

# Capital Planning

## INTRODUCTION

Boston's five-year \$1.8 billion capital plan, "Together, We CAN," is an investment program for the City's future. The underlying framework for the plan emphasizes (1) the strategic use of infrastructure to promote economic development, neighborhood vitality, quality education, health care, and public safety; (2) comprehensive planning to lay the foundation for future growth; and (3) effective government management to deliver necessary municipal services efficiently.

The program name "Together, We CAN" reinforces the ideas that "Cities Are Neighborhoods" and that the capital plan is a strategic tool shaped by many hands and designed to enhance the livability of a city that draws strength from its neighborhoods.

The Office of Budget Management (OBM) is responsible for managing the City's capital plan and budget. OBM coordinates the evaluation of capital requests, forecasts the timing and financial requirements of new construction and rehabilitation, and recommends the allocation of current and future resources by monitoring capital expenditures.

## FY13-FY17 Capital Plan Overview

The FY13-FY17 capital plan supports ongoing efforts and initiatives across the City in the areas of education and youth development, neighborhood stabilization, recreation opportunity, technology enhancement for improved service delivery and economic development. The capital plan is a long-range and flexible planning tool. It allows the City to identify long-term goals and projects within a financial framework that remains flexible so that it can be adjusted as fiscal and other conditions change.

As the City recovers from recent economic stresses, the FY13-FY17 capital plan reflects both a need to catch up on deferred maintenance projects, and a desire to continue innovating in the design and delivery of neighborhood improvements.

In the latter category fall projects like the Streetscape Innovation Fund, a program that will pilot innovations in materials, technology, and design that have the potential to transform public spaces; "Bringing the Outside In," design improvements to two indoor City pools to make them more appealing and open to the environment, especially in the summer months; a new library for East Boston, featuring "living room"-style reading areas, and the City's first library space dedicated to early literacy; and the Dudley Plan, the single largest element in the capital plan, whose central project, a new administrative building for the school department that will bring it closer to the families it serves, broke ground this spring. This project at the Ferdinand building, which will preserve the building's historic façade while incorporating modern design elements, is just one piece in the larger transformation of the Dudley Square area.

## FY13 EXPENDITURE ALLOCATION

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.

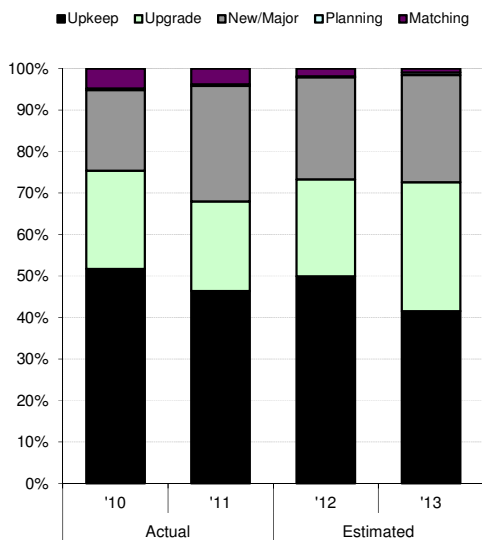
**Upkeep:** Upkeep represents projects that maintain the City's assets, a fundamental priority of the Capital Plan. In FY13, 42% of projected spending supports Upkeep projects. These include roof and masonry repairs, the replacement of play equipment in parks, HVAC and boiler replacement, and critical 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 31% of projected spending, and include the replacement of more than 10,000 street lights with new, energy efficient LED street lights.

**New/Major Renovation:** 26% of the FY13 allocations represent major renovations and new buildings. New 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 historic assets. This category also includes implementation of new technology systems.

**Planning or Matching Funds:** About 1% of the FY13 budget is assigned to matching fund requirements with the state, and a similar amount is dedicated 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. Matching funds for MassDOT and the Massachusetts Bay Transportation Authority (MBTA) projects unlock state and federal funds for local investment.



**Capital Expenditure Allocation**  
FY10-FY13

Figure 1

The distribution of allocations this year— 42% for Upkeep, 31% for Upgrades, 26% for New/Major Renovations, 1% for planning and 1% for matching roadwork—maintains the relative balance of these project categories (See Figure 1). The spending trend towards projects in the Upgrade and New/Major Renovation categories is expected to continue over the

next couple of years as the Dudley Plan projects and significant upgrades to school facilities move into construction.

## 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 schedule where 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 a useful life statement.

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 351 new and continuing projects and proposes \$214.9 million in new project authorizations.

Descriptions of all 351 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.

The parks and facilities within the five-year capital plan are searchable by neighborhood, department or status and displayed in an interactive map ([www.cityofboston.gov/maps](http://www.cityofboston.gov/maps)). Projects that involve Citywide planning efforts or technology improvements are not displayed.

## **FINANCING THE FY13-FY17 CAPITAL PLAN**

The capital plan is financed with general obligation bonds, state and federal funds, trust funds, and other funds.

### **General Obligation (G.O.) Bonds**

General obligation bonds represent 66.0% of all project funding. This year's plan assumes \$715 million in new general obligation borrowings over the next five years to support ongoing capital needs.

## **Highlights of the FY13 – 17**

### **Capital Plan**

#### **Investing in Youth and Families**

Draper Pool and Flaherty Pool  
 New Mission High School / BCLA Expansion  
 Roberts Playground Synthetic Turf Field  
 Hunt/Almont Playground  
 Ball Field and Court Renovations  
 Schoolyard Initiative  
 Youth and Human Services Technology Initiative  
 BPS Student Information System

#### **Improving Neighborhoods**

East Boston Library  
 New Fire Apparatus  
 Strategic Bicycle Network  
 NICE Program  
 Expanded Street Tree Plantings  
 Old Colony Housing Infrastructure  
 Sidewalks and Pedestrian Ramps  
 Streetscape Innovations Fund

#### **Strengthening the Economy**

New Dudley Square Municipal Building  
 Downtown BID Improvements  
 Computer Aided Dispatch  
 Permit and Inspection System  
 Energy Conservation Program  
 Centre Street / South Street  
 Road Resurfacing and Reconstruction  
 Boston Marine Industrial Park Improvements

## State and Federal Funds

Funds for capital financing are currently estimated at \$222.5 million from state programs and \$327.3 million from federal programs. Specific financing programs, such as the School Building Assistance program, Chapter 90 and the Transportation Improvement Program, provide key resources for Boston's capital plan.

### 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 the project's cost. Currently, the MSBA has authorized project feasibility studies for two schools: the Quincy Upper School in Chinatown, and the Dearborn School in Roxbury. The studies will determine whether these projects qualify for MSBA funding.

For the period FY13-17, total payments from the MSBA are estimated at \$39.5 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 FY13.

### 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).

## Trust Funds

The City's Treasury Department manages trust funds and bequests from private citizens dedicated to Boston's public spaces. Grants from the Edward Ingersoll Browne Trust Fund are used for the enhancement of neighborhood parks, schoolyards, and public spaces. The George Robert White Fund supports facilities owned by the Fund.

## Other Funds

The City uses funds from the Street Opening Account to finance road resurfacing projects. Private donors, including the Schoolyard Funders Collaborative, provide funding support for certain capital projects such as schoolyard improvements. These sources of capital funds are estimated at \$82.1 million.

## FISCAL YEAR 2012 EXPENDITURES

Total capital expenditures in FY12 are forecast at \$154 million.

### Transforming Dudley Square

A ground-breaking ceremony was held marking the start of construction for a new \$115 million School Department headquarters building, located on the former Ferdinand Building site. Once completed, the building will also house other youth-focused agencies.

### Investing in Education

The School Department's Redesign and Reinvest program consisted of a series of school mergers and closures in an effort to enhance student access to excellent schools. The reconfiguration required nearly \$5 million of investments at seven schools in FY12. The capital improvements included new science labs for the Community Academy for Science and Health in Dorchester; a new library, and new chemistry and biology labs, at Dorchester Academy; and new classrooms at the Mario Umata Academy in East Boston (which merged with the Dante Alighieri School).

The City continued making investments in its school buildings including masonry repairs at the Condon, Taylor and Tobin, plumbing and bathroom updates at the Channing School, door replacements at the Mather School, and the construction of a new entrance at the O'Bryant School.

In FY12 the School Department participated in the MSBA's Green Repair program in which the MSBA granted up to \$7.6 million or 74.06% of approved costs for the replacement of roofs at four schools and boilers at two schools.

The ongoing partnership with the Boston Schoolyard Initiative led to new schoolyards at the Elihu Greenwood School, Young Achievers Pilot School, and the Edison School.

### **Strengthening Public Safety**

The Fire Department put five new pieces of equipment into operation – three engines and two ladder trucks – and placed a new fireboat into service. A new police station was opened in Dudley Square replacing an aging facility. The City is applying for a LEED Silver certification for the new station.

### **Improving City Streets**

By the end of FY12, the Public Works Department is projected to have resurfaced 24 miles of roadway, and to have reconstructed 3.25 miles. Over 20,000 of the City's street lights – about 1/3 of the total inventory – are projected to have been replaced with much more efficient LED street lights. And almost 500 square feet of sidewalk will have been repaired or reconstructed – a large increase over previous years.

The City added its 50<sup>th</sup> mile of dedicated bike lane at the end of 2011, and continues to add more.

### **Making Community Spaces More Welcoming**

The Shelburne Community Center and Curtis Hall Community Center were reopened after extensive renovations that updated building systems and improved programming spaces.

Construction of a new East Boston Branch Library is scheduled to begin this spring. The state-of-the-art facility, located on the East Boston Greenway in Bremen Street Park, will boast more than 40 computers; flexible spaces meant to accommodate a variety of different users; and a reading porch that faces the park.

### **Enhancing Recreational Opportunities**

Extensive renovations are being finished now at the East Boston Stadium building. The renovations include new locker rooms and restrooms, a concession area, and new bleachers, and make the building useable again after several years of it being condemned. Improvements were made at two playing

fields: Barry Playground in Charlestown, and the Hynes Playground in West Roxbury.

Many parks received upgrades or refurbishment to their landscaping, play areas, passive spaces, and/or drainage. In June alone, ribbons will be cut at 7 newly refurbished parks, representing over \$4 million in investment.

### **Supporting Business Development**

Nearly all permits issued by the Public Works, Transportation, and Fire Departments were moved into the City's enterprise-wide permitting system as part of an ongoing effort to streamline the municipal permitting process.

### **Using Technology to Modernize Service Delivery**

A major upgrade of the City's financial software will go live in early July. The goals of the upgrade are to improve operational efficiency and effectiveness, re-engineer and standardize business processes, and eliminate paperwork with an improved electronic workflow.

The School Department began the implementation of a new Student Information System (SIS) to integrate various administrative systems for school assignment, attendance, health records, and transportation and student performance into one enterprise-wide application. The new SIS will enable parents to view their child's school progress including homework assignments, MCAS score, grades and attendance. The SIS is expected to be fully deployed by mid-2013.

## **FISCAL YEAR 2013 EXPENDITURES**

Total capital expenditures in FY13 are forecast at \$200 million. This estimate includes \$180 million for general obligation (G.O.) bond spending and \$20 million from various grants.

### **Transforming Dudley Square**

Having broken ground this past March, construction on the new, \$115 million administrative office building in Dudley Square is underway. A programming study and entry improvements are planned for the Dudley Branch library. Engineering work will also begin for the redesign of Dudley Street within Dudley Square.

## **Investing in Education**

The \$18.4 million Access to Excellence program supports the School Department's effort to increase capacity in high-demand schools. Through a series of moves, expansions, and renovations, 700 new seats will ultimately become available. Projects for FY13 include new science labs, technology upgrades and flooring improvements at the Hyde Park Education Complex, the new home for New Mission High School and Boston Community Leadership Academy; new science labs and library improvements at the former Agassiz School which will now house the Mission K-8 School and the Margarita Muniz Academy, a new bilingual high school.

Work will begin at Charlestown High School to replace the HVAC system, to install new fire alarm and sprinkler systems, and to improve accessibility. The extensive project will take three summers to complete.

Exterior renovations at the Mattahunt School in Mattapan, which included a new roof, windows and exterior walls, will be completed this year.

The Boston Schoolyard Initiative's 11<sup>th</sup> round will include improvements at the Henderson School in Dorchester, the Harvard/Kent School in Charlestown, and the Grew School in Hyde Park.

## **Strengthening Public Safety**

Interior and exterior renovation work at the Area C-11 police station in Dorchester and the Police Training Academy in Hyde Park will be completed. Studies are scheduled that will examine options to move out of – or expand beyond – the outdated Area A-7 station in East Boston, and to build an addition onto the Area B-3 police station in Mattapan.

## **Improving City Streets**

This year's capital budget nearly doubles the roadway resurfacing program, allowing Public Works to resurface nearly 40 miles of roadway. The reconstruction and sidewalk programs will also expand this year.

Public Works will also continue upgrading or retrofitting existing street lights with more efficient LED lights, and expects to replace more than 10,000, for approximately \$1 million in energy savings, in FY13.

This year also sees the introduction of the Streetscape Innovation Fund, housed in the Department of Innovation and Technology (DoIT). This fund will

pilot new materials, technologies, and designs that have the potential to transform public spaces in the City.

## **Making Community Spaces More Welcoming**

The Draper and Flaherty Pools will go into construction this year, as part of the Mayor's "Bringing the Outside In" initiative to modernize the look and feel of Boston's indoor pools.

## **Enhancing Recreational Opportunities**

As part of ongoing programs to update playing surfaces, the courts in Harambee Park in Mattapan, Savin Hill Park in Dorchester, and Moakley Park in South Boston will be replaced this year; and the ball fields at M Street Field in South Boston, and Playstead Field at Franklin Park in Roxbury will all be upgraded.

The Parks Department will install a new synthetic turf field at Roberts Playground, the first synthetic turf field since 2008.

Fort Hill Tower, located in Roxbury's Highland Park, will receive interior and exterior repairs including masonry repointing and repaired and re-glazed windows. When the tower work is complete the park will be renovated with new benches, paving, and landscaping.

New play equipment will be installed at Draper Playground in West Roxbury, Joyce Playground in Brighton, Mothers Rest in the Fenway, Ringgold Park in the South End, and Shubow Park in Brighton.

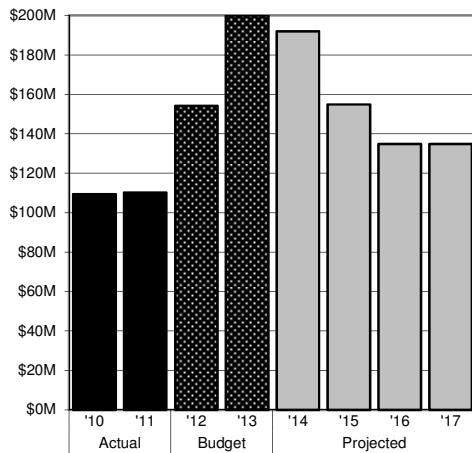
Four other parks will also be renovated in the coming year: Childe Hassam Park in the South End, Doherty Playground in Charlestown, Hunt/Almont Playground in Mattapan, and Mt. Pleasant Street Park in Roxbury.

The Public Works Department will pilot a new program called Safe Routes to Parks, ensuring that the sidewalks and streets adjacent to newly renovated parks are safe and accessible to people walking, biking, and driving. The program will focus on two or three parks this year.

## Supporting Business Development

In Downtown Crossing, more than \$1 million will go towards repairing streets and sidewalks, and other streetscape improvements, as part of larger beautification efforts in the Business Improvement District. The roads in the heart of the Newmarket industrial area will be repaved, with better lighting and sidewalks installed, making it safer for employees who walk to work, and for the trucks that bring goods in and out of the area.

Parks Department and licensing agencies permitting processes will move on-line as part of an ongoing effort by the City to streamline its municipal permitting process.



**Capital Expenditures**  
FY10- FY17

Figure 2

## Using Technology to Modernize Service Delivery

The Department of Innovation and Technology (DoIT) will continue with key public safety projects including the implementation phase of a new Computer Aided Dispatch system, preparing for FCC mandated narrowbanding of emergency communication radio channels, and updating public safety mobile communications. In FY13, DoIT will continue upgrading its core technology and greening program which includes data center consolidation, server virtualization, enterprise storage, and business interruption planning.

As DoIT integrates and modernizes systems across City departments, important efficiencies can be realized by

allowing workers who are “in the field” to access these systems using mobile technology. DoIT will begin a “Mobility Solutions” project this year, to allow workers to remotely handle constituent requests, permit inspections, and asset management, and to create a common platform for future mobile investments.

A new Integrated Library System (ILS) will be implemented in FY13. The upgrade will improve technology services in branch libraries, from public computing to circulation and self-check out. The new ILS will also support the Boston Public Library’s web-based services such as digital book lending and other electronic resources available to the public 24 hours a day. The Library will also roll out its successful self-checkout machines to all branch libraries, making it easier than ever for patrons to check out materials.

## FY14-FY17 Planned Expenditures

Planned G.O. expenditures are \$176 million in FY14, \$139 million in FY15, and \$120 million in FY16 and FY17. Future grant expenditures are estimated at approximately \$16 million in FY14 and FY15 and approximately \$15 million annually in FY16 and FY17. Figure 2 displays total capital spending from all sources since FY10 and projected expenditures through FY17.

The City continues to pursue grant funds, to maximize the use of Chapter 90 monies for road and sidewalk projects, and to manage its projects to ensure that spending does not exceed projections and that priority projects move forward. Together, these strategies will enable the City to maintain a reasonable level of capital spending and outstanding debt.

## 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. Increased costs may often be justified because of an improvement in or expansion of service delivery, or may be unavoidable due to legal mandates or regulatory requirements.

Each capital project summary therefore includes a statement as to whether or not there is an operating impact associated with the project.

The projects which are identified as having near-term operating impacts are summarized in Figure 3. While

many projects may 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. Increases or decreases are further categorized by the budget line in which they would occur: personnel, contracted services, or utilities.

## 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.

The City has committed to designing new buildings and selected major renovations to the standards required to attain U.S. Green Building LEED (Leadership in Energy and Environmental Design) certification. The Brighton Branch Library which underwent a major renovation in 2010 was certified with a LEED Silver designation. An application is in process for the new police station in Dudley Square.

In FY12, ARRA funds and existing capital dollars were leveraged in a rebate program with NStar to begin replacing mercury vapor street lights with LED street lights. This program will continue through FY13 with an expected reduction of an additional 7.5 million kilowatt hours of electricity and an estimated \$936,000 savings in FY13, in addition to the \$1.5 million projected savings in FY12.

The School Department is pursuing capital projects to save energy and reduce operating costs. These projects include ongoing efforts to update energy management systems, replace windows, upgrade HVAC systems and install green roofs.

The Boston Public Health Commission (BPHC) and the Property and Construction Management

Department are examining options for replacing old heating systems in four buildings: the Tobin and Morris buildings on the Long Island campus, and the Finland and Woods Mullen buildings adjacent to the Boston Medical Center campus. The Long Island Buildings use heating oil that is either barged to the island or is transported across the Long Island Bridge at great expense; the South End buildings are heated by steam generated by the Boston Medical Center power plant, which is slated to be decommissioned as part of the Mayor's efforts to reduce greenhouse gas emissions in the City. BPHC is exploring the possibility of providing heat at one or both campuses through a geothermal heating and cooling system, which uses the stability of temperature just below the earth's surface to regulate temperature inside buildings.

Property and Construction Management will begin the process of converting the City Hall heating system from steam to natural gas. The existing steam to water heat exchanger will be replaced with four high-efficiency gas-fired condensing boilers.

The Environment Department works with other City departments on a range of energy saving projects including new controls for ball field lighting, an upgraded energy management system for the central library at Copley Square and four branch libraries, and additional HVAC improvements at City Hall that includes a chiller automation system and variable speed drives for water pumps.

A third phase of energy improvements are scheduled for City Hall that involve an upgrade to the energy management system and additional HVAC improvements to improve exhaust and return air upgrades along with improvements to dampers and distribution systems to save an estimated 1.6 million kilowatt hours of electricity and \$213 thousand in FY13.

Department	Project	Personnel	Contracted Services	Utilities	Comment
Innovation and Technology	Core Technology Infrastructure	--	▼	▼	Maintenance and Energy Savings
Environment	Energy Conservation Program	--	--	▼	Energy Savings
Library	East Boston Branch Library	--	--	▼	Energy Savings
Library	HVAC Replacement at 3 Branch Libraries	--	--	▼	Energy Savings
Library	Johnson Building Energy Improvements	--	--	▼	Energy Savings
Library	Johnson Building Piping Infrastructure	--	▼	▼	Energy Savings, Utility Reduction
Neighborhood Development	Strand Theatre	--	▼	--	Eliminate Rentals
Police Department	Area B-2 Station (project completed)	▲	--	▲	Staff, Energy Increase
Property and Construction Management	1010 Massachusetts Ave.	--	--	▲	Mechanical Increase
Property and Construction Management	City Hall Energy Efficiency	--	--	▼	Energy Savings
Public Works	Central Maintenance Facility Vehicle Wash	--	--	▼	Utility Reduction
Public Works	Street Light LED Conversion	--	--	▼	Energy Savings
School	HVAC at Charlestown High School	--	--	▼	Energy Savings
		Figure 3			



The City also looks to technology improvements and enhancements to reduce costs and improve efficiency. In FY09, DoIT began eliminating leased lines used for data communications as it lights up a City-owned fiber optic cable system. Ongoing savings are estimated at \$1.2 million to \$1.5 million now that the project is completed.

The Core Technology Infrastructure project provides for the creation of virtual servers, enterprise storage and improved network reliability. In conjunction with the fiber optic project, this capital investment will allow the City to consolidate data centers currently located in various buildings. Consolidation and virtual servers will reduce the amount of hardware needed, as well as the space and energy needed to maintain the remote locations.

### DEBT MANAGEMENT POLICIES AND DEBT IMPLICATIONS OF THE PLAN

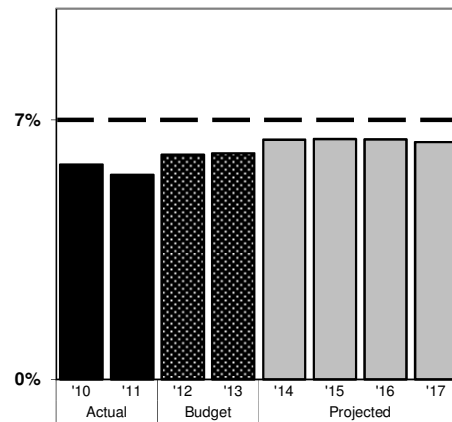
Effective debt management ensures that the City can meet its capital infrastructure and facility needs. Debt management requires a series of decisions about the amount, timing, purposes and structure of debt issuance. Long-term debt related to capital investment has two main purposes:

- (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;



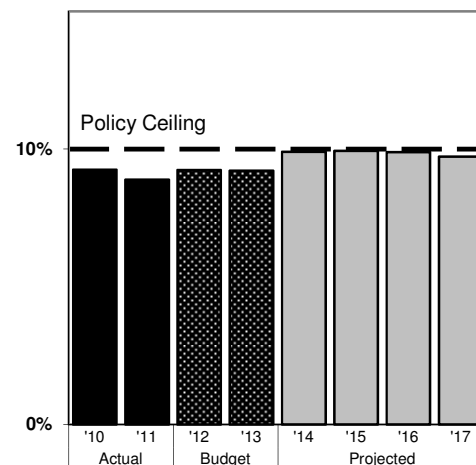
**Gross Debt Service as a Percent of Total General Fund Expenditures**  
FY10 - FY17

Figure 4

- 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.

The City's debt service forecast assumes general obligation borrowing of \$210 million in FY13, \$145 million in FY14 and \$120 million each year from FY15 through FY17. On April 2, 2012, the City issued \$122.0 million in general obligation bonds and \$110.1 million



**Gross Debt Service as a Percent of the Net Property Tax Levy**  
FY10 - FY17

Figure 5

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 FY17 (See Figure 4).

The ratio of debt service to the City's primary revenue source, the property tax levy, is projected to increase through FY16 (See Figure 5). Even with the increase, the ratio is not expected to exceed the City's policy ceiling.

The City's current overall debt burden (net direct debt to assessed property value of \$88.50 billion) is approximately 1.14% as of April 30, 2012. The City's net direct debt per capita currently stands at approximately \$1,633.80 as of April 30, 2012.

Boston has been conservative about assuming long-term debt and aggressive about retiring debt expeditiously. As of April 30, 2012, the City's debt retirement schedule shows that 42.4% of its principal will be retired five years out, before the end of FY17 (See the Debt Retirement table at the end of this chapter).

In March 2012, Moody's Investors Service and Standard & Poor's Rating Services affirmed Boston's credit rating at Aaa and AA+, 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 2013 - 2017

	Existing Authorization	FY13 Authorization	FY14-17 Authorization	State	Federal	Other	Trust	Total
Boston Center for Youth and Families	12,626,753	4,523,350	28,019,546	481,021	0	0	0	\$45,650,670
Boston Redevelopment Authority	1,573,000	5,820,000	4,110,000	2,513,500	0	100,000	0	\$14,116,500
Department of Innovation and Technology	61,737,925	14,550,000	9,500,000	0	0	0	0	\$85,787,925
Environment Department	1,740,000	3,000,000	500,000	50,000	0	250,000	0	\$5,540,000
Fire Department	31,106,394	4,020,000	38,874,055	1,945,000	0	0	0	\$75,945,449
Library Department	35,604,362	2,165,500	37,665,000	7,255,988	0	530,206	0	\$83,221,056
Neighborhood Development	17,900,600	0	0	234,000	0	0	0	\$18,134,600
Parks and Recreation Department	51,267,133	11,072,000	28,230,000	22,740,030	61,400,000	3,639,663	200,000	\$178,548,826
Police Department	12,973,470	350,000	1,484,500	0	0	0	0	\$14,807,970
Property and Construction Management Department	72,001,957	66,500,000	77,710,000	0	0	1,299,891	0	\$217,511,848
Public Health Commission	10,080,000	2,325,000	3,795,000	0	1,376,107	0	0	\$17,576,107
Public Works Department	175,470,178	35,774,000	81,790,000	169,425,230	253,068,491	58,583,344	0	\$774,111,243
School Department	97,032,840	56,254,296	73,589,811	520,000	930,000	17,691,000	0	\$246,017,947
Transportation Department	26,709,698	8,567,000	18,890,000	17,320,000	10,480,000	50,000	0	\$82,016,698
<b>Total</b>	<b>607,824,310</b>	<b>214,921,146</b>	<b>404,157,912</b>	<b>222,484,769</b>	<b>327,254,598</b>	<b>82,144,104</b>	<b>200,000</b>	<b>1,858,986,839</b>

**City of Boston**  
**Outstanding Principal by Statute as of April 30, 2012**

Statute:		Outstanding @ April 30, 2012	Percent of Total Outstanding Debt
<b>General Purpose:</b>			
C44 s7 (13)	Acquisition of Fire or Police Boats	2,229,393	0.207
C44 s7 (20)	Acquisition of Land; Cemeteries	249,565	0.023
C44 s7 (21)	Architectural Services for Plans and Specifications	5,032	0.000
C44 s7 (22)	Engineering or Architectural Services	3,480,190	0.323
C44 s7 (25)	Acquisition of Land; Parks and Playgrounds	71,806,615	6.668
C44 s7 (28)	Computer Hardware	39,434,235	3.662
C44 s7 (29)	Computer Software	13,487,716	1.252
C44 s7 (9)	Departmental Equipment	16,129,566	1.498
C44 s7 (3B)	Energy Conserv., Alternative Energy Improvements	1,811,356	0.168
C659 Acts 1986	BCH - Constr., Equipping, Furnishing	26,945,000	2.502
		\$ 175,578,668	16.304
<b>Urban Development:</b>			
C121B s20	Urban Redevelopment and Renewal	\$ 10,773,094	1.000
C1097 s11 Acts 1971	Economic Development and Industrial Corp.	2,277,569	0.211
		\$ 13,050,663	1.212
<b>Schools:</b>			
C645 s8 Acts 1948	School Project Loan	\$ 41,644,732	3.867
C642 s7 Acts 1966	Capital Improvements; Act of 1966	0	0.000
C642 s7A Acts 1973	Capital Improvements; Act of 1973	12,808	0.001
C642 s7B Acts 1991	Capital Improvements; Act of 1991	5,201,711	0.483
C642 s7C Acts 1996	Capital Improvements; Act of 1996	16,489,962	1.531
		\$ 63,349,213	5.883
<b>Public Buildings:</b>			
C44 s7 (3)	Construction of Buildings; Acquisition Of Land	\$ 118,471,079	11.001
C44 s7 (3A)	Remodeling and Extraordinary Repairs	456,932,397	42.431
C152, Act '97	Convention Center Refunding Bond	36,570,000	3.396
C642 s7 Acts 1966	Capital Improvements; Act of 1966	0	0.000
C642 s7A Acts 1973	Capital Improvements; Act of 1973	8,446,555	0.784
C642 s7B Acts 1991	Capital Improvements; Act of 1991	9,932,119	0.922
C642 s7C Acts 1996	Capital Improvements; Act of 1996	25,486,750	2.367
		\$ 655,838,899	60.901
<b>Public Works:</b>			
C44 s7 (1)	Construct/Re-Construct of Surface Drains, Sewers, etc.	\$ 1,950,172	0.181
C44 s7 (4)	Construction and/or Re-Construction of Bridges	47,430,559	4.404
C44 s7 (5)	Construction of Public Ways	56,110,307	5.210
C44 s7 (6)	Construction of Sidewalks	8,535,605	0.793
C44 s7 (7)	Construction of Walls or Dikes	538,524	0.050
C44 s7 (14)	Traffic Signal and Public Lighting Install., etc.	42,691,077	3.964
C44 s8 (4)	Reservoir Constr/Enrg; Water Trmt Bldgs	998,090	0.093
C44 s8 (5)	Water Mains Laying, Re-Laying, Construct.	3,851,596	0.358
C44 s8 (7A)	Water Meter Purchase & Installation	144,362	0.013
C44 s8 (7C)	Water Dept. Equip.; Purchase, Replace., Rehab.	1,073,175	0.100
C44 s8 (24) C29C	Landfill; Closing, Opening, Improve. to (MWPAT)	5,754,089	0.534
		\$ 169,077,556	15.700
<b>Grand Total = \$</b>		<b>1,076,895,000</b>	<b>100.00 %</b>

**CITY OF BOSTON**  
**BOND - GROSS DEBT SERVICE PAYMENTS**

@ April 30, 2012  
 - Stated in Five Year Intervals -  
 (\$ in thousands)

DATE OF ISSUE	TYPE	AMOUNT ISSUED	FY'12 through FY'17		FY'18 through FY'22		FY'23 through FY'27		FY'28 through FY'32		FY'12 through FY'32 @ 4/30/12	
			Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest	Principal	Interest
April 2, 2012	GO	121,975	43,600	23,146	39,015	13,452	20,750	6,053	18,610	2,292	\$121,975	\$44,943
April 2, 2012	REF	83,155	40,650	14,439	35,400	6,474	7,105	473	0	0	\$83,155	\$21,386
April 2, 2012	BCH REF	26,945	17,865	4,497	9,080	0	429	0	0	0	\$26,945	\$4,926
April 1, 2011	GO	86,190	30,945	15,125	22,630	8,275	14,865	4,175	11,695	1,246	\$80,135	\$28,821
April 1, 2011	OSCB	41,620	935	9,038	10,775	8,502	29,910	3,360	0	0	\$41,620	\$20,900
April 1, 2011	REF	14,425	14,425	1,216	0	0	0	0	0	0	\$14,425	\$1,216
April 1, 2011	Conv Cit Ref	38,295	9,610	6,895	12,180	4,326	14,780	1,721	0	0	\$36,570	\$12,942
April 1, 2010	OSCB	17,415	0	4,424	3,485	4,423	13,930	1,810	0	0	\$17,415	\$10,657
April 1, 2010	Ref	68,345	28,155	11,432	35,725	4,569	3,985	120	0	0	\$67,865	\$16,121
April 1, 2010	RZEDB	16,685	4,435	3,368	8,235	1,811	2,755	697	1,260	134	\$16,685	\$6,010
April 1, 2010	BAB	30,905	0	7,505	5,880	7,374	15,390	4,751	9,635	1,030	\$30,905	\$20,660
April 1, 2010	GO	39,995	20,975	4,320	7,890	961	675	126	345	25	\$29,885	\$5,432
November 4, 2009	OSCB	20,000	0	0	0	0	20,000	0	0	0	\$20,000	\$0
May 27, 2009	REF	31,485	23,585	3,130	6,930	243	0	0	0	0	\$30,515	\$3,373
March 18, 2009	GO	100,000	27,930	16,316	23,295	9,861	21,455	4,971	9,275	660	\$81,955	\$31,808
March 18, 2009	REF	8,940	25	1,726	8,900	522	0	0	0	0	\$8,925	\$2,248
March 20, 2008	GO	126,185	32,775	21,163	28,570	13,395	30,055	6,262	6,760	338	\$98,160	\$41,158
March 20, 2008	REF	28,155	11,070	713	0	0	0	0	0	0	\$11,070	\$713
March 22, 2007	GO	100,000	27,515	13,779	7,865	6,539	17,750	2,328	0	0	\$53,130	\$22,646
March 22, 2007	REF	85,425	23,900	12,628	52,665	4,055	7,165	215	0	0	\$83,730	\$16,898
January 31, 2006	GO	80,000	19,570	6,067	5,655	3,105	10,100	1,054	0	0	\$35,325	\$10,226
February 1, 2005	REF	52,775	32,585	4,429	485	19	0	0	0	0	\$20,975	\$4,448
February 1, 2005	GO	75,000	15,655	2,929	0	1,064	5,320	532	0	0	\$33,070	\$4,525
February 1, 2004	REF	35,870	4,885	610	0	0	0	0	0	0	\$4,885	\$610
February 1, 2004	GO	65,000	7,260	545	0	0	0	0	0	0	\$7,260	\$545
February 1, 2003	REF	28,515	7,250	549	0	0	0	0	0	0	\$7,250	\$549
February 1, 2003	GO	25,000	1,300	65	0	0	0	0	0	0	\$1,300	\$65
February 1, 2003	GO	33,500	1,435	72	0	0	0	0	0	0	\$1,435	\$72
February 1, 2003	GO	75,000	4,095	205	0	0	0	0	0	0	\$4,095	\$205
36448	MWPAT	13,389	3,725	1,154	2,510	188	0	0	0	0	\$6,235	\$1,342
			\$456,155	\$191,485	\$327,170	\$99,587	\$235,990	\$38,648	\$57,580	\$5,725	\$1,076,895	\$335,445
			\$647,640	\$647,640	\$426,757	\$426,757	\$274,638	\$274,638	\$63,305	\$63,305	\$1,412,340	\$1,412,340

% of Total Principal and Interest Retired in 5 Years: 42.4%

% of Total Principal and Interest Retired in 10 Years: 57.1%

% of Total Principal and Interest Retired in 15 Years: 72.7%

% of Total Principal and Interest Retired in 20 Years: 86.8%

% of Total Principal and Interest Retired in 25 Years: 94.7%

% of Total Principal and Interest Retired in 30 Years: 96.3%

% of Total Principal and Interest Retired in 35 Years: 99.0%

% of Total Principal and Interest Retired in 40 Years: 100.0%

**CAPITAL FUND - DEBT SERVICE REQUIREMENTS - FISCAL YEARS 2011 through 2017**

	Actual FY11	Projected FY12	Projected FY13	Projected FY14	Projected FY15	Projected FY16	Projected FY17
<b>Gross Debt Service Requirements - Bonded Debt:</b>							
Total Principal:	92,347,071.67	97,265,000.00	100,135,000.00	112,750,000.00	119,155,000.00	124,845,000.00	130,315,000.00
Total Interest:	41,434,163.92	48,069,780.31	50,393,538.68	55,341,858.16	56,777,394.46	57,097,835.40	56,916,292.41
<b>(1) Total:</b>	<b>133,781,235.59</b>	<b>145,334,780.31</b>	<b>150,528,538.68</b>	<b>168,091,858.16</b>	<b>175,932,394.46</b>	<b>181,942,835.40</b>	<b>187,231,292.41</b>
<b>Less: Revenue Deemed Available from Related Sources:</b>							
Boston Medical Center	721,834.22	742,397.75	0.00	0.00	0.00	0.00	0.00
Boston Public Health Commission	670,790.36	661,374.13	527,203.26	211,477.71	182,393.13	0.00	0.00
Water and Sewer Payments	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Premium, Subsidies, Other	3,784,994.07	4,063,939.43	9,734,184.65	10,304,237.91	6,323,379.97	6,303,028.43	3,839,330.44
Accrued Interest	0.00	0.00	100,000.00	100,000.00	100,000.00	100,000.00	100,000.00
(2) Irrigation Project	239,661.59	231,495.12	223,246.26	214,914.96	206,501.24	199,022.83	190,284.93
(3) 1010 Massachusetts Avenue Project	1,753,636.00	1,809,579.00	1,856,743.00	1,886,304.00	2,285,656.00	2,265,029.00	2,220,937.00
(4) Pension Management System	1,432,246.80	2,443,307.13	2,693,958.90	1,263,283.10	1,263,464.02	1,263,735.40	1,264,006.76
(5) Room Occupancy Excise Fund	0.00	3,300,375.00	3,298,625.00	3,300,375.00	3,302,175.00	3,301,925.00	3,301,925.00
<b>Plus: Interest on Temporary Loan Notes and Additional Items:</b>							
Revenue Anticipation	0.00	1,093,700.00	3,000,000.00	3,000,000.00	3,000,000.00	3,000,000.00	300,000.00
Cost of Issuance	248,079.73	500,000.00	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	505,000.00	505,000.00	505,000.00
Sinking Fund for Nov., 2009 OSCB	727,272.72	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	0.00
<b>Total Debt Service/Budget Summary:</b>	<b>126,658,425.00</b>	<b>135,635,558.19</b>	<b>137,554,123.05</b>	<b>156,270,810.92</b>	<b>167,728,370.54</b>	<b>173,969,640.18</b>	<b>179,074,353.72</b>
<b>Additional Adjustments:</b>							
Less:							
School Construction Assistance	11,157,748.00	9,847,753.00	8,833,043.00	8,474,584.00	8,175,513.00	7,344,337.00	6,720,152.00
(5) Room Occupancy Excise Fund	2,273,831.25	0.00	0.00	0.00	0.00	0.00	0.00
Plus:							
(5) Convention Center Special Obligation Bonds	2,273,831.25	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total Net Debt Service Requirements:</b>	<b>115,500,677.00</b>	<b>125,787,805.19</b>	<b>128,721,080.05</b>	<b>147,796,226.92</b>	<b>159,552,857.54</b>	<b>166,625,303.18</b>	<b>172,354,201.72</b>

**NOTES:**

(1) FY12 - In April, 2012 the City issued:  
 \$121,975 million in General Obligation Bonds with a 20-year maturity and an average coupon rate of 4.25%; closing date: April 2, 2012  
 \$83.155 million in General Obligation Refunding Bonds with a 12-year maturity and an average coupon rate of 4.81%; closing date: April 2, 2012.  
 \$26.945 million in Boston City Hospital Refunding Bonds with a 6-year maturity and an average coupon rate of 4.85%; closing date: May 4, 2012.

Assumptions:  
 FY13 - Assumes General Obligation debt issuance of \$120 million, plus \$90 million General Obligation Debt Issuance for the Dudley Project, each with a 20 year maturity and an interest rate of 4.5 %.  
 FY14 - Assumes General Obligation debt issuance of \$120 million, plus \$25 million General Obligation Debt Issuance for the Dudley Project, each with a 20 year maturity and an interest rate of 5.0 %.  
 FY15 through FY17 - Assumes General Obligation debt issuance of \$120 million per year, each with a 20 year maturity and an interest rate of 5.0 %.

(2) Debt Service Costs will be offset by the "Fund for Parks and Recreation".  
 (3) Debt Service Costs will be offset by charging City departments for the space they occupy.  
 (4) Debt Service Costs will be offset by semi-annual payments from the Retirement Board.  
 (5) On April 1, 2011, the City refunded the remaining balance of the April 15, 2002 Special Obligation Bonds for the Convention Center. Pledged revenues will be dedicated to the repayment of the debt service.

<p><b>CITY of BOSTON</b>  <b>RATE of PRINCIPAL RETIREMENT</b>  <b>on GENERAL OBLIGATION BONDS</b></p>
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Fiscal Years Ending June 30, 2012-2032  
@ APRIL 30, 2012

<u>Fiscal Year Ended June 30,</u>	<u>Amount</u>	<u>Percentage of Total Principal Amount Retired:</u>
@ 4/30/12		
2012 - 2017	\$ 456,155,000.00	42.36 %
2018 - 2022	327,170,000.00	30.38 %
2023 - 2027	235,990,000.00	21.91 %
2028 - 2032	57,580,000.00	5.35 %
	<b>\$ 1,076,895,000.00</b>	<b>100.00 %</b>

