential neighborhoods between Julian Street and Santa Clara Street. As shown in Figure 4.18-5, the census block groups surrounding the alignment between Mabury Road and Santa Clara Street exceed the minority and low-income population percentage thresholds of the City of San Jose and are therefore considered to be environmental justice populations.

The alignment would remain underground starting at Alum Rock/28<sup>th</sup> Street Station and would reemerge north of Interstate (I-) 880 at the proposed Newhall Maintenance Facility and Santa Clara Station. However, other BART Extension features such as mid-tunnel ventilation structures and station facilities, including entrances, systems facilities, and parking, would be above ground. The surrounding land uses and presence of environmental justice populations are described in detail below.

The alignment would curve west from Alum Rock/28<sup>th</sup> Street Station and line up directly under Santa Clara Street as it travels west toward downtown San Jose. An aboveground ventilation structure is proposed at 13<sup>th</sup> Street on the north side of Santa Clara Street. The area surrounding the ventilation structure is mostly commercial along Santa Clara Street and residential to the north and south. As shown in Figure 4.18-5, the census block groups located immediately adjacent to this vent structure and north of Santa Clara Street exceed the minority and low-income population percentage thresholds of the City of San Jose and are, therefore, considered to be environmental justice populations. Census block groups south of Santa Clara Street and across from the 13<sup>th</sup> Street Ventilation Structure do not exceed the minority or low-income population percentage thresholds of the City of San Jose and are, therefore, not considered to be environmental justice populations.

The alignment would continue west to the Downtown San Jose Station East and West Options. The areas that surround these station options are predominantly commercial interspersed with residential uses. While both options would be below ground, station entrances and systems facilities would be aboveground.

For the East Option, as shown in Figure 4.18-5, most of the census block groups (except the southwest block group) adjoining the aboveground station have minority populations that exceed the City of San Jose's minority population percentage thresholds and are, therefore, considered to be environmental justice populations. The census block groups to the east and south of the station have low-income populations that exceed the City of San Jose's low-income population percentage thresholds; therefore, these populations are considered to be environmental justice populations. The other census block groups adjacent to the East Option

do not exceed the City of San Jose's minority or low-income population percentage thresholds and are, therefore, not considered environmental justice populations.

For the West Option, only the census block group to the north exceeds the City of San Jose's minority population percentage thresholds and is, therefore, considered an environmental justice population. However, none of the census block groups surrounding the West Option exceed the City of San Jose's minority or low-income population percentage thresholds; therefore, these are not considered low-income environmental justice populations.

The alignment would continue west, pass under State Route 87, and enter the proposed Diridon Station South and North Options underground, but both options would include aboveground system facilities, station entrances, and a reconstructed bus transit center. The land uses within and around the Diridon Station South and North Options include the Caltrain Station and associated tracks to the west, the SAP Center to the North, residential and industrial uses to the south, and commercial/office establishments to the east.

For the Diridon Station South and North Options, the census block groups to the north and east exceed the City of San Jose's minority population percentage thresholds, and the census block group to the north also exceeds the City of San Jose's low-income population percentage thresholds; therefore, these census block groups are considered environmental justice populations. The other census block groups do not exceed the City of San Jose's minority or low-income population percentage thresholds and are, therefore, not considered environmental justice populations.

The alignment would continue west then swing northwest and line up under Stockton Avenue south of I-880. The Stockton Ventilation Structure would be located at Stockton Avenue south of Taylor Street. Land uses to the north, east, and southeast of the Stockton Avenue Vent Structure are mostly industrial and commercial uses. The census block group to the north and east exceeds the City of San Jose's minority and low-income population percentage thresholds; therefore, it is considered to be an environmental justice population. The census block groups to the west and southwest do not exceed the City of San Jose's minority or low-income population percentage thresholds. Therefore, they are not considered environmental justice populations.

The alignment would continue northwest, pass under I-880, and enter into the Newhall Maintenance Facility and Santa Clara Station, both of which would be aboveground and located within an industrial area with some residential uses to the southwest, south, and southeast.

The Newhall Maintenance Facility is located within the City of San Jose and City of Santa Clara. The census block groups to the north, northeast, and east of the Newhall Maintenance Facility exceed the City of San Jose and the City of Santa Clara's minority and low-income population percentage thresholds and are, therefore, considered environmental justice populations. The census block groups to the southwest and south do not exceed the City of

San Jose or the City of Santa Clara's minority or low-income population percentage thresholds; therefore, they are not considered environmental justice populations.

The Santa Clara Station is located within the City of Santa Clara. The census block groups to the southwest and south of the station do not exceed Santa Clara's minority or low-income population percentage thresholds; therefore, they are not considered environmental justice populations. However, census block groups to the north, northeast, and east exceed the City of Santa Clara's minority and low-income population percentage thresholds and are, therefore, considered environmental justice populations.

#### **4.18.2.2 Regulatory Setting**

The following federal regulations are applicable to the BART Extension Alternative.

##### **Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations**

Executive Order (EO) 12898 directs federal agencies to “promote nondiscrimination in Federal programs substantially affecting human health and the environment, and provide minority and low-income communities’ access to public information on, and an opportunity for public participation in, matters related to human health or the environment.” The order directs agencies to use existing law to ensure that when they act:

- They do not discriminate on the basis of race, color, or national origin.
- They ensure public participation.
- They identify and address disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations.

Environmental Justice is defined as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, adoption, implementation and enforcement of environmental laws and policies.” (California Senate Bill 115, Solis.)

##### **Federal Transit Administration Circular 4703.1**

The Federal Transit Administration (FTA) Circular 4703.1 (August 2012), *Environmental Justice Policy Guidance for Federal Transit Administration Recipients*, provides recipients of FTA financial assistance with guidance in order to incorporate environmental justice principles into plans, projects, and activities that receive funding from FTA. The Circular provides guidance in addressing, as appropriate, disproportionately adverse human health or environmental effects of programs, policies, and activities on minority populations and/or low-income populations. Environmental justice and non-discrimination principles are incorporated into decision-making processes.

## U.S. Department of Transportation Order 5610.2(a)

The U.S. Department of Transportation (USDOT) Order 5610.2(a) (updated May 2012), *Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, sets forth the USDOT policy to consider environmental justice principles in all USDOT programs, policies, and activities. It describes how the objectives of environmental justice will be integrated into planning and programming, rulemaking, and policy formulation.

### 4.18.3 Methodology

Potential effects on environmental justice populations are measured by intensity using the terms *adverse effect* and *disproportionately high and adverse effect*, which are defined as follows.

- An *adverse effect* on minority and low-income populations means the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to:
  - Bodily impairment, infirmity, illness or death;
  - Air, noise, and water pollution and soil contamination;
  - Destruction or disruption of human-made or natural resources;
  - Destruction or diminution of aesthetic values;
  - Destruction or disruption of community cohesion or a community's economic vitality;
  - Destruction or disruption of the availability of public and private facilities and services;
  - Vibration;
  - Adverse employment effects;
  - Displacement of persons, businesses, farms, or nonprofit organizations;
  - Increased traffic congestion, isolation, exclusion, or separation of minority or low-income individuals within a given community or from the broader community; and
  - The denial of, reduction in, or significant delay in the receipt of, benefits of USDOT programs, policies, or activities.
- A *disproportionately high and adverse effect* on minority and low-income populations means an adverse effect that:
  1. Is predominately borne by a minority population and/or a low-income population, or
  2. Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

## 4.18.4 Environmental Consequences and Mitigation Measures

### 4.18.4.1 No Build Alternative

The No Build Alternative consists of the existing transit and roadway networks and planned and programmed improvements (see Chapter 2, Section 2.2.1, *NEPA No Build Alternative*, for a list of these projects). These projects would likely result in effects on environmental justice typically associated with transit, highway, bicycle, and pedestrian facilities and roadway projects. Projects planned under the No Build Alternative would undergo separate environmental review to determine whether the projects would adversely affect environmental justice, which would include an analysis of mitigation measures to mitigate potential impacts on environmental justice. With the No Build Alternative, land uses along the alignment would be built out in accordance with the Cities of San Jose and Santa Clara General Plans, which would include residential, commercial, and industrial projects, but not the BART Extension and its associated accessibility enhancements and transportation options.

### 4.18.4.2 BART Extension Alternative

#### Resource Areas with No Adverse Effects

The resource topics below would have no disproportionately high and adverse effect on environmental justice populations.

##### **Air Quality**

Once operational, the BART Extension would reduce the amount of air quality emissions generated in the region. This benefit is directly related to the BART Extension encouraging a transportation modal shift from single-occupancy vehicles toward transit. No operational adverse effects were identified for air quality; therefore, *no disproportionately high and adverse effects* would occur on environmental justice populations, and this topic is not discussed further.

##### **Electromagnetic Fields**

No operational adverse effects were identified for electromagnetic field generation; therefore, *no disproportionately high and adverse effects* would occur on environmental justice populations, and this topic is not discussed further.

##### **Hazardous Materials**

No operational adverse effects were identified for hazardous materials; therefore, *no disproportionately high and adverse effects* would occur on environmental justice populations, and this topic is not discussed further.

### **Socioeconomics**

No operational adverse effects were identified for socioeconomics; therefore, *no disproportionately high and adverse effects* would occur on environmental justice populations, and this topic is not discussed further.

### **Transportation**

No operational adverse effects were identified for transit, bicycle/pedestrian facilities, and vehicles; therefore, *no disproportionately high and adverse effects* would occur on environmental justice populations, and this topic is not discussed further.

### **Visual Quality**

No operational adverse effects were identified for visual quality; therefore, *no disproportionately high and adverse effects* would occur on environmental justice populations, and this topic is not discussed further.

### **Water Resources, Water Quality, and Floodplains**

No operational adverse effects were identified for water resources, water quality, and floodplains; therefore, *no disproportionately high and adverse effects* would occur on environmental justice populations, and this topic is not discussed further.

## **Resource Areas with Potential Adverse Effects**

The resource topics below would have potential to have a disproportionately high and adverse effect on environmental justice populations; however, mitigation would reduce the potential effect so it would not be appreciably more severe or greater in magnitude than the adverse effect on non-environmental justice populations.

### **Noise and Vibration**

The BART Extension has the potential to cause adverse effects resulting from operational airborne noise and operational groundborne noise as discussed below. No potential adverse effects are anticipated from operational vibration.

Airborne noise impacts from train operations can occur where trains are running on track aboveground, at ventilation facilities where train noise is transmitted to the surface from the tunnel below, and from storage yard tracks and maintenance facility activities. Aboveground BART operations on at-grade track north of I-880 would result in a Moderate Noise Impact at one ground-floor receiver and two second-story receivers near the Santa Clara Station. However, the increases are 2 dBA or less, which is not a readily perceived amount. Therefore, no mitigation is proposed.

Operation of emergency ventilation fans, piston relief shafts, traction power substations, and emergency backup generators could result in exceedances of Cities of San Jose and Santa Clara noise criteria at nearby residences, which would be considered an adverse effect due to

airborne noise. However, with implementation of Mitigation Measure NV-A, described in Section 4.12, *Noise and Vibration*, this impact would have no adverse effect.

Train operations in the tunnel are predicted to result in exceedance of FTA groundborne noise criteria at many receptor locations, which would be considered an adverse effect. However, with implementation of Mitigation Measures NV-B and NV-C, this impact would have no adverse effect.

As described, the study area is composed of predominantly environmental justice populations interspersed among non-environmental justice populations. The BART Extension is predicted to cause potential airborne noise effects from aboveground BART Extension elements and potential groundborne noise effects from underground train operations within or immediately adjacent to environmental justice populations and non-environmental justice populations. However, mitigation would reduce potential airborne and groundborne noise effects; therefore, these impacts would have no adverse effect. The BART Extension operations do not result in any vibration impacts. Consequently, following mitigation, *no disproportionately high and adverse effects* on environmental justice populations would occur.

## Community Outreach Efforts

VTA has taken measures to ensure the public is aware and has been engaged during the design period of the BART Extension. VTA displayed advertisements in the local newspapers, mailed individuals located within the vicinity of the alignment, emailed VTA's web recipients, posted on social media, and issued press releases to announce the BART Extension and held public meetings during the scoping period. The mailers were sent to 58,000 recipients within a 0.25-mile radius of the alignment and within a 1-mile radius of stations. The mailers were translated into five languages (Spanish, Vietnamese, Korean, Chinese, and Portuguese). All of these outreach efforts included a method to contact VTA with concerns or comments. These efforts are further outlined in the *Environmental Scoping Report*.

VTA conducted three scoping meetings to gather input from the community which provided information to the community and initiated public involvement in the environmental review process (see Chapter 10, *Agency and Community Participation*). The community offered suggestions and concerns at several public forums, including scoping meetings. During the scoping process, VTA invited the community to provide input on the BART Extension. The community offered suggestions and voiced concerns related to several BART Extension components. Such community input has helped to guide the development, particularly for aboveground station areas, to minimize adverse community effects of the BART Extension. The main concerns of the community were regarding parking constraints, traffic congestion, entry points of the stations, pedestrian safety, gentrification, displacement, and potential impacts on Five Wounds Church and Cristo Rey San Jose Jesuit High School. The community was also concerned about construction effects of the BART Extension regarding

dust, air quality, and noise. The community also requested understanding of how all of these potential concerns would affect environmental justice populations.

VTA took this community feedback into consideration while determining the most feasible alignment. The BART Extension would expand BART service to the greater San Jose and Santa Clara community, thereby increasing connectivity in the regional San Francisco Bay Area, which would be a direct benefit of this same community. Implementation would facilitate residential and employment growth and infill development planned for the regional area.

## 4.18.5 NEPA Conclusion

As described above, operation of the BART Extension Alternative would not result in adverse effects regarding air quality; electromagnetic fields; hazardous materials, socioeconomics, transportation; visual quality; and water resources, water quality, and floodplains.

Operation of the BART Extension Alternative would result in potential adverse effects regarding noise and vibration. As described, VTA would implement mitigation that would reduce potential effects to a level such that *no adverse effects* would occur. The BART Extension Alternative would expand BART service to the greater San Jose and Santa Clara community, thereby increasing connectivity in the regional San Francisco Bay Area. The BART Extension would create direct and indirect jobs associated with operations that would provide new employment opportunities for all populations including environmental justice populations. Implementation of the BART Extension would facilitate residential and employment growth and infill development planned for the area. Once in operation, the BART Extension Alternative would increase regional mass transit access and reduce air pollutant emissions by shifting more users to public transit. Such effects would benefit environmental justice and non-environmental justice populations. Furthermore, VTA has taken measures to ensure the public is aware of the BART Phase II Project and engaged in the implementation process. With the community outreach efforts that have occurred to-date and with implementation of mitigation, the BART Extension Alternative would not result in adverse effects. Accordingly, *no disproportionately high and adverse effects* from operation of the BART Extension Alternative would result for environmental justice populations.

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