

CHAPTER 9 FINANCIAL CONSIDERATIONS

9.1 INTRODUCTION

This chapter presents anticipated costs, revenues, and funding for the BEP Alternative and the SVRTP Alternative. A summary evaluation of VTA's financial plan for the proposed improvements is also included for informational purposes.

At this phase in the project development process, costs and revenues for a BART extension project are preliminary. The information provided in the DEIS is the best available at the time of its preparation. The capital cost estimates are based on the initial phase of engineering ("preliminary engineering"). Revenues, including the financial plan, for funding both the capital improvements and operating costs for either of the build alternatives are similarly based on preliminary information. The financial plan includes assumptions and estimates of funding that incorporate some element of uncertainty. The plan is also based on governmental actions that have not been finalized. To minimize the risks that such uncertainty poses, planning assumptions for a BART extension project have attempted to be conservative and not underestimate costs nor overestimate sources of funding.

VTA is in the process of completing the capital cost estimate that reflects the 65% design phase. Once the VTA Board of Directors reviews this estimate, the FTA and PMO will complete a cost estimate review and risk assessment. It is anticipated that the final EIS (FEIS) would incorporate this updated information, including the 65 percent cost estimate and revised financial plan.

VTA is also continuing to develop a long-term capital improvements program that would provide for construction of a BART extension and other projects (see the Valley Transportation Plan 2035 and the voter-approved Measure A program). Alternative ways to phase and fund these joint programs are being considered.

9.1.1 VOTER-APPROVED INITIATIVES SUPPORTING THE FINANCIAL PLAN

In November 2000, over 70 percent of the voters of Santa Clara County approved Measure A, a ½-cent sales tax for transit that included a proposed extension of BART service into Santa Clara County.¹ More recently, the VTA Board of Directors voted to place on the November 4, 2008, general election ballot a ⅛-sales tax increment, Measure B, dedicated to operation of a BART extension project. Measure B was approved by approximately 67 percent of the voters of Santa Clara County, meeting the stringent two-thirds approval threshold for general tax measures in California. The measure is to go into effect when (1) VTA executes a Full Funding Grant Agreement (FFGA) or its equivalent with the Federal Transit Administration (FTA) for at least \$750 million and (2) the State of California contributes at least \$240 million in remaining Traffic Congestion Relief Program (TCRP) and/or other funds to the project. The state has reconfirmed its commitment to provide the remaining TCRP funds. The request for FTA funding is anticipated to be submitted later this year. If New Starts funding is approved, Measure B tax collections would begin and continue for 30 years.

Funds from Measures A and B supplemented by the \$750 million in FTA New Starts program and the \$240 million in state of California funds, would form the foundation for the capital and operating financial plan for the proposed BEP and SVRTP alternatives.

9.2 CAPITAL COSTS

This section presents the summary of capital costs estimated for the two build alternatives. Detailed descriptions of the BEP and SVRTP alternatives, which provide a basis for the cost estimates, are found in Chapter 2, Alternatives. The estimates are based on 2005 local unit cost information available for the types of construction and procurement items. These values have been adjusted to reflect subsequent trends in unit prices, cost escalation, and actual expenditures through 2007, where applicable, to establish price levels for 2008. All capital and operating and maintenance costs are stated in 2008 dollars unless, as indicated, inflated to the estimated year of expenditure (YOE). Capital costs are inclusive of final engineering, contingencies, and reserves.

9.2.1 DESIGN OPTIONS COST ASSUMPTIONS

Both the BEP Alternative and the SVRTP Alternative include variations to the proposed scope of improvements, referred to as design options, which are described in detail in Chapter 2, Alternatives. The design options are likely to have a small impact on the

¹ The tax is assessed at the rate of ½ of one percent of the (1) gross receipts of retailers from the sale of goods and services subject to tax and (2) sales price of property whose storage, use or other consumption is subject to the tax.

total estimated costs of either alternative. The change in total costs attributable to design options is considered to be within the margins of estimating accuracy. Therefore, no separate costs are provided for individual design options. Table 9-1 identifies which options have been assumed in the base case estimates for the BEP Alternative and the SVRTP Alternative.

Table 9-1: Build Alternatives Design Options

Option Category & Applicable Alternative	Design Option	Base Case/ Design Option
A1. Montague Retained Cut Options (BEP and SVRTP Alternatives)	Retained Cut Long Option	Base Case
A2. Montague Retained Cut Options (BEP and SVRTP Alternatives)	Retained Cut Intermediate Option	Design Option
B1. Milpitas Station Bus Transit Center Options (BEP and SVRTP Alternatives)	East Bus Transit Center Option	Base Case
B2. Milpitas Station Bus Transit Center Options (BEP and SVRTP Alternatives)	West Bus Transit Center Option	Design Option
C1. BEP Terminus Options (BEP Alternative Only)	Las Plumas Yard Option	Base Case
C2. BEP Terminus Options (BEP Alternative Only)	No New Yard Option	Design Option
D1. Coyote Creek Tunnel Alignment Options (SVRTP Alternative Only)	Southern Offset Option	Design Option
D2. Coyote Creek Tunnel Alignment Options (SVRTP Alternative Only)	Northern Offset Option	Base Case
D3. Coyote Creek Tunnel Alignment Options (SVRTP Alternative Only)	Santa Clara Street Alignment Option	Design Option

Source: VTA 2008

9.2.2 CAPITAL COSTS FOR BEP AND SVRTP ALTERNATIVES (BASE CASE)

Base year capital costs for the two alternatives are presented in Table 9-2. Total capital costs escalated to YOE dollars, which represent project costs at completion, are shown in Table 9-3.

Table 9-2: Capital Costs for BEP and SVRTP Alternatives (\$2008, in millions)

Principal Components Category	Principal Components Description	BEP Alternative ^a	SVRTP Alternative ^b
10	Guideway & Track	\$382.4	\$1,177.0
20	Stations	\$260.4	\$870.2
30	Support Facilities	\$88.3	\$189.3
40	Sitework & Special Conditions	\$48.9	\$113.7
50	Systems	\$214.6	\$443.5
60	Right-of-Way	\$295.5	\$515.1
70	Revenue Vehicles ^c	\$255.1	\$461.8
80	Professional Services	\$311.1	\$915.3
90	Unallocated Contingency	\$169.2	\$521.4
100	Finance Charges ^d	TBD	TBD
n/a	TOTAL ^e:	\$ 2,025.6	\$ 5,207.3

Notes: BART Core System improvements are included in Stations and Systems cost categories, and total approximately \$71 million for the BEP Alternative and \$120 million for the SVRTP Alternative (Operations and Control Center modifications, stations and systems modifications, and core system parking).

^a BEP Alternative Assumes Retained Cut Long Option at Montague Expressway, East Bus Transit Center at Milpitas Station, and the Las Plumas Yard Option.

^b SVRTP Alternative makes the same assumptions as the BEP Alternative except that the SVRTP Alternative does not include any BEP Alternative Terminus Options and assumes a north or south offset option as the least cost option at Coyote Creek.

^c For the BEP Alternative, 74 new BART cars and no change in VTA bus or LRT fleets are assumed. For the SVRTP Alternative, 127 new BART cars and no change in VTA bus or LRT fleets are assumed. The determination of new BART cars is based on year 2030 demand. A range of BART cars, as discussed in Chapter 2 Alternatives, supports ongoing discussion and analysis by VTA and BART to determine the 2030 BART fleet size for the build alternatives. The lower range of BART cars presented in Chapter 2 has been assumed for the BEP and SVRTP alternatives' capital cost estimates.

No change in the total bus fleet is VTA's current target for 2030 and would be achieved through the (1) implementation of operating efficiencies, including ongoing comprehensive operations analyses of the bus system, and (2) substitution of high capacity (articulated) buses for standard 40-foot buses where demand warrants. Vehicle acquisitions for such substitutions would be funded from non-project capital programs and are therefore not included in the federal project costs.

^d Finance charges would likely be incurred as a result of local borrowing (bonding of sales tax revenues and other borrowing). They have not been determined at this time.

^e Measure A and TCRP funds also support the following past, existing, and planned commitments for related projects and other activities in the SVRT corridor:

Pre-NEPA Engineering and Environmental Analysis	\$ 413 million
Freight Railroad Relocation Activities	
• Right Of Way Acquisition and Maintenance	\$ 167 million
• Mission Warren Truck-Rail Project	\$ 46 million
• Lower Berryessa Creek	\$ 18 million
Newhall Yard Acquisition and Maintenance	\$ 42 million
Mitchell Block Acquisition and Maintenance	\$ 39 million

Source: VTA, 2008.

Table 9-3: Capital Costs for BEP and SVRTP Alternatives in Year of Expenditure (\$YOE millions)

Principal Components Category	Principal Components Description	BEP Alternative^a	SVRTP Alternative^b
10	Guideway & Track	\$472.9	\$1,454.1
20	Stations	\$346.2	\$1,155.9
30	Support Facilities	\$114.4	\$235.5
40	Sitework & Special Conditions	\$59.9	\$136.8
50	Systems	\$275.9	\$569.2
60	Right-of-Way	\$323.8	\$561.8
70	Revenue Vehicles ^c	\$307.4	\$559.4
80	Professional Services	\$379.5	\$1,112.2
90	Unallocated Contingency	\$207.0	\$638.1
100	Finance Charges ^d	TBD	TBD
n/a	TOTAL^e:	\$ 2,487.0	\$ 6,423.0

Notes:

BART Core System improvements are included in Stations and Systems cost categories, and total approximately \$93 million for the BEP Alternative and \$159 million for the SVRTP Alternative (Operations Control Center modifications, stations and systems modifications, and core system parking).

^a BEP Alternative Assumes Retained Cut Long Option at Montague Expressway, East Bus Transit Center at Milpitas Station, and the Las Plumas Yard Option.

^b SVRTP Alternative makes the same assumptions as the BEP Alternative except that the SVRTP Alternative does not include any BEP Alternative Terminus Options and assumes a north or south offset option as the least-cost option at Coyote Creek.

^c For the BEP Alternative, 74 new BART cars and no change in the VTA bus or LRT fleets are assumed. For the SVRTP Alternative, 127 new BART cars and no change in VTA bus or LRT fleets are assumed. The determination of new BART cars is based on year 2030 demand. A range of BART cars, as discussed in Chapter 2 Alternatives, supports ongoing discussion and analysis by VTA and BART to determine the 2030 BART fleet size for the build alternatives. The lower range of BART cars presented in Chapter 2 has been assumed for the BEP and SVRTP alternatives' capital cost estimates.

No change in the total bus fleet is VTA's current target for 2030 and would be achieved through the (1) implementation of operating efficiencies, including ongoing comprehensive operations analyses of the bus system, and (2) substitution of high capacity (articulated) buses for standard 40-foot buses where demand warrants. Vehicle acquisitions for such substitutions would be funded from non-project capital programs and are therefore not included in the federal project costs.

^d Finance charges would likely be incurred as a result of local borrowing (bonding of sales tax revenues and other borrowing). They have not been determined at this time.

^e Measure A and TCRP funds also support approximately \$775 million in past, existing, and planned commitments for related projects and other activities in the SVRTC that are not included in the totals. See Table 9.2-1, notes and text for more detail.

Source: VTA, 2008.

In current 2008 dollars, the BEP Alternative, inclusive of BART vehicles, right-of-way and design/administrative costs from July 2008 forward, is estimated to cost \$2.026 billion; in YOE, it would cost \$2.487 billion. Similarly, the SVRTP Alternative is estimated to cost \$5.207 billion in current 2008 dollars and \$6.423 billion in YOE. For both alternatives, construction is assumed to begin in 2010 with the acquisition of right-of-way and initiation of utility improvements. Construction would be essentially completed in 2018, with some finish and contract close-out activities continuing into 2019 under the SVRTP Alternative.

Not included in the capital cost summaries of Tables 9-2 and 9-3 are non-BART vehicles costs and project financing costs. As indicated in the tables, VTA does not propose to acquire bus and light rail vehicles as part of a BART extension project. Should any capital funds be required for vehicle replacements or substitutions to meet future service needs, they would be made available from non-BART program funds and not be part of the federal project costs.

With respect to financing costs, these are to be determined. VTA would apply debt financing for the SVRTP Alternative and possibly for the BEP Alternative (e.g., to provide for adequate cash flow during the construction period or for other purposes) as part of its Measure A capital program. However, as neither the capital cost estimates nor the timing of Measure A capital programs have yet been finalized, the financing charges are indeterminate. These costs would be calculated and included in Principal Component Category 100 in the FEIS. They would also be submitted to FTA for review as part of any financial capacity analysis of VTA's ability to fund a BART extension project.

As noted in the tables, VTA has incurred and will continue to incur other non-federal project capital costs necessary to advance the overall program of planned improvements in the SVRTC. These costs are not directly a part of the BEP or SVRTP Alternative as they support a broader program of transportation improvements, such as freight railroad relocation activities in the former Union Pacific Railroad corridor, as a result of the acquisition of inactive or surplus railroad right-of-way. Early project development costs for environmental studies and engineering completed prior to mid-2008 are also not included in the cost component categories listed in Tables 9-2 and 9-3. This is consistent with FTA policy that defines project costs proposed for federal funding participation under the Section 5309 New Starts program as those costs incurred from New Starts preliminary engineering (PE) forward.²

² VTA intends to seek New Starts funding at some point for a BART extension project in the SVRTC. FTA has not yet formally approved the project to enter the New Starts Preliminary Engineering (PE) phase but, effectively, design has advanced to that level. VTA has therefore excluded pre-PE and associated environmental review costs, primarily for state of California CEQA compliance, from the project totals and included a reasonable level of PE and final design engineering costs, including a portion of NEPA-related environmental review costs. Tables 9.2-2 and 9.2-3 show the costs for a project with federal funding participation, referred to as the federal project.

9.3 OPERATING AND MAINTENANCE COSTS

This section presents operating and maintenance costs for all planned VTA-operated and any planned VTA-supported transit services in 2030. The former include local and express bus, bus rapid transit (BRT), and light rail transit (LRT) services that are identified in the Measure A expenditure program. Costs cover the continuation and, as appropriate, expansion of these services to meet future demand. Costs for new bus, BRT, and LRT lines are also part of the totals. Operating and maintenance costs for VTA-supported services include contract costs for paratransit service in Santa Clara County and operating assistance VTA would provide for Caltrain, Altamont Commuter Express (ACE), and Highway 17 Express Bus Service with the Santa Cruz County Transit District, among other VTA-subsidized transit services. These costs would also include VTA's operating subsidy for BART extension service into Santa Clara County should either the BEP or SVRTP alternative be implemented.

Measure A transit program cost estimates, both capital and operating, are regularly updated by VTA. The estimated 2030 operating and maintenance costs are therefore preliminary and also conservative. They are intended to reflect the effects of fully implementing the proposed capital elements, which would generate associated operating and maintenance costs, and expanding service on the various transit modes described in the ballot initiative. Actual future operating and maintenance costs could well differ if Measure A funding is lower or higher than estimated. Costs would be constrained to what is fundable from Measure A and other sources of operating funds and what is required to meet demand on future transit services.

Operating and maintenance costs are expressed in terms of (1) total annual costs and (2) costs net of fare and related operating revenues for each of the three alternatives considered in this document. Total operating cost less fare and related revenues equals the net operating cost that VTA would incur to provide the proposed transit services under an alternative. This net cost is sometimes referred to as the operating subsidy that VTA would need to cover from other funds, such as local sales taxes. By comparing operating and maintenance costs to the No Build Alternative, it is possible to identify the change in annual costs attributable to either the BEP or SVRTP alternative.

Operating and maintenance costs are presented first for the non-BART services that VTA either would operate or assist other agencies in operating, followed by VTA's estimated share of costs for a BART service extension into Santa Clara County. A summary table indicates the net operating and maintenance costs VTA would incur in 2030 for all planned services, with and without BART.

9.3.1 VTA OPERATED AND ASSISTED TRANSIT SERVICES (NON-BART)

Table 9-4 shows the operating and maintenance costs in real 2008 dollars for VTA's bus, BRT and LRT services in 2030. The figures also include the costs of VTA's operating assistance for paratransit, Caltrain, ACE and other proposed service commitments in 2030. Table 9-5 shows these costs in YOE dollars (i.e., including price level inflation to 2030). The transit service and fleet assumptions are described in Chapter 2, Alternatives.

Table 9-4: Annual O&M Costs and Operating Revenues for VTA Operated and Assisted Services (Non-BART): 2030 Operating Plans (\$2008 in millions)^a

Item	No Build Alternative	BEP Alternative	SVRTP Alternative
VTA Bus, BRT, Light Rail and Other Operating Costs ^b	\$537.2	\$572.3	\$555.5
Fare and Related Operating Revenues (Credit) ^c	(\$146.1)	(\$156.5)	(\$150.0)
NET COST:	\$391.1	\$415.8	\$405.5

Notes:

^a Includes planned expansion of services included in Measure A and growth in existing services to meet projected travel demand.

^b Inclusive of operating assistance for Santa Clara County paratransit services, ACE, Caltrain, and Highway 17 Express Bus Services funded from the 1976 permanent and 2000 Measure A sales taxes.

^c Farebox revenues and advertising income to VTA

Source: AECOM Consult, September 2008.

Table 9-5: Annual O&M Costs and Operating Revenues for VTA Operated and Assisted Services (Non-BART): 2030 Operating Plans (\$YOE in millions)^a

Item	No Build Alternative	BEP Alternative	SVRTP Alternative
VTA Bus, BRT, Light Rail and Other Operating Costs ^b	\$1,157.7	\$1,231.9	\$1,195.7
Fare and Related Operating Revenues (Credit) ^c	(\$271.6)	(\$290.8)	(\$278.8)
NET COST:	\$886.2	\$941.1	\$916.9

Notes:

^a Includes planned expansion of services included in Measure A and growth in existing services to meet projected travel demand.

^b Inclusive of operating assistance for Santa Clara County paratransit services, ACE, Caltrain, and Highway 17 express bus services funded from the 1976 permanent and 2000 Measure A sales taxes.

^c Farebox revenues and advertising income to VTA

Source: AECOM Consult, September 2008.

Total operating and maintenance costs for the No Build Alternative are estimated to be approximately \$537 million expressed in 2008 real dollars and \$1.158 billion when including forecast cost inflation to 2030. Operating costs for non-BART services under the BEP Alternative are estimated to be approximately \$572 million in 2008 dollars and \$1.232 billion in YOE (an approximate increase of 6.5 percent over the No Build Alternative in both dollar amounts). Similar costs for the SVRTP Alternative are projected to be \$555 million in 2008 dollars and \$1.196 billion in YOE (a 3 percent increase in both cases).

Passenger fare revenue is generated by each boarding of the VTA system. Future revenues for the 2030 No Build Alternative and for the BEP and SVRTP alternatives have been estimated based on forecast ridership in that year and an average fare per boarding. The average fare per boarding of VTA bus and LRT services is assumed to increase to keep pace with inflation. Fare and related revenues generated from operations would amount to, and offset, about 23 percent of total operating and maintenance costs. Tables 9-4 and 9-5 indicate estimated 2030 fare revenue under each of the three alternatives in constant 2008 and YOE dollars, respectively. The resulting net costs for VTA non-BART operations are also shown. In 2030, the net cost of service under the BEP Alternative would be approximately \$941 million, or approximately 6 percent higher than the net cost of service under the No Build Alternative. The additional costs are for BART feeder and express bus connections offered primarily at the Milpitas and Berryessa stations. In 2030, the net cost of service under the SVRTP Alternative would be less than under the BEP Alternative, approximately \$917 million due to the proposed lower level of express and feeder service associated with the SVRTP Alternative. This reduction relative to the BEP Alternative would be possible because of the increased amount of BART service in the SVRTC under the SVRTP Alternative.

9.3.2 VTA COSTS FOR BART EXTENSION SERVICE UNDER BEP AND SVRTP ALTERNATIVES

A BART extension into Santa Clara County would generate additional operating and maintenance costs for the BART rail system. Under the 2001 comprehensive agreement between VTA and the BART District, VTA is obligated to reimburse BART, the system operator, for these added costs, adjusted for the operating revenues generated by BART extension service. VTA's payment would cover two types of operating costs:

1. Net direct operating and maintenance (O&M) costs, which are calculated as the difference in BART systemwide operating costs with either the BEP or SVRTP alternatives and BART systemwide costs without either alternatives.
2. A fixed overhead operating and maintenance cost calculated based on the change in net direct operating and maintenance costs.

Besides O&M expenses, VTA is obligated under the comprehensive agreement between VTA and BART to make a capital reserve contribution to BART that is equal to a percentage of the annual operating and maintenance costs for extension service. This payment would go towards repair or replacement of equipment and facilities that would occur over time. For convenience, this third contribution is included in this cost summary as it would occur annually and be part of VTA's overall reimbursement to BART. The annual maximum capital reserve contribution of 30 percent of O&M costs is applied below, which is a conservative estimate of VTA's capital reserve contribution to BART.

The total annual operating and maintenance cost obligation would be adjusted by the net additional fare revenue generated by ridership on a BART extension service. Other revenues BART would receive in response to operation of a BART extension, including advertising and parking fees, would also be credited against VTA's obligation to establish a net annual "operating subsidy." These revenue credits are included in the tables showing VTA's estimated total and net operating and maintenance costs for a BART extension service.

BART Extension Annual O&M Costs, Capital Reserve Contribution, and Operating Revenues

Tables 9-6 and 9-7 show that the incremental cost of BART service under the BEP Alternative would be approximately \$83.9 million in constant 2008 dollars and \$155.9 million in YOE dollars for assumed operations in 2030. Under the SVRTP Alternative, the incremental cost would be approximately \$147.3 million in 2008 dollars and \$273.8 million in YOE dollars. These costs include the maximum capital reserve contribution.

Table 9-6: Annual O&M Costs, Capital Reserve Contribution, and Operating Revenues for BART Extension Service: 2030 Operating Plans (\$2008 in millions)

Item	No Build Alternative	BEP Alternative	SVRTP Alternative
BART Incremental O&M (Generated by Santa Clara County Extension)			
SVRT Direct O&M Costs	\$0	\$58.2	\$103.3
SVRT Allocation of Fixed Overhead O&M Costs	\$0	\$6.3	\$10.1
Capital Reserve Contribution (Maximum: 30%)	\$0	\$19.4	\$34.0
Fare and Related Operating Revenues (Credit) ^a	\$0	(\$36.7)	(\$84.2)
NET COST:	\$0	\$47.2	\$63.2

Notes:

^a Farebox, advertising and parking revenues generated by increase in BART ridership and expanded BART operations in 2030

Source: AECOM Consult, September 2008

Table 9-7: Annual O&M Costs, Capital Reserve Contribution, and Operating Revenues for BART Extension Service: 2030 Operating Plans (\$YOE in millions)

Item	No Build Alternative	BEP Alternative	SVRTP Alternative
BART Incremental O&M (Generated by Santa Clara County Extension)			
SVRT Direct O&M Costs	\$0	\$108.2	\$191.9
SVRT Allocation of Fixed Overhead O&M Costs	\$0	\$11.8	\$18.7
Capital Reserve Contribution (Maximum: 30%)	\$0	\$36.0	\$63.2
Fare and Related Operating Revenues (Credit) ^a	\$0	(\$68.2)	(\$156.5)
NET COST:	\$0	\$87.7	\$117.4

Notes:

^a Farebox, advertising and parking revenues generated by increase in BART ridership and expanded BART operations in 2030

Source: AECOM Consult, September 2008

Fare and related operating revenues would offset a portion of operating costs. Passenger fare revenue generated on BART extension service is also based on the linked transit trips (i.e., riders) generated on either the BEP or SVRTP alternative, multiplied by the average BART system fare per linked trip. Average fares account for all discounts provided for youth, elderly, and disabled riders. BART fares are escalated to YOE by applying a forecast change in the consumer price index. Tables 9-6 and 9-7 list estimated fare and related revenues for the assumed 2030 operating plans of the BEP and SVRTP alternatives.

Fare and related revenues are projected to equal, and thereby offset, approximately 50 percent of BEP Alternative and 66 percent of SVRTP Alternative incremental operating and maintenance costs for BART extension service. The net total annual cost for the BEP Alternative would be approximately \$88 million and for the SVRTP Alternative, approximately \$117 million, both figures in YOE. Net costs for the SVRTP Alternative are higher despite better fare recovery due to the higher total costs of operating an approximately 16-mile BART extension versus approximately 10 miles for the BEP Alternative.

Revenue from Federal Formula Funds

The San Jose Urbanized Area would receive formula grant funds from FTA based on the BART service operated in Santa Clara County on the extension, and these revenues could be applied towards VTA's annual obligation to the BART District. Federal transit formula grants are funds distributed to urbanized areas according to the revenue vehicle miles and route miles of fixed guideway transit in a region and other formulas. The San Francisco Bay Area Metropolitan Transportation Commission (MTC)

is the designated recipient of federal transit formula grants from FTA and manages the re-distribution of these funds to transit operators within the San Jose Urbanized Area. MTC allocates the funds based on capital rehabilitation and ongoing maintenance needs as a priority.

Potential formula funds are not included in the revenues of Tables 9.3-3 and 9.4-4 and therefore not assumed to offset a further portion of BART extension operating and maintenance costs. This is because formula funds are subject to congressional renewal of transportation program authorization legislation, and the financial analysis has attempted to be conservative by recognizing the uncertainty of federal actions in 2030. However, formula funds could be significant as they would be approximately \$21 million annually in 2030 under the BEP Alternative and approximately \$47 million annually under the SVRTP Alternative should current formula funding be continued to that point. Both figures are in YOE. If credited towards operating and maintenance costs, the net total cost for the BEP Alternative would decrease to \$41 million and, for the SVRTP Alternative, \$49 million, both in YOE.

9.3.3 NET ANNUAL O&M COSTS IN 2030: ALL VTA SERVICES

Net operating and maintenance costs to VTA in 2030 for all VTA operated and assisted services combined with BART extension service under either the BEP or SVRTP alternative are shown in Table 9-8. The costs are compared to the 2030 No Build Alternative to indicate the net change under each build alternative. The net change corresponds to the increase in VTA's operating subsidy for all planned transit services that would serve Santa Clara County residents. The analysis is in YOE.

Both build alternatives generate higher operating costs and higher ridership compared to the No Build Alternative. Higher ridership would lead to increased operating revenues. The net increase in operating and maintenance costs that are either directly or indirectly subsidized by VTA would be approximately \$143 million in 2030 under the BEP Alternative (a 16 percent increase over No Build Alternative net operating and maintenance costs) and approximately \$148 million in 2030 under the SVRTP Alternative (a 17 percent increase over No Build Alternative net operating and maintenance costs).

Table 9-8: Net Annual Operating and Maintenance Costs in 2030 (\$YOE in millions)

Mode	No Build Alternative Net O&M	BEP Alternative		SVRTP Alternative	
		Net O&M	Change Relative to No Build	Net O&M	Change Relative to No Build
VTA Bus and Light Rail	\$886.1	\$941.1	\$55.0	\$916.9	\$30.8
BART (Generated by Santa Clara County Extension)	\$0	\$ 87.7	\$87.7	\$117.4	\$117.4
TOTAL:	\$886.1	\$1,028.8	\$142.6	\$1,034.3	\$148.1
% of No Build			16%		17%

Source: VTA, September 2008

The BEP Alternative would include a substantial level of VTA bus and LRT services to complement the shorter BART extension. Feeder and express bus services serving the Milpitas and Berryessa Stations would be expanded over the level of service provided in the No Build Alternative, in part through a redesign of No Build Alternative bus service in the corridor (e.g., the extension of BART would allow VTA to eliminate and/or modify bus routes along the alignment). BEP Alternative feeder and express services would also be more extensive than those provided under the SVRTP Alternative. The expanded BEP Alternative bus services would connect BART to downtown San Jose and points in the core of Silicon Valley to the west.

While BART service under the BEP Alternative tends to generate high passenger revenues (estimated 50 percent farebox recovery, defined as the share of operating costs recovered from passenger fares and related advertising revenues), bus and light rail services do not (estimated 23 percent farebox recovery in 2030).³ As a consequence, the net operating costs of expanded bus and light rail services under the BEP Alternative tend to be high due to low to moderate fare revenue and farebox recovery.

The SVRTP Alternative would include a substantially higher level of BART service than the BEP Alternative. Bus and light rail would not need to be expanded in the SVRTC due to the broader coverage and access offered by BART under the SVRTP Alternative. Fare revenue on the longer BART extension is projected to be substantially greater than on the shorter BEP Alternative; farebox recovery would also improve to an estimated 66 percent when including fares and advertising revenues. Thus, compared to the BEP Alternative, the SVRTP Alternative would offer a combination of transit services with

³ Advertising revenue is calculated on the basis of incremental BEP/SVRT riders, multiplied by BART's FY08 budgeted advertising revenue per passenger (per BART's FY08 Short-Range Transit Plan).

higher overall farebox recovery. It would generate more fare revenue and offset a greater share of its higher operating costs.

9.4 FINANCIAL EVALUATION OF BEP AND SVRTP ALTERNATIVES

This section provides a financial evaluation of VTA's ability to build and operate the BEP and SVRTP alternatives, including a discussion of revenue sources and current funding.

9.4.1 CAPITAL COST FUNDING

VTA has developed a funding strategy that relies on three key funding categories: (1) local sales tax and other local funds, (2) state funds, and (3) federal Section 5309 New Starts funds. Table 9-9 shows the funding sources for each build alternative in YOE.

Table 9-9: Sources of Capital Funding for BEP and SVRTP Alternatives (\$YOE in millions)

Funding Source	BEP Alternative		SVRTP Alternative	
	Funding	Percent of Total	Funding	Percent of Total
VTA Local Sales Tax Measure A and Other ^a	\$1,542.7	60.9%	\$5,433.0	84.6%
State Traffic Congestion Relief Program ^b	\$240.0	9.5%	\$240.0	3.7%
Federal Section 5309 New Starts	\$750.0	29.6%	\$750.0	11.7%
TOTAL:	\$2,532.7	100%	\$6,423.0	100%

Notes:

^a "Other" includes possible state and local funds and potential joint development revenues.

^b Total TCRP funds committed to the project are \$648.6 million. Approximately \$408.6 million of this total has either been expended or is programmed to be expended on pre-NEPA and non-federal activities that are not included in the project costs listed in Table 9.2-2. See text for more detail.

Source: VTA, September 2008

Local Sales Taxes and Other Funding

Santa Clara County directs sales tax revenues to transit from basically three sources. The Transportation Development Act of 1971, a statewide law, returns a ¼-cent sales tax to California counties. A permanent ½-cent local sales tax for transit was approved by Santa Clara County voters in 1976. Both of these sources are primarily allocated to funding transit operations although the county ½-cent sales tax is also available for capital projects.

On November 7, 2000, voters in Santa Clara County approved by a 72 percent to 28 percent margin a second ½-cent sales tax for transit. The 2000 Measure A tax took effect April 1, 2006 and continues to 2036. Measure A specifies transit capital projects to which sales tax revenues would be directed, including an extension of BART service into Santa Clara County.

If necessary, additional local funding for a BART extension could come from the other county sales taxes for transit, discretionary local and state sources, and potential joint development and related revenues.⁴ Areas surrounding proposed BART stations on both the BEP and SVRTP alternatives have significant development opportunities that can generate revenue for the project.

The VTA Board of Directors has approved issuing debt against future sales tax proceeds as necessary to fund project implementation. This includes debt to guarantee the project cash flow during the construction period when the annual costs of construction would be expected to exceed the annual stream of project revenues.

State Traffic Congestion Relief Program (TCRP)

In 2000, the governor of California signed legislation authorizing the TCRP, which dedicated a portion of the sales tax on gasoline to transportation programs and projects for a period of five years. That provision was subsequently extended for another two years. Among the projects named in the legislation was the SVRTC project. The total amount of TCRP funding committed to the project is \$648.6 million. As of September 1, 2008, \$409.5 million of this total had already been awarded. Approximately \$45 million of awarded funds have supported the conceptual engineering and environmental clearance phase of the project. (Measure A funds supplement the TCRP allocation when the latter's category funding limits are reached.) Approximately \$364.5 million of awarded funds have been applied to further advance the level of engineering detail for project alternatives. The detailed engineering phase is ongoing. The state's remaining commitment of \$239.0 million will be used to complete project engineering.

As shown in Table 9-9, \$240 million of TCRP funds are included in the state's portion of capital funding for the BEP and SVRTP alternatives that are subject to federal participation. TCRP funds would amount to 9.5 percent of the \$2.533 billion cost of the BEP Alternative and 3.7 percent of the \$6.423 billion cost of the SVRTP Alternative (both figures in YOE dollars). TCRP funds are not assumed to escalate above the current commitment.

⁴ VTA has the authority to pursue joint development per Assembly Bill No. 1937, which was signed by the Governor of California in August 2002.

Federal Section 5309 New Starts

Federal Section 5309 New Starts funds are discretionary funds appropriated annually by the U.S. Congress for fixed guideway transit projects. Under Section 5309, projects are evaluated and rated by the FTA and submitted to Congress for appropriations. Although New Starts funding can be requested for up to 80 percent of the total federal project cost, generally it does not exceed 50 percent. FTA issues a more favorable project local financial commitment rating, and therefore often a higher project rating, to projects that have a higher percentage of non-New Starts funds required for their implementation, from preliminary engineering through construction and start-up.

The BEP and SVRTP alternatives' financial plan includes New Starts funding in the amount of \$750 million in YOY. This would represent approximately 30 percent of costs for the BEP Alternative and 12 percent for the SVRTP Alternative. A Full Funding Grant Agreement (FFGA) between the FTA and VTA would be required to secure these funds, with grant funds allocated annually at the discretion of Congress. An FFGA could be requested of FTA in 2010 (for award in federal fiscal year 2012).

9.4.2 VTA BUS, BRT AND LRT O&M COSTS FUNDING

The primary sources of funding for VTA's current bus, BRT and LRT operations, and for other transit operating assistance commitments of the Authority include:

- Local Transportation Fund component of the State Transportation Development Act (TDA ¼ cent sales tax, of which approximately 94 percent is returned to source)
- Permanent (1976) Santa Clara County ½-cent sales tax
- 2000 Santa Clara County Measure A ½ cent sales tax, effective 2006-2036. A portion of these revenues is made available annually for VTA operations.
- State Transit Assistance (STA) program funds from gasoline sales tax revenues
- Passenger fare revenues
- Other sources (e.g., advertising, rentals, interest earnings, etc.).

Local tax measures have provided VTA reliable and somewhat stable funding for transportation improvements over the past 26 years. Local sales taxes have voter approval to continue into the future. Together with passenger fares and state operating assistance, VTA has developed a revenue stream that has supported the growth of transit service in the county. The sources have provided VTA substantial funds to provide a high level of bus and LRT service for county residents and to help support other regional services (e.g., Caltrain and ACE commuter rail). They are projected to generate sufficient funds to cover future operating subsidies required for these services, with the provision there could be periodic adjustments of services to ensure a balance

between operating costs and operating revenues, both of which can fluctuate with local economic conditions. (See Section 9.5, Funding Issues And Risk Analysis, for a discussion of variability in Santa Clara County sales tax revenues for transit.)

9.4.3 BART EXTENSION O&M COST FUNDING

In November 2001, VTA and BART executed a comprehensive agreement in connection with a proposed BART extension into Santa Clara County. Pursuant to the agreement, VTA and BART agreed that the ongoing operating and maintenance costs caused by operating the extension, both within and outside Santa Clara County, are the financial responsibility of VTA (capital costs of an extension are also a VTA responsibility).

The estimated annual amount of the subsidy required by VTA to meet this responsibility would vary depending upon service levels and passenger fare revenues. Based on the proposed 2030 operating plans, the total net annual costs to VTA for BART extension service would be approximately \$88 million under the BEP Alternative and \$117 million under the SVRTP Alternative (both figures are 2030 YOE). In the first years of operation, service levels are expected to be somewhat lower, therefore the subsidy would be less than in 2030.

The VTA-BART agreement calls for the annual subsidy to be funded from a dedicated source of revenue. During initial project planning, it was determined that existing sources of operating funds would likely not be sufficient to cover all of the additional net operating costs associated with the BEP or SVRTP alternative. An analysis of VTA's financial capacity to build a BART extension into Santa Clara County and reimburse BART for the net costs of its operation, while continuing to operate and maintain the existing bus, light rail, and paratransit service over the next 20 years, indicated that existing operating resources would need to be augmented to improve long-term financial results.⁵

⁵ Funding sources to operate and maintain all existing VTA transit services (operated and assisted) would not be used as a funding source for BART extension operations and maintenance costs.

Therefore, the VTA Board of Directors decided to place another local sales tax on the ballot. On November 4, 2008, county voters were given the opportunity to approve Measure B, adding a $\frac{1}{8}$ -cent increment to the local sales tax and dedicated solely to operate the BART extension to Santa Clara County. The tax would go into effect contingent upon VTA executing an FFGA with FTA for at least \$750 million in federal participation towards a project and the state committing at least \$240 million in additional TCRP or other funds, the tax would be in effect for 30 years. Measure B was approved by the required two-thirds margin (66.7 percent of voters in favor, 33.3 percent in opposition). Thus, Santa Clara County will have a combined local/state sales tax rate of 1.375 percent for transit when Measure B takes effect.⁶

9.4.4 POTENTIAL NEW FUNDING SOURCES

By approving the latest sales tax increment for transit, Santa Clara County voters and VTA have bolstered the financial plan for bringing BART service into the county and supporting its long-term operation once construction is complete. However, there is continual pressure to expand and/or improve transit services besides completing a BART extension. Therefore, VTA has determined it would be prudent to consider other potential sources of funding that could further support VTA's overall transit programs.

Several potential sources have been identified to augment funding for bus, LRT, and BART extension services. However, before pursuing some of them, certain legislative actions may be needed to help make them a reality. Potential new revenues, which could be considered by the VTA Board of Directors, include the following:

- **Broadening the Sales Tax Base.** The California state legislature has explored a number of options for increasing revenues, one of which is broadening the sales tax base to include certain professional services. The prospects for legislative action in the near-term do not appear promising, given the controversial nature of this approach. However, given the long-term structural problem with the sales tax resulting from an increasingly higher percentage of personal income being spent on non-taxable transactions, the concept of broadening the sales tax base will continue to be a part of political discussions. Broadening the sales tax base would require a $\frac{2}{3}$ -vote of both houses of the legislature.
- **Joint Development.** VTA has statutory authority to pursue joint development in conjunction with transportation projects under Assembly Bill No. 1937. There are excellent opportunities for joint development at all of the proposed BART stations in the SVRTC, which could yield both capital funding and ongoing operational support.

⁶ Local sales taxes for transit would include the $\frac{1}{4}$ -cent TDA, $\frac{1}{2}$ -cent 1976 permanent sales tax, $\frac{1}{2}$ -cent Measure A, and $\frac{1}{8}$ -cent Measure B.

- **Benefit Assessment Districts.** On October 11, 2003, the Governor signed legislation (Assembly Bill No. 935) that gives VTA the authority to assess fees on property owners within a half-mile of any existing or proposed rail transit station. With the concurrence of a majority of the affected property owners and the appropriate local jurisdiction, the proceeds generated from such assessments could be used to build, maintain, operate, and improve a rail transit station or stations located within a particular benefit assessment district.
- **Proposition 42.** This proposition provided a new state source of transportation funding, including supplemental State Transportation Improvement Program funds beginning in 2009. Since these funds are not currently committed, it is assumed that a portion could be used to supplement the Measure A sales tax.
- **Regional Gas Tax.** The MTC is empowered to place a regional gas tax on the ballot of up to \$0.10 per gallon. Such a tax measure, as the law currently stands, would require a $\frac{2}{3}$ -vote to pass.

9.5 FUNDING ISSUES AND RISK ANALYSIS

The financial plan for construction and operation of a BART extension into Santa Clara County is based on a number of assumptions about future conditions, in particular costs and revenues in the period 2008 through 2036 and thereafter in the event long-term debt would be a financing mechanism. Although the best efforts are made to forecast the future and to be conservative in key assumptions (not being overly optimistic on revenues or costs), under certain circumstances actual conditions could differ from forecasts. The following describes several risks to the BEP and SVRTP alternatives, including the financing plan, that could increase costs and/or decrease funding and thereby require corrective actions by VTA or other project participants in order to ensure construction and operation of a BART extension.

Variability in Sales Tax Revenues. VTA is heavily reliant on local sales tax revenues for both the implementation of capital projects and the operation of its transit services. Historically, sales tax-based revenues accounted for approximately 80 percent of VTA's annual operating revenues, making it the single most important determinant of VTA's financial strength. Historically sales tax revenues have enjoyed healthy and steady growth, even through the recession of the early 1990s. Growth, however, was substantially reduced during the economic downturn in Santa Clara County during the early 2000s when many high technology and internet related businesses experienced declining revenues. Even accounting for that recession, the average annual growth rate in the county's permanent $\frac{1}{2}$ -cent sales tax was strong over the period from 1978 through 2007—approximately 5.9 percent.

Future sales tax revenue forecasts do not anticipate that this high annual rate of growth would continue. For the permanent $\frac{1}{2}$ -cent tax and Measure A $\frac{1}{2}$ -cent sales tax, the

projected annual growth rate for 2008 to 2036 is just over 3.5 percent. Despite the more conservative projections compared to historic growth, it is possible sales tax revenue growth would not reach these levels. The current economic downturn has reduced sales tax revenue in 2008 to below expected levels, and 2009 is likely to be another low or no-growth year. An extended recession—and unexpected future downturns—would leave VTA with shortfalls in funding for capital and operations that would require either cutbacks in programmed levels of expenditures or replacement of sales tax revenues by another source of funding.

Lower Ridership/Lower Fare Revenues. Lower operating revenues from passenger fares could result from either VTA not escalating fares to keep pace with inflation or slower than anticipated ridership growth. Fare revenue is projected to provide a large offset to the total operations and maintenance costs for BART service into the county. It is also projected to offset about $\frac{1}{4}$ of VTA's future operating costs for bus and rail service (2030 conditions). The risk is to VTA operations that possibly would need to be curtailed in order to bring operating revenues more in line with operating costs.

Higher than Anticipated Capital Program Costs. Higher than estimated costs, not just for a BART extension but also for other VTA transit capital programs, could place the agency's financial plan at risk. Market conditions could change from those assumed in cost estimates and programming documents and result in construction costs escalating faster than revenues. VTA would need to either reduce costs, possibly by cutting back programs, or augment revenues through new sources of funding for transit.

Excessive Schedule Delays. Construction costs for a project would escalate over time and therefore be higher for a project completed beyond the current schedule (opening of a BART extension project is proposed in 2018). The resulting increase in the capital costs of a project would need to be offset by additional revenues, or a reduction in the project scope could be required to reduce cost.

Loss or Shortfalls in Other Funding Sources. In the event a BART extension project would not be awarded an FFGA or if VTA would not receive programmed state/other funds in the amounts and timeframes assumed, the financial plan for the project would be adversely affected. Alternate sources of funding, possibly from local, regional, or state initiatives, would need to be secured to carry out a BART extension and/or other VTA projects.