# D. POPULATION AND HOUSING

## 1. Introduction

This section describes the setting and existing conditions with regard to population and housing as they relate to BART to Livermore Extension Project, discusses regulations relevant to population and housing, and assesses the potential impacts to population and housing from construction and operation of the Proposed Project and Alternatives. Future population, housing, and employment projections are presented, and potential impacts of the Proposed Project and Alternatives on housing supply and population are analyzed.

The study area for population impacts is defined as the cities of Dublin, Pleasanton, and Livermore, as well as Alameda County as a whole. The study area for the analysis of potential impacts related to displacement of people, housing, or businesses is limited to the collective footprint—the combined footprints of the Proposed Project, DMU Alternative, and Express Bus/BRT Alternative. The bus routes and bus infrastructure improvements for the Enhanced Bus Alternative, as well as for the feeder buses for the Proposed Project and other Build Alternatives, which are anticipated to extend along existing streets and within the street ROWs, are addressed programmatically in this analysis, as described in Chapter 2, Project Description.

Data for existing conditions are based on several sources, which vary depending on the topic. Population, housing, age, and income data presented in this section at the county and city level are based on the 2010–2014 American Community Survey, a multi-year estimate that represents information collected over the course of each year and then aggregated over the 5-year survey period; i.e., these data are not estimates for only 2014 (or any single interim year), but rather the entirety of 2010 to 2014.[1] Housing data presented for Priority Development Areas (PDAs) represent existing conditions in 2010 and are based on the Association of Bay Area Governments' (ABAG) and Metropolitan Transportation Commission's (MTC) Final Forecast of Jobs, Population, and Housing[2] and Plan Bay Area Projections 2013, a supplementary report for the region's long range transportation and land use plan, known as Plan Bay Area.[3] Employment data presented in

[1] U.S. Census Bureau, 2014. 2010-2014 American Community Survey 5-Year Estimates. Available at: https://factfinder.census.gov/.

[2] Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), 2013. Draft Plan Bay Area, Final Forecast of Jobs, Population and Housing, July.

[3] Association of Bay Area Governments (ABAG), 2013. Plan Bay Area Projections 2013.

this section are based on the 2012 Economic Census and related programs and represent existing conditions in 2012.[4, 5]

Data for future years (2025 and 2040) are based on population, housing, and employment projections from the Final Forecast of Jobs, Population, and Housing and Plan Bay Area Projections 2013.[6, 7]

No scoping comments pertaining to population and housing were received in response to the Notice of Preparation for this EIR or during the public scoping meeting held for the EIR.

## 2. Existing Conditions

This subsection describes the existing population, housing, and employment characteristics in the study area, followed by population, housing, and employment projections for 2025 and 2040.

### a. Existing Characteristics

Demographic characteristics of BART riders are provided below, followed by the population, housing, and employment characteristics for the study area.

#### (1) BART Rider Characteristics

BART serves a wide range of customers. BART's 2015 Station Profile Study provides demographic information regarding the riders throughout the BART system. Over 44,000 BART riders were surveyed on weekdays at all the stations in the system. Relevant characteristics of the riders are described for comparison with the demographic information for the study area.

The following information is provided as a percent of the riders surveyed:[8]

- **Persons per Household**. The highest percentage of BART riders (31 percent) have two people in their household followed by: 24 percent in three-person households;

[4] U.S. Census Bureau, 2012. Economic Census and 2012 Non-employer Statistics. Available at: https://www.census.gov/programs-surveys/economic-census.html.

[5] Some of the data were in the form of employment ranges rather than discrete numbers; in these cases, the median of the range was used.

[6] Association of Bay Area Governments (ABAG), 2013. Plan Bay Area Projections 2013.

[7] Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), 2013. Draft Plan Bay Area, Final Forecast of Jobs, Population and Housing, July.

[8] San Francisco Bay Area Rapid Transit District (BART), Office of External Affairs, 2015. BART Station Profile Study, Preliminary Data. Available at: http://www.bart.gov/about/reports/profile, accessed March 2, 2017.

20 percent in four-person households; 13 percent of BART riders have five or more people in their households; and 13 percent have one person in their household.[9]

- **Household Income.** Approximately 26 percent of BART riders reported total annual household incomes of less than $50,000; 28 percent had incomes between $50,000 and $74,999; and 46 percent had incomes of $75,000 or more.
- **Age.** Approximately 74 percent of riders are under age 45.
- **Household Vehicle Ownership.** Approximately 13 percent of BART riders have no vehicle within their household.

### (2) Population and Housing

The demographic profile for the study area is summarized below and shown in Table 3.D-1.

**TABLE 3.D-1 EXISTING DEMOGRAPHIC PROFILE FOR THE STUDY AREA**

| | Alameda County | Dublin | Pleasanton | Livermore |
|---|---|---|---|---|
| **Population** | | | | |
| Persons | 1,559,308 | 49,694 | 73,164 | 83,901 |
| Households | 551,734 | 16,476 | 25,222 | 29,956 |
| Persons per Household | 2.77 | 2.78 | 2.89 | 2.79 |
| **Housing** | | | | |
| Housing Units | 587,071 | 17,248 | 26,079 | 31,281 |
| Home Ownership | 53% | 63% | 70% | 69% |
| Vacancy Rate | 6.0% | 4.5% | 3.3% | 4.2% |
| **Median Age and Income** | | | | |
| Household Income | $73,775 | $114,699 | $123,608 | $99,683 |
| Age | 36.9 | 36.3 | 40.6 | 39.3 |

Note: Existing demographics are shown for 2010 to 2014 and represent the entire 5-year period rather than a specific year.
Source: U.S. Census Bureau, 2014.

- **Population and Households.** Alameda County has 1,559,308 residents and 551,734 households. Dublin has 49,694 residents and 16,476 households, Pleasanton has 73,164 residents and 25,222 households, and Livermore has 83,901 residents and 29,956 households.

[9] Total percentage exceeds 100 percent due to rounding.

- **Household Size.** Compared to the countywide average household size (2.77 persons), the cities in the study area have slightly larger household sizes. Dublin and Livermore have average household sizes of 2.78 and 2.79 persons, respectively. The city of Pleasanton has the largest household size at 2.89 persons.
- **Housing Units.** Alameda County has 587,071 housing units. Dublin has the fewest housing units (17,248), while Pleasanton and Livermore have 26,079 and 31,281 housing units, respectively.
- **Homeownership.** Compared to the rate of homeownership in Alameda County (53 percent), the cities of Dublin, Pleasanton, and Livermore have higher rates of homeownership. Dublin, Pleasanton, and Livermore have homeownership rates of 63 percent, 70 percent, and 69 percent, respectively. Additionally, all three cities have vacancy rates of 3 to 4 percent, compared to Alameda County's vacancy rate of 6 percent, suggesting a higher demand for housing in the three cities.
- **Household Income.** The cities in the study area have higher household incomes than Alameda County as a whole. Specifically, Dublin, Pleasanton, and Livermore have median household incomes of approximately $114,699, $123,608, and $99,683, respectively, compared to the county median of $73,775.
- **Age.** The median age in Alameda County is 36.9 years. Dublin has a median age of 36.3 years, while Pleasanton and Livermore have a slightly higher median age, at 40.6 years and 39.3 years, respectively.

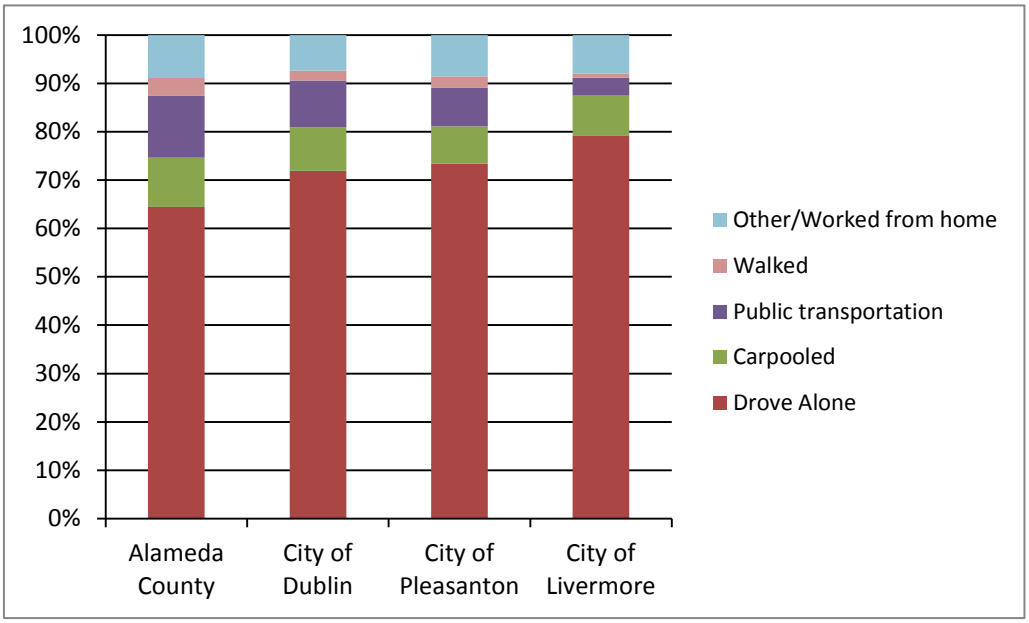
Chart 3.D-1 shows information about how people within the study area commute to work. Within Alameda County, 64 percent of residents commute to work in a single-occupancy vehicle whereas 13 percent of residents use transit. Between 72 to 79 percent of residents in Dublin, Pleasanton, and Livermore commute to work by single-occupancy vehicle—higher than the rate in Alameda County. Livermore has the highest level of commuting in a single-occupancy vehicle at 79.1 percent. Dublin has the highest rate of commuting by transit, at approximately 10 percent, and Livermore has the lowest rate of commuting by transit at 4 percent.

### (3) Employment

As of 2012, there were approximately 746,688 jobs in Alameda County, 19,138 jobs in Dublin, 64,152 jobs in Pleasanton, and 44,953 jobs in Livermore.[10] The largest employers or industries in the study area are described below, first for the County, then for the cities.

[10] U.S. Census Bureau, 2012. Economic Census and 2012 Non-employer Statistics. Available at: https://www.census.gov/programs-surveys/economic-census.html.

CHART 3.D-1 JOURNEY TO WORK DATA FOR THE STUDY AREA




Note: This data was collected over a period between 2010 and 2014 and represents the entire 5-year period rather than a specific year.
Source: U.S. Census Bureau, 2014.

The largest employers in Alameda County (that are not within the cities of Dublin, Pleasanton, and Livermore) include:[11]

- Alameda County Law Enforcement
- Alameda County Sheriff's Office
- Alta Bates Summit Medical Center
- Bayer Health Care
- Children's Hospital and Research Center
- Coopervision Inc. Advanced
- East Bay Water
- EMC Corp
- Grifols Diagnostic Solutions
- Highland Hospital
- Kaiser Oakland
- Lawrence Berkeley National Lab
- Life Scan Inc.
- Merritt Pavilion Lab
- Residential Students Service Program
- Tesla Motors
- Transportation Department-California
- University of California-Berkeley
- Washington Hospital Healthcare System
- Western Digital Corporation

In the city of Dublin, the following industries provide the greatest number of jobs: retail trade, accommodation and food services, food services and drinking places,

[11] State of California Employment Development Department (EDD), 2017. Major Employers in Alameda County. Available at: http://www.labormarketinfo.edd.ca.gov/majorer/countymajorer.asp?CountyCode=000001, accessed March 1.

manufacturing, healthcare and social assistance, construction, ambulatory health care services, educational services, motor vehicle and parts dealers, and public administration.[12]

In the city of Pleasanton, the major employers include the following (listed by greatest number of employees to least):[13]

1. Kaiser Permanente
2. Safeway
3. Workday Incorporated
4. Oracle
5. Pleasanton Unified School District
6. Valley Care Medical Center
7. Clorox Service Company
8. Macy's
9. Ross
10. State Fund – Compensation Insurance
11. EMC Corporation
12. Hendrick Automotive
13. City of Pleasanton
14. Roche Molecular Systems Inc.
15. Thoratec Corporation

In the city of Livermore, major employers are as follows:[14]

- Alere Home Monitoring
- City of Livermore
- Costco Wholesale Corp
- JW Peterson Painting
- Kaiser Permanente
- Lam Research
- Las Positas College
- Lawrence Livermore National Laboratory
- Livermore Area Recreation and Parks District
- Livermore Valley Joint Unified School District
- Performant Financial Corporation
- RGW Construction
- Sandia National Laboratories
- Topcon Positioning Systems
- US Foods
- Valley Care Health System
- Wente

[12] City of Dublin, 2016. Business Facts: Three-Digit NAICS Summary 2016. Available at: www.dublin.ca.gov/DocumentCenter/View/1761, accessed November 21.

[13] City of Pleasanton, 2013. Pleasanton Economic Development Strategic Plan, Background Report. Prepared by Strategic Economics. August.

[14] City of Livermore, 2016a. Major Employers. Available at: www.cityoflivermore.net/citygov/ed/why/majorbiz.htm, accessed August 23, 2016.

### b. Projections

Projections for population, housing, and employment within the study area are discussed below.

#### (1) Population, Households, and Housing Units

Population and household projections are described below for both 2025 and 2040, and housing unit projections are described for 2040. This discussion focuses on the projected change between existing conditions and 2040.

As shown in Tables 3.D-2 and 3.D-3, by 2040, Alameda County as a whole is projected to add the following: approximately 428,592 residents, an increase of 27 percent; approximately 153,596 households, an increase of 28 percent; and approximately 143,469 housing units, an increase of 24 percent. Of the three cities, Dublin is projected to experience the greatest percentage growth as demonstrated below.[15, 16]

**TABLE 3.D-2 EXISTING AND PROJECTED POPULATION AND HOUSEHOLDS, BY JURISDICTION**

| | | | | Change (Existing to 2040) | |
|---|---|---|---|---|---|
| **Jurisdiction** | **Existing** | **2025** | **2040** | **Increase** | **Percent** |
| **Population** | | | | | |
| Alameda County (Total) | 1,559,308 | 1,730,100 | 1,987,900 | 428,592 | 27 |
| Dublin | 49,694 | 58,700 | 73,800 | 24,106 | 49 |
| Pleasanton | 73,164 | 80,200 | 91,800 | 18,636 | 25 |
| Livermore | 83,901 | 91,700 | 104,300 | 20,399 | 24 |
| **Households** | | | | | |
| Alameda County (Total) | 551,734 | 624,300 | 705,330 | 153,596 | 28 |
| Dublin | 16,476 | 19,200 | 23,610 | 7,134 | 43 |
| Pleasanton | 25,222 | 28,730 | 32,300 | 7,078 | 28 |
| Livermore | 29,956 | 33,970 | 38,940 | 8,984 | 30 |

Note: Existing population and households are shown for 2010 to 2014 and represent the entire 5-year period rather than a specific year.
Sources: For existing data - U.S. Census Bureau, 2014.
For 2025 and 2040 data - ABAG, 2013.

[15] U.S. Census Bureau, 2014. 2010-2014 American Community Survey 5-Year Estimates. Available at: https://factfinder.census.gov/.
[16] Association of Bay Area Governments (ABAG), 2013. Plan Bay Area Projections 2013.

**TABLE 3.D-3 EXISTING AND PROJECTED HOUSING UNITS, BY JURISDICTION**

| | | | Change (Existing to 2040) | |
|---|---|---|---|---|
| **Jurisdiction** | **Existing** | **2040** | **Increase** | **Percent** |
| Alameda County (Total) | 587,071 | 730,540 | 143,469 | 24 |
| Dublin | 17,248 | 24,320 | 7,072 | 41 |
| Pleasanton | 26,079 | 33,160 | 7,081 | 27 |
| Livermore | 31,281 | 40,040 | 8,759 | 28 |

Note: Existing housing units are shown for 2010 to 2014 and represent the entire 5-year period rather than a specific year.
Sources: For existing data: U.S. Census Bureau, 2014.
For 2040 data: ABAG and MTC, 2013.

The cities in the study area are projected to grow as follows:

- Dublin is projected to add 24,106 residents, an increase of 49 percent from 2014; approximately 7,134 households, an increase of 43 percent; and approximately 7,072 housing units, an increase of 41 percent.
- Pleasanton is projected to add 18,636 residents, an increase of 25 percent from 2014; approximately 7,078 households, an increase of 28 percent; and approximately 7,081 housing units, an increase of 27 percent.
- Livermore is projected to add 20,399 residents, an increase of 24 percent from 2014; approximately 8,984 households, an increase of 30 percent; and approximately 8,759 housing units, an increase of 28 percent.

Much of this projected growth is anticipated to occur in areas referred to as PDAs. PDAs are areas within existing communities that local city or county governments have identified and approved for future growth. Within the nine-county Bay Area, 78 percent of new housing and 62 percent of new jobs are anticipated to be developed in PDAs.[17] Within the study area, there are seven PDAs as follows: three in Dublin, one in Pleasanton, and three in Livermore. Due to the nature of the Proposed Project, which would extend the BART service 5.5 miles to the east of Dublin/Pleasanton Station to a new terminus station at Isabel Avenue (see Chapter 2, Project Description), this discussion focuses on the PDAs in the city of Livermore. These PDAs are: (1) Livermore Downtown PDA, (2) Livermore East Side PDA, and (3) Livermore Isabel Avenue BART Station PDA, the location of the proposed Isabel Station and proposed Isabel Neighborhood Plan (INP). The housing and population

[17] Ibid.

numbers presented below for the Livermore Isabel Avenue BART Station PDA do not include growth related to the Isabel Station or INP. See Section 3.C, Land Use and Agricultural Resources, for further discussion of these PDAs, which are shown in Figure 3.C-10.

Table 3.D-4 shows existing and projected housing units in the city of Livermore and its PDAs. Between 2010 and 2040, the city of Livermore PDAs are projected to experience the greatest growth in housing units, compared to the remainder of the city of Livermore. The Livermore East Side PDA is projected to have the greatest increase, with approximately 4,270 new housing units by 2040. The Livermore Isabel Avenue BART Station PDA is projected to add approximately 3,470 units and the Livermore Downtown PDA is anticipated to add 1,670 housing units. The remainder of the city is projected to grow by only 290 housing units. The proposed INP, described in Section 3.A, Introduction to Environmental Analysis, provides for additional growth in the Livermore Isabel Avenue BART Station PDA, as shown in Table 3.A-2. Therefore, projected housing units in 2040 for the Livermore Isabel Avenue BART Station PDA would be greater than shown below if the INP is adopted.

**TABLE 3.D-4 EXISTING AND PROJECTED HOUSING UNITS IN LIVERMORE AND ITS PRIORITY DEVELOPMENT AREAS**

| PDA / Location | Existing | 2040 | Change (Existing to 2040) |
|---|---|---|---|
| Livermore Isabel Avenue BART Station PDA | 530 | 4,000 | 3,470 |
| Livermore East Side PDA | 100 | 4,370 | 4,270 |
| Livermore Downtown PDA | 1,020 | 2,690 | 1,670 |
| Remainder of City of Livermore | 28,690 | 28,980 | 290 |
| **Total for City of Livermore** | **30,340** | **40,040** | **9,700** |

Notes: PDA = Priority Development Area.
Existing housing units are shown for 2010.
For projected growth in the Livermore Isabel Avenue BART Station PDA related to the proposed INP, see Table 3.A-2 in Section 3.A, Introduction to Environmental Analysis.
Source: ABAG and MTC, 2013.

### (2) Employment

Table 3.D-5 presents employment projections for Alameda County and the cities of Dublin, Pleasanton, and Livermore. Alameda County is expected to add 200,962 jobs by 2040, an increase of 27 percent.

**TABLE 3.D-5 EXISTING AND PROJECTED JOBS, BY JURISDICTION**

| | | | | Change (Existing to 2040) | |
|---|---|---|---|---|---|
| **Jurisdiction** | **Existing** | **2025** | **2040** | **Increase** | **Percent** |
| Alameda County (Total) | 746,688 | 850,610 | 947,650 | 200,962 | 27 |
| Dublin | 19,138 | 25,620 | 31,650 | 12,512 | 65 |
| Pleasanton | 64,152 | 64,320 | 69,640 | 5,488 | 9 |
| Livermore | 44,953 | 47,860 | 53,210 | 8,257 | 18 |

Sources: Existing jobs - U.S. Census Bureau, 2012.
2025 and 2040 jobs - ABAG, 2013.

The cities in the study area are projected to grow as follows:

- Dublin is anticipated to add 12,512 jobs, representing a 65 percent increase.
- Pleasanton is expected to add 5,488 jobs by 2040, an increase of 9 percent.
- Livermore is projected to add approximately 8,257 jobs by 2040, an increase of 18 percent.

## 3. Regulatory Framework

This subsection describes the state environmental laws and policies relevant to population and housing. Applicable land use policies and regulations that affect growth are discussed in Section 3.C, Land Use and Agricultural Resources.

### a. California Relocation Assistance and Real Property Acquisition Guidelines

As described in the Environmental Analysis subsection below, the Proposed Project and Build Alternatives would require acquisition of land. Title 25 of the California Code of Regulations, Chapter 6, Section 6000 et seq, referred to as California Relocation Assistance and Real Property Acquisition Guidelines requires that relocation assistance be provided to any person, business, or farm operation displaced due to the acquisition of real property by a public entity for public use.[18] In addition, comparable replacement properties must be available for each displaced person within a reasonable period of time prior to displacement. Title 25 mandates that certain relocation services and payments be made available to eligible residents, businesses, and nonprofit organizations displaced by

[18] California Code of Regulations, Title 25, Chapter 6, Section 6000 et seq.

construction and operation of transit-related projects. Title 25 also establishes uniform and equitable procedures for land acquisition, and provides for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by state and state-assisted programs.

### b. Senate Bill 375

On September 30, 2008, Governor Schwarzenegger signed California State Senate Bill (SB) 375. SB 375 aims to achieve GHG emission reductions from automobiles and light trucks by using transportation and land use planning to implement smart growth principles, thereby reducing vehicle trips and the resulting GHG emissions. SB 375 creates a new regional planning mechanism, the Sustainable Communities Strategy, which promotes high-density, transit-oriented development (TOD) and creates incentives for specifically defined, high-density development projects. See Section 3.L, Greenhouse Gas Emissions, for additional information regarding SB 375.

### c. Plan Bay Area

On July 18, 2013, ABAG and MTC adopted Plan Bay Area 2013 (Plan Bay Area), an integrated transportation and land use strategy through 2040, which serves as the nine-county Bay Area's first Sustainable Communities Strategy in compliance with the requirements of SB 375. See Section 3.C, Land Use and Agricultural Resources, for additional information regarding Plan Bay Area.

## 4. Impacts and Mitigation Measures

This subsection lists the standards of significance used to assess impacts, discusses the methodology used in the analysis, summarizes the impacts, and then provides an in-depth analysis of the impacts with mitigation measures identified as appropriate.

### a. Standards of Significance

For the purposes of this EIR, impacts related to population and housing are considered significant if the Proposed Project or one of the Alternatives would result in any of the following:

- Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) not in accordance with existing community or city plans
- Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere
- Displace substantial numbers of existing businesses

### b. Impact Methodology

The methodology used to evaluate the significance of employment, population, and housing-related impacts is described below under each respective impact analysis. The Electrical Multiple Unit (EMU) Option would result in the same impacts as the Diesel Multiple Unit (DMU) Alternative, and therefore the analysis and conclusions for the DMU Alternative also apply to the EMU Option.

The analysis of the Enhanced Bus Alternative, which addresses the potential impacts of construction of the bus infrastructure improvements and operation of the bus routes at a programmatic level, would also apply to the bus improvements and feeder bus service under the Proposed Project and other Build Alternatives. Therefore, the analyses and conclusions for the Enhanced Bus Alternative also apply to the Proposed Project, DMU Alternative, and Express Bus/BRT Alternative, and are not repeated in the analysis of the Proposed Project and other Build Alternatives.

### c. Summary of Impacts

Table 3.D-6 summarizes the impacts of the Proposed Project and Alternatives described in the analysis below.

**TABLE 3.D-6 SUMMARY OF POPULATION AND HOUSING IMPACTS**

| | Significance Determinations[a] | | | | |
|---|---|---|---|---|---|
| **Impacts** | **No Project Alternative** | **Conventional BART Project[b]** | **DMU Alternative (with EMU Option)[b]** | **Express Bus/BRT Alternative[b]** | **Enhanced Bus Alternative** |
| **Construction** | | | | | |
| **Project Analysis** | | | | | |
| Impact PH-1: Induce substantial population growth during construction | NI | LS | LS | LS | LS |
| Impact PH-2: Displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere | NI | LSM | LSM | LS | NI |
| Impact PH-3: Displace substantial numbers of existing businesses during construction | NI | LSM | LSM | LSM | NI |

**TABLE 3.D-6 SUMMARY OF POPULATION AND HOUSING IMPACTS**

| Impacts | Significance Determinations[a] | | | | |
|---|---|---|---|---|---|
| | No Project Alternative | Conventional BART Project[b] | DMU Alternative (with EMU Option)[b] | Express Bus/BRT Alternative[b] | Enhanced Bus Alternative |
| **Cumulative Analysis** | | | | | |
| Impact PH-4(CU): Induce substantial population growth during construction under Cumulative Conditions | NI | LS | LS | LS | LS |
| Impact PH-5(CU): Displace substantial numbers of existing housing, people, or businesses during construction under Cumulative Conditions | NI | LS | LS | LS | NI |
| **Operational** | | | | | |
| **Project Analysis** | | | | | |
| Impact PH-6: Induce substantial population growth during operations | NI | LS | LS | LS | LS |
| **Cumulative Analysis** | | | | | |
| Impact PH-7(CU): Induce substantial population growth during operations under Cumulative Conditions | NI | LS | LS | LS | LS |

Notes: NI=No impact; LS=Less-than-Significant impact, no mitigation required; LSM=Less-than-Significant impact with mitigation.
DMU = diesel multiple unit; EMU = electrical multiple unit; BRT = bus rapid transit.
[a] All significance determinations listed in the table assume incorporation of applicable mitigation measures.
[b] The analysis of the Enhanced Bus Alternative also applies to the feeder bus service and bus improvements under the Proposed Project, DMU Alternative, and Express Bus/BRT Alternative, as described in the Impact Methodology subsection above.

### d. Environmental Analysis

Impacts related to construction are described below, followed by operations-related impacts.

#### (1) Construction Impacts

Potential impacts related to project construction are described below, followed by cumulative construction impacts.

Impacts related to displacement of housing, people, or businesses would be the same during construction and operation of the Proposed Project or Build Alternatives. Any potential displacement would commence during construction and continue during operation. Therefore, the construction-related impacts described below are considered permanent (rather than temporary). However, impacts related to inducement of substantial population growth would differ during construction and operation and are therefore discussed under both the Construction Impacts and Operational Impacts subsections.

#### (a) Construction – Project Analysis

***Impact PH-1: Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) not in accordance with existing community or city plans, during construction.***

***(No Project Alternative: NI; Conventional BART Project: LS; DMU Alternative: LS; Express Bus/BRT Alternative: LS; Enhanced Bus Alternative: LS)***

**No Project Alternative.** Under the No Project Alternative, the BART to Livermore Extension Project would not be implemented. However, planned and programmed transportation improvements for segments of Interstate (I-) 580, local roadways and intersections, and core transit service improvements for BART, Altamont Corridor Express, and the Livermore Amador Valley Transit Authority (LAVTA) would be constructed. In addition, population and employment increases throughout Alameda County would result in continued land use development, including construction of both residential and commercial uses. While construction of these improvements and development projects could induce population growth, the effects of the projects associated with the No Project Alternative have been or will be addressed in environmental documents prepared for those projects before they are implemented. Furthermore, the No Project Alternative would not result in new impacts as a consequence of the BART Board of Directors' decision not to adopt a project. Therefore, the No Project Alternative is considered to have no impact related to inducement of substantial population growth during construction. **(NI)**

**Conventional BART Project and Build Alternatives.** As described in Chapter 2, Project Description, construction of the Proposed Project and Build Alternatives is anticipated to occur over approximately 5 years. The construction workforce for the Proposed Project and DMU Alternative would be several hundred workers per day, with fewer workers for the Express Bus/BRT Alternative and Enhanced Bus Alternative. Most construction employees would be anticipated to live in the Bay Area or Central Valley region and permanent housing would typically not be needed. However, even if construction employees do obtain housing near the project site, the existing housing stock in the area would be adequate to accommodate the temporary relocation of workers, as housing vacancy rates range between 3 to 6 percent in the study area, as shown in Table 3.D-1. Construction of the Proposed Project and Build Alternatives would not result in housing and employment growth beyond that currently anticipated as part of ongoing planning efforts. Therefore, the Proposed Project and Build Alternatives would have a less-than-significant impact related to inducement of substantial population growth during construction. **(LS)**

**Mitigation Measures.** As described above, the Proposed Project and Alternatives would not result in significant impacts related to inducement of substantial population growth during construction, and no mitigation measures are required.

***Impact PH-2: Displace substantial numbers of existing housing or people necessitating the construction of replacement housing elsewhere.***

***(No Project Alternative: NI; Conventional BART Project: LSM; DMU Alternative: LSM; Express Bus/BRT Alternative: LS; Enhanced Bus Alternative: NI)***

Construction of the Proposed Project, DMU Alternative, or Express Bus/BRT Alternative would require the acquisition of partial properties, or in some cases, full properties along the project corridor, as described below. The Enhanced Bus Alternative would not require any property acquisition as it would be constructed within the existing street rights-of-way (ROWs).[19]

If partial acquisition of a parcel would leave the owner with an uneconomic remnant, then BART would offer to acquire that remnant. An uneconomic remnant is a parcel of property in which the owner is left with an interest after the partial acquisition of the owner's

[19] This EIR describes and analyzes the bus routes and bus infrastructure improvements at a programmatic level. Candidate locations for bus infrastructure improvements, anticipated to be constructed within existing street ROWs, are described to document the availability of such locations. Following implementation of the adopted project, specific routes would be developed by the bus operators based on detailed service planning. At that time, the routes and bus infrastructure improvements would be subject to subsequent environmental review if required.

property, and BART has determined that the remnant has little or no value or utility to the owner.

California Relocation Assistance and Real Property Acquisition Guidelines require that relocation assistance be provided to any person, business, or farm operation displaced due to the acquisition of real property by a public entity for public use, as discussed in the Regulatory Framework subsection above.[20] The guidelines establish uniform and equitable procedures for land acquisition, and provide for uniform and equitable treatment of persons displaced from their homes, businesses, or farms by state and state-assisted programs. Any acquisition by BART for the Proposed Project or Build Alternative would follow these guidelines.

A detailed representation of the footprints of the Proposed Project, DMU Alternative, and Express Bus/BRT Alternative is shown in Appendix B of this EIR and a detailed list of potential land acquisition is presented in Appendix C.

**No Project Alternative.** Under the No Project Alternative, the BART to Livermore Extension Project would not be implemented—the relocation of I-580 would not occur, the mainline track would not be extended to a new station at Isabel Avenue, and the storage and maintenance facility would not be constructed. However, construction of the planned and programmed transportation improvements and continued land use development, including construction of residential and commercial uses would occur. The effects of the projects associated with the No Project Alternative have been or will be addressed in environmental documents prepared for those projects before they are implemented The No Project Alternative would not result in new impacts as a consequence of the BART Board of Directors' decision not to adopt a project. Therefore, the No Project Alternative is considered to have no impact related to displacement of substantial numbers of existing housing or people during construction. **(NI)**

**Conventional BART Project.** Activities under the Proposed Project that would require land acquisition include the relocation of the Caltrans ROW to accommodate the new BART ROW within the I-580 median, construction of the proposed Isabel Station, tail tracks, and storage and maintenance facility. Construction staging areas would occur within the land acquired for the project or on already vacant land temporarily leased for staging.

As shown in Table 3.C-1 in Section 3.C, Land Use and Agricultural Resources, the Proposed Project would require acquisition of approximately 117 parcels (approximately 147 acres) in whole or in part. This does not include parcels which are already owned by BART, or parcels which are currently occupied by existing transportation uses (i.e., Caltrans ROW). The majority of the 147 acres that would be affected under the Proposed

[20] California Code of Regulations, Title 25, Chapter 6, Section 6000 et seq.

Project would consist of agricultural uses (approximately 69 percent); the remaining 31 percent of affected land uses would be government, residential, commercial, and other uses.

Approximately 8 percent (approximately 11 acres) of the parcels to be acquired are occupied by residential uses, comprised of 10 parcels as shown in Table 3.D-7. Two residential parcels—1790 Hartman Road (Assessor's Parcel Number [APN] 903-006-004-05) and 1820 Hartman Road (APN 903-006-004-01)—would be functionally affected by the proposed storage and maintenance facility. Each parcel has a residential unit, which would be permanently displaced. For the other eight residential parcels, the area impacted by the Proposed Project footprint would be approximately 5 percent or less of each parcel and the areas affected would consist of landscaping, undeveloped land, and circulation. While BART would maintain access to the residential parcels during construction and operation, construction of the Proposed Project could result in changes to access or loss of parking spaces.

Acquisition of privately owned land—including residences and parking at existing development—is considered a significant impact. Therefore, the Proposed Project would result in a potentially significant impact related to displacement of existing housing or people. This impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure PH-2**, which would require BART to implement an acquisition and relocation program. **(LSM)**

**DMU Alternative.** The DMU Alternative would require partial or full acquisition of approximately 137 parcels (approximately 102 acres), as shown in Table 3.C-1 in Section 3.C, Land Use and Agricultural Resources. This does not include parcels which are already owned by BART, or parcels which are currently occupied by existing transportation uses (i.e., Caltrans ROW). For the DMU Alternative, approximately 54 percent of the 102 acres that would be affected consist of agricultural uses, 10 percent consist of government/public property, and the remainder of the uses each account for approximately 1 to 18 percent.

Similar to the Proposed Project, the DMU Alternative would require land acquisition for the relocation of the Caltrans ROW to accommodate the new BART ROW within the I-580 median, the proposed DMU transfer platform and BART storage tracks at the Dublin/Pleasanton Station, the proposed Isabel Station, tail tracks, and storage and maintenance facility. In addition, the construction staging areas would occur within the land acquired for the project or on vacant land temporarily leased for staging.

Approximately 3 percent of the parcels to be acquired under the DMU Alternative (approximately 3 acres) is occupied by residential uses; comprised of 8 parcels as shown in Table 3.D-7. The area within the DMU Alternative footprint would be approximately

5 percent or less of each parcel and the areas affected would consist of landscaping, undeveloped land, and circulation. No residences would be displaced. While BART would maintain access to the residential parcels during construction and operation, construction of the DMU Alternative could result in some changes in access or loss of parking spaces.

**TABLE 3.D-7 RESIDENTIAL PARCELS AFFECTED BY THE CONVENTIONAL BART PROJECT AND DMU ALTERNATIVE**

| APN Number/ Jurisdiction | Location | Use within Footprint | Acreage within Footprint | Percent of Parcel Area Affected |
|---|---|---|---|---|
| **Parcels only within Conventional BART Project Footprint** | | | | |
| 903-006-004-05 Alameda County | 1790 Hartman Road | Residence | 4.62 | 94 |
| 903-006-004-01 Alameda County | 1820 Hartman Road | Residence | 3.72 | 62 |
| **Parcels within Both Conventional BART Project and DMU Alternative Footprints** | | | | |
| 905-001-006-03 Dublin | Croak Road | Grazing land | 1.88 | 4 |
| 905-001-004-04 Dublin | Western end of Collier Canyon Road | Rural undeveloped land | 0.27 | 1 |
| 946-4623-008-06 Pleasanton | Northwest of Stoneridge Drive | Landscaped area | 0.08 | <1 |
| 946-1120-173 Pleasanton | Brockton Drive and Pimlico Drive | Landscaped area in front of apartments | 0.06 | 3 |
| 099-130-002-02 Livermore | East Airway Boulevard | Parking spaces and circulation | 0.22 | 1 |
| 099-1344-092 Livermore | Between East Airway Boulevard and Saddleback Circle | Landscaped area | 0.13 | 5 |
| 903-010-024-01 Livermore | Campus Hill Drive | Landscaped area | 0.03 | 2 |
| 903-010-024-02 Livermore | Campus Hill Drive | Landscaped area | 0.02 | 1 |
| **Total Residential Acres** | | | | |
| **Conventional BART Project** | | | 11 | -- |
| **DMU Alternative** | | | 3 | -- |

Notes: -- = Not applicable.
No residential parcels are within the footprint of the Express Bus/BRT Alternative. In addition, the bus routes and bus infrastructure improvements for the Enhanced Bus Alternative, as well as for the Proposed Project and other Build Alternatives, are anticipated to extend within the existing street ROWs and would not include any residential parcels.
Source: Arup, 2017.

Acquisition of privately owned land—including residences and parking at existing development—is considered a significant impact. Therefore, the DMU Alternative would result in a potentially significant impact related to displacement of existing housing or people. This impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure PH-2**, which would require BART to implement an acquisition and relocation program. **(LSM)**

**Express Bus/BRT Alternative.** The Express Bus/BRT Alternative would require partial or full acquisition of approximately 34 parcels (approximately 10 acres), as shown in Table 3.C-1 in Section 3.C, Land Use and Agricultural Resources. This does not include parcels which are already owned by BART, or parcels which are currently occupied by existing transportation uses (i.e., Caltrans ROW). In terms of total acreage, acquisition for the Express Bus/BRT Alternative would primarily affect parcels with government/public property uses (approximately 56 percent) and commercial and office (approximately 42 percent).

The new BART ROW for this alternative would mainly occur within the I-580 ROW, from just west of Dougherty Road to Tassajara Road/Santa Rita Road. Land acquisition would be required for the widening of the Caltrans ROW to accommodate the widened BART ROW within the I-580 median. Parcels would also be acquired for the BART storage tracks and the bus transfer platforms at the Dublin/Pleasanton Station. In addition, the construction staging areas would occur within the land acquired for the alternative or on vacant land temporarily leased for staging.

Under the Express Bus/BRT Alternative, no residential parcels would be affected and no residents would be displaced. Therefore, the Express Bus/BRT Alternative would result in less-than-significant impacts related to displacement of existing housing or people during construction, and no mitigation measures are required. **(LS)**

**Enhanced Bus Alternative.** The Enhanced Bus Alternative does not include any major capital improvements. It would entail construction of bus shelters, bus bulbs, and signage within the existing street ROWs and other improvements to existing bus services. No land acquisition would be required under this alternative. Therefore, the Express Bus/BRT Alternative would result in no impacts related to displacement of existing housing or people during construction, and no mitigation measures are required. **(NI)**

**Mitigation Measures.** As described above, the Proposed Project and DMU Alternative would have potentially significant impacts related to displacing substantial numbers of existing housing or people during construction. However, with implementation of **Mitigation Measure PH-2**, which would require BART to implement an acquisition and relocation program, potential impacts would be reduced to a less-than-significant level.

As described above, the Express Bus/BRT Alternative and Enhanced Bus Alternative would not have significant impacts; therefore, no mitigation measures are required for these alternatives.

**Mitigation Measure PH-2: Acquisition of Property and Relocation Assistance. (Conventional BART Project and DMU Alternative/EMU Option)**

BART's Real Estate Department will implement an acquisition and relocation program that meets the requirements of applicable State acquisition and relocation law. 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 California Relocation Assistance and Real Property Acquisition Guidelines.

***Impact PH-3: Displace substantial numbers of existing businesses during construction.***

***(No Project Alternative: NI; Conventional BART: LSM; DMU Alternative: LSM; Express Bus/BRT Alternative: LSM; Enhanced Bus Alternative: NI).***

**No Project Alternative.** Under the No Project Alternative, the BART to Livermore Extension Project would not be implemented—the relocation of I-580 would not occur, the mainline track would not be extended to a new station at Isabel Avenue, and the storage and maintenance facility would not be constructed. However, construction of the planned and programmed transportation improvements and continued land use development, including construction of residential and commercial uses would occur. The effects of the projects associated with the No Project Alternative have been or will be addressed in environmental documents prepared for those projects before they are implemented. The No Project Alternative would not result in new impacts as a consequence of the BART Board of Directors' decision not to adopt a project. Therefore, the No Project Alternative is considered to have no impact related to displacement of substantial numbers of businesses. **(NI)**

**Conventional BART Project.** As described in **Impact PH-2** above, the Proposed Project would require the partial or full acquisition of approximately 117 parcels. Approximately 5 percent of the land to be acquired (26 parcels) is occupied by commercial and office uses. Many of these parcels are located along the I-580 corridor and the Proposed Project would encroach into areas of the parcels typically used as surface parking lots. Furthermore, one commercial building, at 2600 Kitty Hawk Road (APN 904-004-010-02), would be functionally affected by the Proposed Project and the existing business would be displaced. In addition, approximately 69 percent of the land to be acquired (15 parcels) is occupied by agricultural uses, generally in the Cayetano Creek Area. The tail tracks and

storage and maintenance facility that extend through the area would require partial or full acquisition of several large agricultural parcels used as grazing land. See Section 3.C, Land Use and Agricultural Resources, for an assessment of impacts to agricultural resources.

Acquisition of privately owned land—including businesses, farm operations, and/or parking—is considered a significant impact. Therefore, the Proposed Project would result in a potentially significant impact related to displacement of businesses. This impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure PH-2**, which would require BART to implement an acquisition and relocation program. **(LSM)**

**DMU Alternative.** As described in **Impact PH-2** above, the DMU Alternative would require the partial or full acquisition of approximately 139 parcels. Approximately 10 percent of the land to be acquired (38 parcels) is occupied by commercial and office uses. Many of these parcels are located along the I-580 corridor and the DMU Alternative would encroach into areas of the parcels typically used as surface parking lots. Similar to the Proposed Project, the only commercial building that would be functionally affected is 2600 Kitty Hawk Road (APN 904-004-010-02) and the existing business would be displaced. In addition, approximately 54 percent of the land to be acquired (11 parcels) is occupied by agricultural uses, generally in the Cayetano Creek Area. Similar to the Proposed Project, the tail tracks and storage and maintenance facility that extend through the area would require partial or full acquisition of several large agricultural parcels used as grazing land. See Section 3.C, Land Use and Agricultural Resources, for an assessment of impacts to agricultural resources.

Acquisition of privately owned land—including business activities, farm operations, and/or parking—is considered a significant impact. Therefore, the DMU Alternative would result in a potentially significant impact related to displacement of businesses. This impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure PH-2**, which would require BART to implement an acquisition and relocation program. **(LSM)**

**Express Bus/BRT Alternative.** As described under **Impact PH-2** above, the Express Bus/BRT Alternative would require the partial or full acquisition of 34 parcels. Approximately 41 percent of the land to be acquired (13 parcels) is occupied by commercial and office uses. These parcels are located along the I-580 corridor and the Express Bus/BRT Alternative would encroach into areas of the parcels typically used as surface parking lots. No commercial or office buildings would be affected by this alternative.

Acquisition of privately owned land, including available parking, is considered a significant impact. Therefore, the Express Bus/BRT Alternative would result in a potentially significant impact related to displacement of businesses. This impact would be reduced to a less-than-significant level with implementation of **Mitigation Measure PH-2**, which would require BART to implement an acquisition and relocation program. **(LSM)**

**Enhanced Bus Alternative.** The Enhanced Bus Alternative does not include any major capital improvements. It would entail construction of bus shelters, bus bulbs, and signage within the existing street ROWs and other improvements to existing bus services. No land acquisition would be required under this alternative. Therefore, the Express Bus/BRT Alternative would result in no impacts related to displacement of substantial numbers of businesses during construction and no mitigation measures are required. **(NI)**

**Mitigation Measures.** As described above, the Proposed Project, DMU Alternative, and Express Bus/BRT Alternative would have potentially significant impacts related to displacing existing businesses during construction. However, with implementation of **Mitigation Measure PH-2** (see **Impact PH-2** above)**,** which would require BART to implement an acquisition and relocation program, potential impacts would be reduced to a less-than-significant level.

As described above, the Enhanced Bus Alternative would not have significant impacts; therefore, no mitigation measures are required for this alternative.

**(b) Construction – Cumulative Analysis**

The geographic study area for the cumulative analysis is the same as that described in the Introduction subsection above—it is the area that would be served by the Proposed Project and Build Alternatives, including the cities of Dublin, Pleasanton, and Livermore.

***Impact PH-4(CU): Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) not in accordance with existing community or city plans, during construction under Cumulative Conditions.***

***(No Project Alternative: NI; Conventional BART Project: LS; DMU Alternative: LS; Express Bus/BRT Alternative: LS; Enhanced Bus Alternative: LS)***

**No Project Alternative.** As described in **Impact PH-1** above, the No Project Alternative would have no impacts related to inducement of substantial population growth during construction. Therefore, the No Project Alternative would not contribute to cumulative impacts. **(NI)**

**Conventional BART Project and Build Alternatives.** Most of the cumulative projects listed in Section 3.A, Introduction to Environmental Analysis and Appendix E, would entail construction and therefore would create temporary construction jobs. Concurrent construction of the Proposed Project or a Build Alternative with the cumulative projects could temporarily increase demand for construction workers. These jobs would be spread throughout the Tri-Valley Area and would likely draw construction employees from around the region. Due to the temporary nature of these construction jobs, they would not result in substantial growth. Therefore, construction of the Proposed Project and Build Alternatives, in combination with other probable future projects, would result in less-than-significant cumulative impacts related to inducement of substantial population growth. **(LS)**

**Mitigation Measures.** As described above, Proposed Project and Alternatives in combination with past, present, and probable future projects would not result in significant cumulative impacts related to substantial population growth, and no mitigation measures are required.

***Impact PH-5(CU): Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere or displace substantial numbers of existing businesses, during construction under Cumulative Conditions.***

***(No Project Alternative: NI; Conventional BART Project: LS; DMU Alternative: LS; Express Bus/BRT Alternative: LS; Enhanced Bus Alternative: NI)***

**No Project Alternative.** As described in **Impact PH-2** and **Impact PH-3** above, the No Project Alternative would have no impacts related to displacement of substantial numbers of existing housing, people, or businesses during construction. Therefore, the No Project Alternative would not contribute to cumulative impacts. **(NI)**

**Conventional BART Project, DMU Alternative, and Express Bus/BRT Alternative.** As described in **Impact PH-2** and **Impact PH-3**, the Proposed Project and DMU Alternative would have significant impacts related to displacement of housing or people. Furthermore, the Proposed Project, DMU Alternative, and Express Bus/BRT Alternative would each have significant impacts related to displacement of businesses. However, these impacts would be mitigated to a less-than-significant level with the implementation of **Mitigation Measure PH-2.**

While future cumulative projects within the study area could result in the need to redevelop land already occupied by other uses, the cumulative projects would generally be constructed on parcels that are currently undeveloped. As such, it is not anticipated that the cumulative projects listed in Section 3.A, Introduction to Environmental Analysis and

Appendix E, including the INP, would require substantial displacement of people, housing, or businesses.

Therefore, the Proposed Project, DMU Alternative, and Express Bus/BRT Alternative, in combination with cumulative projects, would result in less-than-significant cumulative impacts related to displacement of housing, people, or businesses. **(LS)**

**Enhanced Bus Alternative.** The Enhanced Bus Alternative would have no project impacts related to displacement of housing, people, or businesses, as described in **Impact PH-2** and **Impact PH-3** above, and therefore it would not contribute to cumulative impacts. **(NI)**

**Mitigation Measures.** As described above, Proposed Project and Alternatives in combination with past, present, or probable future projects would not result in significant cumulative impacts related to displacement of substantial numbers of existing housing, people, or businesses, and no mitigation measures are required.

### (2) Operational Impacts

Potential impacts related to project operations are described below, followed by cumulative operational impacts.

#### (a) Operations – Project Analysis

***Impact PH-6: Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) not in accordance with existing community or city plans, during operations.***

***(No Project Alternative: NI; Conventional BART Project: LS; DMU Alternative: LS; Express Bus/BRT Alternative: LS; Enhanced Bus Alternative: LS)***

**No Project Alternative.** Under the No Project Alternative, the BART to Livermore Extension Project would not be implemented. However, construction of the planned and programmed transportation improvements would occur, and population and employment growth throughout Alameda County would result in continued development. As the only anticipated transportation improvements under the No Build Alternative would be planned and programmed transit and roadway improvements and continued land use development, including construction of residential and commercial uses, there would be no indirect growth inducement impacts associated with transportation infrastructure not in accordance with plans.

The development pattern for growth in the project corridor would likely be less dense (i.e., more dispersed and automobile-oriented) than the pattern supported by the

Proposed Project and DMU Alternative, because there would not be a major transit hub (the proposed Isabel Station) to focus development around. Therefore, the No Project Alternative would not support local TOD policies within the city of Livermore and SB 375's goal of encouraging more compact and efficient communities to the same degree that the Proposed Project or DMU Alternative would. Nevertheless, while affecting the distribution of growth, the No Project Alternative would not be expected to induce population and employment growth beyond that planned by the County and cities. The long-term projections for growth in population, housing, and jobs within the project corridor would not change significantly under the No Project Alternative. Therefore, the No Project Alternative would not directly or indirectly result in significant impacts pertaining to inducement of substantial unplanned population growth. **(NI)**

**Conventional BART Project.** The Proposed Project is a transit project and would not include any residential uses. Therefore, it would not directly induce substantial population growth by proposing new housing.

The Proposed Project would increase the number of BART and LAVTA employees. Overall, approximately 119 full-time employees would be required for the Proposed Project as follows: approximately 101 BART employees, including station agents, train operators, maintenance personnel, and security; and approximately 18 LAVTA employees.[21] These jobs would likely be filled by persons within the study area or greater Bay Area, and would not represent substantial population growth. Furthermore, even if all new employees required new housing within the study area, this demand could be accommodated within the existing housing stock, as vacancy rates in the study area range from 3 to 6 percent (see Table 3.D-1). Therefore, the Proposed Project would not directly induce substantial population growth by proposing new businesses or jobs.

As described in Chapter 2, Project Description, one of the objectives of the BART to Livermore Extension Project is to provide an effective alternative to traffic congestion on I-580. While the study area is already largely developed and the Proposed Project would generally respond to the existing commuter demand, it would also indirectly support future growth in the study area. As described in the Projections subsection above, the population in the County and three cities in the study area is anticipated to increase by approximately 24 to 49 percent through 2040. Both BART ridership and passenger vehicle miles traveled (VMT) are forecast to increase in the future even without the Proposed Project, as described in Section 3.B, Transportation. Various planning documents anticipate this growth and it is planned for in Plan Bay Area, as well as the General Plans and Specific Plans of the cities in the study area.

[21] Dean, Donald, 2017. Email communication from Donald Dean, BART Environmental Coordinator, with Urban Planning Partners, Inc., February 28.

The Proposed Project could indirectly induce new growth, particularly near the proposed Isabel Station within the City of Livermore. One of the project objectives is to support TOD in PDAs, and development in the Livermore Isabel Avenue BART Station PDA would be consistent with this objective. The City of Livermore General Plan anticipates future BART service to Livermore and identifies buildout estimates for housing and employment that anticipate substantial new development in Livermore through 2040, with new residential and commercial uses near the Isabel Station. Furthermore, Plan Bay Area projects that approximately 3,470 additional housing units would be constructed by 2040 in the Livermore Isabel Avenue BART Station PDA (see Table 3.D-4). Redistributing planned development anticipated within the city of Livermore to the Livermore Isabel Avenue BART Station PDA is consistent with Plan Bay Area and other regional planning efforts, and with SB 375's mandate to reduce greenhouse gas emissions by increasing density, reducing passenger VMT and promoting TOD. As such, redistributing growth to areas well-served by transit is considered an environmental benefit rather than an adverse impact.

BART's System Expansion Policy requires communities that would be served by a new BART extension to prepare Ridership Development Plans (RDPs) for the area around proposed stations to support greater ridership. RDPs help to achieve greater ridership through measures such as transit-supportive land uses. Details regarding the RDP being prepared by the City of Livermore, referred to herein as the Isabel Neighborhood Plan, are presented in the Cumulative Analysis subsection below. In addition, details concerning projected population growth and its consistency with existing and proposed city plans are presented in Chapter 4, Other CEQA Considerations.

While the Proposed Project would have an indirect growth-inducing effect in the vicinity of the proposed Isabel Station, this growth has been accounted for in the various planning documents for the study area and is currently being addressed in the INP being prepared by the City of Livermore. Moreover, by diverting growth to the Isabel/BART Station PDA, the Proposed Project will reduce urban sprawl and comply with SB 375's direction to encourage more compact and efficient communities, Therefore, the Proposed Project would not directly or indirectly cause substantial population growth not in accordance with community and city plans, and would result in less-than-significant impacts related to population growth. No mitigation measures are required. **(LS)**

**DMU Alternative.** Similar to the Proposed Project, the DMU Alternative would extend rail service to the city of Livermore and construct a new station at Isabel Avenue. The DMU Alternative is a transit project and would not include any residential uses. Therefore, it would not directly induce substantial population growth by proposing new housing.

Approximately 135 new full-time equivalent staff would be required as follows: 102 DMU employees; 15 additional BART employees; 18 additional LAVTA employees. This number

of new employees would not directly induce substantial population growth by proposing new businesses or jobs, for the same reasons described for the Proposed Project above.

Also, similar to the Proposed Project, the DMU Alternative could indirectly induce new growth, particularly near the proposed Isabel Station within the City of Livermore. However, as described above for the Proposed Project, this growth has been accounted for in the various planning documents for the study area and is currently being addressed in the INP being prepared by the City of Livermore. Moreover, by diverting growth to the Isabel/BART Station PDA, the DMU Alternative would reduce urban sprawl and comply with SB 375's direction to encourage more compact and efficient communities, Therefore, the DMU Alternative would not directly or indirectly cause substantial population growth not in accordance with community and city plans. For these reasons, the DMU Alternative would result in less-than-significant impacts related to population growth and no mitigation measures are required. **(LS)**

**Express Bus/BRT Alternative.** Under the Express Bus/BRT Alternative, rail service would not be extended to Livermore and a new station would not be constructed at Isabel Avenue. Instead, this alternative is intended to achieve the project objectives using Express Bus and BRT technology only. Under this alternative, approximately 23 additional employees would be required as follows: approximately six employees to serve the BART facilities at the Dublin/Pleasanton Station and 17 additional LAVTA employees. This number of employees would not result in substantial population growth.

The Express Bus/BRT Alternative could indirectly induce new growth by providing improved transit access. However, bus routes without major fixed improvements are easily changed in the future, which discourages major developer investment. It is unlikely that growth associated with the Express Bus/BRT Alternative would be substantial because the combination of BART ridership increases at Dublin/Pleasanton Station and bus ridership increases would be considerably lower than for the Proposed Project or DMU Alternative (see Section 3.B, Transportation). To the extent that the Express Bus/BRT Alternative would indirectly cause growth in the vicinity of new or modified bus routes, such growth would be redistributed from nearby areas which have less transit access, and has been accounted for in the various planning documents for the study area. Such growth would be consistent with SB 375's direction to encourage more compact and efficient communities. Therefore, the Express Bus/BRT Alternative would result in less-than-significant impacts related to population growth, and no mitigation measures are required. **(LS)**

**Enhanced Bus Alternative.** Under the Enhanced Bus Alternative, rail service would not be extended to Livermore and a new station would not be constructed at Isabel Avenue, similar to the Express Bus/BRT Alternative. This Alternative only entails lower-cost bus service improvements. Under this Alternative, approximately 20 additional LAVTA

employees would be required to provide the increased bus services. This number of employees would not result in substantial population growth.

Similar to the Express Bus/BRT Alternative described above, the Enhanced Bus Alternative could indirectly induce new growth by providing improved transit access. However, bus routes without major fixed improvements are easily changed in the future, which discourages major developer investment. It is unlikely that growth associated with the Enhanced Bus Alternative would be substantial because the combination of BART ridership increases at Dublin/Pleasanton Station and bus ridership increases would be considerably lower than for the Proposed Project or DMU Alternative (see Section 3.B, Transportation). Due to the minor nature of the bus improvements and the low projected increase in ridership, this alternative is unlikely to result in substantial population growth. Therefore, the Enhanced Bus Alternative would result in less-than-significant impacts related to population growth, and no mitigation measures are required. **(LS)**

**Mitigation Measures.** As described above, the Proposed Project and Alternatives would not result in significant impacts related to inducement of substantial population growth, and therefore, no mitigation measures are required.

**Operations – Cumulative Analysis**

The geographic study area for the cumulative analysis is the same as that described in the Introduction subsection above—it is the area that would be served by the Proposed Project and Build Alternatives, including the cities of Dublin, Pleasanton, and Livermore.

***Impact PH-7(CU): Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure) not in accordance with existing community or city plans, during operations under Cumulative Conditions.***

***(No Project Alternative: NI; Conventional BART Project: LS; DMU Alternative: LS; Express Bus/BRT Alternative: LS; Enhanced Bus Alternative: LS)***

**No Project Alternative.** For the purpose of this EIR, it is assumed the INP would be implemented by the City of Livermore if the Proposed Project or DMU Alternative is adopted by the BART Board of Directors. Therefore, under the No Project Alternative, the INP would not be implemented and the development pattern would likely continue be less dense (i.e., more sprawling) than supported by the Proposed Project and DMU Alternative (in combination with the INP). Under the No Project Alternative, combined with the probable future projects, population growth would likely not support SB 375's goal of encouraging more compact and efficient communities and local TOD policies to the same degree as under the Proposed Project or DMU Alternative (in combination with the INP). However, as described in **Impact PH-6** above, the No Project Alternative would affect the

distribution of growth but would not be expected to induce population and employment growth beyond that planned by the County and cities. Therefore, the No Project Alternative would not directly or indirectly result in significant impacts on population growth, and would not contribute to cumulative impacts. **(NI)**

**Conventional BART Project and DMU Alternative.** As described in **Impact PH-6**, above, the Proposed Project and DMU Alternative would respond to the existing need for transit services as well as future growth anticipated by ABAG and the City of Livermore.

One of BART's requirements for implementation of either the Proposed Project or DMU Alternative is for the City of Livermore to create a Ridership Development Plan. This requirement would be fulfilled by the INP, a specific plan under preparation by the City of Livermore that would provide for denser development around the proposed Isabel Station than is currently allowed by the City of Livermore General Plan or projected by Plan Bay Area. The City of Livermore anticipates that the Draft INP and its Draft EIR will be available for public review in fall 2017 and will be considered for approval by the City of Livermore in winter 2017/2018.

Approval of the INP would facilitate an increase in population with new residential and commercial development around the proposed Isabel Station. Under the INP, the Livermore Isabel Avenue BART Station PDA would have 15,294 residents, 6,068 households, and 19,632 jobs by 2040, as shown in Table 3.A-2 in Section 3.A, Introduction to Environmental Analysis.[22, 23] The specific impacts of such growth are being evaluated by the City of Livermore in a separate environmental review for the INP.

While the amount of new growth projected for the study area could be substantial, preparation of the INP would help to accommodate growth in a more compact, transit-oriented configuration than would otherwise occur without the INP. The purpose of the INP is to concentrate jobs and housing around a transit hub to support transit ridership and reduce automobile travel.

The Proposed Project and DMU Alternative would not directly induce substantial population, housing, or economic growth beyond that currently defined in the general plans for the cities of Dublin, Pleasanton, and Livermore, as well as the Isabel Neighborhood Plan. Under the INP, the projected growth would be reconfigured to concentrate development at the transit hub and to take advantage of the regional accessibility provided at the proposed Isabel Station. This intensification of land uses in the INP area would be consistent with Livermore land use policies that have anticipated a BART to Livermore Extension. It would also be consistent with Plan Bay Area and other

[22] Cambridge Systematics, 2017. BART to Livermore Ridership Projections (Draft). January.
[23] City of Livermore, 2016b. Staff Report, Preferred Plan for the INP. July 5.

regional planning efforts, and with SB 375's mandate to reduce greenhouse gas emissions by increasing density, reducing passenger VMT and promoting TOD. Therefore, the Proposed Project and DMU Alternative, in combination with the cumulative projects, would have a less-than-significant cumulative impact related to inducement of substantial population growth. **(LS)**

**Express Bus/BRT Alternative and Enhanced Bus Alternative.** Under the Express Bus/BRT Alternative and Enhanced Bus Alternative, no rail service would be extended to Livermore and no new station would be constructed. For the purpose of this EIR, it is assumed that the INP would not be implemented under these alternatives. As described under **Impact PH-6**, the long-term projections for growth in population, housing, and jobs within the project corridor would not change significantly under the bus alternatives. Furthermore, bus routes that do not have major fixed infrastructure improvements, can be modified in the future, which discourages major developer investment. Nevertheless, while it is unlikely that growth associated with the Express Bus/BRT Alternative and Enhanced Bus Alternative would be substantial, these alternatives may, to a limited extent, indirectly cause growth in the vicinity of new or modified bus routes. Growth next to transit—including bus routes—would support SB 375's goal of encouraging more compact and efficient communities and local TOD policies within the city of Livermore, although not to the same degree that the Proposed Project or DMU Alternative would with the INP. Therefore, under the Express Bus/BRT Alternative and Enhanced Bus Alternative, projected growth would be anticipated to remain consistent with Plan Bay Area as well as city planning documents. The probable future projects combined with the Express Bus/BRT Alternative or Enhanced Bus Alternative would not result in significant cumulative impacts related to inducement of substantial population growth, and no mitigation measures are required. **(LS)**

**Mitigation Measures.** As described above, the Proposed Project and Alternatives, in combination with probable future projects, would not result in significant cumulative impacts related to inducement of substantial population growth, and no mitigation measures are required.