



THE FINANCIAL PLAN

INTRODUCTION

For the Plan Amendment, as in the original JOURNEY to 2030 Plan, the estimated transportation revenue from existing and available sources, both public and private, must be compared with the estimated cost of constructing, maintaining, and operating the existing and planned transportation system through 2030. If this comparison reveals a revenue gap, the financial plan must identify revenue sources to cover the shortfall and provide strategies to ensure the availability of such revenue.

This financial plan is limited to the components of the regional transportation system over which the Boston Region MPO has some funding or programming jurisdiction. These components are the Statewide Road and Bridge Program (including highway funding for alternative modes), the Central Artery/Tunnel project, and the regional public transportation system.

THE STATEWIDE ROAD AND BRIDGE SYSTEM

The Executive Office of Transportation and Public Works (EOT) has forecast highway revenues through 2030 for the 13 MPOs in the Commonwealth. Highway revenues consist of federal and state funds made available on an annual basis to the Commonwealth. The projections for the time period 2010–2013 are the targets provided to the MPO by EOT for the Transportation Improvement Programs (TIPs). EOT developed these estimates based on estimates of expected federal funding provided by the Federal Highway Administration (FHWA).¹ The funding levels for 2014 through 2030 are projections from 2013 revenues. The estimate for each

¹ *Statewide Transportation Improvement Program (STIP), FFY 2010–2013, Appendix B, Guidance Documents and Regional Targets*, p. xx.

year is 3 percent higher than the previous year's funding.²

EOT has projected federal funding based upon current apportionment levels as constrained by federally imposed obligation limits, while state funds are based upon recent trends in non-Central Artery funding. Funding available for the Statewide Road and Bridge Program is determined after deducting the costs of certain programs. These programs include the Central Artery/Tunnel project (CA/T), the Accelerated Bridge Program (ABP), metropolitan and statewide planning, cost adjustments, and extra work orders. This available funding represents the amount of funding that can reasonably be expected based upon existing revenue sources, and represents the upper limit for the Plan's financial constraint.

In addition to providing this figure, EOT provided programmatic guidance for certain defined programs: Regional Major Infrastructure; Statewide Resurfacing, Infrastructure, and Maintenance programs; American Reinvestment and Recovery Act (ARRA); and the Accelerated, Statewide, and Special Bridge programs. This guidance was developed based upon estimates of statewide funding allocated among MPOs based upon need-based formulas. Under the targets of the Massachusetts Association of Regional Planning Agencies (MARPA), the Boston region MPO assumes that it will receive approximately 43 percent of all available highway funds. Statewide bridge funding was based on the number of bridges in the Boston Region, which is approximately 29 percent of the bridges in the commonwealth. Resurfacing, Infrastructure, and Maintenance funding was based on the percentage of National Highway System lane mileage in the region, which is approximately 31 percent of centerline miles in the commonwealth. The guidance is not binding for financial constraint purposes and was intended simply to provide

an order-of-magnitude estimate for the affected programs.

Reinvestment in the existing system is the top priority of the Boston Region MPO. For roadways, this Plan Amendment includes funding for the maintenance and expansion of the transportation system through 2030. Funding for maintenance of the roadways for the Boston Region MPO area is provided through the Statewide Resurfacing, Maintenance, and Infrastructure programs, and the Statewide Infrastructure and Bridge programs. Maintenance of the bridges is provided through the Special Bridge program, the Statewide Bridge program, and the Accelerated Bridge program. Major infrastructure and capacity expansion projects and other maintenance and rehabilitation projects not included in the statewide programs are funded through the Boston Region MPO's share of the Discretionary Capital Program and the Regional Infrastructure Program.

Table 12-1 shows projections of available highway revenue for the Boston Region MPO for the years 2010 through 2030, by program. The estimates are summarized into five time periods: the year 2010, 2011 through 2015, 2016 through 2020, 2021 to 2025, and 2026 through 2030.

In developing this plan, the MPO has been guided by the information provided by EOT, but has opted to make certain adjustments to reflect the MPO's assessment of current needs, within the overall financial constraint imposed by existing funding sources. Specifically, this plan allocates some of the funding from available MPO discretionary highway funding to transit. These "Flex Funded" transit projects are detailed in Table 12-2. In addition to these projects (Green Line from College Avenue to Mystic Valley Parkway (Route 16), Assembly Square Orange Line Station, and Wonderland Parking Garage), approximately \$16.1 million of highway revenue has

² An annual allotment of \$37 million per year of redistribution funds was assumed by EOT. Also, an annual increase of 3 percent was applied after 2013

TABLE 12-1
ESTIMATED BOSTON REGION MPO REVENUE FROM EXISTING SOURCES
(DOLLARS IN MILLIONS)

EXISTING SOURCES	2010	2011–2015	2016–2020	2021–2025	2026–2030	TOTAL
STATEWIDE RESURFACING PROGRAM	\$27.81	\$132.40	\$163.69	\$233.52	\$286.61	\$844.04
STATEWIDE INFRASTRUCTURE PROGRAM	\$4.25	\$44.20	\$66.36	\$94.48	\$115.97	\$325.26
STATEWIDE BRIDGE PROGRAM	\$34.71	\$191.65	\$246.67	\$349.27	\$432.47	\$1,254.77
ACCELERATED BRIDGE PROGRAM	\$26.63	\$1,020.14	\$0	\$0	\$0	\$1,046.77
STATEWIDE MAINTENANCE PROGRAM	\$34.76	\$246.16	\$325.48	\$341.28	\$352.34	\$1,300.02
SPECIAL BRIDGE PROGRAM	\$29.10	\$0	\$0	\$0	\$0	\$29.10
TOTAL DEDICATED MAINTENANCE REVIEW	\$157.25	\$1,634.56	\$802.19	\$1,018.56	\$1,187.40	\$4,799.96
ARRA PROJECTS	\$140	\$0	\$0	\$0	\$0	\$140.00
ESTIMATED NON-MPO FUNDED REGIONAL MAJOR INFRASTRUCTURE PROJECTS	\$0	\$37.81	\$112.14	\$161.13	\$197.65	\$508.73
RTP SHARE OF MPO DISCRETIONARY CAPITAL PROGRAM	\$56.72	\$293.70	\$377.28	\$538.41	\$661.31	\$1,927.42
TOTAL AVAILABLE REVENUE FOR BOSTON REGION MAJOR INFRASTRUCTURE, EXPANSION AND FLEX FUNDING	\$196.72	\$331.51	\$489.42	\$699.54	\$858.96	\$2,576.15
TOTAL ESTIMATED BOSTON REGION REVENUE FROM EXISTING SOURCES	\$353.97	\$1,966.07	\$1,291.61	\$1,718.10	\$2,046.35	\$7,376.11

been flexed to the Fitchburg Line Commuter Rail Improvements project in fiscal years 2010, 2011, and 2012.

Additionally, the Plan allocates funding to certain projects that are defined by federal regulations as being regionally significant for air quality purposes (expansion projects), or which cost more than \$10 million. An expansion project is any project that adds capacity to the existing system through the addition of a travel lane, the construction of an interchange, the construction or extension of a commuter rail or rapid transit line, or the procurement of additional (not replacement) public transportation vehicles. Table 12-2 shows all of the highway projects that are specifically recommended in this Plan, whether as a major infrastructure project, a regionally significant project (expansion) for air quality conformity, a project that is funded using highway money for transit

(flex funding) or all three. Table 13-3 (in Chapter 13) lists the name, type, and cost of each of these projects.

THE CENTRAL ARTERY/TUNNEL PROJECT

The source of the cost and revenue figures for the Central Artery/Tunnel (CA/T) project in this Plan Amendment is the Cash Flow Status Report of 2009, Executive Office of Transportation and Public Works, May 2009. The numbers in this report were current as of June 30, 2008. It is estimated that the project's overall cost will be \$14.807 billion. Of the \$14.807 billion estimated total, \$14.57 billion has already been expended. The project is considered 99 percent complete.

Project Funding Summary

Table 12-3 indicates the sources of funds for the CA/T project, the total cost by source, and funds

TABLE 12-2

MAJOR INFRASTRUCTURE PROJECTS, EXPANSION HIGHWAY PROJECTS, AND FLEX-FUNDED TRANSIT PROJECTS IN THE RECOMMENDED PLAN

HIGHWAY PROJECTS	TYPE OF PROJECT*	COST
MIDDLESEX TURNPIKE (BEDFORD, BURLINGTON, AND BILLERICA)	MI/EXP	\$19,200,000
PULASKI BOULEVARD (BELLINGHAM)	MI	\$13,006,510
TRAPELO ROAD (BELMONT)	MI	\$13,000,000
EAST BOSTON HAUL ROAD/CHELSEA TRUCK ROUTE (BOSTON)	MI/EXP	\$18,000,000
SULLIVAN SQUARE (BOSTON)	MI	\$40,000,000
RUTHERFORD AVENUE (BOSTON)	MI	\$45,507,000
RESURFACING AT VARIOUS LOCATIONS (BOSTON)	MI	\$21,500,000
CONSOLIDATED RENTAL CAR FACILITY (LOGAN AIRPORT, BOSTON)	MI/EXP	\$337,000,000
BRAINTREE SPLIT – I-93/ROUTE 3 INTERCHANGE (BRAINTREE)	MI/EXP	\$36,017,000
I-93/I-95 INTERCHANGE (CANTON)	MI/EXP	\$216,000,000
I-95 (NB)/DEDHAM STREET RAMP (CANTON)	MI/EXP	\$9,000,000
ROUTE 2/CROSBY’S CORNER (CONCORD AND LINCOLN)	MI/EXP	\$72,000,000
ROUTE 128/ROUTE 35 AND ROUTE 62 (DANVERS)	MI	\$25,982,000
ROUTE 126/135 GRADE SEPARATION (FRAMINGHAM)	MI	\$54,080,000
RESURFACING AND RELATED WORK ON ROUTE 9 (FRAMINGHAM AND NATICK)	MI	\$12,500,000
BRUCE FREEMAN RAIL TRAIL (CONCORD TO WESTFORD)	MI	\$17,250,000
ROUTE 53 FINAL PHASE (HANOVER)	EXP	\$1,000,000
ASSABET RIVER RAIL TRAIL (HUDSON TO ACTON)	MI	\$16,725,000
ROUTE 85 IMPROVEMENTS (HUDSON)	EXP	\$8,400,000
ROUTE 1 IMPROVEMENTS (MALDEN, REVERE, & SAUGUS)	MI/EXP	\$70,304,000
ROUTE 139 WIDENING (MARSHFIELD)	EXP	\$7,150,200
NEEDHAM STREET/HIGHLAND AVENUE (NEWTON AND NEEDHAM)	MI/EXP	\$17,000,000
QUINCY CENTER CONCOURSE, PHASE 2 (QUINCY)	EXP	\$8,100,000
I-93/I-95 INTERCHANGE (READING AND WOBURN)	MI/EXP	\$194,792,000
BRIDGE STREET (SALEM)	EXP	\$10,000,000
ASSEMBLY SQUARE ROADWAYS (SOMERVILLE)	MI/EXP	\$28,000,000
SOUTH WEYMOUTH NAVAL AIR STATION ACCESS IMPROVEMENTS (WEYMOUTH, HINGHAM, & ROCKLAND)	MI/EXP	\$90,014,750
ROUTE 18 CAPACITY IMPROVEMENTS (WEYMOUTH)	MI/EXP	\$26,100,000
MONTVALE AVENUE (WOBURN)	EXP	\$3,400,000
NEW BOSTON STREET BRIDGE (WOBURN)	EXP	\$4,500,000
TRANSIT EXPANSION PROJECTS (“FLEX”)		
WONDERLAND PARKING GARAGE (REVERE)	MI/EXP/FLEX	\$52,000,000
ASSEMBLY SQUARE ORANGE LINE STATION (SOMERVILLE)	MI/EXP/FLEX	\$10,000,000
GREEN LINE COLLEGE AVENUE TO MYSTIC VALLEY PARKWAY ROUTE 16 (SOMERVILLE)	MI/EXP/FLEX	\$130,000,000

* EXP = Expansion – Project adding capacity to the roadway or transit system

MI = Major Infrastructure – Project costing \$10 million or more

FLEX= Transit projects funded with all or some highway funding.

TABLE 12-3

CA/T PROJECT FUNDING SOURCES, BY AMOUNT AND EXPENDITURES, THROUGH JUNE 2008

SOURCE	TOTAL COSTS	EXPENDITURES THROUGH 6/30/08
FEDERAL (NON-GANS)	\$7,031,000,000	\$6,870,000,000
GRANT ANTICIPATION NOTES (GANS)	\$1,500,000,000	\$1,500,000,000
STATE BOND	\$1,667,000,000	\$1,764,000,000
TRANSPORTATION INFRASTRUCTURE FUND (TIF)	\$2,519,000,000	\$2,434,000,000
TRANSPORTATION INFRASTRUCTURE FUND (TIF) (TRANSFERRED FROM INSURANCE TRUST REVENUE)	\$33,000,000	\$0
MASSACHUSETTS PORT AUTHORITY (FUND 0182)	\$302,000,000	\$302,000,000
MASSACHUSETTS TURNPIKE (MTA) (FUND 0182)	\$1,452,000,000	\$1,450,000,000
STATE INTEREST ON MTA FUNDS	\$24,000,000	\$24,000,000
MTA DIRECT	\$140,000,000	\$140,000,000
INSURANCE TRUST REVENUE	\$116,000,000	\$62,000,000
OTHER REVENUE	\$24,000,000	\$24,000,000
TOTAL	\$14,807,000,000	\$14,570,000,000

expended as of June 30, 2008. The following sections discuss federal funding, state funding, and remaining project obligations.

Federal Funding

The FHWA instituted an administrative cap on the project in 2000, which was subsequently adjusted in 2002 and 2007. Under this cap, the project cannot exceed \$7.031 billion in federal obligations plus \$1.413 billion in Grant Anticipation Notes (GANS) repayments, for a total federal participation level of \$8.444 billion. An additional \$0.087 billion in GANS payments was made by other parties. The 2007 Central Artery Finance Plan was approved by FHWA on March 13, 2009.

State Funding

Like all federally funded highway projects, the Central Artery/Tunnel project requires matching funds from state sources. General obligation bonds, revenue from two trust funds, and the Massachusetts Port Authority and the Massachusetts Turnpike funds compose this funding. General obligation bonds are estimated to contribute

\$1.667 billion. The revenue from the Insurance Trust Fund is estimated to generate \$116 million for the project.

In May 2000, the Massachusetts General Court enacted Metropolitan Highway System legislation creating the Central Artery and Statewide Road and Infrastructure Trust Fund (TIF). The Infrastructure Trust Fund authorized \$2.519 billion in bonds to be funded from the following sources: reinstated Registry of Motor Vehicles vehicle registration and license fees, the Massachusetts Turnpike Authority (\$200 million), the Massachusetts Port Authority (\$65 million), Commonwealth debt-service savings, and investment earnings on balances in the Trust Fund. The projections for the performance of the fund are based on a number of factors, including market forces, which are estimated by the Central Artery Finance Plan.

In addition to the above \$65 million, the Massachusetts Port Authority paid \$302 million for certain segments of the project that were located near Logan Airport. In addition to \$200 million provided to the Turnpike Infrastructure Fund, the

Massachusetts Turnpike Authority is also expected to contribute up to \$1.452 billion to the project.

Remaining Project Obligations

The MPO estimates that it will program \$653.170 million in federal funding for the project during federal fiscal years (FFYs) 2010–2013. The GANs repayment schedule from the Central Artery Finance Plan indicates repayments of \$151 million in FFY 2010, \$159 million in FFY 2011, \$166 million in FFY 2012, \$177 million in FFY 2013, and \$184 million in 2014.

THE REGIONAL PUBLIC TRANSPORTATION SYSTEM

The MBTA projections of long-range revenues and expenses are included in the Revised Finance Plan for the Silver Line, Phase III, of the federal New Starts program application, submitted in September 2008. The Revised Finance Plan includes projections through 2030 and is the basis for the projections in this Plan Amendment. A summary of the MBTA's operations and capital investments is provided below.

Funding MBTA Operations

Recent Massachusetts fiscal reform legislation (Section 151 of Chapter 127 of the Acts of 1999) altered the way the MBTA is funded. The MBTA Enabling Act (Chapter 161A of the Massachusetts General Laws) established dedicated sources of revenue and mandated the MBTA to operate as an independent, financially self-sustaining, public transportation agency. Prior to the enactment of this legislation, the Commonwealth funded the MBTA in arrears—in other words, it reimbursed the MBTA for expenses that had already been incurred. The Enabling Act and the new financing mechanism for the MBTA have been referred to as Forward Funding to reflect the fact that the MBTA's costs will no longer be funded in arrears.

Revenues for Funding Operations and Maintenance

Since July 1, 2000, the MBTA no longer received Net Cost of Service assistance (or Section 28 assistance), which had been unlimited. Instead, under the Enabling Act, the MBTA receives a dedicated revenue stream consisting of the amounts assessed on cities and towns of the MBTA's service district, in accordance with the Enabling Act, and revenue from the dedicated sales tax. The revenues available to fund MBTA operations and maintenance over the life of this Plan Amendment come from the following sources: dedicated sales tax revenue, local assessments, fare revenue, a subsidy to fund projects mandated by the State Implementation Plan, and non-fare revenue. Under anticipated allocation formulas, the amount of federal aid the MBTA will receive will cover only a very small percentage of its operating expenses. Table 12-4 lists the MBTA's projected revenues for FFYs 2010 to 2030.

Sales Tax

The dedicated sales tax is equal to whichever is greater: the amount raised by a 1 percent statewide sales tax, which equals 20 percent of the existing statewide 5 percent sales tax, or the base revenue amount, which is \$734 million in FFY 2010. In either case, the funds come from existing sales tax receipts, subject to upward adjustment under certain circumstances set forth in the Enabling Act. Additionally, under recent legislation (Section 1 of Chapter 35 of the Acts of 2009), starting August 1, 2009, the MBTA will receive \$160 million annually from the legislated sales tax increase, from 5 percent to 6.25 percent. Over the period 2010 to 2030, projected sales tax revenue received by the MBTA equals approximately \$26.633 billion.

TABLE 12-4

PROJECTED OPERATIONS AND MAINTENANCE COSTS OF THE MBTA TRANSIT SYSTEM
(DOLLARS IN MILLIONS)

OPERATIONS: SOURCES AND USES OF FUNDS	FEDERAL FISCAL YEAR(S)					
	2010	2011-2015	2016-2020	2021- 2025	2026- 2030	TOTAL
REVENUES:						
SALES TAX	\$767	\$4,079	\$4,926	\$5,705	\$6,559	\$22,036
ADDITIONAL TAX REVENUE	\$160	\$851	\$1,028	\$1,190	\$1,368	\$4,597
LOCAL ASSESSMENTS	\$150	\$809	\$915	\$1,036	\$1,172	\$4,082
OPERATING REVENUE						
FARE REVENUE	\$526	\$2,718	\$3,029	\$3,329	\$3,533	\$13,135
ADDITIONAL FARE REVENUE	\$68	\$693	\$1,332	\$1,820	\$2,533	\$6,446
NON-FARE REVENUE	\$23	\$152	\$177	\$206	\$240	\$798
TOTAL REVENUES	\$1,694	\$9,302	\$11,408	\$13,286	\$15,404	\$51,094
OPERATING EXPENSES:						
OPERATING EXPENSES	(\$1,182)	(\$6,901)	(\$8,883)	(\$10,689)	(\$12,818)	(\$40,473)
PROJECTED SAVINGS FROM REFORM	\$0	\$200	\$200	\$200	\$200	\$800
TOTAL OPERATING EXPENSES	(\$1,182)	(\$6,701)	(\$8,683)	(\$10,489)	(\$12,618)	(\$39,673)
REMAINING AMOUNT FOR REV. BONDS	\$512	\$2,601	\$2,725	\$2,797	\$2,786	\$11,421
DEBT-SERVICE EXPENSE:						
PRIOR OBLIGATIONS (PRE-FORWARD FUNDING)						
BOND DEBT SERVICE	(\$169)	(\$684)	(\$172)	(\$105)	(\$92)	(\$1,223)
OPERATING LEASE PAYMENTS	(\$13)	(\$31)	\$0	\$0	\$0	(\$44)
SUBTOTAL OF PRIOR OBLIGATIONS	(\$182)	(\$715)	(\$172)	(\$105)	(\$92)	(\$1,266)
REVENUE BONDS (POST-FORWARD FUNDING)						
BOND DEBT SERVICE	(\$263)	(\$1,798)	(\$2,546)	(\$2,672)	(\$2,688)	(\$9,967)
SUBTOTAL OF REVENUE BONDS	(\$263)	(\$1,798)	(\$2,546)	(\$2,672)	(\$2,688)	(\$9,967)
LESS NET TOTAL DEBT SERVICE	(\$445)	(\$2,513)	(\$2,718)	(\$2,777)	(\$2,780)	(\$11,233)
OPERATING SURPLUS/(DEFICIT)	\$67	\$89	\$7	\$20	\$6	\$188
LESS DEFICIENCY FUND CONTRIBUTION	\$0	\$0	\$0	\$0	\$0	\$0
LESS CAPITAL MAINTENANCE FUND CONTRIBUTION	\$0	\$0	\$0	\$0	\$0	\$0
LESS SEC. 20 SURPLUS REQUIREMENT STABILIZATION FUND	(\$5)	(\$24)	(\$29)	(\$34)	(\$39)	(\$131)

Local Assessment

In addition to the sales tax revenue, the MBTA receives funding through local assessments in accordance with a statutory formula. The 175 municipalities within the MBTA's service district pay an assessment to the MBTA on an annual basis. The amount paid by each municipality varies according to the population and the level of service provided. Local assessments are projected to be \$150 million in FFY 2010, with an average increase thereafter of 2.5 percent per year through FFY 2030. Over the life of this Plan Amendment, projected local assessment revenue equals approximately \$4.082 billion.

Fare Revenue

Fare revenue projections from the existing system total \$526 million in FFY 2010 and \$13.135 billion over the life of the Plan Amendment. An additional \$68 million in fare revenue is assumed through a 19.5 percent MBTA fare increase in 2010. Additional fare increases are assumed in the years 2013, 2017, 2023, and 2028. This equals an additional \$6.446 billion over the life of this Plan Amendment. It should be noted that subsequent to the development of this finance plan, hearings to discuss a possible fare increase in 2010 were put on hold, pending the completion of an independent "stem to stem" review of

the MBTA. Efforts to ensure attainment of the revenue projections included in this Plan Amendment will likely include a combination of the following: savings or additional revenues identified by the stem to stem review; the allocation of ARRA funds for operating support of the MBTA; and/or fare increases, if needed.

Non-Fare Revenue

The final component of the system revenue is non-fare revenue, such as that derived from parking fees, advertising, concessions, rent, interest income, utility reimbursements, and non-operating revenues such as income earned on investments and sale of property. This Plan Amendment projects that non-fare revenue will amount to \$23 million in FFY 2010. After FFY 2010, it is assumed that non-fare revenue will increase by a variable rate 0.4 to 6.5 percent per year. Over the life of this Plan Amendment, projected non-fare revenue equals approximately \$798 million.

This Plan does not identify revenue sources for addressing the current \$2.7 billion state-of-good-repair backlog or additional expansion projects.

Operations and Maintenance Costs

Operating Expenses

The MBTA's operating expenses include wages, benefits, payroll taxes, materials, supplies, services, and purchased transportation. Given current data in the Finance Plan, operating expenses for FFY 2010 are projected to total \$1.18 billion. The Finance Plan also assumes a variable average annual increase in operating cost of between 1.8 and 6.3 percent from FFY 2010 to 2030. This percentage is based on trend line analysis of known anticipated need and past operating cost. The total operating expenses over the life of the Plan Amendment are \$39.67 billion.

Debt-Service Expenses

Prior to Forward Funding, the Commonwealth covered operating shortfalls. The transition to

Forward Funding required the MBTA to be fully responsible for its finances, thus creating the need for reducing operating costs while providing efficient transit service to the region. That financial reform legislation provided the MBTA with the tools necessary to develop a sensible approach to controlling the growth of operating expenses.

MBTA bonds were backed by the Commonwealth prior to the enactment of the Forward Funding legislation. Upon the effective date of the legislation, however, contract payments from the state ceased and all outstanding debt became the responsibility of the MBTA. The projected total debt service for new debt and prior-obligation debt over the life of the Plan Amendment equal approximately \$11.23 billion.

In addition to debt-service expenses, obligations under prior lease agreements also became the sole responsibility of the MBTA upon the effective date of the Forward Funding legislation. These obligations are related primarily to "safe harbor" lease agreements that were executed in the 1980s for various MBTA rolling stock. Under such agreements, nonfederal shares of rolling stock were sold to private corporations and leased back to the MBTA. The corporations received tax benefits for such transactions, in the form of deductions for depreciation. These leases will terminate in 2013, and payments between 2010 and 2013 will total approximately \$44 million.

Operating Surplus

An additional requirement of the Forward Funding legislation was a mandate that the MBTA maintain a cash surplus equal to 0.5 percent of the sum of the annual allocation to the MBTA from the state sales tax and the assessments on cities and towns in the MBTA district. Over the life of the Plan Amendment this requirement equals approximately \$131 million.

Funding MBTA Capital Investments

The MBTA's capital program is primarily funded by two major sources: revenue bonds and feder-

al grants; other sources include project financing, the pay-as-you-go/Capital Maintenance Fund, and state appropriations. Prior to Forward Funding, the MBTA's nonfederal portion of the capital program was funded by General Transportation System bonds issued by the MBTA and backed by the Commonwealth Guaranty. Under Forward Funding, the MBTA's non-federal portion of the capital program is primarily funded in the early years by revenue bonds secured by the dedicated revenues under two separate categories (assessment bonds and sales tax bonds) established under the Enabling Act. The assessment bonds are secured by the assessments paid by the 175 cities and towns in the MBTA district, and the sales tax bonds are secured by the sales tax revenues received by the MBTA.

The MBTA's goal is to preserve sufficient funding for the operating budget, and it cannot allow

debt-service expenses to increase in relation to operating expenses. Taking this into consideration, the MBTA is seeking to make a transition from complete reliance on debt financing to greater use of pay-as-you-go financing of capital projects. However, the General Court (state legislature) will appropriate additional capital funds for projects required by legal commitments that pre-dated the Forward Funding legislation and for other projects mandated by new legislation. (See Chapter 161A, Section 18, of the Massachusetts General Laws, as amended, and the following section of this Plan Amendment, for more details.)

The total proceeds from all capital program funding sources from 2010 through 2030 are estimated at \$13.212 billion. Table 12-5 shows the projections of available capital funds.

TABLE 12-5
PROJECTIONS OF AVAILABLE CAPITAL FUNDS

FUNDING SOURCE	2010	2011–2015	2016–2020	2021–2025	2026–2030	TOTAL
NON-FEDERAL CAPITAL FUNDS						
MBTA REVENUE BONDS	\$291,000,000	\$1,272,000,000	\$1,675,000,000	\$1,675,000,000	\$1,675,000,000	\$6,588,000,000
PAYGO	\$0	\$0	\$0	\$25,000,000	\$140,000,000	\$165,000,000
TOTAL NON-FEDERAL SOURCES	\$291,000,000	\$1,272,000,000	\$1,675,000,000	\$1,700,000,000	\$1,815,000,000	\$6,753,000,000
FEDERAL FUNDS						
SECTION 5307	\$134,000,000	\$684,000,000	\$778,000,000	\$966,000,000	\$1,096,000,000	\$3,658,000,000
SECTION 5309 (RAIL)	\$72,000,000	\$437,000,000	\$519,000,000	\$563,000,000	\$623,000,000	\$2,213,000,000
SECTION 5309 (BUS)	\$53,000,000	\$304,000,000	\$0	\$0	\$0	\$357,000,000
ARRA FUNDING	\$99,000,000	\$131,000,000	\$0	\$0	\$0	\$230,000,000
TOTAL FEDERAL FUNDS	\$359,000,000	\$1,556,000,000	\$1,296,000,000	\$1,529,000,000	\$1,718,000,000	\$6,459,000,000
TOTAL FUNDING	\$650,000,000	\$2,827,000,000	\$2,971,000,000	\$3,230,000,000	\$3,534,000,000	\$13,212,000,000

Federal Aid

The federal appropriations program established under SAFETEA-LU specifies formulas that govern the dispersal of nondiscretionary federal funds. The funding programs assumed in this Plan Amendment include Section 5307 (formula funds),

Section 5309 (rail and bus modernization funds), and American Recovery and Reinvestment Act funding. A total of \$359 million in appropriations is scheduled for FFY 2010, with that figure increasing thereafter, at a variable rate, through FFY 2030. This results in a total estimate of \$6.459 billion in federal funds over the life of the Plan Amendment,

excluding New Start program grants.

Currently, federal discretionary New Starts program funds are projected to be secured for three MBTA projects:

1. Assembly Square Station: \$25 million (50 percent of total cost) is anticipated between 2010 and 2012
2. Fitchburg Line Commuter Rail Improvements: \$72 million (50 percent of total cost) is anticipated between 2010 and 2012
3. Green Line Extension from Lechmere Station to College Avenue and a Spur to Union Square: \$467 million (50 percent of total cost) is anticipated between 2010 and 2014

The combined total of New Starts funds for these projects over the life of the Plan Amendment would be \$564 million. The total federal aid projected to be available to the MBTA during the life of the Plan Amendment from all such programs combined is thus \$7.023 billion.

The Boston Region MPO believes that it is reasonable to assume this level of federal financial support based on New Starts funding that the MBTA has previously received.

Bond Proceeds

The MBTA issues bonds to pay for the local share of all capital projects. It is assumed that the MBTA will issue \$6.588 billion in revenue bonds over the life of this Plan Amendment.

Pay-As-You-Go Financing

The MBTA's goal is to use pay-as-you-go financing in the long-term to fund the capital program. The advent of forward funding has enabled the MBTA to maintain a modest amount in the Capital Maintenance Fund. This fund will be used for the MBTA's State of Good Repair program and will address the ongoing schedule of maintaining the equipment and mass transportation facilities of the system. Pay-as-you-go is a method of funding capital projects using cash rather than issuing bonds and incurring additional debt-ser-

vice expenses. Continuance of a pay-as-you-go financing method requires significant surpluses in the upcoming years, which will be determined by the level of fare and non-fare revenue and by the MBTA's continued progress on containing operating expenses. This Plan Amendment assumes \$165 million in pay-as-you-go financing.

State Appropriations

The MBTA will receive state funding of \$109 million in FFY 2010 for the State Implementation Plan projects. Based upon current assumptions contained in this Plan, it is estimated that the Commonwealth's capital subsidy for the expansion projects contained in this Plan (the SIP commitments) will be \$1.1022 billion. It is understood that efforts to secure additional funding will require the involvement of EOT, the Executive Office of Administration and Finance, and the Legislature, and such additional funding is subject to annual appropriation.

Table 12-6 shows all of the transit projects that are specifically recommended in this plan, whether as a major infrastructure project, a regionally significant (expansion) project for air quality, or both. The projects listed below are SIP projects, with the exception of Assemble Square. Assemble Square will be funded with federal and state earmarks and other state, local, and private funds. Two additional transit projects are being funded in this Plan Amendment—Green Line Extension from College Avenue to Mystic Valley Parkway, and Wonderland South Parking Garage; however, they are being funded with highway funds that are flexed to transit (see page 12-4, in this chapter).

The Boston Region MPO assumes that over time the capital maintenance needs of the MBTA will consume almost 100 percent of all MBTA capital revenues (excluding those from the special state appropriations discussed above). MBTA capital maintenance needs include infrastructure projects, such as signal and track upgrades; system enhancement projects; and accessibility projects, such as improvements necessary to

TABLE 12-6

MAJOR INFRASTRUCTURE AND EXPANSION TRANSIT PROJECTS IN THE RECOMMENDED PLAN

PROJECT	TYPE OF PROJECT*	COST
FAIRMOUNT LINE IMPROVEMENTS (BOSTON)	MI/EXP	\$114,000,000
RED LINE/BLUE LINE CONNECTOR – DESIGN ONLY (BOSTON)	MI/EXP	\$29,000,000
RUSSIA WHARF FERRY TERMINAL (BOSTON)	EXP	\$2,200,000
1000 ADDITIONAL PARK AND RIDE SPACES (REGIONWIDE)	MI/EXP	\$69,100,000
ASSEMBLY SQUARE ORANGE LINE STATION (SOMERVILLE)**	MI/EXP	\$50,000,000
GREEN LINE LECHMERE TO COLLEGE AVENUE AND UNION SQUARE SPUR (SOMERVILLE)	MI/EXP	\$934,000,000

* EXP = Expansion – Project adding capacity to the roadway or transit system

MI = Major Infrastructure – Project costing \$10 million or more

**Assembly Square – assumes use of \$25 million in New Starts funds and \$15 million in private contributions. \$10 million of highway funding will be flexed to this transit project.

comply with the Americans with Disabilities Act (ADA) Key Station Plan. The MBTA expects that all revenues during that time period will be used to maintain the system in a state of good repair. The MBTA is not proposing any new expansion projects at this time. As discussed above, the Commonwealth will be providing the funding for all of the SIP commitment projects. The other expansion project, Assembly Square Orange Line Station, will be funded with federal and state earmarks and other state, local, and private funds. Table 12-7 shows the level of funding available for maintenance and expansion projects over the life of the Plan Amendment.

TABLE 12-7

PROJECTIONS OF THE USE OF TRANSIT CAPITAL FUNDS

PROJECT TYPE	2010	2011–2015	2016–2020	2021–2025	2026–2030	TOTAL
STATE-OF-GOOD-REPAIR PROJECTS	\$650,000,000	\$827,000,000	\$2,971,000,000	\$3,230,000,000	\$3,534,000,000	\$13,212,000,000
COMMONWEALTH EXPANSION PROJECTS	\$109,000,000	\$995,200,000	\$0	\$0	\$0	\$1,102,200,000
OTHER EXPANSION PROJECTS	\$0	\$40,000,000	\$0	\$0	\$0	\$40,000,000
TOTAL CAPITAL USES	\$759,000,000	\$3,862,200,000	\$2,971,000,000	\$9,397,000,000	\$3,534,000,000	\$14,356,200,000