

## CHAPTER 8.0: FINANCIAL CONSIDERATIONS

### 8.1 INTRODUCTION

This chapter presents cost and revenue information, as well as cost effectiveness measures for the Baseline and BART alternatives, as well as the MOS scenarios. A financial evaluation of the BART Alternative is also included. The financial analysis is not required for environmental review but is presented for informational purposes.

The SVRTC project is included in the financially constrained 2001 Regional Transportation Plan (RTP), and is detailed in the transit expansion element of the RTP, adopted as Resolution 3434 by the Metropolitan Transportation Commission. In addition to regional support for the project, in November 2000, over 70 percent of the voters of Santa Clara County approved Measure A, a half-cent sales tax for transit that included the SVRTC project. The State of California also programmed funding for the corridor in the Traffic Congestion Relief Program (TCRP).

The financial plan indicates that this extension will need additional revenue in order to be constructed and operated in the time frame described. FTA approved circulation of the Draft EIS/EIR, with a preliminary financial plan, in recognition of the project's inclusion in the current MTC financially constrained regional plan and as support for the public dialogue on the project and its financial plan. The financial plan is based on financial projections and governmental actions that are not finalized. As part of the New Starts process, a feasible financial plan will need to be prepared to advance the project into Final Design. In addition, the proposed project is dependent on the completion of the BART Warm Springs Extension Project that does not yet have a final financial plan in place.

### 8.2 CAPITAL COSTS

This section presents the summary of capital costs estimated for the Baseline and BART alternatives. The capital costs for the MOS scenarios are also included. Detailed descriptions of the alternatives, which provided a basis for the cost estimates, are found in Chapter 3, *Alternatives*. The estimates are based on the latest local unit cost information available for the types of construction and procurement items. These costs are inclusive of engineering, contingencies, and reserves. No capital costs would be associated with the No-Action Alternative.

#### 8.2.1 BASELINE ALTERNATIVE

Total capital costs are estimated to be \$353 million in mid-2001 dollars and \$379 million in 2003 dollars for the Baseline Alternative, as shown in Table 8.2-1. The principal components of these capital cost estimates include construction, ROW needs, new express bus vehicles, engineering, contingencies, and reserves.

#### 8.2.2 BART ALTERNATIVE

Total capital costs in mid-2001 dollars are estimated at \$3,838 million for the BART Alternative, as shown in Table 8.2-1. This estimate assumes the least costly design options identified in Table 8.2-2 to

**Table 8.2-1: Capital Costs for Baseline and BART Alternatives**

Principal Components	Baseline Alternative		BART Alternative <sup>[1]</sup>	
	2001 Dollars	2003 Dollars	2001 Dollars	2003 Dollars
Construction	\$125,664,000	\$134,614,000	\$1,565,827,000	\$1,677,353,000
Right-of-Way	\$36,906,000	\$39,535,000	\$439,038,000	\$470,308,000
Vehicles	\$48,988,000	\$52,477,000	\$320,940,000	\$343,799,000
Engineering, Contingencies, & Reserves <sup>[2]</sup>	\$141,919,000	\$152,027,000	\$1,512,672,000	\$1,620,412,000
<b>TOTAL:</b>	<b>\$353,477,000</b>	<b>\$378,653,000</b>	<b>\$3,838,477,000</b>	<b>\$4,111,873,000</b>

Notes:  
<sup>[1]</sup> Assumes least costly design options to establish a "base case" estimate.  
<sup>[2]</sup> BART Alternative includes 25% for engineering/administration, 6.8% for contingencies, 5.2% for reserves, and 2.5% for initial system start-up and freight railroad relocation.  
Source: Earth Tech, Inc.; VTA, 2003.

establish a "Base Case" estimate for the BART Alternative. This number would escalate to \$4,112 million in today's dollars (2003) and \$4,998 million in year of expenditure dollars (through 2013), as shown in Table 8.2-3. Table 8.2-2 also shows the projected add-on costs associated with each of the design options not included in the Base Case, which would be in addition to the Base Case cost estimate of \$3,838 million shown in Table 8.2-1. If all of the most costly add-on design options were chosen, the BART Alternative could cost as much as \$4,004 million in 2001 dollars, \$4,289 million in 2003 dollars, \$5,222 million in year of expenditure dollars.

**8.2.2.1 Minimum Operating Segment Scenarios**

The capital cost estimates for the MOS scenarios are shown in Table 8.2-4. The capital cost estimate for MOS-1E in 2025 is \$3,568 million in 2001 dollars, which escalates to \$3,822 million in 2003 dollars. This would have a \$271 to \$291 million cost savings in comparison to the full-build BART Alternative, respectively. Assuming 2015 conditions for MOS-1E, the capital cost estimate would be \$3,512 million in 2001 dollars and \$3,762 million in 2003 dollars, a savings of \$327 million in 2001 dollars and \$350 million in 2003 dollars. MOS-1F would cost \$3,636 million in 2001 dollars, which saves \$203 million and \$3,895 million in 2003 dollars, a \$217 million cost savings.

MOS-1E in 2025 would escalate to \$4,632 million in year of expenditure (through 2013), while MOS-1E built to year 2015 conditions would cost \$4,556 million in year of expenditure. MOS-1F would cost \$4,724 million in year of expenditure through the year 2013.

Since the MOS-2E and 2F elements would be deferred by three years under all of the MOS scenarios, the ultimate cost of the project would be more in comparison to the full-build BART Alternative. Thus, by completing the MOS-2E and 2F components three years later by 2016, it would ultimately add between \$30 and \$40 million to the project.

<b>Table 8.2-2: BART Alternative Design Options</b>			
<b>Design Option</b>	<b>Base Case</b>	<b>Incremental Add-on Costs</b>	
		<b>2001 Dollars</b>	<b>2003 Dollars</b>
<b>South of Warm Springs Alignment</b>			
• Rail Right-of-Way	Base Case	--	--
• East of Rail Right-of-Way	--	+\$10,799,000	+\$11,568,000
<b>East Warren Avenue Alignment</b>			
• Aerial	Base Case	--	--
• At grade	--	+\$5,927,000	+\$6,349,000
<b>Locomotive Wye Location</b>			
• Fremont	Base Case	--	--
• Milpitas	--	+\$1,695,000	+\$1,816,000
<b>Dixon Landing Alignment</b>			
• Aerial	Base Case	--	--
• Retained Cut	--	+\$11,183,000	+\$11,980,000
• At-grade	--	+\$8,831,000	+\$9,460,000
<b>South Calaveras Future Station</b>			
• Parking Structure North	--	+\$98,948,000	+\$105,996,000
• Parking Structure South	--	+\$107,682,000	+\$115,352,000
• Parking Structure North with Parallel Bus Transit Center	--	+\$103,654,000	+\$111,037,000
<b>Montague/Capitol Station</b>			
• Roadway Transit Center with At-grade Concourse	Base Case	--	--
• Roadway Transit Center with Elevated Concourse	--	+\$9,039,000	+\$9,683,000
• South Bus Transit Center with At-grade Concourse	--	+\$2,327,000	+\$2,493,000
• South Bus Transit Center with Elevated Concourse	--	+\$11,365,000	+\$12,174,000
<b>Berryessa Station</b>			
• Parking Structure Southwest	Base Case	--	--
• Parking Structure Northeast	--	+\$49,745,000	+\$53,288,000
<b>Alum Rock Alignment and Station</b>			
• Railroad/28 <sup>th</sup> Street	Base Case	--	--
• US 101/Diagonal	--	+\$23,850,000	+\$25,549,000
<b>Diridon/Arena Alignment and Station</b>			
• North	Base Case	--	--
• South	--	+\$22,315,000	+\$23,904,000
<b>Santa Clara Station</b>			
• Parking Structure North	Base Case	--	--
• Parking Structure South	--	+\$20,808,000	+\$22,290,000
<b>Airport Connection</b>			
• Lowered Profile for Future Airport Connection	--	+\$7,261,000	+\$7,778,000
<i>Source: Earth Tech, Inc.; VTA, 2003.</i>			

**Table 8.2-3: BART Alternative Cash Flow through Fiscal Year 2014**

Project Component	Fiscal Year 2003 to 2009 <sup>[1]</sup>						
	FY 03 <sup>[2]</sup>	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09
Environmental/Conceptual Design	\$18,988	\$26,012					
Preliminary Engineering		\$35,817	\$106,031	\$27,307			
Final Design				\$95,938	\$44,134		
Civil Construction				\$17,206	\$234,054	\$533,763	\$535,681
Systems Installation					\$4,567	\$52,208	\$98,001
Systems Testing/Integration							
Vehicles						\$77,639	\$106,584
Property Costs	\$80,428	\$66,760	\$67,073	\$100,691	\$104,215	\$85,512	\$83,568
<b>FISCAL YEAR TOTAL:</b>	<b>\$99,417</b>	<b>\$128,588</b>	<b>\$173,104</b>	<b>\$241,141</b>	<b>\$386,970</b>	<b>\$749,122</b>	<b>\$823,834</b>
<b>CUMULTATIVE TOTAL:</b>	<b>\$99,417</b>	<b>\$228,005</b>	<b>\$401,109</b>	<b>\$642,250</b>	<b>\$1,029,220</b>	<b>\$1,778,342</b>	<b>\$2,602,176</b>

Project Component	Fiscal Year 2010 to 2014 <sup>[1]</sup>					
	FY 10	FY 11	FY 12	FY 13	FY 14 <sup>[3]</sup>	TOTAL
Environmental/Conceptual Design						\$45,000
Preliminary Engineering						\$169,155
Final Design						\$140,072
Civil Construction	\$533,236	\$461,604	\$259,742	\$207,316	\$28,301	\$2,810,903
Systems Installation	\$116,597	\$129,531	\$103,195	\$37,795		\$541,894
Systems Testing/Integration			\$22,966	\$37,498	\$13,786	\$74,250
Vehicles	\$110,314	\$114,175	\$88,327			\$497,039
Property Costs	\$86,493	\$44,742				\$719,482
<b>FISCAL YEAR TOTAL:</b>	<b>\$846,641</b>	<b>\$750,052</b>	<b>\$474,229</b>	<b>\$282,608</b>	<b>\$42,088</b>	<b>\$4,997,794</b>
<b>CUMULTATIVE TOTAL:</b>	<b>\$3,448,817</b>	<b>\$4,198,869</b>	<b>\$4,673,098</b>	<b>\$4,955,706</b>	<b>\$4,997,794</b>	<b>\$4,997,794</b>

Notes:

<sup>[1]</sup> A Fiscal Year (FY) covers a period from July through June.

<sup>[2]</sup> FY 03 includes expenditures incurred to-date from the beginning of the project in mid-2001.

<sup>[3]</sup> Assumes BART Alternative would be completed in December 2013.

Source: VTA, 2003.

**Table 8.2-4: Capital Cost Estimates for MOS Scenarios**

MOS Scenario	Year of Dollars in Millions			Total Cost with MOS-2 <sup>[2]</sup>
	2001	2003	Year of Expenditure <sup>[1]</sup>	
BART Alternative	\$3,838	\$4,112	\$4,998	NA <sup>[3]</sup>
MOS-1E in 2025	\$3,568	\$3,822	\$4,632	\$5,038
MOS-1E in 2015	\$3,512	\$3,762	\$4,556	\$5,046
MOS-1F in 2015	\$3,636	\$3,895	\$4,724	\$5,028

Notes:  
<sup>[1]</sup> Through the year 2013.  
<sup>[2]</sup> MOS-2E and 2F project elements would be implemented three years later, resulting in year of expenditure dollars through 2016.  
<sup>[3]</sup> NA = Not Applicable.  
Source: *Earth Tech; VTA, 2003.*

### 8.2.2.2 Summary of Cost Estimates for BART Alternative

Table 8.2-5 summarizes the cost estimates for the BART Alternative in 2001, 2003, and year of expenditure dollars for the Base Case Estimate and the Base Case plus Add-on Design Options.

**Table 8.2-5: Summary of Cost Estimates for BART Alternative**

Cost Estimates	Year of Dollars in Millions		
	2001	2003	Year of Expenditure <sup>[1]</sup>
Base Case Estimate <sup>[2]</sup>	\$3,838	\$4,112	\$4,998
Base Case plus Add-on Design Options <sup>[3] [4] [5]</sup>	\$4,004	\$4,289	\$5,222

Notes:  
<sup>[1]</sup> Through the year 2013.  
<sup>[2]</sup> Assumes least costly design options shown in Table 8.2-2.  
<sup>[3]</sup> Assumes most costly add-on design options shown in Table 8.2-2; However, no costs are included for South Calaveras Future Station.  
<sup>[4]</sup> South Calaveras Future Station would add \$107.7 million in 2001, \$115.4 million in 2003, and \$147.9 million in 2013.  
<sup>[5]</sup> 20 additional vehicles would add \$70 million in 2001, \$75 million in 2003, and \$96 million in 2013.  
Source: *Earth Tech, Inc.; VTA, 2003.*

## 8.3 OPERATING AND MAINTENANCE COSTS AND FARE REVENUES

This section presents operating and maintenance costs and fare revenues for each of the alternatives. It also includes the farebox recovery ratio for each alternative, which measures the percentage of operating costs that are funded through passenger fares. Table 8.3-1 shows the operating and maintenance costs, passenger fare revenues, and farebox recovery ratios for all modes in the corridor under each of the alternatives. Operating and maintenance costs for the alternatives are based upon the service and fleet assumptions, as well as the projected bus, light rail, and BART vehicle revenue miles and hours of service described in Chapter 3, *Alternatives*.

<b>Table 8.3-1: Annual Operating and Maintenance Costs, Fare Revenue, and Farebox Recovery 2025</b>			
<b>Mode</b>	<b>Year 2025</b>		
	<b>No-Action Alternative</b>	<b>Baseline Alternative</b>	<b>BART Alternative</b>
<b>Operating and Maintenance Costs (millions) <sup>[1]</sup></b>			
VTA Bus	\$241.9	\$266.5	\$247.1
Light Rail	\$67.5	\$67.5	\$67.5
BART	\$456.3	\$457.0	\$521.4
"Valley" Bus <sup>[2]</sup>	\$2.2	\$5.1	\$5.3
<b>TOTAL:</b>	<b>\$768.0</b>	<b>\$796.2</b>	<b>\$841.3</b>
<b>Cost vs. No-Action</b>	<b>NA <sup>[3]</sup></b>	<b>\$28.2</b>	<b>\$73.3</b>
<b>Cost vs. Baseline</b>	<b>NA</b>	<b>NA</b>	<b>\$45.1</b>
<b>Fare Revenue (millions) <sup>[1]</sup></b>			
VTA Bus	\$65.9	\$69.9	\$66.3
Light Rail	\$15.5	\$15.8	\$16.3
BART	\$314.4	\$319.3	\$371.3
"Valley" Bus <sup>[2]</sup>	\$0.5	\$1.8	\$2.2
<b>TOTAL:</b>	<b>\$396.3</b>	<b>\$406.8</b>	<b>\$456.0</b>
<b>Revenue vs. No-Action</b>	<b>NA</b>	<b>\$10.5</b>	<b>\$59.7</b>
<b>Revenue vs. Baseline</b>	<b>NA</b>	<b>NA</b>	<b>\$49.3</b>
<b>Farebox Recovery Ratio <sup>[4]</sup></b>			
VTA Bus	27.2%	26.2%	26.8%
Light Rail	23.0%	23.4%	24.1%
BART	68.9%	69.9%	71.2%
"Valley" Bus <sup>[2]</sup>	24.3%	34.7%	41.8%
<b>TOTAL:</b>	<b>51.6%</b>	<b>51.1%</b>	<b>54.2%</b>
Notes: <sup>[1]</sup> Costs in 2003 dollars. <sup>[2]</sup> Operated and funded by transit agencies (SMART, LAVTA, MAX, and County Connection) serving the Central Valley, Tri-Valley, and central Contra Costa County and the planned BART Warm Springs Station. <sup>[3]</sup> NA = Not Applicable. <sup>[4]</sup> Farebox Recovery Ratio represents the ratio of passenger farebox revenues to operating and maintenance costs. No other operating revenues are assumed in the calculation, such as parking fees, joint development revenues, etc. Source: Manuel Padron & Associates, Inc.; Hexagon Transportation Consultants, Inc.; VTA, 2003.			

Table 8.3-2 highlights the incremental increase for the Baseline and BART alternatives relative to the No-Action Alternative.

**Table 8.3-2: Incremental Annual Operating and Maintenance Costs and Fare Revenue, 2025**

Mode	Increment to No-Action			Increment to Baseline
	No-Action	Baseline	BART	BART
<b>Operating and Maintenance Costs (millions) <sup>[1]</sup></b>				
VTA Bus	NA <sup>[2]</sup>	\$24.6	\$5.2	-\$19.4
Light Rail	NA	\$0.0	\$0.0	\$0.0
BART	NA	\$0.7	\$65.1	\$64.4
"Valley" Bus <sup>[3]</sup>	NA	\$2.9	\$3.1	\$0.2
<b>TOTAL:</b>	<b>NA</b>	<b>\$28.2</b>	<b>\$73.3</b>	<b>\$45.1</b>
<b>Fare Revenue (millions) <sup>[1]</sup></b>				
VTA Bus	NA	\$4.1	\$0.4	-\$3.7
Light Rail	NA	\$0.3	\$0.8	\$0.5
BART	NA	\$4.9	\$56.8	\$52.0
"Valley" Bus <sup>[3]</sup>	NA	\$1.2	\$1.7	\$0.4
<b>TOTAL:</b>	<b>NA</b>	<b>\$10.5</b>	<b>\$59.7</b>	<b>\$49.3</b>
Notes:				
<sup>[1]</sup> Costs in 2003 dollars.				
<sup>[2]</sup> NA = Not Applicable.				
<sup>[3]</sup> Operated and funded by transit agencies (SMART, LAVTA, MAX, and County Connection) serving the Central Valley, Tri-Valley, and central Contra Costa County and the planned BART Warm Springs Station.				
Source: Manuel Padron & Associates, Inc.; Hexagon Transportation Consultants; VTA, 2003.				

### 8.3.1 BASELINE ALTERNATIVE

In 2025, the incremental annual operating and maintenance costs are projected to increase by \$28.2 million (2003 dollars) for all modes under the Baseline Alternative in comparison to the No-Action Alternative. Annual fare revenues are expected to grow by \$10.5 million, with a 51.1 percent farebox recovery ratio for all modes combined. VTA and "Valley" buses are projected to have farebox recovery ratios of 26.2 percent<sup>1</sup> and 34.7 percent, respectively.

### 8.3.2 BART ALTERNATIVE

In 2025, the incremental annual operating and maintenance costs for all modes under the BART Alternative are projected to grow by \$73.3 million (2003 dollars) in comparison to the No-Action Alternative and \$45.1 million relative to the Baseline. The costs to operate and maintain the BART Alternative in 2025 are estimated at \$65.1 million compared to the No-Action Alternative and \$64.4 million in comparison to the Baseline. Annual operating and maintenance costs for the MOS scenarios

<sup>1</sup> The farebox recovery ratio of 26.2 percent is higher than what VTA buses are experiencing today due to the significant ridership growth projected for the year 2025. These bus riders would fill available capacity on existing buses, resulting in a more efficient bus system.

would be \$60.3 million for MOS-1E in 2025 and \$56.1 million in 2015. MOS-1F would cost \$59.7 million in 2015 to operate and maintain.

All modes under the BART Alternative are anticipated to have a collective increase in annual fare revenues of \$59.7 million over the No-Action Alternative and \$49.3 million more than the Baseline in 2025. Annual fare revenues generated by BART extension passengers are projected to be \$56.8 million compared to the No-Action Alternative and \$52.0 million relative to the Baseline.

In 2025, the BART Alternative would have a composite 54.2 percent farebox recovery ratio for all modes. However, BART would operate at a 71.2 percent recovery ratio. The MOS scenarios would result in a farebox recovery similar to the full-build BART Alternative at 71 percent.

## **8.4 COST EFFECTIVENESS**

Cost effectiveness, as applied to transportation projects, is defined as the extent to which an alternative returns benefits in relation to its costs. Performance measures used to evaluate cost effectiveness in the year 2025 are found in Table 8.4-1 and further described as follows:

- **Operating Cost per Passenger-Mile.** Operating cost per passenger-mile is calculated by dividing estimated annual operating costs by annual passenger-miles.
- **Cost per Passenger.** The cost per passenger (cost per total riders) measure is similar to the cost per new rider measure, except that existing transit riders are taken into account. A total annualized cost represents an annualized capital cost plus annual operating and maintenance costs. This total annualized cost is compared to the total annual linked trips (trips with transfers are counted as one "linked" trip) attributed to the alternative.
- **Cost per New Rider.** The cost per new rider (incremental cost per incremental passenger) is a measure still reported to the Federal Transit Administration (FTA) and widely used by transit agencies. An incremental total annualized cost is compared to the increment of annual linked trips (new riders) attributed to the alternative.
- **Cost per Hour of User Benefit.** The incremental cost per hour of user benefit is a new FTA measure. It compares an incremental total annualized cost to an increment of annual hours of user benefits for all modes in the corridor. User benefits are determined using SUMMIT software recently distributed by FTA for analyzing and summarizing travel demand model results for federal "New Starts" projects. The user benefits are computed based on the difference between the Baseline and the BART alternatives. Since this measure by definition compares a project to the Baseline Alternative, it does not calculate a user benefit for the No-Action or Baseline alternatives.

### **8.4.1 BASELINE ALTERNATIVE**

The operating cost per passenger mile for the Baseline Alternative is projected to be \$0.301. The cost per passenger is expected to be \$1.64, while the cost per new rider is \$30.12 in comparison to the No-Action Alternative.

### **8.4.2 BART ALTERNATIVE**

Under the BART Alternative, the operating cost per passenger mile is \$0.276, with the cost per passenger anticipated to be \$2.24. The incremental cost per new rider is \$32.83 and \$33.41 compared to the No-Action and Baseline alternatives, respectively.



<b>Table 8.4-1: Cost Effectiveness of Alternatives, 2025</b>			
<b>Performance Measures</b>	<b>No-Action</b>	<b>Baseline Alternative</b>	<b>BART Alternative <sup>[1]</sup></b>
<b>Costs (millions) <sup>[2]</sup></b>			
Annualized capital cost	NA <sup>[3]</sup>	\$33.5	\$313.5
Annual operating and maintenance costs	\$768.0	\$796.2	\$841.3
<b>Total Annualized Cost:</b>	<b>\$768.0</b>	<b>\$829.6</b>	<b>\$1,154.8</b>
<b>Operating Characteristics (millions) <sup>[4]</sup></b>			
Annual passenger-miles	2,561.6	2,649.4	3,045.2
Annual ridership in linked trips	503.8	505.9	515.6
Incremental annual user benefits (hours)			
• All Users	NA	NA	12.3
• Transit Users Only	NA	NA	7.9
<b>Cost Effectiveness Indicators</b>			
Operating cost per passenger-mile	\$0.300	\$0.301	\$0.276
Cost per passenger	\$1.52	\$1.64	\$2.24
Cost per new rider compared to No-Action	NA	\$30.12	\$32.83
Cost per new rider compared to Baseline	NA	NA	\$33.41
Cost per hour of user benefits			
• All Users	NA	NA	\$26.35
• Transit Users Only	NA	NA	\$40.99
Notes:			
<sup>[1]</sup> Assumes the Base Case Estimate, with the least costly design options.			
<sup>[2]</sup> Costs in 2003 dollars for all modes in the corridor.			
<sup>[3]</sup> NA = Not Applicable.			
<sup>[4]</sup> Represents all modes in the corridor, including BART, bus, and light rail.			
Source: Manuel Padron & Associates, Inc., 2003.			

For MOS-1E in 2025, the operating cost per passenger mile is \$0.275 in 2003 dollars, nearly the same as the full-build BART Alternative. The cost per passenger is anticipated to be \$2.19 in 2003 dollars. The incremental cost per new rider is \$34.81 and \$33.90 (2003 dollars) compared to the No-Action and Baseline alternatives, respectively, which is slightly higher than the full-build BART Alternative.

Since FTA's cost per user benefit measure is newly developed, it is difficult to evaluate the effectiveness of the BART Alternative's incremental cost of \$26.35 for all users and \$40.99 for transit users only. However, it is believed that the \$26.35 figure is moderately competitive with other fixed-guideway projects currently seeking FTA Section 5309 New Starts funding. VTA will continue to evaluate options to reduce this number, thereby improving the overall cost-effectiveness of the project.

The cost per hour of user benefits under MOS-1E in 2025 is \$23.08 for all users and \$42.41 for transit users only in 2003 dollars.

## 8.5 FINANCIAL EVALUATION OF BART ALTERNATIVE

This section provides a financial evaluation of VTA's ability to build and operate the BART Alternative. The following subsections discuss revenue sources and funding issues.

### 8.5.1 FUNDING FOR CAPITAL COSTS

VTA has developed a funding strategy that relies on three key funding categories: local sales tax and other funds, state funds, and Federal Section 5309 New Starts funds. Table 8.5-1 shows the funding sources for the Base Case Estimate and Base Case plus Add-on Design Options in 2001, 2003, and year of expenditure dollars.

Per the FTA's direction, the MOS scenarios were developed to reduce the initial project costs and federal funding share. While the MOS-1 scenarios would reduce the BART Alternative costs between \$217 and \$350 million in 2003 dollars, the funding implications will still need to be determined as part of the FTA's New Starts process. Under the MOS scenarios, it is anticipated that additional federal funding would be required for the deferred MOS-2 project elements, which are targeted for implementation three years after MOS-1.

<b>Table 8.5-1: Sources of Capital Funding for BART Alternative</b>				
<b>FUNDING SOURCE</b>	<b>Base Case Estimate</b>		<b>Base Case plus Add-on Design Options</b>	
	<b>Funding Amount (Millions)</b>	<b>Percent of Total Funding</b>	<b>Funding Amount (Millions)</b>	<b>Percent of Total Funding</b>
<b>Year 2001 Dollars</b>				
VTA Local Sales Tax Measure A and Other <sup>[1]</sup>	\$2,355	61.4%	\$2,521	63.0%
State Traffic Congestion Relief Program	\$649	16.9%	\$649	16.2%
Federal Section 5309 New Starts	\$834	21.7%	\$834	20.8%
<b>TOTAL:</b>	<b>\$3,838</b>	<b>100%</b>	<b>\$4,004</b>	<b>100%</b>
<b>Year 2003 Dollars</b>				
VTA Local Sales Tax Measure A and Other <sup>[1]</sup>	\$2,629	63.9%	\$2,806	65.4%
State Traffic Congestion Relief Program	\$649	15.8%	\$649	15.1%
Federal Section 5309 New Starts	\$834	20.3%	\$834	19.5%
<b>TOTAL:</b>	<b>\$4,112</b>	<b>100%</b>	<b>\$4,289</b>	<b>100%</b>
<b>Year of Expenditure Dollars (through 2013)</b>				
VTA Local Sales Tax Measure A and Other <sup>[1]</sup>	\$3,376	67.5%	\$3,600	70.0%
State Traffic Congestion Relief Program	\$649	13.0%	\$649	12.4%
Federal Section 5309 New Starts	\$973	19.5%	\$973	18.6%
<b>TOTAL:</b>	<b>\$4,998</b>	<b>100%</b>	<b>\$5,222</b>	<b>100%</b>
Note:				
<sup>[1]</sup> Other includes possible state and local funds, as well as potential joint development and other revenues.				
Source: VTA, 2003.				

### **8.5.1.1 Measure A Half-Cent Sales Tax and Other Funding**

On November 7, 2000, voters in Santa Clara County approved a 30-year extension of an existing half-cent sales tax for transit purposes. The new 2000 Measure A will take effect April 1, 2006, and is primarily dedicated to capital expenditures. The sales tax measure specified the projects to which the receipts would be directed, including the BART Alternative. The VTA Board of Directors approved allocating \$2,212 million to the BART Alternative in November 2001, with completion of the Major Investment Study/Alternatives Analysis (MIS/AA) and selection of the project as the Preferred Investment Strategy/Locally Preferred Alternative for the SVRTC. An additional \$143 million (2001 dollars) for the BART Alternative could come from other local and state sources, as well as potential joint development<sup>2</sup> and other revenues for the Base Case Estimate. All of the BART Alternative station areas have significant development opportunities that can generate revenue for the project. Assuming a 3.5 percent cost escalation for the Measure A and other funds, \$2,629 million would be needed for the project in 2003 dollars and \$3,376 million in year of expenditure dollars.

For the Base Case plus Add-on Design Options, Measure A and other funds would cover \$2,521 million in 2001 dollars, \$2,806 in 2003 dollars, and \$3,600 in year of expenditure dollars. This local and other funding share was determined based on an assumed fixed level of state and federal funds.

The VTA Board of Directors has approved a plan to issue debt against the future sales tax proceeds to fund preliminary engineering. VTA may also issue debt to guarantee the project cash flow schedule, as shown in Table 8.2-3

### **8.5.1.2 State Traffic Congestion Relief Program**

In 2000, the Governor of California signed into law the TCRP that dedicated a portion of the sales tax on gasoline to transportation programs and projects for a period of five years, which was subsequently extended for two years. Among the projects named in the legislation was the SVRTC at a funding level of \$649 million. Due to the budget shortfalls facing the State of California, the state legislature has deferred the TCRP funds. While the TCRP funds will not be available within the timeframe originally anticipated, the state's commitment to the project is assumed to continue in the future, with funds being restored and available to the project over the next five to seven years. However, at this time, these funds are not assumed to escalate over the life of the project.

### **8.5.1.3 Federal Section 5309 New Starts**

Federal Section 5309 New Starts funds are discretionary funds authorized every six years and appropriated annually by Congress for fixed guideway transit projects. Under Section 5309, projects are evaluated and rated by the FTA and submitted to Congress for appropriations. Generally, federal New Starts funding is requested for 50 to 80 percent of the total capital cost for most projects. The BART Alternative financial plan includes 21.7 percent of its funding from the New Starts program for the Base Case Estimate and 18.7 percent for the Base Case plus Add-on Design Options. This is well below the typical federal share in such projects. For the Base Case Estimate and the Base Case plus Add-on Design Options, this translates to New Starts funding of \$834 million in 2001 and 2003 dollars, which escalates to \$973 million in 2005 dollars. A Full Funding Grant Agreement (FFGA) is anticipated in Fiscal Year (FY) 2006/2007.

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<sup>2</sup> VTA has the authority to pursue joint development per Assembly Bill No. 1937, which was signed by the Governor of California in August 2002.

## **8.5.2 FUNDING FOR OPERATIONS AND MAINTENANCE COSTS**

In November 2001, VTA and BART executed a comprehensive agreement in connection with the proposed BART Alternative. Pursuant to the agreement, VTA and BART agreed that the ongoing operating, maintenance and capital costs caused by operating the extension, both within and outside Santa Clara County, are the financial responsibility of VTA. The estimated annual amount of the subsidy required by VTA to meet this responsibility is \$48 million (FY 2002 dollars). The agreement calls for the subsidy to be funded from a dedicated source of revenue. This dedicated funding source will be adjusted at a rate equal to the growth rate of VTA's half-cent sales tax revenues.

The primary funding sources for VTA's current bus and LRT operations include the following:

- Santa Clara County half-cent sales tax
- Local Transportation Fund component of the State Transportation Development Act (TDA) – one-quarter cent levied by the state, with approximately 94 percent returned to source
- State Transit Assistance Program funds from gasoline sales tax revenues
- Passenger fare revenues
- Other sources (e.g., advertising, rentals, interest earnings, etc.).

To operate the BART Alternative and the MOS scenarios, VTA would use a mix of these funds, along with potential new funding sources, as described in Section 8.5.5 below.

## **8.5.3 EXISTING SYSTEMWIDE FUNDING SOURCES**

An analysis of VTA's financial capacity to build, operate and maintain the BART Alternative, while continuing to operate and maintain the existing bus, light rail, and paratransit service over the next 20 years indicates that the current operating resources must be enhanced to improve long-term financial results. This analysis is based on a series of assumptions relative to existing systemwide funding sources, including sales tax revenues, passenger fares, and Federal Section 5307 formula funds.

Santa Clara County enjoys strong support for the transit systems that operate in the county. Voters in the county have repeatedly and overwhelmingly supported sales tax measures to provide both capital and operating support for transit service. These measures have provided a source of reliable and stable funding for transportation improvements over the past 26 years, and have voter approval to continue into the future. Together with passenger fares and state operating assistance, VTA has developed a revenue stream largely dependent on sales tax funds, which has supported the growth of transit service in the county.

### **8.5.3.1 Sales Tax Revenues**

Recent economic conditions have resulted in an extended downturn in sales tax receipts in FY 2002 and FY 2003 (Table 8.5-2). However, historically the sales tax has enjoyed healthy and steady growth, even through the recession of the early 1990s. VTA expects this growth trend to resume over the mid- to long-term. As such, VTA's operating plan projects sales tax recovery beginning in FY 2005 and continuing through the duration of the forecast period, as shown in Table 8.5-2.

<b>Fiscal Year</b>	<b>Revenue in Millions</b>	<b>Percentage Growth Rate</b>
2001	\$183.5	10.1%
2002	\$144.2	-21.4%
2003	\$132.6	-8.0%
2004 (estimated)	\$136.2	2.7%
2005 (estimated)	\$146.8	7.8%
2006 (estimated)	\$159.4	8.6%
2007 (estimated)	\$169.8	6.5%
2008 (estimated)	\$181.0	6.6%
2009 (estimated)	\$192.9	6.6%
2010 (estimated)	\$200.4	3.9%
Beyond	--	4.8%

*Source: VTA, 2003.*

The existing countywide sales tax, the 2000 Measure A sales tax, and TDA revenues are based on these growth rates.

### **8.5.3.2 Passenger Fares**

Passenger fare revenue forecasts are based on service level increases, boardings per revenue hour, and the average fare per boarding. Average fare per boarding is assumed to increase by 15 percent in FY 2005, 17 percent in FY 2006, and 20 percent in FY 2007 and maintain a 20 percent farebox recovery ratio thereafter through the forecast period. Boardings per hour are assumed to increase 2 percent per year until 2020 and 1 percent thereafter.

### **8.5.4 FUNDING ISSUES**

The BART Alternative enjoys broad-based support from the public, elected officials, the Metropolitan Transportation Commission, and the State of California. The project is supported by the half-cent sales tax Measure A, which was passed by over 70 percent of the voters in November 2000. The project is included in the financially constrained 2001 RTP. In addition, VTA and BART have both approved a comprehensive agreement regarding the governance, operation, maintenance, capital cost sharing, and funding of the extension.

Historically, sales tax-based revenues accounted for approximately 80 percent of VTA's annual operating revenues, making it the single most important determinant to VTA's financial strength. The recent economic downturn in Santa Clara County has caused a significant reduction in sales tax revenues used to fund the operation and maintenance of VTA's existing system. Year-over-year, sales tax receipts have declined for the last eight quarters. In response to declining sales tax receipts, VTA has converted a large portion of the federal capital grants to operating assistance (i.e., preventative maintenance). Sales tax revenues currently account for less than 65 percent of operating revenue because of the declining sales tax and increasing amounts of funds programmed for preventative maintenance. The change in the economy has also negatively impacted ridership and related fare revenues.

To address the funding issues presented by the economic downturn, VTA has embarked on a program of ongoing financial assessments and plans for achieving a stable and reliable funding program. In November 2002, VTA provided an assessment of its financial condition given the recent economic factors that indicated that significant additional operating revenues were needed to continue the system as then planned. As a part of this evaluation, VTA secured an independent forecast of near-term sales tax revenues, which were then incorporated into the analysis. The analysis included a series of sensitivity tests on sales tax growth, inflation rate, wage increases, fare increases, and American with Disabilities Act (ADA) ridership growth. VTA identified four ways to improve long-term financial results:

- Increasing existing revenues
- Implementing cost efficiency strategies and changes in service levels
- Reducing the capital program
- Introducing new revenue sources

The Silicon Valley Business Review Team submitted its report on the *Efficiency and Effectiveness of the Santa Clara Valley Transportation Authority (VTA)* in November 2002. The Business Review Team, comprised of members of the Silicon Valley business community and VTA management and staff, was formed to investigate the efficiency and effectiveness of VTA, and to help assure VTA's financial stability throughout the next decade of growth. Five recommendations addressing farebox recovery and average fare per boarding, health benefits costs, ADA paratransit program, marketing efforts, and the role of VTA in Joint Powers Authorities in approving operating and capital budgets were provided.

To broaden the work begun by the Business Review Team, the VTA Board appointed an Ad Hoc Financial Stability Committee in December 2002. The purpose of the Ad-Hoc Financial Stability Committee was to carefully consider options that would address the near-term financial situation and establish a sound plan for the long-term financial stability of the organization. The committee consisted of VTA Board of Directors and stakeholders and met weekly from February through October 2003.

The Ad Hoc Financial Stability Committee developed 19 recommendations to improve VTA's financial stability in both the near- and long-term. One of the main recommendations that would directly impact the BART Alternative includes pursuing a new local revenue source dedicated to VTA. The revenue enhancement options considered by the committee include supporting a statewide legislative effort to broaden the sales tax base, as well as to reduce the threshold for passing broad-based local transportation measures, and partnering with other entities when seeking new revenue sources. In the near-term, VTA would also implement possible fare increases, fare policy changes, service reductions, service restructuring, and other measures to improve the efficiency and effectiveness of the organization.

In June 2003, the VTA Board of Directors adopted all of the recommendations of the Ad Hoc Financial Stability Committee, including a fare increase and further cost efficiency improvements to VTA's paratransit service. The VTA Board also directed the Ad Hoc Committee to develop recommendations for a proposed new revenue source for VTA Board consensus, with subsequent adoption by the VTA Board.

In response to the Board's direction, the Ad Hoc Committee developed a revenue enhancement strategy, which was based upon the current economic climate and the viability of obtaining a new or broadened revenue source at this time. The strategy covered the near- to mid-term, as well as a long-term horizon and included revenue enhancement, project prioritization, and financial management strategies. The Committee's recommended strategy was discussed at a VTA Board Workshop on November 7, 2003, and is scheduled for VTA Board consideration in January 2004. Adoption of the Financial Stability Strategy would establish a broad policy statement for the Board to utilize in implementing measures to address VTA's current and future financial needs.

### **8.5.5 POTENTIAL NEW FUNDING SOURCES**

To address the long-term projections for operational funding needs and resources, VTA will need additional operating revenues. Several potential funding sources have been identified. However, before pursuing some of them, selected legislative actions may be needed to help make them a reality. Potential sources for these new revenues, which could be considered by the VTA Board, include the following:

- **One-quarter- to Half-cent Sales Tax.** The VTA Board of Directors could put a local sales tax measure on the ballot, including a one-quarter or half-cent sales tax increase. Presently, such a measure requires a two-thirds vote to pass. However, VTA is working in partnership with other transportation organizations from around the state, as well as with key groups, on a potential amendment to California's Constitution to change the voting requirement for local transportation sales tax from a two-thirds to a 55 percent majority vote.
- **Broadening the Sales Tax Base.** The California State Legislature has explored a number of options for increasing revenues, one of which was broadening the sales tax base to include some 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 the discussions. Broadening the sales tax base would require a two-thirds vote of both houses of Legislature.
- **Joint Development.** VTA has statutory authority to pursue joint development in conjunction with transportation projects via Assembly Bill No. 1937. There are excellent opportunities for joint development at all of the proposed BART Alternative stations, which could yield both capital funding and on-going operational support.
- **Benefit Assessment Districts.** On October 11, 2003, the Governor signed legislation (Assembly Bill No. 935) that gives VTA the right 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 the rail transit station that is 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.** A number of years ago, state legislation was enacted that empowered the Bay Area's MTC 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 two-thirds vote to pass. Recently, the Bay Area Council, a regional business organization, proposed that a measure imposing a \$0.03 to \$0.05 per gallon gas tax be placed on the ballot sometime in the near future. Interest in the Bay Area about such a ballot measure remains high, and discussions involving MTC, the countywide congestion management agencies, Bay Area transit operators, and other stakeholders are taking place regarding if and when it would be appropriate to put a regional gas tax measure before the voters.

### **8.5.6 SUMMARY**

The capital funding strategy for the BART Alternative presented in Table 8.5-1 shows that the project will rely on local sales taxes, state funds and other sources for 78.3 to 81.4 percent of its funding. Although local sales tax receipts have dropped in the past 18 months, forecasts anticipate that the economy will rebound. Amidst the recent financial uncertainty, the BART Alternative continues to be a high priority for VTA and the community. As such, VTA will continue to pursue solutions that will achieve financial stability to assure that the BART Alternative and the VTA system as a whole are adequately funded.