

Section 5

Program Merits

5.1 INTRODUCTION

Introduction

As mentioned at the beginning of this document, EIRs are intended to be informational documents, providing information to the public and the decision-makers about the project, its physical environmental effects, and measures or alternatives that can reduce these effects. More specifically, an EIR prepared pursuant to CEQA must address the significant *adverse* impacts on the environment (Public Resources Code, Section 21068). Information on whether a project is “desirable” is usually regarded as a discussion of the project’s merits and strays from the intent of an EIR to provide objective, independent evaluation of a project’s environmental implications.

Accordingly, the identification of beneficial effects of the BART to Livermore Extension Program, while useful in understanding the program’s merits, is not an environmental “impact” in the sense of CEQA and an EIR is not required to evaluate these relative benefits. Nevertheless, BART wishes to emphasize, for the benefit of the public and decision makers, the extent to which the BART to Livermore Extension Program may improve upon existing conditions or those conditions that would occur under a No Build scenario. In these cases, the change to the environment is reported in the Draft Program EIR as a benefit.

Similarly, the ability of the BART to Livermore Extension Program to satisfy the objectives established for the program, the BART System Expansion Policy, and the Metropolitan Transportation Commission’s Resolution #3434 may be viewed as describing the project’s merits. In the current instance, it is instructive to touch upon these topics so that the differences among the nine BART extension alternatives can be discerned and so that the BART Board of Directors (Board) have information at their disposal to make a more informed decision about whether a particular alternative, if any, might be preferable to advance to more detailed planning, engineering, and project-level environmental review.

5.2 PROGRAM BENEFITS

Beneficial effects of the BART to Livermore Extension Program include effects that enhance or improve upon the existing conditions. As discussed in more detail in Section 3 of this document, the BART extension program would have the beneficial impacts identified in Table 5-1 and summarized below:

- improved freeway operations compared to the No Build conditions in 2035;
- net reduction in regional air emissions that would be consistent with and supportive of the goals of the Clean Air Plan and the Bay Area 2005 Ozone Strategy;
- net reductions to regional greenhouse gas emissions that would be supportive of the goals of Senate Bill 375; and
- net reduction in energy and petroleum consumption.

5.3 ATTAINMENT OF BART TO LIVERMORE EXPANSION PROGRAM OBJECTIVES

Given the transportation characteristics and future travel demand in east Alameda County in general and in the BART to Livermore study area in particular, the following objectives have been identified by BART for extension of transit service to Livermore:

- Increase BART ridership.
- Provide congestion relief along the I-580 corridor through the Tri-Valley area.
- Provide convenient intermodal connections between BART, the Altamont Commuter Express, and the Livermore Amador Valley Transit Authority.
- Support local efforts, initiatives, and policies to promote transit-oriented development.
- Enhance economic benefits, contributing to local investment and development opportunities.
- Provide a cost effective transit system, recognizing budget constraints and available funding.
- Conform with the BART System Expansion Policy and with the Metropolitan Transportation Commission's Resolution #3434 – Transit-Oriented Development Policy for Regional Transit Extension Projects.
- Protect and enhance the environment.
- Improve transit mobility between the Silicon Valley, the Tri-Valley area, the East Bay Area, and San Francisco in support of efforts to reduce greenhouse gas emissions, consistent with Senate Bill (SB) 375.

In general terms, the objectives involve reducing environmental impacts related to traffic within the I-580 corridor including congestion and greenhouse gas emissions, increasing transit usage and connections for the BART system and area transit providers, stimulating transit-oriented development planning and economic investment for station areas, and conforming with the BART system expansion policy (SEP) and the Metropolitan Transportation Commission's Resolution #3434 (Resolution #3434). Table 5-2 presents a comprehensive assessment of the degree to which each of the program alternatives meet those objectives. As described in Table 5-2, the No Build Alternative would do the least in satisfying the program objectives.

**Table 5-1
Beneficial Effects of the BART Extension Alternatives**

Issue	1 Greenville East	1a Downtown- Greenville East via UPRR	1b Downtown- Greenville East via SPRR	2 Las Positas	2a Downtown- Vasco	3 Portola	3a Railroad	4 Isabel/ I-580	5 Quarry
Transportation									
Increase in BART System Ridership (daily riders)	31,700	30,900	30,900	29,800	31,600	29,900	29,700	19,900	20,800
Reduction in Vehicle Miles Traveled (per day)	687,877	742,836	742,836	742,494	860,211	704,246	633,485	404,159	620,992
# of Improved Segments along I-580 (in Peak Hour)	7	7	7	6	7	5	6	5	4
# of Improved Local Intersections (in Peak Hour)	8	8	8	6	8	8	7	8	7
Possible Station Connection to ACE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Air Quality									
Reduction in Regional Emissions (lbs/day)									
NO _x	267	287	287	290	339	273	243	149	247
ROG	46	50	50	49	57	47	42	27	41
Reduction in Greenhouse Gas Emissions (lbs/day)	429,694	459,473	463,658	493,946	591,522	483,098	412,010	261,429	468,866
Energy									
Reduction in Regional Energy Consumption (Billion BTUs/year)	628	668	678	754	919	756	624	402	770

**Table 5-2
Satisfaction of Program Objectives for the No Build and BART Extension Alternatives**

Objectives	No Build Alternative	Alternative 1	Alternative 1a	Alternative 1b	Alternative 2	Alternative 2a	Alternative 3	Alternative 3a	Alternative 4	Alternative 5
		Greenville East	Downtown-Greenville East via UPRR	Downtown-Greenville East via SPRR	Las Positas	Downtown-Vasco	Portola	Railroad	Isabel/I-580	Quarry
Increase BART ridership.	Not Satisfied. This alternative would not increase ridership beyond the anticipated increases at the West Dublin and Dublin/Pleasanton BART Stations.	Satisfied. This alternative would add 31,700 daily riders to the BART system.	Satisfied. This alternative would add 30,900 daily riders to the BART system.	Satisfied. This alternative would add 30,900 daily riders to the BART system.	Satisfied. This alternative would add 29,800 daily riders to the BART system.	Satisfied. This alternative would add 31,600 daily riders to the BART system.	Satisfied. This alternative would add 29,900 daily riders to the BART system.	Satisfied. This alternative would add 29,700 daily riders to the BART system.	Satisfied. This alternative would add 19,900 daily riders to the BART system.	Satisfied. This alternative would add 20,800 daily riders to the BART system.
Provide congestion relief along the I-580 corridor through the Tri-Valley area.	Not Satisfied. Because BART service would not extend further within the Tri-Valley area, this alternative would not divert commuters from driving on I-580.	Satisfied. Although this alternative would worsen 1 segment, 7 segments would improve.	Satisfied. Although this alternative would worsen 1 segment, 7 segments would improve.	Satisfied. Although this alternative would worsen 1 segment, 7 segments would improve.	Satisfied. Although this alternative would worsen 2 segments, 6 segments would improve.	Satisfied. Although this alternative would worsen 1 segment, 7 segments would improve.	Satisfied. Although this alternative would worsen 4 segments, 5 segments would improve.	Satisfied. Although this alternative would worsen 2 segments, 6 segments would improve.	Satisfied. Although this alternative would worsen 4 segments, 5 segments would improve.	Satisfied. Although this alternative would worsen 4 segments, 5 segments would improve.

**Table 5-2
Satisfaction of Program Objectives for the No Build and BART Extension Alternatives**

Objectives	No Build Alternative	Alternative 1 Greenville East	Alternative 1a Downtown-Greenville East via UPRR	Alternative 1b Downtown-Greenville East via SPRR	Alternative 2 Las Positas	Alternative 2a Downtown-Vasco	Alternative 3 Portola	Alternative 3a Railroad	Alternative 4 Isabel/I-580	Alternative 5 Quarry
Provide convenient intermodal connections between BART and the Altamont Commuter Express.	Not Satisfied. No new intermodal connections would occur under this alternative.	Satisfied. The Greenville East Station would include a connection to a new ACE station at this location. The existing ACE station at Vasco Road would be removed to the new Greenville East site.	Satisfied. The Downtown Livermore Station would include a connection to the ACE system.	Satisfied. The Downtown Livermore Station would include a connection to the ACE system.	Satisfied. The Vasco Road Station would include a connection to the ACE system.	Satisfied. The Downtown Livermore and Vasco Road Stations would include connections to the ACE system.	Satisfied. The Downtown Livermore Station would include a connection to the ACE system.	Satisfied. The Downtown Livermore Station would include a connection to the ACE system.	Not Satisfied. The Isabel/I-580 Station would not include a connection to the ACE system.	Satisfied. The Isabel/Stanley Station would include a connection to a new ACE station.
Provide convenient intermodal connections between BART and the Livermore Amador Valley Transit Authority (LAVTA).	Not Satisfied. No new intermodal connections would occur under this alternative.	Satisfied. The Isabel/I-580 Station and the Greenville East Station would include connections to LAVTA bus services.	Satisfied. The Downtown Livermore Station and the Greenville East Station would include connections to LAVTA bus services.	Satisfied. The Downtown Livermore Station and the Greenville East Station would include connections to LAVTA bus services.	Satisfied. The Isabel/I-580 Station and the Vasco Road Station would include connections to LAVTA bus services.	Satisfied. The Downtown Livermore Station and the Vasco Road Station would include connections to LAVTA bus services.	Satisfied. The Isabel/I-580 Station and the Downtown Livermore Station would include connections to LAVTA bus services.	Satisfied. The Isabel/Stanley Station and the Downtown Livermore Station would include connections to LAVTA bus service.	Satisfied. The Isabel/I-580 Station would include connections to LAVTA bus services.	Satisfied. The Isabel/Stanley Station would include connections to LAVTA bus services.

**Table 5-2
Satisfaction of Program Objectives for the No Build and BART Extension Alternatives**

Objectives	No Build Alternative	Alternative 1 Greenville East	Alternative 1a Downtown-Greenville East via UPRR	Alternative 1b Downtown-Greenville East via SPRR	Alternative 2 Las Positas	Alternative 2a Downtown-Vasco	Alternative 3 Portola	Alternative 3a Railroad	Alternative 4 Isabel/I-580	Alternative 5 Quarry
Enhance economic benefits, contributing to local investment and development opportunities.	Not Satisfied. As with the previous objective, the absence of new BART stations would not promote local and investment opportunities that could otherwise occur around the stations.	Partially Satisfied. This alternative would include two new stations at Isabel/I-580 and Greenville East. These stations would be constrained in their development potential, as described in Section 5.4.	Partially Satisfied. This alternative would include two new stations at Downtown Livermore and Greenville East. The Downtown Station would support this objective; however, the Greenville East Station is constrained in its development potential, as described in Section 5.4.	Partially Satisfied. This alternative would include two new stations at Downtown Livermore and Greenville East. The Downtown Station would support this objective; however, the Greenville East Station is constrained in its development potential, as described in Section 5.4.	Partially Satisfied. This alternative would include two new stations at Isabel/I-580 and Vasco Road. The Isabel/I-580 is constrained in its development potential as described in Section 5.4; however, the Vasco Road Station has some potential to support this objective.	Satisfied. This alternative would include two new stations at Downtown Livermore and Vasco Road. These stations would support this objective.	Partially Satisfied. This alternative would include two new stations at Downtown Livermore. The Isabel/I-580 Station would be constrained in its development potential as described in Section 5.4; however, the Downtown Station would support this objective.	Partially Satisfied. This alternative would include two new stations at Isabel/Stanley and Livermore. The Isabel/Stanley Station would be constrained in its development potential, as described in Section 5.4; however, the Downtown Station would support this objective.	Partially Satisfied. This alternative would include a new station at Isabel/I-580, which is constrained in its development potential, as described in Section 5.4.	Not Satisfied. This alternative would include a new station at Isabel/Stanley which is constrained in its development potential, as described in Section 5.4.

**Table 5-2
Satisfaction of Program Objectives for the No Build and BART Extension Alternatives**

Objectives	No Build Alternative	Alternative 1 Greenville East	Alternative 1a Downtown-Greenville East via UPRR	Alternative 1b Downtown-Greenville East via SPRR	Alternative 2 Las Positas	Alternative 2a Downtown-Vasco	Alternative 3 Portola	Alternative 3a Railroad	Alternative 4 Isabel/I-580	Alternative 5 Quarry
Provide a cost effective transit system, recognizing budget constraints and available funding. ^a	Not Satisfied. No new BART extension to Livermore would occur; thus, this alternative would not provide a cost effective transit system.	To Be Determined. \$2,920 million	To Be Determined. \$3,610 million	To Be Determined. \$3,650 million	To Be Determined. \$3,280 million	To Be Determined. \$3,800 million	To Be Determined. \$3,470 million	To Be Determined. \$3,380 million	To Be Determined. \$1,120 million	To Be Determined. \$1,610 million
Conform with the BART System Expansion Policy.	Not Applicable. Since no new BART extension to Livermore would be constructed, the SEP would not be applicable.	Satisfied. The alternative would satisfy the SEP by generating an average total of 19,050 new trips per station along the extension.	Satisfied. The alternative would satisfy the SEP by generating an average total of 17,650 new trips per station along the extension.	Satisfied. The alternative would satisfy the SEP by generating an average total of 17,650 new trips per station along the extension.	Satisfied. The alternative would satisfy the SEP by generating an average total of 17,700 new trips per station along the extension.	Satisfied. The alternative would satisfy the SEP by generating an average total of 17,550 new trips per station along the extension.	Satisfied. The alternative would satisfy the SEP by generating an average total of 17,150 new trips per station along the extension.	Satisfied. The alternative would satisfy the SEP by generating an average total of 15,850 new trips per station along the extension.	Satisfied. The alternative would satisfy the SEP by generating an average total of 25,100 new trips per station along the extension.	Satisfied. The alternative would satisfy the SEP by generating an average total of 23,100 new trips per station along the extension.

**Table 5-2
Satisfaction of Program Objectives for the No Build and BART Extension Alternatives**

Objectives	No Build Alternative	Alternative 1	Alternative 1a	Alternative 1b	Alternative 2	Alternative 2a	Alternative 3	Alternative 3a	Alternative 4	Alternative 5
		Greenville East	Downtown-Greenville East via UPRR	Downtown-Greenville East via SPRR	Las Positas	Downtown-Vasco	Portola	Railroad	Isabel/I-580	Quarry
Conform with the Metropolitan Transportation Commission’s Resolution #3434 – Transit-Oriented Development Policy for Regional Transit Extension Projects.	Not Applicable. Since no new BART extension to Livermore would be constructed, the MTC Resolution #3434 would not be applicable.	Not Satisfied. An average of 2,138 housing units per station area would be needed to achieve the MTC target.	Not Satisfied. An average of 824 housing units per station area would be needed to achieve the MTC target.	Not Satisfied. An average of 824 housing units per station area would be needed to achieve the MTC target.	Not Satisfied. An average of 1,819 housing units would be needed to achieve the MTC target.	Not Satisfied. An average of 505 housing units per station area would be needed to achieve the MTC target.	Not Satisfied. An average of 438 housing units per station area would be needed to achieve the MTC target.	Not Satisfied. An average of 787 housing units per station area would be needed to achieve the MTC target.	Not Satisfied. An average of 1,282 housing units per station area would be needed to achieve the MTC target.	Not Satisfied. An average of 1,806 housing units per station area would be needed to achieve the MTC target.

**Table 5-2
Satisfaction of Program Objectives for the No Build and BART Extension Alternatives**

Objectives	No Build Alternative	Alternative 1	Alternative 1a	Alternative 1b	Alternative 2	Alternative 2a	Alternative 3	Alternative 3a	Alternative 4	Alternative 5
		Greenville East	Downtown-Greenville East via UPRR	Downtown-Greenville East via SPRR	Las Positas	Downtown-Vasco	Portola	Railroad	Isabel/I-580	Quarry
Protect and enhance the environment	Not Satisfied. This alternative would not reduce traffic, air emissions, greenhouse gas emissions, or energy consumption as the BART extension alternatives would.	Satisfied. This alternative would reduce VMT, air and greenhouse gas emissions, and energy consumption, and promote smart growth and TOD. There may be adverse effects to agricultural, biological, and water resources, but the overall effect on the environment is positive.	Satisfied. This alternative would reduce VMT, air and greenhouse gas emissions, and energy consumption, and promote smart growth and TOD. There may be adverse effects to agricultural, biological, and water resources, but the overall effect on the environment is positive.	Satisfied. This alternative would reduce VMT, air and greenhouse gas emissions, and energy consumption, and promote smart growth and TOD. There may be adverse effects to agricultural, biological, and water resources, but the overall effect on the environment is positive.	Satisfied. This alternative would reduce VMT, air and greenhouse gas emissions, and energy consumption, and promote smart growth and TOD. There may be adverse effects to cultural, biological, and water resources, but the overall effect on the environment is positive.	Satisfied. This alternative would reduce VMT, air and greenhouse gas emissions, and energy consumption, and promote smart growth and TOD. There may be adverse effects to cultural, biological, and water resources, but the overall effect on the environment is positive.	Satisfied. This alternative would reduce VMT, air and greenhouse gas emissions, and energy consumption, and promote smart growth and TOD. There may be adverse effects to cultural, biological, and water resources, but the overall effect on the environment is positive.	Satisfied. This alternative would reduce VMT, air and greenhouse gas emissions, and energy consumption, and promote smart growth and TOD. There may be adverse effects to cultural, biological, mineral, and water resources, but the overall effect on the environment is positive.	Satisfied. This alternative would reduce VMT, air and greenhouse gas emissions, and energy consumption, and promote smart growth and TOD, although not to the degree of the two-station alternatives. There may be adverse effects to biological and water resources, but the overall effect on the environment is positive.	Satisfied. This alternative would reduce VMT, air and greenhouse gas emissions, and energy consumption, and promote smart growth and TOD, although not to the degree of the two-station alternatives. There may be adverse effects to biological, mineral, and water resources, but the overall effect on the environment is positive.

**Table 5-2
Satisfaction of Program Objectives for the No Build and BART Extension Alternatives**

Objectives	No Build Alternative	Alternative 1	Alternative 1a	Alternative 1b	Alternative 2	Alternative 2a	Alternative 3	Alternative 3a	Alternative 4	Alternative 5
		Greenville East	Downtown-Greenville East via UPRR	Downtown-Greenville East via SPRR	Las Positas	Downtown-Vasco	Portola	Railroad	Isabel/I-580	Quarry
Improve transit mobility between the Silicon Valley, the Tri-Valley area, the East Bay Area, and San Francisco in support of efforts to reduce greenhouse gas emissions, consistent with Senate bill (SB) 375.	Not Satisfied. This alternative would not extend BART service to Livermore. Therefore, BART ridership from San Joaquin commuters would be less than the BART extension alternatives and VMT would be higher. Increased VMT would not support the reduction of greenhouse gas emissions.	Satisfied. This alternative would extend BART service east into Livermore by 11.5 miles, reduce VMT by 687,877 miles per day, and reduce greenhouse gas emissions by 429,694 pounds per day (lbs/day).	Satisfied. This alternative would extend BART service east into Livermore by 13.1 miles, reduce VMT by 742,836 miles per day, and reduce greenhouse gas emissions by 459,473 lbs/day.	Satisfied. This alternative would extend BART service east into Livermore by 13.2 miles, reduce VMT by 742,836 miles per day, and reduce greenhouse gas emissions by 463,658 lbs/day.	Satisfied. This alternative would extend BART service east into Livermore by 10 miles, reduce VMT by 742,494 miles per day, and reduce greenhouse gas emissions by 493,946 lbs/day.	Satisfied. This alternative would extend BART service east into Livermore by 12 miles, reduce VMT by 860,211 miles per day, and reduce greenhouse gas emissions by 591,522 lbs/day.	Satisfied. This alternative would extend BART service east into Livermore by 7.2 miles, reduce VMT by 704,246 miles per day, and reduce greenhouse gas emissions by 483,098 lbs/day.	Satisfied. This alternative would extend BART service east into Livermore by 7.9 miles, reduce VMT by 633,485 miles per day, and reduce greenhouse gas emissions by 412,010 lbs/day.	Satisfied. This alternative would extend BART service east into Livermore by 5.2 miles, reduce VMT by 404,159 miles per day, and reduce greenhouse gas emissions by 261,429 lbs/day.	Satisfied. This alternative would extend BART service east into Livermore by 5.5 miles, reduce VMT by 620,992 miles per day, and reduce greenhouse gas emissions by 468,866 lbs/day.

Source: BART and PBS&J, September 2009.

Note:

- a Preliminary cost effectiveness ratings are being determined in accordance with BART's System Expansion Policy, based on ridership forecasts and estimated capital and operational costs. These ratings will be presented in the Preferred Alternative Memorandum and Final Program EIR, prior to selection of the preferred alternative.

5.4 REGIONAL TRANSIT-ORIENTED DEVELOPMENT POLICIES

Introduction

Both BART and the Metropolitan Transportation Commission (MTC) have adopted policies to encourage transit-oriented development (TOD) in association with transit system expansion projects. These policies seek to establish that the development capacity of station areas serving a proposed extension will both support acceptable ridership levels and accommodate growth resulting from the extension.

The BART and MTC policies approach the evaluation of TOD potential from different sides of the issue: BART's System Expansion Policy (SEP) establishes a series of ridership thresholds to evaluate extension performance and identify whether TOD-oriented development strategies, known as Ridership Development Plans (RDPs), are needed. MTC's Resolution #3434 uses corridor-level housing thresholds to establish whether or not proposed extension station areas contain adequate residential growth potential, and then, if necessary, identify measures to increase that potential. Because the possible outcome of both policy evaluations is the identification of new growth strategies, both are potential drivers of new development that could lead to subsequent environmental impacts.

At this program-level stage of environmental review, sufficient information is not available to draw definitive conclusions about the specifics of future land use or access changes that may be initiated in the station areas. Rather, the following analyses are used to gain initial insight into the TOD-related constraints of each alternative, and to establish directions and options for improving station area development potential and overall extension performance.

BART System Expansion Policy

The 1999 BART System Expansion Policy (SEP) identifies goals, strategies, and project advancement criteria to guide expansion of the transit system. Evaluation criteria considers potential ridership in the context of project cost effectiveness, surrounding land use, project access, connectivity with other transit systems, effects on the existing BART system, and degree of inter-agency partnering and community support. The system expansion criteria are designed to contend with the pressures of growth in the Bay Area and to address the dispersal of jobs and housing while reinvesting in BART and other transit systems. BART has developed and applies the adopted criteria in order to meet the following goals:

- Enhance regional mobility, especially access to jobs.
- Generate new ridership on a cost-effective basis.
- Demonstrate a commitment to transit-supportive growth and development.
- Enhance multi-modal access to the BART system.

As noted, a chief element of the SEP is the comparison of BART's corridor-wide ridership development thresholds to ridership forecasted for proposed extension corridors. This comparison is used to evaluate the development capacity of extension station areas in terms of achieving adequate ridership. If the corridor-wide ridership threshold is not already projected to be met under existing land use plans and policies, local jurisdictions must adopt and implement Ridership Development Plans (RDPs), which can take the form of General Plan amendments, Specific Plans, zoning amendments, access improvements, or other actions selected at the discretion of the local jurisdictions. RDPs, which are normally completed by relevant local agencies concurrent with the project-specific environmental review process, must consider land use or access changes to encourage TOD in station areas and demonstrate that as a result of such changes, BART's corridor-wide ridership threshold can be achieved.

Under the SEP, projected average daily trips for the extension (daily entries and exits associated with new stations) are rated into five grades from low to high:

- Low – less than 5,000 average daily trips
- Low-Medium – 5,000 to 9,999 average daily trips
- Medium – 10,000-13,999 average daily trips
- Medium-High – 14,000 to 20,000 average daily trips
- High – above 20,000 average daily trips

Table 5-3 contains ridership levels (daily entries and exits) at the West Dublin/Pleasanton and Dublin/Pleasanton BART Stations, as well as forecasted ridership at the five proposed BART to Livermore stations. These figures are used to tabulate corridor-wide averages for each of the nine BART to Livermore extension alternatives, which are then evaluated against BART thresholds in Table 5-3.

All BART Extension Alternatives. Based on the current projected ridership for each BART extension alternative, the BART SEP would be satisfied, with each of the alternatives attaining either a “Medium High” or “High” rating. The projected ridership numbers reflect the current development potential contained in the ACCMA countywide transportation model, which in turn incorporates information from each of the jurisdictions' adopted general plans. Based on this preliminary assessment, RDPs would not be required of the local jurisdictions to fulfill BART's ridership targets. However, there are other reasons for pursuing such plans, such as to ensure that the future TOD helps fulfill the design vision of the community, that the means for implementing the proposed uses are in place, and that the mechanisms for meeting infrastructure and transportation improvements are defined. Moreover, the RDP process as envisioned in the SEP would assist in meeting the MTC Resolution #3434 target which are not met by any of the alternatives based on the current development potential, as discussed below.

Table 5-3
Existing Station Total Trips and Proposed Station Total Trip Forecasts

Alternative	Existing Stations		New Extension Stations					Average Total Trips per New Station
	West Dublin/Pleasanton	East Dublin/Pleasanton	Isabel/I-580	Greenville East	Isabel/Stanley	Downtown Livermore	Vasco Road	
1 - Greenville East	16,800	21,900	16,200	21,900	NA	NA	NA	19,050 <i>Medium-High</i>
1a - Downtown-Greenville East via UPRR	17,200	23,200	NA	12,300	NA	23,000	NA	17,650 <i>Medium-High</i>
1b - Downtown-Greenville East via SPRR	17,200	23,200	NA	12,300	NA	23,000	NA	17,650 <i>Medium-High</i>
2 - Las Positas	17,200	22,200	16,000	NA	NA	NA	19,400	17,700 <i>Medium-High</i>
2a - Downtown-Vasco	17,200	23,900	NA	NA	NA	18,600	16,500	17,550 <i>Medium-High</i>
3 - Portola	17,100	23,700	15,100	NA	NA	19,200	NA	17,150 <i>Medium-High</i>
3a - Railroad	17,300	23,500	NA	NA	8,500	23,200	NA	15,850 <i>Medium-High</i>
4 - Isabel/I-580	16,800	22,100	25,100	NA	NA	NA	NA	25,100 <i>High</i>
5 - Quarry	17,100	25,800	NA	NA	23,100	NA	NA	23,100 <i>High</i>

Source: Wilbur Smith Associates, 2009.

Note:

- a. Average daily trips is the number of entries and exits at each station. *Italicized* ratings of Medium-High and High reflect the qualitative ratings assigned by the BART System Expansion Policy for the average number of new BART entries and exits at stations associated with a proposed extension.

MTC Resolution #3434

The Metropolitan Transportation Commission (MTC) is responsible for financing and coordinating public transportation in the nine-county San Francisco Bay Area. Resolution #3434 is MTC's Regional Transit Expansion Program. Upon adoption in 2001, Resolution #3434 earmarked \$10.5 billion in funding for a series of rail and express/rapid bus transit projects in the Bay Area, including nine rail extensions. The resolution was amended in July 2005 to include a Transit-Oriented Development (TOD) Policy. Under the policy, all transit extensions funded under MTC Resolution #3434 are conditioned on a series of land use and housing criteria.

Specifically, the MTC Resolution #3434 TOD Policy is predicated on corridor-level housing thresholds. Each extension funded under Resolution #3434 must plan for a minimum number of housing units along proposed transit corridors. These thresholds require that, within one-half mile of all stations, a combination of existing land uses and planned land uses meets or exceeds the corridor housing threshold. Thresholds, listed below, vary depending on the type of service proposed.

The corridor-level housing threshold for BART extensions utilizing BART technology is 3,850 housing units on average per station area. Meeting this threshold requires that, on average, areas around stations within one-half mile serving a given corridor are able to accommodate a minimum of 3,850 units, including the current housing stock.

In Table 5-4, existing (2008) housing units and estimates of planned (2030) housing units are tabulated for the existing Dublin/Pleasanton BART Station area and for each of the five proposed BART to Livermore station areas. Table 5-4 also presents the extension-wide housing average for each of the nine alternatives, and a comparison of this average to MTC's threshold of 3,850 units.

As stressed above, this program-level environmental review only provides an initial assessment of whether current housing development in the station areas would meet the minimum station average of MTC's TOD policy. For that reason, the following analysis of consistency with MTC policy utilizes housing projection estimates based on generalized growth assumptions from the City of Livermore General Plan, as well as various Specific and Neighborhood Plans and, where available, planned development projects.

The City of Livermore identified "Change Areas" throughout Livermore as an analytic tool in preparing the General Plan Update EIR. Change Areas were areas where additional development was possible, considered desirable and could transform, or change, the existing land use development and intensity. As a result, these areas were expected to house much of the City's future growth. For the EIR, the City calculated the number of units expected to be built in each Change Area during the time horizon of the General Plan. These projections have been used to estimate the future housing units for the station areas presented in Table 5-4. For the most part, proposed BART extension alternative stations are located in Change Areas, and thus are expected to experience future growth.

**Table 5-4
Comparison of MTC Resolution #3434 Target with Proposed Station Area Development**

Alternative	Station Area Housing Units												2030 Average	Comparison of 2030 Average to 3,850 Target
	Dublin/ Pleasanton		Isabel/I-580		Isabel/ Stanley		Downtown Livermore		Vasco Road		Greenville East			
	2008	2030 Total	2008	2030 Total	2008	2030 Total	2008	2030 Total	2008	2030 Total	2008	2030 Total		
1 – Greenville East	1,351	3,978	468	1,158	NA	NA	NA	NA	NA	NA	0	0	1,712	-2,138
1a – Downtown - Greenville East via UPRR	1,351	3,978	NA	NA	NA	NA	1,841	5,100	NA	NA	0	0	3,026	-824
1b – Downtown - Greenville East via SPRR	1,351	3,978	NA	NA	NA	NA	1,841	5,100	NA	NA	0	0	3,026	-824
2 – Las Positas	1,351	3,978	468	1,158	NA	NA	NA	NA	227	956	NA	NA	2,031	-1,819
2a – Downtown-Vasco	1,351	3,978	NA	NA	NA	NA	1,841	5,100	227	956	NA	NA	3,345	-505
3 – Portola	1,351	3,978	468	1,158	NA	NA	1,841	5,100	NA	NA	NA	NA	3,412	-438
3a– Railroad	1,351	3,978	NA	NA	110	110	1,841	5,100	NA	NA	NA	NA	3,063	-787
4 – Isabel/I-580	1,351	3,978	468	1,158	NA	NA	NA	NA	NA	NA	NA	NA	2,568	-1,282
5 – Quarry	1,351	3,978	NA	NA	110	110	NA	NA	NA	NA	NA	NA	2,044	-1,806

Sources: City of Livermore, 2009; Livermore General Plan Environmental Impact Report, 2003; East Dublin Specific Plan, 2008; Claritas, Inc, 2008; Bay Area Economics, 2009.

Notes:

NA = this station is not proposed for this alternative and thus is Not Applicable to the station area development estimates.

- 2008 housing units are for ½ mile radius around station location, as projected by Claritas, 2008.
- 2030 housing units include existing (2008) and planned units
- Based on projected number of units in the Livermore General Plan Change Area in which station would be located. Change Areas exceed the size of the ½ mile station areas; therefore, not all housing realized in the areas would be located in station areas.
- Dublin/Pleasanton Station planned units based on Transit Village and Hacienda planned developments, from East Dublin Specific Plan, Chapter 4, amended 2008.

The potential of each alternative to comply with MTC's TOD policy is assessed below. Based on the information contained in Table 5-4, none of the alternatives would satisfy the current MTC TOD threshold. Alternatives 2a and 3 have shortfalls that could be addressed by increasing the development potential at the other stations along these extensions. All other alternatives face development constraints that may make it difficult to attain the current MTC threshold. Physical and regulatory constraints to residential growth surrounding proposed stations are identified. Finally, where necessary, initial strategies for overcoming these constraints are proposed and would be appropriate to consider during the subsequent project-specific effort.

The strategies outlined here are not decisions within BART's jurisdiction, but are decisions to be made by the City of Livermore or, in certain cases, by the voters or by private property owners, as discussed below. In addition, other developments may occur, by the time a specific BART to Livermore project is proposed, which would enable the project to achieve the MTC Resolution #3434 targets, or the targets themselves may be modified by MTC. However, to the extent that no such other developments occur and the City or its residents decline to adopt such strategies, some alternatives could prove ineligible for MTC funding.

Alternative 1. Alternative 1 proposes stations at Isabel/I-580 and Greenville East. Alternative 1 would have a deficit of an average of 2,138 units per station (for three stations) as compared to the MTC threshold of 3,850 units. This shortfall is due to low residential growth potential surrounding the proposed Stations. The entire Isabel/I-580 Station area is located within Livermore's Airport Protection Area (APA) and a portion lies outside the City of Livermore Urban Growth Boundary (UGB). Policy LU-4.4.P2 of the Livermore General Plan prohibits intensification of existing residential land use within the APA, in order to ensure public safety and airport functionality. This policy severely limits the number of housing units that could be constructed in the station area in the future. Future residential development in the eastern portions of both the Isabel/I-580 and Greenville East Station areas is restricted. As shown in Figure 3.3-4, this is particularly true for the Greenville East Station area where the majority of the eastern portion of the station area is located outside the City of Livermore and Alameda County UGBs. City and County policies identified in Section 3.3, Land Use, restrict future development to within these boundaries. Additionally, the California Air Resources Board (CARB) has issued guidelines that recommend close evaluation of residential development within 500 feet of heavily trafficked roadways, because of exposure to diesel particulate matter from vehicle emissions. This evaluation may reduce some of the residential development potential for the remaining portion of this station area. Further, the eastern portion of the station area is dominated by land contracted under the Williamson Act (see Figure 3.3-3), which as detailed in Section 3.3, Land Use, is considered an agricultural resource to be conserved and also lies in a City-designated scenic corridor.

There are two general options to increase the residential development potential of Alternative 1 station areas and bring Alternative 1 into consistency with Resolution #3434. The first option would involve relaxing the development restrictions associated with the Livermore APA. However, loosening APA restrictions would be difficult because airport restrictions are established and enforced to protect public

health and safety. They are unlikely to be reduced as long as the airport remains operational. The second option is to amend either or both of the County and City UGB development policies to include more or all of the station areas within the UGB. However, both of these boundaries are the result of voter initiatives, and as such, altering the UGBs would demand further voter approval and passage of a local measure(s). If the UGB is amended, this option also involves negotiating with owners of Williamson Act contracted land in the Greenville East Station area in order to purchase contracted land. In order to develop the land, it would either need to be condemned or property owners would need to file for non-renewal on their own accord, a decision that would trigger a final, 10-year contract. Alternatively, owners of Williamson Act contracted land could petition to cancel their contract(s) and pay the required cancellation fee, which is equal to 12.5 percent of the unrestricted fair market value of the property. To approve tentative contract cancellations, the County of Alameda would have to present specific findings that are supported by substantial evidence. Cancellation of the contracts by the owners, however, would not necessarily mean that the land would be approved for urban development by the City. Each of these options, if successfully implemented, would ultimately result in new physical development whose subsequent environmental impacts would need to be examined.

Alternatives 1a and 1b. These alternatives, both of which include the Dublin/Pleasanton, Downtown Livermore, and Greenville East Stations, would have a housing deficit of an average of 824 units per station (for three stations) compared to the MTC threshold of 3,850 units. This is due to development restrictions in portions of the Greenville East Station area; as described under Alternative 1, above. As such, Alternatives 1a and 1b would not be consistent with MTC Resolution #3434. There are two options to bring these alternatives closer to the MTC target, both of which focus on increasing the development potential at Greenville East. In addition, amendments to the Livermore Downtown Specific Plan could be considered to introduce more residential development near the Downtown Livermore Station. Each of these different proposals, if successfully implemented, would ultimately result in new physical development whose subsequent environmental impacts would need to be examined.

Alternative 2. This alternative includes stations at Isabel/I-580 and Vasco Road. Alternative 2 would have a housing deficit of an average of 1,819 units per station (for three stations) compared to the MTC threshold of 3,850 units. This shortfall is the result of the low residential growth potential surrounding the proposed stations. Constraints associated with the Isabel/I-580 Station are identified under Alternative 1 above. Residential development surrounding the Vasco Road Station is primarily constrained by existing land use designations. As shown in Figure 3.3-5, the area is primarily designated for light industrial and public land uses (the latter associated with Lawrence Livermore National Laboratory and the neighboring public park). Thus, the area currently contains only 227 housing units. Although the great majority of the 729 housing units projected for the area are the result of residential development associated with Livermore's Brisa Neighborhood Plan, current land use designations in the station area prevent achieving more residential units around the Vasco Road Station.

There are two main options for increasing the residential development potential of Alternative 2 station areas and bringing Alternative 2 closer to the MTC target. The first is to change the Livermore APA

for the Isabel/I-580 Station area, as explained under Alternative 1 and to modify the UGB. As previously noted, the likelihood of either of these occurring and resulting in additional housing in this station area is unlikely. The second option is to increase the development potential around the Vasco Road Station via amendments to the City of Livermore General Plan land use map. This process, which would likely involve changing the primary industrial land use designations around the proposed station to various residential designations, would require evaluation of environmental impacts such as land use compatibility, transportation and traffic, air quality, and noise.

Alternative 2a. This alternative includes the Downtown Livermore and the Vasco Road Stations. Alternative 2a would have a housing deficit of an average of 505 units per station (for three stations) compared to the MTC threshold of 3,850 units. This alternative is nearly consistent with the MTC target ,because the two station areas—Dublin/Pleasanton and Downtown Livermore—have high residential development potential but the third station area—Vasco Road—has development constraints based on current land use designations (see Alternative 2, above).

As noted under Alternative 2 above, the development potential around the Vasco Road Station could be increased by amending the Livermore General Plan. It is also conceivable that additional units could be permitted in the Downtown Livermore Station area, which would require amending the Livermore Downtown Specific Plan and supplementing the environmental document prepared for that plan.

Alternative 3. This alternative includes stations at Isabel/I-580 and Downtown Livermore. Like Alternative 2a, the corridor-wide projected housing average for the three stations that would be served by this alternative nearly attains the MTC target, at only 438 units below the MTC threshold. Again, this is the result of two stations—Dublin/Pleasanton and Downtown Livermore—with high residential development potential and a third station—Isabel/I-580—with development constraints (see Alternative 1, above).

Options for increasing the development potential around the Isabel/I-580 Station are outlined under Alternative 1 and suggestions for the Downtown Livermore Station are identified under Alternative 2a.

Alternative 3a. This alternative proposes stations at Isabel/Stanley and Downtown Livermore. Alternative 3a would have a housing deficit of an average of 787 units per station (for three stations) compared to the MTC threshold of 3,850 units. This alternative's development potential reflects two stations—Dublin/Pleasanton and Downtown Livermore—with high residential development potential that are offset by a third station—Isabel/Stanley—with development constraints. There are three primary constraints to residential development around the Isabel/Stanley Station. First, the northern portion of the Isabel/Stanley Station area extends into the Livermore APA. Resulting restrictions to residential development are explained under Alternative 1 above, and are unlikely to allow further residential development potential in this station area. Second, the western portion of the station area is composed almost entirely of privately-owned and currently utilized quarry land, the owners of which have expressed no interest in selling. Third, the station footprint is bisected by the east-west running Livermore UGB, thus inhibiting development potential in the southern portion of the station area.

The constraints to TOD around the Isabel/Stanley Station are substantial. Strategies for promoting residential development in areas currently outside the UGB and within the APA have been discussed under Alternative 1, above. This notwithstanding, the large amount of privately-owned quarry land in the station area would demand negotiating with land owners. As indicated, the quarry is currently a profitable operation and there is no indication that the owners wish to sell quarry land. Moreover, the quarries are recognized by the state as a significant mineral resource area, making the area's conversion to transit uses unlikely until the mineral resources have been extracted. Thus, opportunities to make up the shortfall are likely limited to amending the Livermore Downtown Specific Plan, as described under Alternative 2a.

Alternative 4. This alternative proposes a single station at Isabel/I-580. Alternative 4 would have a housing deficit of an average of 1,282 units per station as compared to the MTC threshold of 3,850 units. Unlike the preceding BART extension alternatives, Alternative 4 would be a one-station extension beyond the existing Dublin/Pleasanton BART Station. As explained under Alternative 1 above, the station area would experience limited residential development potential due to its location within the Livermore APA, would need to be evaluated for potential diesel particulate matter exposure due to its proximity to heavy traffic on I-580, and would need voter approval and subsequent City approval of increased development potential in the area that is currently outside the UGB.

As noted under Alternative 2 above, the development potential around the Isabel/I-580 Station could be increased via changes to the Livermore APA and amendments to the UGB. However, reliance on a single station area to meet the MTC threshold, especially when the station development potential is unlikely to be increased, significantly decreases the overall TOD potential of Alternative 4.

Alternative 5. This alternative proposes a single station at Isabel/Stanley. Alternative 5 would have a housing deficit of an average of 1,806 units per station compared to the MTC threshold of 3,850 units. Like Alternative 4, Alternative 5 includes only one station beyond the existing Dublin/Pleasanton BART Station. As explained under Alternative 3a above, this station area is limited in terms of new development by numerous regulatory and physical constraints. As a result, the corridor-wide projected housing average represents the largest MTC threshold deficit and least amount of TOD potential of all nine proposed alternatives.

As noted under Alternative 3a above, the development potential around the Isabel/Stanley Station could be increased via several options. However, none of these options are particularly promising at this time, and, like Alternative 4, reliance on a single station area to meet the MTC threshold significantly decreases the overall TOD potential of Alternative 5.

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