

Capital Planning

INTRODUCTION

Imagine Boston 2030, the City's first comprehensive planning process in fifty years is underway. Four goals have emerged that will help guide Boston's growth:

- Provide quality of life in accessible neighborhoods.
- Drive inclusive economic growth.
- Invest in infrastructure, open space and culture.
- Promote a healthy environment and adapt to climate changes.

The City's capital plan is an important tool in realizing the goals and vision of Boston 2030. As an investment program for the future, "Building A Better Boston" will enable the City to identify, prioritize, and implement capital projects aligned with Boston 2030's goals.

The FY17-FY21 capital plan initiates early action items from completed plans, reserves funding capacity for future projects that will emerge from ongoing planning processes such as Build BPS – the 10-year facilities master plan for Boston Public Schools, and embraces a new model for implementing and financing energy efficiency projects.

This capital plan makes new investments in the City's parks, libraries, streets, and other infrastructure. These new investments are possible due to a reevaluation of all future projects relative to immediate need, increasing annual borrowing within the City's debt affordability policy, utilizing the Parking Meter Fund to support a portion of the Northern Avenue Bridge project, and applying the City's one-time FY16 snow surplus toward one-time capital projects.

The FY17-21 capital plan includes 324 projects that will keep Boston healthy, thriving, and innovative through investments in education, public safety, parks, transportation, and community spaces.

FY17-FY21 EXPENDITURES

The City is responsible for maintaining a large inventory of capital assets, including roads, bridges, schools, parks, libraries, public safety equipment, city buildings and more. The City's capital investments enhance our neighborhoods, improve mobility, support the academic agenda of our schools and reinforce public safety with quality emergency response tools.

These capital investments are planned and funded through the City's capital budget, which is separate and distinct from the annual operating budget, as the capital plan is primarily funded by borrowing through the issuance of bonds within the City's fiscally responsible debt affordability limits.

Project Highlights

Parks: New investments in this plan allow for the launch of Parks First, a comprehensive initiative ensuring that Boston's open spaces are among the most accessible and equitable. Franklin Park, Boston's largest open space, will see \$5 million in pathway and entrance improvements over the next two years. The improved pathways will enable more people to enjoy this Emerald Necklace Park.

Ninety-seven percent of Bostonians live within a 10-minute walk of a park, but those spaces are only equitable if they serve the diverse needs of the City's residents. Inclusive design and a comprehensive whole park approach are needed for many of our open spaces. Major investments are proposed at Smith Playground in Allston, Noyes Park in East Boston, and Garvey Playground in Dorchester.

This year the first phase of a comprehensive redesign of the 45-acre Harambee Park will begin. The renovation will include environmental improvements, pedestrian pathways, field renovations and entrance improvements that will transform Harambee into a premier example of community-led comprehensive planning.

Other new projects include Ramsay Park in the South End, a project that resulted out of the advocacy of dedicated young people; Martin's Park in South Boston, a new park in honor of Martin Richard that will feature an inclusive playground. Funds for the park will be provided through City, state, and private sources.

Park projects that are currently underway or will be in construction this year include Marcella Playground, Parkman Playground, Roberts Playground, Allandale Woods, Winthrop Square, John Harvard Mall, Rachael Revere Square, and Boston Common Parkman Plaza.

Schools: The City is moving forward on three school building projects in partnership with the Massachusetts School Building Authority (MSBA). Construction is underway on the site of the new Dearborn 6-12 STEM Academy. The new school will open in September 2018. The City continues to develop schematic designs for a new Josiah Quincy Upper School as part of an ongoing feasibility study process. The City will begin a feasibility study process for the Boston Arts Academy.

In addition, the MSBA recently authorized its Executive Director to enter into a Project Funding Agreement with the City for window and door replacement projects at seven schools. The MSBA will provide a maximum grant totaling nearly \$16.4 million for this \$25 million project. The project will be completed by fall 2017.

There is also capacity set aside in this plan for spending by a future Boston School Building Authority on major renovation projects that are expected to result from the 10 year facilities master plan currently getting underway.

Upgrades to the Madison Park High School welding shop will be completed; this will accommodate classroom welding with appropriate ventilation and safety equipment.

Public Safety: The facility program for a new police station for East Boston has been finalized and design will begin in FY17, with construction to follow within the five year plan. The Fire Department will start the first phase of their enhanced apparatus replacement schedule; while also beginning to study how to best replace the diesel exhaust systems in firehouses. The Police Department will begin the second year of their radio system replacement.

Streets: In FY17, the City is investing \$3.1 million in Vision Zero – an initiative focused on improving safety,

eliminating serious injuries and fatalities for cyclists and pedestrians through improved roadway design and public education; and the Walkable Streets program which takes a holistic look at pedestrian access by reconstructing long sidewalk sections.

Through ongoing annual programs the Public Works Department will reconstruct five lane-miles of roadway and resurface 40 lane-miles of roadway, install 10 miles of bike lanes and 800 ADA/MAAB-compliant pedestrian ramps, and continue the replacement of existing street light fixtures with LED fixtures. In FY17 the capital plan provides increased funding for roadway resurfacing, sidewalk repairs, and improvements to the Freedom Trail. The reconstruction program includes several large-scale, significant projects, including the \$29 million Connect Historic Boston program, funded in part with a federal grant; Quincy Street as part of the Choice Neighborhood in Roxbury; and a redesigned Central Square in East Boston.

Innovation and Technology: This five-year plan includes a large investment to expand Boston's fiber optic network, which will provide greater connectivity to schools, provide the backbone of the City's free WiFi expansion, and possibly support public safety communications systems. The capital plan also supports increased investments in tools for digital engagement, such as a new redesigned City website; and for data access, data warehousing, reporting, and data visualization that will allow City departments and the public to understand better trends in education, transportation, city services, and more.

Community Spaces: This five-year plan includes full renovations to four BCYF community center facilities: the Paris Street Community Center and Paris Street Pool in East Boston, the Vine Street Community Center in Roxbury, and the Clougherty Pool in Charlestown. The City will also begin a study that will examine the feasibility of building a new community center in the North End. Construction work will begin at the Gallivan Community Center in FY17; the scope of work includes a new roof, gym floor, and air conditioning.

New libraries are planned to replace the existing Adams Street and Uphams Corner branch libraries. Full-scale renovations are underway or planned for the Jamaica Plain, Dudley, Roslindale, and Faneuil branches. A new branch library for Fields Corner is also anticipated. A Chinatown Library study will assess potential locations for the development and/or

delivery of new branch library services. Finally, the \$75 million Johnson Building renovation will be completed this summer.

Renew Boston Trust: This initiative aims to bundle municipal energy efficiency renovation projects and capture the resulting financial savings. The City plans to finance the program with general obligation bonds payable in part with the financial savings resulting from reduced energy consumption. The City expects to implement the program through contracts with Energy Service Companies (ESCOs) that will provide financial guarantees that the energy savings generated by the projects will be sufficient to cover anticipated debt service costs.

FY17-21 PROJECT HIGHLIGHTS AND SEQUENCING

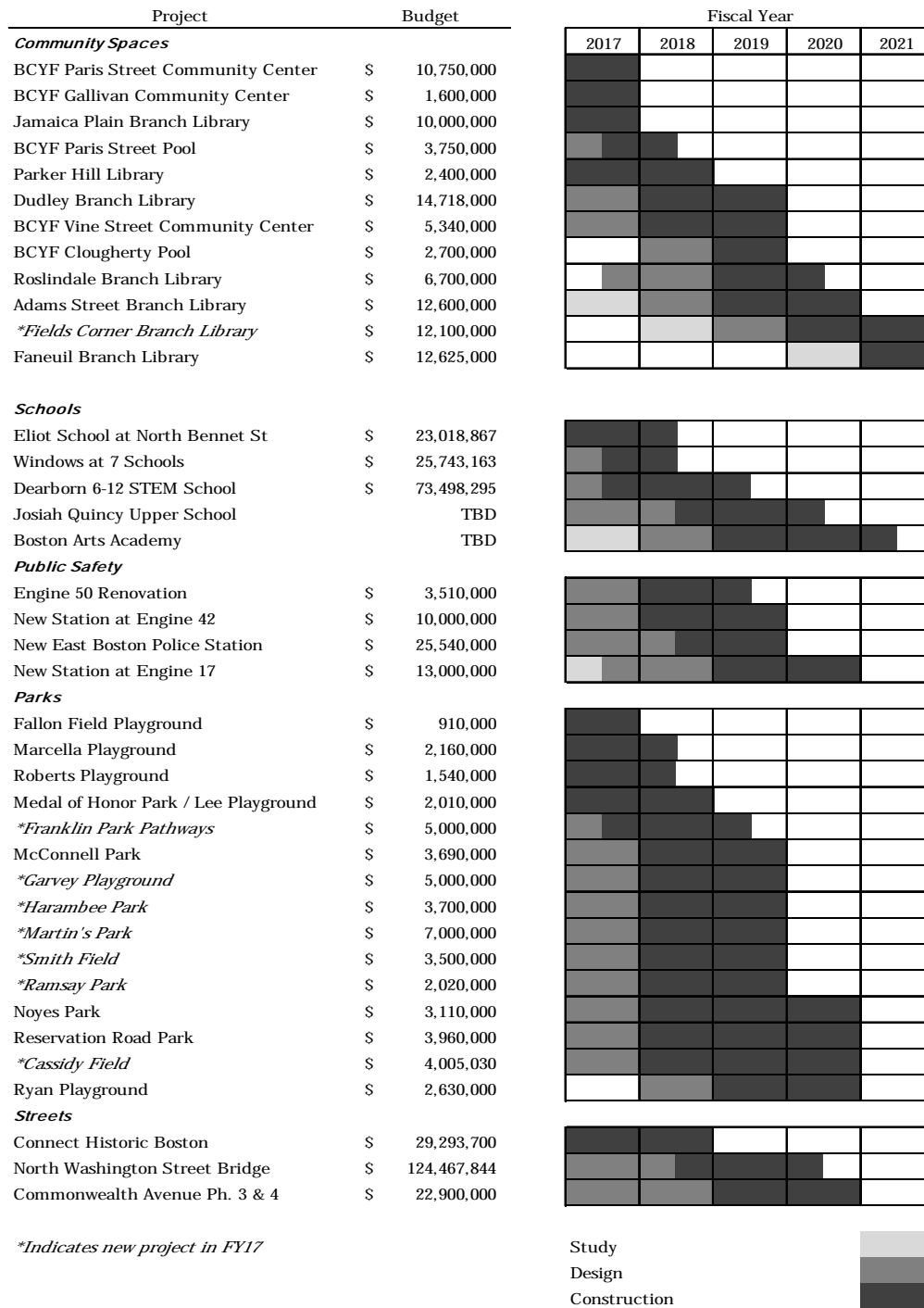


Figure 1

FY17 Expenditure Allocation

The City estimates FY17 capital expenditures will total \$267 million from all sources (see Figure 2).

All projects in the capital plan are categorized as Upkeep, New/Major Renovation, Upgrade, Planning or Matching Funds. OBM tracks the overall distribution of these categories to maintain a balance between the upkeep of existing assets and the expansion or introduction of new ones.

Upkeep: Upkeep represents projects that maintain the City's assets, a fundamental priority of the Capital Plan. In FY17, 33% of projected spending supports Upkeep projects. These include roof and masonry repairs, the replacement of play equipment in parks, HVAC and boiler replacement, and critical repair funds for departments to address relatively small but vital repair projects not covered by routine maintenance. A substantial portion of the Upkeep category supports on-going bridge, street, sidewalk, and street lighting repairs that ensure the City's roads and sidewalks are safe and in good condition.

Upgrade: Upgrade represents projects that improve existing assets by adding new capacity or innovations. This year's upgrade allocations account for 41% of projected spending, and includes projects such as Connect Historic Boston – the redesign of several Downtown streets with support from a Federal grant – and new equipment for the police radio system.

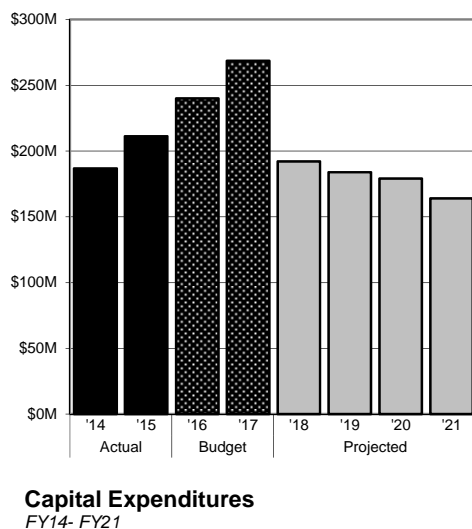


Figure 2

New/Major Renovation: 24% of the FY17 allocations represent major renovations and new buildings. New

FY17-FY21 PROJECT HIGHLIGHTS

New Projects to Launch in FY17

Parks

Garvey Playground
Harambee Park
Paul Revere Mall
Smith Playground
Franklin Park Pathways
Martin's Park
Ramsay Park
McConnell Playground
Noyse Park

Schools and Community Spaces

Adams Branch Library
Uphams Corner Library
Madison Park High School Welding Shop

In Construction

Parks

John Harvard Mall
Fallon Field Playground
Marcella Playground

Schools and Community Spaces

Dearborn 6-12 STEM / Early College Academy
Eliot School expansion
Jamaica Plain Branch Library Renovation
Paris Street Community Center Renovation

Streets

Vision Zero
Walkable Streets
Connect Historic Boston

Innovation and Technology

Digital Engagement Upgrades

Community Spaces

In Design / Studies Underway

Public Safety

New A-7 Police Station

Schools and Community Spaces

10-Year Facilities Master Plan
Dudley Square Branch Library Renovation
Gallivan Community Center Upgrades

facilities and rehabilitation projects for schools, libraries, parks and community centers enable the City's facilities to adapt to fit the needs of today's programs, improve the 'green' performance of facilities, and extend the useful life of older assets. Highlights in this category include a new fire houses at Engine 42 in Roxbury and a new library in Dorchester.

Planning or Matching Funds: About 4% of the FY17 budget is assigned to matching fund requirements and to planning projects. Comprehensive planning projects, which analyze a group of buildings or program needs, provide the groundwork for targeted investments in the categories of Upgrade and New/Major Renovations. Projects in this category include the 10-year master plan for school facilities, a programming study to determine the space needs for modern fire stations, and planning money for the construction of a new North Washington Street bridge, which will help leverage state construction funds.

FINANCING THE FY17-FY21 CAPITAL PLAN

The capital plan is financed with general obligation bond issued by the City, other City funds, state grants, federal grants, and private grants.

General Obligation (G.O.) Bonds

General obligation bonds represent 66.6% of all project funding. This year's plan assumes \$775 million in new general obligation borrowings over the next five years, a 10.7% increase over last year's plan, to support ongoing capital needs and the Renew Boston Trust project. The increase is sustainable within the City's debt affordability policy.

State and Federal Funds

State and federal financing programs, such as the School Building Assistance program, Chapter 90 and the Transportation Improvement Program, provide key resources for Boston's capital plan. Funds for capital financing are currently estimated at \$218.6 million from state programs and \$305.5 million from federal programs.

School Building Assistance Program

The School Building Assistance (SBA) program, administered by the Massachusetts School Building Authority (MSBA), is an important revenue source for school renovation and construction. Annually, the MSBA accepts new project requests from cities, towns,

and school districts, and if a project is ultimately approved, the MSBA will pay 40% to 80% of eligible project costs.

The City entered into a Project Funding Agreement with the MSBA to build a new school on the site of the existing Dearborn School in Roxbury. The MSBA will provide a maximum project grant totaling \$37.4 million or 50.8% of total projects costs.

Two other City projects are currently in the MSBA's process. A feasibility study is underway for the Josiah Quincy Upper School. The schedule calls for a preferred option to be selected in calendar year 2016. A feasibility study will begin for the Boston Arts Academy project.

In March, 2016 the Executive Director of the MSBA was authorized to enter into a Project Funding Agreement with the City for window and door replacement projects at seven schools. The MSBA will provide a maximum grant totaling nearly \$16.4 million.

For the period FY17-21, total payments from the MSBA are estimated at \$21.0 million to offset debt service costs for projects previously approved by the MSBA.

Chapter 90 Funds

Administered by the Massachusetts Highway Department, Chapter 90 funds are allocated by formula through state bond authorizations and through the state budget to all cities and towns in the Commonwealth. The City uses Chapter 90 allocations to fund road resurfacing and reconstruction projects as well as sidewalk reconstruction projects. The City expects an allocation of approximately \$14 million in FY16, which will be used for major roadway reconstruction projects including Connect Historic Boston and Central Square, for the annual sidewalk and resurfacing program, and for a pavement preservation program that will use inexpensive interventions on deteriorating roadways in order to postpone more costly resurfacing.

Transportation Improvement Program (TIP)

The Transportation Improvement Program is a statewide road and bridge construction advertisement program developed under the management of the Massachusetts Department of Transportation (MassDOT). It includes both local and state owned roads and bridges. The TIP's funding sources include state-issued general obligation bonds and federal funds made available through the Safe, Accountable,

Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Other Funds

Other Funds include both City and non-City sources of project funds. City sources include the Street Opening Account which funds the permanent repair of utility cuts and pavement restoration. City sources also include transfers from the Surplus Property Fund, Parking Meter Fund, and the General Fund. This year, the one-time FY16 snow surplus will be applied to one-time capital projects. Non-City sources of project funds include grants from the Boston Redevelopment Authority for roadway construction or other capital projects, as is the case with Harrison Avenue and Connect Historic Boston. Other funds also include incentive rebates provided by utilities to carry out energy efficiency projects. Altogether, these sources of capital funds are estimated at \$114.4 million.

CAPITAL PLANNING PROCESS

Capital needs and resource availability are assessed annually through a capital planning process that results in a five-year capital plan. The first year of the spending plan constitutes the City's capital budget. Expenditures against this budget are closely monitored throughout the year. To emphasize the balance between needs and resource availability, the budget document (in Volumes II and III) includes both capital authorizations and expenditure projections for each project.

The annual capital planning process begins with a capital improvement project request period during which all departments have an opportunity to identify their facility, equipment, infrastructure, and planning needs in a systematic manner and to submit their proposals to OBM for funding consideration. The development of department project requests may involve both internal assessments of current needs and a review of external constituent requests.

All capital improvement projects requesting funding consideration must meet at least one of the following minimum criteria:

- Complies with Americans with Disabilities Act;
- Improves health and safety;
- Supports economic development;

- Enhances general government effectiveness;
- Mitigates an environmental hazard;
- Responds to a legal, legislative or administrative mandate; or
- Preserves existing municipal facilities.

A project request includes a cost estimate, a description of the proposed scope of work, and additional descriptive information to help OBM evaluate it.

Proposed projects must account for short-term and long-term effects on the City's operating budget. Accordingly, project requests that OBM determines may impact the City's operating budget are subject to additional review to determine the anticipated effect on personnel, utilities, maintenance, and supply costs as well as expected changes in service demand or delivery of departmental programs. As a practical matter, it is assumed that certain types of projects such as energy conservation and energy efficiency projects (e.g. heating system upgrades or roof and window replacements) provide operating budget savings. OBM works with departments to measure these savings.

OBM reviews project proposals to determine the extent to which private purposes or benefits may exist; this review allows the City of Boston to maintain its tax-exempt financing status.

New capital requests that are recommended for funding are placed into a multi-year spending plan along with previously authorized projects. The Mayor submits the capital plan to the City Council each year. The City Council in turn, holds public hearings to consider project authorizations. This year's capital plan identifies 324 new and continuing projects and proposes \$212 million in new project authorizations.

Descriptions of all 324 projects can be found in Volumes II and III of the Budget. Project descriptions include authorizations and funding sources, projected expenditures, scope of work summary, and an indication of whether or not the project generates a near-term operating budget impact.

Operating Budget Impacts

Determining the impact that proposed capital investments will have on the City's operating budget (personnel, contracted services, equipment and utilities) is essential to the capital budgeting process.

Many capital projects, such as those that replace mechanical equipment with modern, more efficient versions, save the City money in future operating costs; others, such as those that allow the City to expand programming or establish a stronger presence in different neighborhoods, may entail future operating costs. Understanding the balance between future savings and future costs resulting from these capital projects is vital to maintaining the City's long-term financial health.

In Volumes II and III of this document, each capital project summary indicates whether or not there is an operating impact associated with the project.

While most capital projects can be assumed to have a marginal impact on energy savings or personnel demands, only those projects which will likely result in an increase or decrease in a budget appropriation are included here.

Savings

The capital plan supports investments that will decrease operating expenses by reducing costs associated with emergency repairs, maintenance of old systems, and energy inefficiency. A substantial portion of the capital plan is focused on these types of basic facility improvements.

Through an Executive Order relative to climate action, the City has committed to designing new buildings and selected major renovations to the standards required to attain U.S. Green Building Council LEED (Leadership in Energy and Environmental Design) certification.

By far the largest operational savings comes from the conversion of street lights to newer fixtures using Light Emitting Diode (LED) technology. Starting in FY11, and initially taking advantage of funds from the American Recovery and Reinvestment Act (ARRA) as well as rebates from EverSource, the street lights converted under this program in FY17 are expected to add to the approximately \$4 million in total savings that the program has accomplished.

The Renew Boston Trust initiative aims to bundle municipal energy efficiency renovation projects and capture the resulting financial savings. The City plans to finance the program with general obligation bonds payable in part with the financial savings resulting from reduced energy consumption. The City expects to implement the program through contracts with Energy Service Companies (ESCOs) that will provide

financial guarantees that the energy savings generated by the projects will be sufficient to cover anticipated debt service costs. The City has issued an RFP to select an ESCO and anticipates moving forward on a pilot program in FY17.

The Property Management Department is updating the City Hall heating system. An assessment is underway that will determine the most cost effective and energy efficient solution. The School Department and Fire Department are both pursuing capital projects to save energy and reduce operating costs, primarily by replacing boilers and updating HVAC and associated systems.

Costs

Increases in operating expenses expected as a result of capital projects are primarily driven by two areas: an expansion of the City's IT infrastructure and the addition of buildings to the City's portfolio.

Although many of the projects identified in the Department of Innovation and Technology (DoIT)'s capital budget are replacing legacy systems, in many cases they involve an expansion of that infrastructure, as well. This entails annual licensing fees to support the ongoing maintenance and upgrades of the new software solutions, and often the addition of personnel to support the customizations and integrations that allow the new software to meet the City's needs. Although it is expected that most of this new software will result in operational efficiencies, those efficiencies have been difficult to quantify in a way that can be accurately reflected in the City's budget projections.

DEBT MANAGEMENT POLICIES AND DEBT IMPLICATIONS OF THE PLAN

Effective debt management ensures that the City can meet its capital infrastructure and facility needs. Debt management requires a series of decisions about the amount, timing, purposes and structure of debt issuance. Long-term debt related to capital investment has two main purposes:

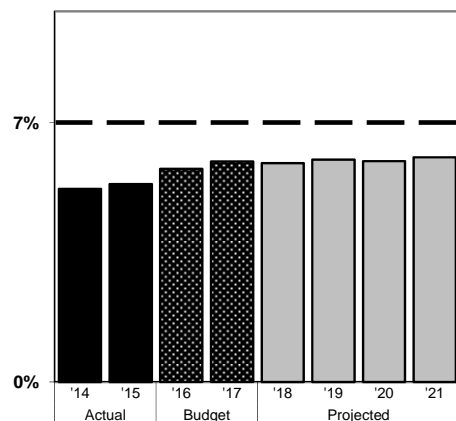
- (1) It finances acquisition, construction, repair, and renovation of City-owned buildings and equipment that are necessary to provide public services; and
- (2) It finances infrastructure improvements to ensure the City's continued growth and safe roadway conditions.

The Treasury Department manages all borrowings according to the City's debt management policies. These policies address issues such as debt affordability and limitations on the level of variable rate debt the City will use. The City's goals are to rapidly repay debt, maintain a conservative level of outstanding debt, and ensure the City's continued positive financial standing with the bond market.

Key components of the debt management policies ensure that:

- combined net direct debt does not exceed 3% of taxable assessed value;
- at least 40% of the overall debt is repaid within five years and 70% within ten years;
- annual gross debt service costs do not exceed 7% of general fund expenditures;
- variable rate debt does not exceed 20% of the City's total currently outstanding bonded debt (the City has no variable debt).

For further discussion of the City's financial policies and management controls, refer to the chapter on Financial Management.



Gross Debt Service as a Percent of Total General Fund Expenditures
FY14 - FY21

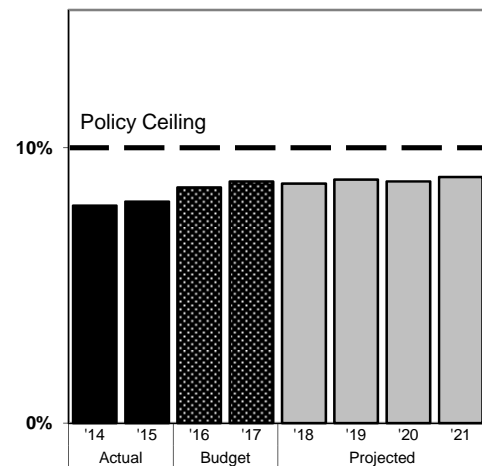
Figure 3

The City's debt service forecast assumes general obligation borrowing of \$153 million in FY17, \$167 million in FY18, \$160 million in FY19, \$155 million in FY20 and \$140 million in FY21. On March 8, 2016, the City sold \$140 million in general obligation bonds to fund its capital improvement projects, and \$8.1 million in general obligation refunding bonds. The debt tables at the end of this chapter detail the City's outstanding

debt service obligations and demonstrate the City's rapid retirement of its debt.

The City's gross debt service requirement will remain under 7% of total General Fund expenditures through FY21 (See Figure 3).

The ratio of debt service to the City's primary revenue source, the property tax levy, is projected to increase through FY17 (See Figure 4). Even with the increase, the ratio is not expected to exceed the City's policy ceiling.



Gross Debt Service as a Percent of the Net Property Tax Levy
FY14 - FY21

Figure 4

The City's current overall debt burden (net direct debt to assessed property value of \$128.05 billion) is approximately 0.96% as of April 30, 2016. The City's net direct debt per capita currently stands at approximately \$1,866.41 as of April 30, 2016.

Boston has been conservative about assuming long-term debt and aggressive about retiring debt expeditiously. As of April 30, 2016, the City's debt retirement schedule shows that 41.3% of its principal will be retired five years out, before the end of FY21 (See the Debt Retirement table at the end of this chapter).

In March of 2016, Moody's Investors Service and Standard & Poor's reaffirmed Boston's credit rating at Aaa, and AAA, respectively. A bond rating is a statement of credit quality and is analyzed when determining the interest rate that should be paid for a municipality's bonds. A higher bond rating translates into lower interest rates and real dollar savings for the City.

Capital Project Financing

Fiscal Years 2017 - 2021

	Existing Authorization	FY17 Authorization	FY18-21 Authorization	State	Federal	Other	Trust	Total
Boston Center for Youth and Families	22,971,688	10,640,000	3,400,000	0	0	0	0	\$37,011,688
Boston Redevelopment Authority	12,797,500	0	0	1,583,500	0	4,720,000	0	\$19,101,000
Department of Innovation and Technology	82,270,744	5,750,000	1,350,000	0	0	0	0	\$89,370,744
Emergency Management	1,500,000	0	0	0	2,000,000	0	0	\$3,500,000
Environment Department	445,000	10,700,000	0	0	0	0	0	\$11,145,000
Fire Department	16,020,000	23,922,500	24,042,000	0	0	118,861	0	\$64,103,361
Inspectional Services Department	583,000	0	0	0	0	0	0	\$583,000
Library Department	105,814,113	18,588,000	43,630,124	0	0	313,245	0	\$168,345,482
Neighborhood Development	3,990,000	0	0	0	0	1,750,000	0	\$5,740,000
Office of New Urban Mechanics	400,000	0	0	0	0	0	0	\$400,000
Parks and Recreation Department	64,869,607	26,406,000	36,150,426	17,092,173	61,950,086	15,804,809	0	\$222,273,101
Police Department	20,299,000	43,110,000	19,540,000	0	0	0	0	\$82,949,000
Property Management Department	42,496,483	14,655,000	32,130,000	0	0	1,043,232	0	\$90,324,715
Public Health Commission	8,941,000	375,000	1,021,484	0	0	0	0	\$10,337,484
Public Works Department	200,852,975	15,475,000	11,200,000	128,268,465	227,131,286	61,201,509	0	\$644,129,235
School Department	148,196,002	29,054,145	97,979,208	55,240,470	0	22,740,000	0	\$353,209,825
Transportation Department	49,215,136	13,750,000	10,892,240	16,470,241	14,430,964	6,700,000	0	\$111,458,581
Total	781,662,248	212,425,645	281,335,482	218,654,849	305,512,336	114,391,656	0	1,913,982,216

City of Boston
Outstanding Principal by Statute as of April 30, 2016

Statute:		Outstanding @ April 30, 2016	Percent of Total Outstanding Debt
General Purpose:			
C44 s7 (13)	Acquisition of Fire or Police Boats	1,996,071	0.158
C44 s7 (20)	Acquisition of Land; Cemeteries	469,830	0.037
C44 s7 (21)	Architectural Services for Plans & Specs	194,443	0.015
C44 s7 (22)	Engineering or Architectural Services	8,372,662	0.661
C44 s7 (25)	Acquisition of Land; Parks and Playgrounds	83,306,250	6.573
C44 s7 (28)	Computer Hardware	62,075,678	4.898
C44 s7 (29)	Computer Software	7,257,487	0.573
C44 s7 (9)	Departmental Equipment	11,098,292	0.876
C44 s7 (3B)	Energy Conserv., Alternative Energy Improvements	3,254,780	0.257
C659 Acts 1986	BCH - Constr., Equipping, Furnishing	13,870,000	1.094
		\$ 191,895,492	15.142
Urban Development:			
C121B s20	Urban Redevelopment and Renewal	\$ 7,725,139	0.610
C1097 s11 Acts 1971	Economic Development and Industrial Corp.	7,860,132	0.620
		\$ 15,585,271	1.230
Schools:			
O645 s8 Acts 1948	School Project Loan	\$ 26,341,074	2.078
O642 s7A, s7B, s7C	Capital Improvements; Acts of 1973, 1991, 1996	9,028,230	0.712
		\$ 35,369,304	2.791
Public Buildings:			
C44 s7 (3)	Construction of Buildings; Acquisition Of Land	\$ 224,694,292	17.730
C44 s7 (3A)	Remodeling and Extraordinary Repairs	548,936,498	43.315
C152, Act '97	Convention Center Refunding Bond	29,060,000	2.293
O642 s7A, s7B, s7C	Capital Improvements; Acts of 1973, 1991, 1996	21,141,363	1.668
		\$ 823,832,154	65.006
Public Works:			
C44 s7 (1)	Construct/Re-Construct of Surface Drains, Sewers, etc.	\$ 1,580,970	0.125
C44 s7 (4)	Construction and/or Re-Construction of Bridges	48,569,980	3.832
C44 s7 (5)	Construction of Public Ways	57,555,115	4.541
C44 s7 (6)	Construction of Sidewalks	5,378,290	0.424
C44 s7 (7)	Construction of Walls or Dikes	103,668	0.008
C44 s7 (14)	Traffic Signal and Public Lighting Install., etc.	63,454,223	5.007
C44 s8 (4)	Reservoir Constr/Enlrg; Water Trmt Bldgs	900,286	0.071
C44 s8 (5)	Water Mains Laying, Re-Laying, Construct.	3,782,595	0.298
C44 s8 (7A)	Water Meter Purchase & Installation	67,861	0.005
C44 s8 (7C)	Water Dept. Equip.; Purchase, Replace., Rehab.	516,150	0.041
C44 s8 (24) C29C	Landfill; Closing, Opening, Improve. to (MVPAT)	18,733,911	1.478
		\$ 200,643,047	15.832
Grand Total =		\$ 1,267,325,268	100.00 %

CITY of BOSTON
BOND - GROSS DEBT SERVICE PAYMENTS
@ April 30, 2016

- Stated in Five Year Intervals -
(\$ in thousands)

DATE OF ISSUE	TYPE	AMOUNT ISSUED	FY'16 through FY'21		FY'22 through FY'26		FY'27 through FY'31		FY'32 through FY'36		FY'16 through FY'36	
			Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
March 24, 2016	GO	140,000	48,590	27,067	44,205	15,787	23,685	6,733	23,520	2,158	\$140,000	\$51,745
March 24, 2016	REF	8,100	0	1,589	3,970	1,620	4,130	165	0	0	\$8,100	\$3,384
February 11, 2016	MW/PAT	15,365	3,246	1,387	3,614	1,070	4,024	693	4,481	273	\$15,365	\$3,423
April 1, 2015	GO	140,000	36,565	24,402	38,210	14,908	32,160	7,189	26,565	2,134	\$133,500	\$48,633
April 1, 2015	REF	126,735	35,480	24,657	55,835	13,435	25,375	1,774	0	0	\$116,690	\$39,866
March 26, 2014	GO	119,085	36,170	19,600	30,550	11,039	24,050	5,436	13,925	1,129	\$104,695	\$37,204
March 26, 2014	GO/Dudley	33,915	6,440	6,125	8,230	4,344	10,005	2,565	6,975	565	\$31,650	\$13,599
March 14, 2013	GO	109,095	32,560	15,872	26,055	8,162	21,910	3,627	9,320	421	\$89,845	\$28,082
March 14, 2013	GO/Dudley	35,760	7,145	5,744	9,095	3,790	11,000	1,884	4,935	223	\$32,175	\$11,641
March 14, 2013	REF	24,380	3,110	3,643	17,510	1,819	0	0	0	0	\$20,620	\$5,462
October 12, 2012	GO/Dudley	28,865	6,080	3,659	7,345	2,396	8,560	1,175	3,780	114	\$25,765	\$7,344
May 4, 2012	BCH/REF	26,945	40,025	15,307	24,805	7,130	19,070	3,010	4,020	161	\$87,920	\$25,608
April 2, 2012	GO	121,975	36,830	8,316	11,840	1,065	0	0	0	0	\$48,670	\$9,381
April 2, 2012	REF	83,155	13,870	1,003	0	0	0	0	0	0	\$13,870	\$1,003
April 1, 2011	Conv Ctr Ref	38,295	24,220	9,486	15,020	4,733	14,340	1,835	0	0	\$53,580	\$16,054
April 1, 2011	GO	86,190	11,600	4,906	14,285	2,216	3,175	127	0	0	\$29,060	\$7,249
April 1, 2011	QSCB	41,620	5,000	8,698	36,620	4,972	0	0	0	0	\$41,620	\$13,670
April 1, 2010	QSCB	17,415	0	4,423	17,415	2,695	0	0	0	0	\$17,415	\$7,118
April 1, 2010	REF	68,345	40,805	6,202	8,740	382	0	0	0	0	\$49,545	\$6,584
April 1, 2010	RZEDB	16,685	9,845	2,200	2,985	838	1,655	220	0	0	\$14,485	\$3,258
April 1, 2010	BAB	30,905	2,900	7,505	15,365	5,464	12,640	1,688	0	0	\$30,905	\$14,657
April 1, 2010	GO	39,995	10,070	1,414	720	149	450	41	0	0	\$11,240	\$1,604
November 4, 2009	QSCB	20,000	0	0	20,000	0	0	0	0	0	\$20,000	\$0
May 27, 2009	REF	31,485	6,995	487	0	0	0	0	0	0	\$6,995	\$487
March 18, 2009	GO	100,000	16,385	1,665	0	0	0	0	0	0	\$16,385	\$1,665
March 18, 2009	REF	8,940	8,905	867	0	0	0	0	0	0	\$8,905	\$867
March 20, 2008	GO	126,185	13,665	1,033	0	0	0	0	0	0	\$13,665	\$1,033
March 22, 2007	GO	100,000	6,030	301	0	0	0	0	0	0	\$6,030	\$301
March 22, 2007	REF	85,425	57,060	9,506	18,270	444	0	0	0	0	\$75,330	\$9,950
October 15, 1999	MW/PAT	13,389	3,300	335	0	0	0	0	0	0	\$3,300	\$335
% of Total Principal and Interest Retired in 5 Years:			\$522,891	\$217,409	\$430,684	\$108,458	\$216,229	\$38,162	\$97,521	\$7,178	\$1,267,325	\$371,207
			41.3%	58.6%		\$539,142		\$254,391		\$104,699		\$1,638,532

% of Total Principal and Interest Retired in 5 Years:

% of Total Principal and Interest Retired in 10 Years:

% of Total Principal and Interest Retired in 15 Years:

% of Total Principal and Interest Retired in 20 Years:

<p align="center">CITY of BOSTON RATE of PRINCIPAL RETIREMENT on GENERAL OBLIGATION BONDS</p>

Fiscal Years Ending June 30, 2016 - 2036
@ APRIL 30, 2016

<u>Fiscal Year Ended June 30,</u> <u>@ 4/30/16</u>	<u>Amount</u>	<u>Percentage of Total Principal Amount Retired:</u>
2016 - 2021	\$ 522,890,755.00	41.26 %
2022 - 2026	430,684,132.00	33.98 %
2027 - 2031	216,229,320.00	17.06 %
2032 - 2036	97,521,061.00	7.70 %
	<u><u>\$ 1,267,325,268.00</u></u>	<u><u>100.00 %</u></u>

CITY of BOSTON - DEBT SERVICE REQUIREMENTS - FISCAL YEARS 2015 through 2021						
	Actual FY15	Projected FY16	Projected FY17	Projected FY18	Projected FY19	Projected FY20
Gross Debt Service Requirements - Bonded Debt:						
Total Principal:	107,660,000.00	110,590,000.00	116,976,541.00	123,965,049.00	131,258,851.00	133,952,953.00
Total Interest:	51,444,965.30	56,545,601.46	63,502,679.82	59,404,330.23	61,277,873.91	62,708,912.79
(1) Total:	159,104,965.30	167,135,601.46	180,479,220.82	183,369,379.23	192,536,724.91	196,661,865.79
Less: Revenue Deemed Available from Related Sources:						
Boston Medical Center	0.00	0.00	0.00	0.00	0.00	0.00
Boston Public Health Commission	182,393.13	0.00	0.00	0.00	0.00	0.00
Water and Sewer Payments	0.00	0.00	0.00	0.00	0.00	0.00
(2) Premium, Subsidies, Other	8,520,908.96	3,656,500.45	3,598,172.13	3,502,660.51	3,418,863.47	3,308,755.72
Renew Boston Trust - Energy Savings	0.00	0.00	71,250.00	455,187.50	956,000.00	932,250.00
Accrued Interest	100,000.00	100,000.00	100,000.00	100,000.00	100,000.00	100,000.00
(3) Irrigation Project	206,501.24	199,022.83	190,284.93	116,364.90	9,149.49	0.00
(4) 1010 Massachusetts Avenue Project	2,285,655.98	2,265,029.18	2,220,936.61	2,168,216.83	1,947,260.57	1,916,238.83
(5) Pension Management System	1,858,296.67	1,904,611.67	1,904,552.59	1,903,325.99	1,902,667.57	1,903,311.94
Interest on Loan to BOA Fund and Dudley Fund	146,664.50	0.00	0.00	0.00	0.00	0.00
Plus: Interest on Temporary Loan Notes and Additional Items:						
Revenue Anticipation	0.00	3,000,000.00	3,000,000.00	3,000,000.00	3,000,000.00	3,000,000.00
Cost of Issuance	113,905.48	500,000.00	500,000.00	500,000.00	500,000.00	500,000.00
Dudley Sq. Site / Sec. 108	505,000.00	505,000.00	505,000.00	505,000.00	0.00	0.00
Lease Payment for Bolling Municipal Building	128,835.50	0.00	0.00	0.00	0.00	0.00
(6) Sinking Fund for Nov., 2009 QSCOB	1,454,545.44	1,454,545.44	1,454,545.44	1,454,545.44	1,454,545.44	1,454,545.44
School B.A.N.'s	0.00	0.00	0.00	0.00	0.00	0.00
Total Debt Service/Budget Summary:	148,006,831.24	164,469,982.77	177,853,570.00	180,583,168.94	189,157,329.25	193,455,854.74
Less Additional Adjustments:						
School Construction Assistance	8,175,513.00	7,344,337.00	6,720,152.00	6,720,147.00	5,107,351.00	2,461,330.00
Total Net Debt Service Requirements:	139,831,318.24	157,125,645.77	171,133,418.00	173,863,021.94	184,049,978.25	190,994,524.74
NOTES:						
(1)	FY16 - the City issued: \$140 million in General Obligation Bonds with a 20-year maturity and an average coupon rate of 4.40%; closing date: March 24, 2016 \$8.1 million in General Obligation Refunding Bonds with a 11-year maturity and an average coupon rate of 4.00%; closing date: March 24, 2016. \$15.3 million is on loan with the State's MWPA with a 20-year maturity and an average coupon rate of 2.0%; closing date: February 11, 2016, for the Gardner Street Landfill Closure Project. Assumptions: FY17 - Assumes General Obligation debt issuance of \$150 million, and \$3 mil for the Renew Boston Trust project, each with a 20 year maturity and an interest rate of 4.75%. FY18 - Assumes General Obligation debt issuance of \$160 million, and \$7 mil for the Renew Boston Trust project, each with a 20 year maturity and an interest rate of 4.75%. FY19 - Assumes General Obligation debt issuance of \$160 million per year, with a 20 year maturity and an interest rate of 5.0%. FY20 - Assumes General Obligation debt issuance of \$155 million per year, with a 20 year maturity and an interest rate of 5.0%. FY21 - Assumes General Obligation debt issuance of \$140 million per year, with a 20 year maturity and an interest rate of 5.0%. (2) Under the American Recovery and Reinvestment Act of 2009 (ARRA), in 2010 and 2011, the City issued Tax Benefitted Bonds which are entitled to receive subsidy payments from the Federal Government. The IRS has released 5 subsidy reduction notifications since March of 2013, reducing the expected annual subsidy - the projected loss through FY2016 is approximately \$1.15 million. An estimated Subsidy reduction to ARRA-related issuances of 7.3% per year from FY2018 through FY2021 has been applied in response to IRS withholding notifications. (3) Debt Service Costs will be offset by the "Fund for Parks and Recreation". (4) Debt Service Costs will be offset by charging City departments for the space they occupy. (5) Debt Service Costs will be offset by semi-annual payments from the Retirement Board. (6) Quarterly payments of principal in the amount of \$363,636.36 are currently being made to the paying agent with respect to the City's outstanding \$20 million G.O. Qualified School Construction Bonds, 2009-Series A, which were issued as tax credit bonds that do not earn interest. These funds are kept in escrow until the Bonds mature on September 15, 2024.					