6.0 COST AND FINANCIAL ANALYSIS

This chapter presents the capital and operating and maintenance (O&M) cost estimates and financial plans for the Refined Build Alternative. The chapter also presents the risks and uncertainties associated with the cost and revenue estimates and describes several mitigation strategies that the San Diego Association of Governments (SANDAG) could consider to address these risks.

This chapter has been updated from the *Draft Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report* (SEIS/SEIR) to focus on the Refined Build Alternative and to reflect updates to the project capital cost estimate resulting from design refinements, updated escalation rates, and an updated project implementation schedule. The capital financial plan presented in this chapter reflects revisions to the sources and uses of funds for the SANDAG systemwide capital plan, including the Mid-Coast Corridor Transit Project and other SANDAG and Metropolitan Transit System (MTS) projects. Similarly, the O&M cost financial plan has been updated to reflect revisions to the sources and uses of funds for MTS systemwide operations, including the project when it is completed and opened for operations.

Unless otherwise specified, all costs and revenues in this chapter are presented in year-of-expenditure (YOE) dollars. Additionally, all costs and revenues are presented on the basis of the SANDAG fiscal year (FY), which runs from July 1 through June 30. For example, FY 2013 refers to the period from July 1, 2012 through June 30, 2013.

6.1 Cost Estimate Methodology

This section describes the methodology used to develop the capital and O&M cost estimates.

6.1.1 Capital Cost Estimate Methodology

The capital cost estimates are based on the engineering and station plans contained in the Mid-Coast Corridor Transit Project Final Supplemental Environmental Impact Statement/Subsequent Environmental Impact Report Volume 2: Plan Set (Final SEIS/SEIR Plan Set). The estimates were developed in conformance with Federal Transit Administration (FTA) guidelines for estimating capital costs for New Starts projects. Capital cost estimates were prepared and reported using the latest version of the FTA's Standard Cost Categories (SCC) Workbook. Further information on the capital cost estimate methodology can be found in the *Mid-Coast Corridor Transit Project Capital Cost Methodology and Estimate Report* (SANDAG, 2014z).

For each project component, quantities were estimated based on the preliminary engineering drawings, and these quantities were multiplied by estimated unit costs. The results were then summed at the SCC level. Allowances for contingencies were added separately to the base cost for each of the SCC line items, with an additional amount assumed for unallocated contingency. All construction costs were estimated in base year (2013) dollars, including contingencies, and were then escalated to YOE dollars based on assumed annual cost escalation rates and the proposed project implementation schedule. The cost escalation rates were determined using a

comprehensive analysis of inflation forecasts, supplemented by interviews with industry suppliers and manufacturers. Further information on the cost escalation rates can be found in the *Mid-Coast Corridor Transit Project Cost Escalation Forecast (2014 to 2023)* (SANDAG, 2014x). As the project advances through the New Starts project development stage into Engineering, SANDAG will continue to review and refine the capital cost estimates.

6.1.2 Operating and Maintenance Cost Estimate Methodology

An O&M cost model was developed for the project based on a resource build-up approach that fully allocates O&M costs based on transit level-of-service variables. Unit costs were developed and calculated in 2012 dollars because 2012 was the most recently completed reporting period for the National Transit Database at the time of development of the estimates. These costs were then escalated to 2013 dollars and inflated to YOE dollars by applying different inflation rates. Inflated unit costs were then multiplied by the level-of-service variables taken from the transit operating plan to calculate total O&M costs. Additional information on the project's O&M cost model and estimates can be found in the *Mid-Coast Corridor Transit Project Operating and Maintenance Cost Methodology and Estimate Report* (SANDAG, 2014aa).

The O&M cost estimates for the project represent only MTS operations since MTS would be responsible for operating and maintaining the project. The analysis does not include the costs and revenues for the North County Transit District (NCTD) operations because NCTD would not operate or maintain the project and because MTS and NCTD have separate operating budgets.

6.2 Capital Plan

This section presents the capital cost estimates developed for the Refined Build Alternative in base year (2013) and YOE dollars, and identifies the proposed capital funding sources. This section also discusses SANDAG's ability to implement the project while maintaining the existing and planned transit system in a state of good repair. Additional information on the capital plan can be found in the *Mid-Coast Corridor Transit Project Financial Plan* (SANDAG, 2014y).

6.2.1 Capital Cost Estimate for Refined Build Alternative

Table 6-1 summarizes the total capital cost estimate for the Refined Build Alternative in base year (2013) dollars. As shown in the table, the capital cost estimate without finance charges or capital cost escalation is $1,489 million. Table 6-1 also presents the total capital cost estimate for the Refined Build Alternative in YOE dollars. The proposed project implementation schedule assumes that the project would open for revenue operations in May 2019, which is near the end of SANDAG's FY 2019. As shown in the table, the capital cost estimate, including finance charges and capital cost escalation, is $2,112 million.

Table 6-1. Capital Cost Estimates by Standard Cost Category

Standard Cost Categories	Base Year (2013) Dollars, Millions	YOE Dollars, Millions
10 - Guideway and track elements	332	381
20 - Stations, stops, terminals, intermodal	104	122
30 - Support facilities: yards, shops, administration buildings	-	-
40 - Sitework and special conditions	188	214
50 - Systems	130	152
60 - Right-of-way, land, existing improvements	146	155
70 - Vehicles	170	196
80 - Professional services	290	319
90 - Unallocated contingency	129	148
Capital cost	1,489	1,688
Finance charges	-	424
Total cost	1,489	2,112

Source: SANDAG, 2014
Note: Totals may not add due to rounding; base year (2013) cost estimates do not include finance charges or capital cost escalation.
YOE = year-of-expenditure

The capital cost estimate in Table 6-1 includes cost contingencies to cover unknown conditions that could lead to cost increases, consistent with FTA's recommendations for transit projects in this stage of project development. Contingency amounts were allocated to each SCC based on currently available information about project risks. In addition, a prudent amount of unallocated contingency (9.5 percent) was also added to cover unanticipated events. Together, allocated and unallocated amounts make up the total contingency estimate. Table 6-2 shows the total amount of contingency that is included in the cost estimates. The project's 33 percent level of contingency is conservative at this stage of its development.

Table 6-2. Total Allocated and Unallocated Contingencies (2013$, Millions)

Standard Cost Category	Amount
Allocated contingency	$243
Unallocated contingency	$129
Total contingency	$372
Total contingency as a percent of total capital cost estimate without contingency	33%

Source: SANDAG, 2014
Note: Totals may not add due to rounding.

6.2.2 Proposed Capital Funding Sources for Refined Build Alternative

SANDAG proposes to use a mix of federal and local sources to fund the project. The project's capital plan assumes federal Section 5309 New Starts funds in an amount equal to 49.4 percent of the total project cost. The remaining 50.6 percent of project

cost is assumed to be funded from SANDAG's *TransNet* sales tax program. Table 6-3 summarizes the proposed capital sources of funds for the Refined Build Alternative.

Table 6-3. Proposed Capital Funding Sources (YOE$, Millions)

Funding Source	Amount
FTA New Starts funds	$1,043
Federal share (percent)	49.4%
TransNet bond proceeds	$935
TransNet capital revenues	$134
Total sources of funds	$2,112

Source: SANDAG, 2014
Notes: Totals may not add due to rounding.
YOE$ = year-of-expenditure dollars

6.2.2.1 Federal Section 5309 New Starts Funds

Section 5309 New Starts funds are awarded by FTA on a discretionary basis to new fixed-guideway transit projects. To be eligible, projects must meet the New Starts criteria established in law and regulation. When the FTA approved the project into Preliminary Engineering (PE) in 2011, FTA determined that the project met those criteria and was likely to continue to meet the criteria as it was further developed. Subsequently, the Moving Ahead for Progress in the 21st Century Act (MAP-21) altered the New Starts process and criteria, and FTA has issued new rules and guidance on the criteria. FTA will rate the Mid-Coast Corridor Transit Project using the new criteria before approving the project into the next phase, Engineering, and recommending it for funding. The availability of funding for this project will depend upon further authorizing legislation and appropriations by Congress (see Section 6.5.2.1).

As shown in Table 6-3, SANDAG intends to request federal funds in an amount equal to 49.4 percent of the total capital cost (including finance charges). This proposed federal share results in a total federal contribution of $1,043 million, starting in FY 2016. Based on guidance received during FTA's assessment of the project's PE financial plan, the annual amount of New Starts funds is currently assumed to be limited to a maximum of $100 million. In order to offset the timing gap between the receipt of these funds and the project's cash flow needs during peak construction activities, the capital plan assumes that SANDAG would issue Grant Anticipation Notes (GANs) as a form of debt that would be repaid by New Starts funds as they are received. The remaining amount of annual New Starts funds net of annual GANs principal repayment would then be used toward project capital costs. Additional information on GANs is provided in Section 6.4.

6.2.2.2 Local *TransNet* Sales Tax Program

Revenues collected through SANDAG's *TransNet* sales tax program, approved by San Diego County voters in 1988 and extended by voters in 2004, are expected to provide all non-federal funding for the Mid-Coast Corridor Transit Project. The *TransNet* Extension Ordinance and Expenditure Plan (Ordinance) governs the distribution of the half-percent sales tax revenues beginning in FY 2009. In the Ordinance, the project is identified as 1 of 11 rail and bus rapid transit capital improvements that make up part of SANDAG's

Major Corridor Projects Program, which receive 38 percent of net annual *TransNet* sales tax revenues. The project also can receive funding from the *TransNet* Major Corridor Project Environmental Mitigation Program, which receives 4.4 percent of net annual *TransNet* sales tax revenues. Additionally, the Ordinance gives priority to funding and completing the Mid-Coast Corridor Transit Project along with two highway projects, the first of which already is completed and the other is currently under construction.

The capital plan relies on a combination of pay-as-you-go *TransNet* capital revenues and conventional long-term bonds backed by *TransNet* revenues to provide the proposed 50.6 percent local match. Pay-as-you-go capital revenues are used to pay the local share of the annual project finance charges, which is consistent with SANDAG's practice of using capital revenues to first pay off annual debt service amounts. Bonds backed by *TransNet* revenues are used to bridge the remaining gap in project funding in each year. Additional information on project borrowing and financing costs is presented in Section 6.4.

6.2.3 Evaluation of Financial Capacity

The Mid-Coast Corridor Transit Project Financial Plan (SANDAG, 2014y) presents the sources and uses of funds for the SANDAG systemwide capital plan, including the Mid-Coast Corridor Transit Project, between FY 2009 and FY 2030. The plan includes capital expenditures and associated funding for the remaining *TransNet* projects, SANDAG non-*TransNet* projects, and MTS capital projects, including bus, paratransit, and light rail transit vehicle replacement and acquisition purchases. The capital plan shows that the ending capital cash balance is expected to remain positive throughout the forecast period, which demonstrates that SANDAG and MTS possess the financial resources to undertake the project and fund the other major capital projects and routine replacements of existing assets, keeping the entire system in a state of good repair through FY 2030. This reserve balance exceeds $290 million in any given year and averages $843 million between FY 2009 and FY 2030.

If additional *TransNet* revenues are needed for the Mid-Coast Corridor Transit Project, SANDAG is required to dedicate such revenues to complete construction. As discussed earlier, the project is one of three projects identified in the Ordinance as having first priority for *TransNet* revenues. With one of the other projects already completed and the other expected to be completed by FY 2015, the project will become the only one with first priority for *TransNet* Major Corridor Projects funding.

6.3 Operating and Maintenance Plan

This section presents the annual O&M cost estimates prepared for the No-Build and Refined Build Alternatives, and assesses the region's ability to fund the project's O&M costs and the O&M costs for MTS' regional transit system. Additional information on the operating financial plan can be found in the *Mid-Coast Corridor Transit Project Financial Plan* (SANDAG, 2014y).

6.3.1 Operating and Maintenance Costs

Table 6-4 presents the annual costs to operate and maintain the project as well as the planned MTS transit system for FY 2030. The O&M costs include costs associated with light rail transit, bus (both directly operated and purchased services), paratransit, and other miscellaneous expenses. Although Chula Vista Transit is reported as a separate entity in the National Transit Database, it is consolidated under the bus purchased transportation services for reporting purposes. Commuter bus, paratransit, and Chula Vista Transit services are not expected to be affected by implementation of the project, but they are included for completeness of the analysis.

Table 6-4. Annual O&M Costs for FY 2030 for No-Build and Refined Build Alternatives (YOE$ Millions)

	No-Build Alternative	Refined Build Alternative
Light rail transit	$103.06	$135.21
Directly operated bus	$179.11	$175.58
Purchased transportation bus	$133.94	$134.07
Purchased transportation commuter bus	$6.59	$6.59
Paratransit and other	$25.72	$25.72
Total O&M cost	$448.43	$477.17
Project O&M cost (LRT)		$32.15
Project share (percent)		6.7%
Total net O&M cost		$28.74

Source: SANDAG, 2014
Notes: Totals may not add due to rounding.
FY = fiscal year; LRT = light rail transit; O&M = operating and maintenance; YOE$ = year-of-expenditure dollars

The net difference in annual O&M costs in FY 2030 between the No-Build and Refined Build Alternatives is $28.74 million. This is mostly due to the addition of the Mid-Coast Corridor Transit Project to MTS' light rail transit (Trolley) system, resulting in an incremental increase of $32.15 million to the total light rail transit O&M costs for FY 2030.

The increase in light rail O&M costs is offset by a decrease in directly operated bus O&M costs as a result of the project. The costs for the Refined Build Alternative include elimination of MTS Route 150 and minor modifications to other bus routes to improve station access. This reduction in directly operated bus service under the Refined Build Alternative decreases annual O&M costs for directly operated buses by $3.53 million compared to the No-Build Alternative. This decrease is approximately 2 percent of the No-Build Alternative directly operated bus O&M costs in FY 2030.

6.3.2 Operating and Maintenance Funding Sources

SANDAG and MTS use a combination of local, state, and federal funding sources to operate and maintain the existing transit system. This section describes the primary funding sources for the operation and maintenance of the system.

6.3.2.1 Fare Revenues

MTS currently relies on fare revenues to fund about 41 percent of its O&M costs (FY 2012). The financial plan assumes that, beginning in FY 2016, the average fare for each transit mode will increase every three years to keep pace with general inflation. In addition, for the first full year of project operation in FY 2020, MTS expects that the increased ridership resulting from the new service would also generate additional fare revenues for the light rail system. Fare revenues for the Trolley system in FY 2020 are expected to be $8 million higher than those in FY 2019 as a result of the additional expected ridership.

6.3.2.2 Federal Funding

MTS has been using FTA funds for preventive maintenance of its rail operations. Although the FTA program structure was changed by MAP-21, overall funding levels have not changed significantly. The financial plan assumes that federal formula funds (Section 5337 State of Good Repair and Section 5307 Urbanized Area) will be used to help pay for preventive maintenance costs in future years. The plan assumes that implementation of the project will also lead to an increase in the amount of formula funding apportioned to the San Diego metropolitan area. Between FY 2009 and FY 2030, the financial plan assumes that 100 percent of MTS' share of Section 5337 funds and 22 percent of MTS' share of Section 5307 funds would be used for transit operations.

6.3.2.3 State Funding

The State Transit Assistance (STA) fund constitutes the main state funding assistance for MTS transit operations. The forecasts used in the financial plan are consistent with projections in the SANDAG *2050 Regional Growth Forecast Process and Model Documentation* (SANDAG, 2010a). MTS allocates STA funds between the operating and capital budgets at the direction of its Board of Directors. The financial plan assumes that only 28 percent of total STA projected revenues would be used for MTS transit operations between FY 2009 and FY 2030.

6.3.2.4 Local Funding

Transportation Development Act (TDA) funding is the main local O&M revenue source, providing approximately 65 percent of the total local operating assistance. The forecast used in the financial plan assumes a 5.1 percent compounded annual growth rate between FY 2013 and FY 2030, consistent with projections in the SANDAG *2050 Regional Growth Forecast Process and Model Documentation* (SANDAG, 2010a). MTS policy is to use TDA funds for operations first; only if there is an operating surplus in a given year are these funds used for capital projects.

The *TransNet* program covers the remaining 35 percent share of local operating assistance. The program includes two sub-programs for funding transit operations: a subsidy for current transit services and an operating fund dedicated to new services. *TransNet* dedicates 16.5 percent of annual sales tax revenues to help fund existing transit operations. The new services operating fund also was established to subsidize the incremental cost of transit projects built under the *TransNet* program. As such, this funding source, which amounts to 8.1 percent of *TransNet* revenues, will provide an

additional subsidy to MTS for the operation and maintenance of those projects within MTS' service area.

6.3.2.5 Summary of O&M Sources and Uses

The Mid-Coast Corridor Transit Project Financial Plan (SANDAG, 2014y) presents the O&M sources and uses of funds for the entire MTS system, including the Mid-Coast Corridor Transit Project, between FY 2009 and FY 2030. The operating plan shows an operating surplus in almost every year that allows MTS to build an operating reserve and transfer some TDA funds to be used for ongoing capital needs. This demonstrates that SANDAG and MTS have sufficient financial capacity to operate and maintain the project while operating and maintaining the existing and planned transit system.

6.4 Cash Flow Analysis

This section compares the project's annual and total proposed capital funding to its capital costs. To make the financial plan work on a cash flow basis, SANDAG will use debt financing and incur finance charges.

6.4.1 Project Financing Assumptions

Total finance charges for the project equal $424 million (Table 6-5). These charges represent interest and upfront financing costs associated with two types of debt instruments: short-term GANs that will be repaid with FTA New Starts funds and long-term bond issuances that will be repaid with *TransNet* capital revenues.

The plan assumes an annual limit of $100 million on FTA New Starts funds. To address project cash flow needs, SANDAG plans to issue GANs as a form of short-term debt that would be repaid by New Starts funds. The capital plan assumes that these GANs would be issued in FY 2016, at the start of peak construction activities, at a 4 percent interest rate and with a 7-year maturity. The total amount of GANs issued for the project is currently estimated to be $550 million.

SANDAG also plans to use *TransNet* bond proceeds to bridge the project's funding gap in each year. SANDAG's Plan of Finance includes planned bond issuances every other year between FY 2015 and FY 2029 to provide funding for the entire *TransNet* program. The financial plan assumes that some proceeds from the following three planned debt issuances will be used for project funding:

- FY 2015 debt issuance: total of $354.4 million; 4 percent interest rate; 30-year maturity; 64 percent ($228.0 million) used for project funding
- FY 2017 debt issuance: total of $588.1 million; 4 percent interest rate; 30-year maturity; 89 percent ($523.2 million) used for project funding
- FY 2019 debt issuance: total of $311.1 million; 4 percent interest rate; 29-year maturity; 59 percent ($183.8 million) used for project funding

Table 6-5 summarizes the finance charges attributed to the project for each bond issue.

Table 6-5. Mid-Coast Corridor Transit Project Financing Costs (YOE$ Millions)

Debt Instrument	Finance Charges
FTA-backed Bond Proceeds	
FY 2016 GANs	$99
***TransNet* Bond Proceeds**	
FY 2015 debt issue	$93
FY 2017 debt Issue	$181
FY 2019 debt Issue	$51
Total Finance Charges	$424

Source: SANDAG, 2014
Note: Totals may not add due to rounding.
FTA = Federal Transit Administration; FY = fiscal year; GANs = Grant Anticipation Notes;
YOE$ = year-of-expenditure dollars

6.4.2 Project Cash Flow

Table 6-6 summarizes the proposed sources and uses of capital funds for the project. The table demonstrates that the project would be fully funded assuming receipt of 49.4 percent of total project cost from the federal New Starts program. All of the non-Section 5309 New Starts funds are committed for the project from *TransNet* revenues.

6.5 Risks and Uncertainties

This section describes the risks and uncertainties associated with the project's capital costs, operating costs, and funding. It also presents several mitigation strategies that SANDAG could implement in the event that any of these risks materialize.

6.5.1 Project Cost Uncertainties

Typical areas of capital cost risk for projects in this stage of project development include the potential for scope and schedule changes that can increase a project's capital cost and higher-than-expected inflation that can increase YOE costs. Project O&M costs also are subject to their own risk factors, which include changes to O&M unit costs, inflation, and unanticipated service changes.

Table 6-6. Mid-Coast Corridor Transit Project Sources and Uses of Funds (YOE$ Millions)

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	Total
Uses of Funds																	
Mid-Coast Corridor Transit Project Cost																	
SCC 10 to 90	$20.0	$13.1	$18.5	$43.5	$166.0	$335.5	$426.1	$480.1	$182.0	$2.8							$1,687.7
SCC 100 - Finance Charges					$3.2	$16.8	$38.3	$48.9	$48.1	$49.3	$45.4	$41.4	$37.2	$32.8	$32.0	$31.1	$424.4
Total Uses of Funds	$20.0	$13.1	$18.5	$43.5	$169.2	$352.3	$464.4	$529.1	$230.0	$52.0	$45.4	$41.4	$37.2	$32.8	$32.0	$31.1	$2,112.1
Sources of Funds																	
FTA Sec. 5309 New Starts						$100.0	$100.0	$100.0	$100.0	$100.0	$100.0	$100.0	$100.0	$100.0	$100.0	$43.4	$1,043.4
FTA Sec. 5309 GANs Proceeds Drawdown						$181.8	$341.1	$27.0									$550.0
FTA Sec. 5309 GANs Principal Repayment							-$69.6	-$72.4	-$75.3	-$78.3	-$81.5	-$84.7	-$88.1				-$550.0
TransNet Bond Proceeds Drawdown					$166.0	$62.0	$73.5	$449.7	$181.0	$2.8							$935.0
TransNet Capital Revenues	$20.0	$13.1	$18.5	$43.5	$3.2	$8.5	$19.4	$24.8	$24.3	$27.6	$26.9	$26.1	$25.3	-$67.2	-$68.0	-$12.3	$133.7
Total Sources of Funds	$20.0	$13.1	$18.5	$43.5	$169.2	$352.3	$464.4	$529.1	$230.0	$52.0	$45.4	$41.4	$37.2	$32.8	$32.0	$31.1	$2,112.1

Source: SANDAG, 2014
Note: Totals may not add due to rounding.
FTA = Federal Transit Administration; FY = fiscal year; GANs = Grant Anticipation Notes; SCC = Standard Cost Category; YOE$ = year-of-expenditure dollars

6.5.1.1 Scope and Schedule Risks

The capital cost estimates presented in this chapter are based on the Final SEIS/SEIR Plan Set (Volume 2 of this Final SEIS/SEIR) at a level of design completion needed for this stage of project development. While the contingencies included in the estimates are considered to be sufficient to cover unknown factors at this stage of project development, cost increases could occur as a result of unexpected scope changes. Cost increases also could occur as a result of schedule delays. These delays could be related to unforeseen construction challenges, local decision-making processes, equipment malfunctions, or general construction delays.

Prior to FTA's approval of the project into PE, SANDAG, FTA, and FTA's Project Management Oversight Contractor assessed potential scope and schedule risks to the project and evaluated the level of contingency included in the project's budget. As the project advances through the project development stage into Engineering, SANDAG and the FTA will continue to collaborate to refine the cost estimate.

6.5.1.2 Cost Escalation Risk

The cost escalation rates used to convert the cost estimates from constant 2013 dollars to YOE dollars were developed specifically for the project using a comprehensive analysis of inflation forecasts, supplemented by interviews with industry suppliers and manufacturers. These rates are affected by regional economic conditions, commodity prices, real estate values, and labor availability. Changes in cost escalation rates could lead to cost increases in nominal terms, which would require additional capital funding.

6.5.1.3 Interest Rates and Municipal Market Risks

As with any capital project requiring this issuance of debt, the project is subject to uncertainty associated with fluctuations in interest rates. Variations in interest rates could affect the interest earned on cash balances and the interest paid on any outstanding debt, as well as the size of the debt requirements to finance the project. Fluctuations in interest rates are influenced by a number of factors, including the credit rating of the bond issuer (SANDAG) and other external factors that are not directly under the control of SANDAG, such as market risks.

6.5.1.4 Operating and Maintenance Cost Risks

The O&M unit costs (in constant 2013 dollars) that were developed to build the O&M cost model are based on recent MTS operating statistics. As a result, productivity factors, such as the number of gallons of fuel used per mile or work hours per revenue hour of service, are fairly well established and subject to limited uncertainty. Resource unit costs, such as dollar per gallon of fuel or hourly wages, on the other hand, are subject to inflationary pressures from national and regional factors.

Moreover, the project's O&M cost is based on an operating plan that makes assumptions about future systemwide levels of service. There is some risk that the systemwide levels of service might change, which could affect the overall O&M costs for the project and MTS.

6.5.2 Project Funding Uncertainties

The financial plan assumes certain levels of New Starts and other federal funds and *TransNet* revenues. There are potential risks associated with securing federal grants and/or securing them in the timeframes required to maintain the project schedule and avoid inflationary risk. Potential risks are also associated with *TransNet* revenue collections being below forecast levels.

6.5.2.1 FTA New Starts Funding

New Starts funding is subject to legislative uncertainties. MAP-21, the current federal legislation that authorizes the New Starts program, expires September 30, 2014. Considerable uncertainty exists regarding when Congress will reauthorize the surface transportation program, the amount of funding that will be provided for New Starts projects, and the potential changes to program eligibility and other requirements.

SANDAG is requesting federal New Starts funding in an amount that represents 49.4 percent of total project cost. The terms of this funding will be negotiated and described in a Full Funding Grant Agreement (FFGA) between SANDAG and the FTA, which would occur following completion of the National Environmental Policy Act/ California Environmental Quality Act processes and following the project's rating and approval into Engineering by FTA. Several projects around the country are competing for a limited supply of New Starts funds, and the amount of uncommitted funding available for new projects may become increasingly limited in the coming years. Any delay in the FFGA or reduction in the annual New Starts funding amount below the assumed $100 million could affect the construction schedule and increase project costs.

Even if an FFGA is negotiated and signed according to the schedule, there is risk associated with the timing of annual funding appropriations for the project. Although history has shown that Congress ultimately honors and appropriates the full amount spelled out in an FFGA, Congress could delay funding for the project by reducing or stretching out the annual appropriations. Any delay might necessitate additional borrowing, schedule delays, and cost increases.

6.5.2.2 *TransNet* Funding

The only source of non-federal funds for the project is being generated by *TransNet* revenues, which are based on sales taxes. Sales tax revenues tend to move in tandem with the overall economy. As such, *TransNet* revenues will be affected by the ebbs and flows of the local economy. This could lead to future *TransNet* shortfalls during times of economic recession. Any reduction in *TransNet* revenues could affect the ability of SANDAG to complete other projects in its capital program.

Moreover, the project's capital plan includes proceeds from several planned *TransNet* bond issuances between FY 2015 and FY 2019. If these bond issuances are not approved by the SANDAG Board of Directors, there is a risk that the agency may need to modify the project's schedule or scope.

6.5.3 Mitigation Strategies

In the event that any of these cost or funding risks materialize, SANDAG has several mitigation strategies that it can implement to absorb potential cost increases or revenue shortfalls.

6.5.3.1 Increase in Project Capital Cost

The project is one of three projects identified in the Ordinance as having first priority for *TransNet* revenues. The other two projects include an extension of State Route (SR) 52 from SR 125 to Highway 67, which opened to travelers in FY 2011, and improvements to SR 76, which will be completed by FY 2015. Once the work on SR 76 is complete, the Mid-Coast Corridor Transit Project will receive first priority for *TransNet* Major Corridor Projects funding. In the event of a cost increase, SANDAG is required to dedicate additional *TransNet* revenues to complete the project.

6.5.3.2 Delay in Federal New Starts Funding/Decrease in *TransNet* Revenue Collections

In the event that federal funding for the project is delayed, SANDAG has the ability to issue additional *TransNet* bonds to complete the project. Revenues generated by *TransNet* until FY 2048 would provide more than adequate debt capacity for the project.

SANDAG has forecasted that sales tax revenues will increase at a compounded annual growth rate of 4.9 percent between FY 2013 and FY 2030. If *TransNet* revenues increase at a lower rate than forecasted, SANDAG still is required to complete the project and would need to strategize its capital program capacity, including issuing more debt. SANDAG also can seek additional state and federal funding to help make up any shortfall in *TransNet* revenues. SANDAG will frequently review *TransNet* receipts as compared to forecasts and update forecasted amounts if needed.

6.5.3.3 Increase in Operating and Maintenance Cost

MTS has demonstrated its ability to control O&M cost increases through periods of economic change and price volatility. In the event that O&M costs increase at a greater rate than forecasted in the project's financial plan, the project will still be able to use the 8.1 percent *TransNet* operating fund that is dedicated to new services. If additional revenues are needed, MTS may use additional federal formula funding apportioned to the region to fund ongoing preventative maintenance activities required for the project.

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