Commonwealth of Massachusetts
Debt Affordability Analysis

Executive Office for Administration & Finance
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The Patrick-Murray Administration's capital investment program continues to be guided by three key principles: (1) affordability, (2) strategic prioritization of capital investments, and (3) transparency. The Commonwealth faces a backlog of needed capital projects; at the same time, it faces the constraints of an extraordinarily challenging, albeit improving, economic climate and a high debt burden. In light of this challenge, it is more critical than ever that the Commonwealth take a disciplined approach to capital budgeting that is guided by the three principles stated above.

The Patrick-Murray Administration is the first Administration to develop a debt affordability analysis and policy to ensure that the amount of debt issued to fund the capital investment program is kept to affordable levels. The debt affordability analysis is formally updated each year. This report is the Administration's fourth publication of the debt affordability analysis and five-year capital investment plan. With respect to strategic prioritization of capital investments, the Patrick-Murray Administration is the first to engage in a thorough process of reviewing and prioritizing capital investment needs and developing a comprehensive five-year capital investment plan within the fiscal constraints prescribed by the debt affordability analysis and policy. Finally, with respect to transparency, the Administration publishes its debt affordability analysis and its five-year capital investment plan (www.mass.gov/eoaf) in order to enhance public understanding of the Commonwealth's capital investment program and thereby improve public discourse and accountability with respect to the capital budget.

This debt affordability analysis addresses the first of the key principles guiding the Administration's approach to capital budgeting – affordability. The debt affordability analysis detailed below is an update to the analysis published in September 2009. The Administration will continue to update this analysis at least annually to inform its annual capital budgeting process.

In setting the annual administrative bond cap, the Administration has established a policy which sets a cap that will ensure debt service does not exceed 8% of annual budgeted revenues. By keeping total annual debt service within this limit, the Administration will be able to maximize needed capital investments while ensuring that debt service levels remain affordable.

For purposes of constraining growth in debt, the Administration has placed another restriction on its debt capacity model: growth in the annual bond cap for the regular capital program is limited to not more than $125 million each year (excluding carry forwards of unused bond cap from prior years). This limit will apply even if in some years the actual revenue growth projection provides capacity to issue a greater amount of debt. This additional constraint ensures stable and manageable growth and avoids taking on an unaffordable long-term debt burden on the basis of unusually robust short-term revenue growth.

State tax revenues declined at an historic rate over the last two years due to the economic downturn. Fiscal year 2009 state tax revenues were ultimately $2.7 billion less than the original fiscal year consensus revenue forecast, and fiscal year 2010 revenues were revised downward a net of $419 million from the original fiscal year consensus revenue forecast. Recent tax collection data suggest that the Massachusetts economy is growing faster and stronger than the rest of the nation, yet it is still unclear how robust growth in state tax revenues will be.

It is important that this debt affordability analysis take into account the impacts of the current challenging fiscal environment. It is also important, however, that the debt affordability analysis continue to be based in part on longer-term, historic trends rather than simply being reactive to current economic conditions. Trends reflecting experience over time are particularly relevant in the context of evaluating the affordability of long-term debt issued to fund investments in long-lived capital assets pursuant to a multi-year capital investment plan.

This debt affordability analysis is consistent with the basic analytical approach presented in the debt affordability analyses published previously. All of the underlying assumptions have been reviewed and, where appropriate, updated to reflect new information and revised outlooks.

Based on the debt affordability analysis and policy described in more detail below, the Administration has set the annual borrowing limit - or "administrative bond cap" – to fund the Commonwealth's regular capital budget for fiscal year 2011 at $1.625 billion. This is the same bond cap level for fiscal year 2011 that was projected in the five-year capital investment plan published in September 2009. When compared to the first five-year capital investment plan published by the Patrick-Murray Administration in July 2007, this updated debt affordability analysis results in a reduction of $250 million of planned borrowing for fiscal year 2011 and a reduction of over $1 billion of planned borrowing through fiscal year 2015, reflecting the changed economic conditions. (See Table 9.) As this analysis demonstrates, the planned bond cap levels for fiscal years 2011 through 2015, together with the continuation of the planned borrowings for the accelerated bridge program and self-supporting project financings, represent an affordable level of new debt that will allow the Commonwealth to responsibly invest in the general capital infrastructure needs of the state.

Introduction

The Commonwealth borrows funds through the issuance of bonds and notes to fund the large majority of its capital investments. The issuance of bonds and notes to fund capital projects must be approved by a two-thirds vote of each house of the Legislature. The Governor determines the timing and amount of any authorized debt issuances. At the request of the Governor and with his approval, the State Treasurer is responsible for the issuance of the debt. The Governor, through the Executive Office for Administration and Finance (A&F), approves and manages the capital budget and the allocation of debt proceeds to pay the costs of authorized projects.

In addition to direct debt[1], the Commonwealth has a number of other debt-like, long-term liabilities. These liabilities include contract assistance payments and contingent liabilities. Contract assistance payments are made by the Commonwealth to some independent authorities and political subdivisions of the state to support all or a portion of the debt service on certain bonds issued by such entities. Some of these contract assistance payment liabilities of the Commonwealth are secured by a general obligation pledge of the Commonwealth and others are subject to annual appropriation by the Legislature.[2] Contingent liabilities of the Commonwealth exist with respect to certain debt issued by independent authorities and agencies of the Commonwealth. These obligations are expected to be paid by the issuing entities, but the Commonwealth has guaranteed payment of debt service or replenishment of reserves if expected payment sources are inadequate.[3]

Statutory Debt Limits

Legislation enacted in December 1989 restricts the amount of the Commonwealth's outstanding direct debt.[4] This legislation imposed a "statutory debt limit" of $6.8 billion in fiscal year 1991 and set the limit for each subsequent year at 105% of the previous fiscal year's limit. The statutory debt limit is calculated according to certain rules[5] and excludes several direct and contingent obligations of the

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[1] "Direct" debt includes general obligation debt (secured by a pledge of the full faith and credit of the Commonwealth), special obligation debt (secured by a pledge of receipts credited either to the Commonwealth Transportation Fund, formerly the Highway Fund, or to the Convention Center Fund), and federal grant anticipation notes (secured by a pledge of federal highway construction grants).

[2] General obligation contract assistance liabilities (which, like general obligation debt, must receive two-thirds approval of the Legislature) include payments to the Massachusetts Water Pollution Abatement Trust, the Massachusetts Development Finance Agency, and the Massachusetts Department of Transportation, as successor to the Massachusetts Turnpike Authority. Budgetary contract assistance liabilities (which are the result of certain capital leases and other contractual agreements) include payments on behalf of the Route 3 North Transportation Improvements Association, the Plymouth County Correctional Facilities Corporation, and the Saltonstall Building Redevelopment Corporation Project.

[3] Contingent liabilities of the Commonwealth exist with respect to certain debt obligations of the Massachusetts Bay Transportation Authority, the Woods Hole, Martha's Vineyard and Nantucket Steamship Authority, the University of Massachusetts Building Authority, the Massachusetts State College Building Authority, the Massachusetts Housing Finance Agency and regional transit authorities.

[4] M.G.L. Chapter 29, Section 60A.

[5] The statutory debt limit is calculated under the statutory basis of accounting, which, unlike GAAP, measures debt net of underwriters' discount, costs of issuance, and other financing costs. In addition, the statutory debt limit

Commonwealth.[6] The statutory debt limit on "direct" debt during fiscal year 2010 was approximately $17.2 billion, and the Commonwealth's outstanding direct debt subject to that limit was $14.7 billion.[7]

Legislation enacted in January 1990 imposes a limit on debt service appropriations in Commonwealth operating budgets.[8] No more than 10% of total budgeted appropriations may be spent on debt service (both interest and principal) on Commonwealth general obligation debt in any fiscal year. Payments on debt not subject to the statutory debt limit described above are also excluded from the debt service limit. As of June 30, 2009, budgeted debt service on debt subject to this limit was approximately $1.58 billion, representing 5.2% of total budgeted expenditures, which were approximately $30.6 billion.[9]

Administrative Bond Cap

The statutory debt limit and debt service limits represent only an upper limit on the amount of direct debt the Commonwealth may incur, and they do not count many types of Commonwealth debt and debt-like obligations (e.g., contract assistance payment liabilities). Since fiscal year 1991, A&F has established an "administrative bond cap" to limit annual bond issuance to affordable levels. However, growth in the bond cap has not always been based on transparent, analytical measures of affordability. Prior to the Patrick-Murray Administration, certain bonds issued outside of the stated cap do not appear to have been taken into account in determining debt affordability or in setting the annual bond cap (e.g., $1 billion of bonds issued during fiscal years 2005 and 2006 to support the Massachusetts School Building Authority).

Existing Debt Burden

Since the Patrick-Murray Administration instituted rigorous debt affordability policies, the Commonwealth's rankings in terms of debt burden have been improved by several measures from what the Administration inherited. Nevertheless, the Commonwealth's debt burden remains among the highest in the nation by certain measures. Moody's Investors Service ranks Massachusetts fourth in total net tax-supported debt, fourth in total gross tax-supported debt (down from third in 2007),

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excludes bonds that are refunded by the proceeds of Commonwealth refunding bonds once those refunding bonds have been issued.

[6] Debt not counted in the calculation of the statutory debt limit includes: certain Commonwealth refunding and restructuring bonds issued in 1991, federal grant anticipation notes, special obligation bonds, debt issued by certain counties that has been assumed by the Commonwealth, bonds issued to pay operating notes of the Massachusetts Bay Transportation Authority or to reimburse the Commonwealth for advances to the Massachusetts Bay Transportation Authority, certain debt issued to fund costs of the Central Artery/Tunnel project, bonds issued to finance the Massachusetts School Building Authority and bonds and notes issued to finance the accelerated bridge program. Contract assistance payments, lease payments, and contingent liabilities are also excluded.

[7] Commonwealth of Massachusetts Information Statement, June 8, 2010.

[8] M.G.L. Chapter 29, Section 60B.

[9] Commonwealth of Massachusetts Information Statement, June 8, 2010.

second in net tax-supported debt as a percentage of personal income, and second in net tax-supported debt per capita (down from first in 2007).[10] Standard and Poor's Massachusetts rankings are similar: second in tax-supported debt per capita (down from first in 2007), third in tax-supported debt as a percentage of personal income (down from second in 2007), and fourth in total tax-supported debt.[11]

It is important to note, however, that these measures include certain debt issued by entities other than the Commonwealth for which the Commonwealth is not liable (e.g., $4.45 billion of debt issued by the Massachusetts School Building Authority). In addition, these measures favor other states that have stronger county governments and other political subdivisions that issue debt to finance capital improvements that are financed by state government in Massachusetts. In fact, in the most recent U.S. Census Bureau report on the matter, Massachusetts ranked 49th out of the 50 states in terms of local debt as a percent of total debt (local and state debt)[12], indicating that relative to other states, many of the capital needs of the entire state are borne by the Commonwealth itself. Based on this statistic, it is safe to assume that Massachusetts would likely rank lower when measuring debt as a percentage of personal income or per capita if both state and local debt were taken into account.

In light of the Commonwealth's large outstanding debt burden and significant need for capital investment, the Patrick-Murray Administration evaluated the administrative bond cap immediately after taking office in connection with the fiscal year 2008 capital planning process and the publication of the FY2008-2012 Five-Year Capital Investment Plan. This examination and analysis focused on the affordability of the Commonwealth's current obligations and its capacity to support additional debt obligations. This report represents the third annual update of the analysis and the results inform the FY2011-2015 Five-Year Capital Investment Plan.

Methodology and Model for Analysis

Consistent with prior years' analysis, this updated analysis evaluates the affordability of issuing new debt, taking into account the Commonwealth's existing debt service and contract assistance payment obligations. In this analysis, affordability is measured by determining the annual amount of debt service and other debt-like payment obligations as a percentage of budgeted revenues. This measure (debt service as a percent of budgeted revenues) is a commonly accepted standard for measuring debt capacity. It provides a true indication of the relative cost of Commonwealth debt by taking into account the actual payment obligations on Commonwealth debt and the amount of revenue available to pay those obligations and other budgetary obligations.

[10] Moody's Investors Service, "2010 State Debt Medians Report", May 2010.

[11] Standard and Poor's, "2009 State Debt Review: Significant Challenges Lie Ahead", December 16, 2009.

[12] U.S. Census Bureau, "State and Local Government Finances by Level of Government and by State: 2007".

Existing Obligations and Liabilities

A&F's debt capacity analysis includes an examination of existing Commonwealth debt service and contract assistance payment obligations. The analysis includes only the interest payments on federal grant anticipation notes (GANs); principal payments are made with grants from the Federal Highway Administration that are legally dedicated to such purpose and are not available for general budgeting purposes. Special obligation bonds secured by gas tax receipts are included in the analysis. Special obligation bonds for the Massachusetts Convention Center Authority are not included; although these bonds are obligations of the Commonwealth, they are secured and paid directly by a pledge of dedicated tax and excise revenues related to the convention center projects financed with proceeds of the bonds. Massachusetts Bay Transportation Authority (MBTA) and Massachusetts School Building Authority (MSBA) bonds are also not included because they are obligations of the respective authorities, and, although secured in part by a portion of the Commonwealth's sales tax revenues, the Commonwealth is not liable for such bonds and such sales tax revenues are legally dedicated to the MBTA and MSBA. The revenues legally dedicated for the convention center bonds and for the MBTA and MSBA bonds are not available for general budgetary purposes and are consequently not included in the budgeted revenue figures taken into account in this analysis.

The Commonwealth's existing direct debt service obligations for fiscal years 2010 through 2015 are presented in the following table.

Table 1
Existing Direct Debt Service Obligations
Fiscal Years 2010-2015
($000s)

Fiscal Year	General Obligations	Federal GANs (interest only)	Special Obligations (gas tax only)	Total Existing Direct Debt Service Obligations
2010	*1,799,564*	*45,752*	*58,931*	*1,904,247*
2011	1,878,364	44,957	58,932	1,982,253
2012	1,753,084	36,880	58,938	1,848,902
2013	1,768,952	28,933	58,922	1,856,807
2014	1,609,381	16,727	52,704	1,678,812
2015	1,560,147	5,641	52,701	1,618,489

As part of the comprehensive plan to address fiscal year 2011 budgetary challenges, the Commonwealth authorized a refinancing of up to $300 million of the $1.02 billion in principal due in fiscal year 2011. The Administration has already refinanced $200 million of this authorized amount, primarily to smooth an unusual spike in debt service. The remaining $100 million of restructuring debt was also issued, but it will only be applied to restructure debt later in the fall to the extent necessary based on tax revenue performance. If deemed not to be necessary for budgetary reasons, the $100 million will be applied to fund authorized capital projects. This analysis assumes the full $300 million in debt restructuring, the impact of which is shown in the following table.

Table 1a
Impact of
Fiscal Year 2011 Debt Restructuring
($000s)

Fiscal Year	Refunded Debt Service	Refunding Debt Service	Savings
2010	*0*	*0*	*0*
2011	308,563	3,567	304,996
2012	0	10,578	-10,578
2013	0	10,578	-10,578
2014	0	101,143	-101,143
2015	0	101,099	-101,099
2016	0	101,125	-101,125

Table 1b adjusts the General Obligations Existing Debt Service Obligations by reducing fiscal year 2011 debt service and increasing fiscal year 2012 through 2015 by the amount of the debt service reflected in the "Savings" column, above.

Table 1b
Existing Direct Debt Service Obligations Including Fiscal Year 2011 Restructure
Fiscal Years 2010-2015
($000s)

Fiscal Year	General Obligations Including FY11 Restructure	Federal GANs (interest only)	Special Obligations (gas tax only)	Total Existing Direct Debt Service Obligations
2010	*1,799,564*	*45,752*	*58,931*	*1,904,247*
2011	1,573,368	44,957	58,932	1,677,257
2012	1,763,662	36,880	58,938	1,859,480
2013	1,779,530	28,933	58,922	1,867,385
2014	1,710,524	16,727	52,704	1,779,955
2015	1,661,246	5,641	52,701	1,719,588

Contract assistance obligations, including certain capital lease obligations that relate to major capital projects, were also included in the examination of existing Commonwealth obligations.[13] These obligations for fiscal years 2010 – 2015 are presented in the following table.

[13] The analysis includes major capital lease obligations, such as lease payments that support the Route 3 North Transportation Improvements Association, the Plymouth County Correctional Facilities Corporation, and the Saltonstall Building Redevelopment Corporation Project, all of which are large-scale capital projects that were funded outside of the bond cap by prior administrations. For the Massachusetts Department of Transportation as successor to the Massachusetts Turnpike Authority, the contract assistance payment obligations reflect an increase of $100 million annually beginning in fiscal year 2010 pursuant to comprehensive transportation reform legislation. Contract assistance for infrastructure development related bonds issued by Massachusetts Development Finance Agency (MassDevelopment) are not included in this analysis as they are expected to be fully reimbursed by incremental state tax revenues resulting from the development or other sources (see Table 6). Minor capital costs, such as equipment lease purchases made by state agencies, are funded through their respective operating budgets and are not part of the state's capital budget and, accordingly, are not included in this analysis.

Table 2
Existing Contract Assistance Obligations
Fiscal Years 2010-2015
($000s)

	General Obligation		Budgetary			
Fiscal Year	**Water Pollution Abatement Trust**	**MassDOT (Turnpike Authority)**	**Route 3 North Transportation Improvements Association**	**Plymouth County Correctional Facility**	**Saltonstall Building**	**Total Contract Assistance Obligations**
2010	*67,262*	*125,000*	*9,618*	*10,244*	*9,437*	*221,561*
2011	70,000	125,000	9,618	10,225	9,509	224,352
2012	70,000	125,000	5,409	10,240	9,578	220,227
2013	70,000	125,000	1,129	10,245	9,649	216,023
2014	70,000	125,000	1,130	10,244	9,723	216,097
2015	70,000	125,000	1,128	10,250	9,840	216,218

Exhibit A to this Debt Affordability Analysis lists the line items in the General Appropriations Act that provide for the debt service and contract assistance payment liabilities described above. It should be noted that the appropriated amounts may not match the amounts reflected in this Debt Affordability Analysis due to more conservative assumptions in this analysis with respect to the timing of bond issues and the resulting impact on fiscal year budgets and different assumptions regarding interest rates.

Revenue Projections

The debt affordability analysis is based on projections of budgeted revenue that will be available to support debt service and other budgetary needs. The budgeted revenue projection for fiscal year 2011 is $29.99 billion. This estimate is based in part on a tax revenue estimate of $19.078 billion, which consists of the consensus tax revenue estimate of $19.05 billion as determined by the Secretary of Administration and Finance and the chairs of the House and Senate Committees on Ways and Means on January 13, 2010, $48 million of additional tax revenue expected as a result of enhanced collection initiatives included in the budget for fiscal year 2011, less $20 million in reduced sales taxes to be collected as a result of the sales tax holiday in August 2010. For purposes of projecting budgeted revenue in future fiscal years, the compound annual growth rate (CAGR) in budgeted revenues from fiscal years 2001 through 2011 of 2.75% was applied to fiscal year 2012 revenues and to each year thereafter. This is consistent with past practice of applying the lesser of (a) the CAGR of historical budgeted revenues, which is 2.75%; and (b) 3%.

To ensure consistency, the budgeted revenue projection for fiscal year 2011 takes into account the same revenues included in the actual budgetary revenue amounts reported in the audited statutory basis financial statements. Specifically, budgeted revenue includes all Commonwealth taxes and other revenues available to pay Commonwealth operating expenses, including debt service, pensions and other budgetary obligations. These budgeted revenue amounts do not include off-budget revenues or tax or toll revenues dedicated to the Massachusetts Department of Transportation, the Massachusetts Bay Transportation Authority, the Massachusetts School Building Authority, and the Massachusetts Convention Center Authority (the debt service obligations of these entities payable from such dedicated revenues have also been excluded from the analysis) or inter-fund transfers from budgeted funds, such as the Stabilization Fund. Any one-time federal stimulus funding received (or expected to be received) pursuant to the American Recovery and Reinvestment Act of 2009 (ARRA) in fiscal years 2009, 2010 and 2011 has been excluded from the calculation of budgeted revenues for purposes of this debt affordability analysis.

Actual and projected budgeted revenues are shown in the table below. The fiscal year 2011-2015 budgeted revenue amounts are projections, as described above.

Table 3
Actual and Projected Budgeted Revenues
($000s)

Fiscal Year	Budgeted Revenues (Excluding ARRA Revenues)	Annual Growth Rate	Compound Annual Growth Rate
2001	22,860,700	n/a	
2002	21,174,800	-7.37%	
2003	21,987,200	3.84%	
2004	23,988,400	9.10%	
2005	24,373,400	1.60%	
2006	26,305,600	7.93%	2.75%
2007	28,615,900	8.78%	
2008	30,313,200	5.93%	
2009	28,412,300	-6.27%	
2010	29,125,400	2.51%	
2011	29,995,500	2.99%	
2012	30,821,429	2.75%	
2013	31,670,099	2.75%	Projections
2014	32,542,138	2.75%	
2015	33,438,188	2.75%	

As a starting point for the analysis of future debt capacity, the following table shows existing debt service and contract assistance payment obligations in fiscal year 2010 and in each of the next five fiscal years as a percentage of the budgeted revenue projection for each of those fiscal years. The existing obligations include the effect of the debt restructuring described above.

Table 4
Exisiting Debt Obligations as Percentage of Budgeted Revenue
Fiscal Years 2010-2015
($000s)

Fiscal Year	Existing Direct Debt Service Including FY11 Restructure	Existing Contract Assistance	Total Existing Obligations	Projected Budgeted Revenue	Debt Service as % of Budgeted Revenue
2010	*1,904,247*	*221,561*	*2,125,808*	*29,125,400*	*7.30%*
2011	1,677,257	224,352	1,901,609	29,995,500	6.34%
2012	1,859,480	220,227	2,079,707	30,821,429	6.75%
2013	1,867,385	216,023	2,083,408	31,670,099	6.58%
2014	1,779,955	216,097	1,996,052	32,542,138	6.13%
2015	1,719,588	216,218	1,935,806	33,438,188	5.79%

Accelerated Bridge Program

In fiscal year 2009, the Commonwealth launched a new capital investment program known as the "Accelerated Bridge Program" (the Bridge Program). The Bridge Program is a $2.984 billion, eight-year program to rehabilitate and repair bridges in the Commonwealth that are structurally-deficient or that would otherwise become structurally-deficient within the next few years. The Bridge Program will be financed with a combination of two sources: (1) special obligation gas tax bonds of the Commonwealth, and (2) federal grant anticipation notes.

The following table shows the current estimate of annual Bridge Program spending between fiscal years 2010 and 2015 to be funded with a combination of gas tax bonds and federal grant anticipation notes.

Table 5
Accelerated Bridge Program Spending Schedule
Fiscal Years 2010-2015
($000s)

Fiscal Year	Gas Tax Bond Bridges Spending	Federal GANs Bridges Spending	Projected Accelerated Bridge Program Spending
2010	206,872	0	206,872
2011	275,333	18,406	293,739
2012	378,798	114,166	492,964
2013	327,097	277,760	604,857
2014	269,410	295,322	564,732
2015	212,846	212,567	425,413
	1,670,356	918,221	2,588,577

In addition to addressing the public safety and transportation concerns posed by the Commonwealth's backlog of structurally-deficient bridges, the Bridge Program is an intentional effort on the part of the Commonwealth to generate hundreds of millions of dollars of cost savings by doing these needed bridge projects sooner than it otherwise would. These savings will result from avoided cost inflation and avoided costs of further deferring maintenance and repair of the bridges.

In an effort to achieve the public safety and cost savings benefits through the acceleration of investment in structurally-deficient bridges, the amounts to be borrowed and expended for the Bridge Program over the next few years will be in addition to the bond cap for the regular capital program. The debt service impact of the Bridge Program financing is, however, taken into account for purposes of determining the affordable level of debt to fund the regular capital program each year within the 8% of budgeted revenue limit described herein. Specifically, the principal and interest payable on any special obligation gas tax bonds and the interest payable on any federal grant anticipation notes issued to finance the Bridge Program will be included in the total debt service payment obligations that must be constrained within 8% of budgeted revenues (principal on the federal grant anticipation notes will be payable from future federal grants which are not included within budgeted revenue). This treatment of the Bridge Program gas tax bond and federal grant anticipation note debt service is consistent with the manner in which this debt affordability analysis treats the Commonwealth's other outstanding gas tax bonds and federal grant anticipation notes.

The impact of the Bridge Program will be to constrain the bond cap in future years. As the debt service impact of the debt issued to finance the Bridge Program increases over the next few years, there will be less capacity than there otherwise would be to issue new debt to fund the regular capital program within the 8% limit. The reduced future capacity will result in less funding for transportation capital projects in future years than there otherwise would be. However, by accelerating this future borrowing capacity (as well as accelerating the future federal grant spending capacity through the issuance of the federal grant anticipation notes) to invest in structurally-deficient bridge projects that must be undertaken throughout the Commonwealth, the Bridge Program will ensure that these projects are done cheaper and sooner than they otherwise would be.

Self-Supporting Project Financings

Unlike past practice in Commonwealth capital budgeting, the Patrick-Murray Administration is taking all debt service and debt-like payment obligations into account in determining the appropriate level of annual borrowing pursuant to the policy set forth in this report. The Administration recognizes, however, that exceptions to this policy may be justified in limited circumstances where a project financed with debt payable by the Commonwealth directly or indirectly generates new state revenue or budgetary savings that is targeted to the payment of such debt. In these limited circumstances, the Administration will exclude the debt from the annual bond cap and will exclude such debt service payment obligations, and the related new revenue used to pay such obligations, from the analysis set forth herein for purposes of determining the annual bond cap.

There are three examples of debt the Administration will exclude from the annual bond cap and debt affordability analysis. The first is debt that the Massachusetts Development Finance Agency issues for public infrastructure improvements necessary to support significant new private development, pursuant to the infrastructure investment incentive program known as "I-Cubed". This debt will be excluded because the Commonwealth will ultimately be responsible for funding *only* the portion of the related debt service that is supported by new state tax revenue generated from the related private development. The second example of debt that will be excluded from the debt affordability analysis is debt the Administration issues to fund fire training facility projects as legislation authorizes the Commonwealth to raise the amounts needed to fund the related debt service costs for such projects through assessments on property insurance policies. The third example is debt associated with the Clean Energy Investment Program initiated by the Governor in January 2010 in which the Commonwealth issues general obligation bonds to fund energy efficiency and renewable energy projects at state facilities. These projects will result in energy cost savings from less energy use and a portion of the related budgetary savings will be used to cover the debt service associated with the general obligation bonds issued to finance the projects. The table below shows the amounts of incremental tax revenue, assessments, and captured energy savings projected to be applied in fiscal year 2010 and the subsequent five fiscal years to pay debt service on bonds issued to fund the construction of the infrastructure development projects, fire training facilities and energy efficiency projects, respectively.

Table 6
Self Supporting Project Financings
Fiscal Years 2010-2015
($000s)

Fiscal Year	Infrastructure Development Projects Debt Service	DFS Insurance Assessments	Energy Efficiency Projects Debt Service	Total Self-Supporting Debt Service
2010	*0*	*1,648*	*0*	*1,648*
2011	2,602	2,288	1,100	5,989
2012	6,576	2,646	7,222	16,443
2013	9,479	2,901	14,943	27,323
2014	12,680	3,072	22,664	38,416
2015	15,873	3,092	30,385	49,350

Table 8 excludes such amounts from both the debt service and the budgeted revenue estimates.

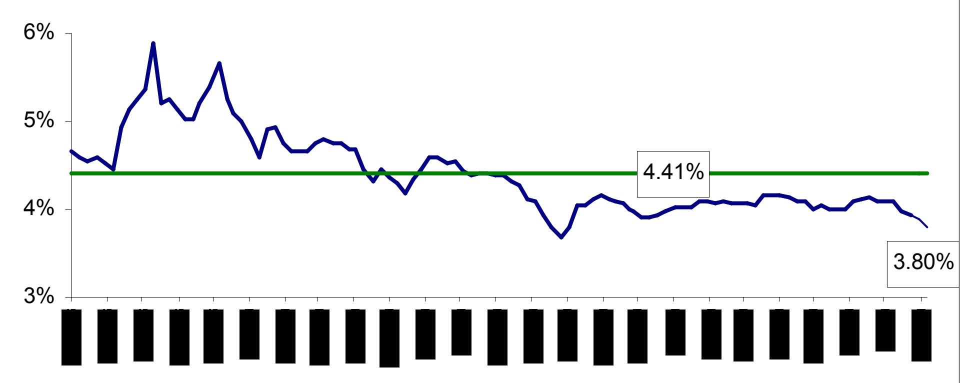
Fiscal Year 2011-2015 Debt Issuance Modeling

In analyzing potential levels of debt issuance to fund the Commonwealth's capital spending plan for the next five years, the Patrick-Murray Administration has made the following conservative and fiscally responsible assumptions:

- Timing of Debt. All debt issued to fund the capital spending program, including the Bridge Program, is assumed to be issued at the start of the fiscal year in which it will be spent. This assumption is conservative for modeling purposes, as it results in the debt service impact of bonds issued in a fiscal year being assumed as early as possible.
- Term of Debt. Although the Commonwealth has the statutory authority to issue virtually all of its authorized debt for a term of up to 30 years and the useful life of significantly more than one-third of the Commonwealth's annual capital investments are for assets with a useful life of 30 years or longer, the Administration has adopted a policy of issuing not more than one-third of the debt it issues each year to fund the regular capital program for a term of 30 years. Consequently, this analysis assumes that one-third of the debt to be issued each year to fund the regular capital program will have a 30-year term and two-thirds of the debt to be issued each year will have a 20-year term. For the Bridge Program financing, all of the federal grant anticipation notes are expected to be paid by fiscal year 2022 and this analysis assumes that one-third of the special obligation gas tax bonds will have a 30-year term and two-thirds will have a 20-year term.

- Interest Rates. The interest rate used for 20-year debt and for the federal grant anticipation notes for the Bridge Program is 4.55%, which was the rate used in the Debt Affordability Analysis performed last year, and which reflected the average of the prior 24 months of the Bond Buyer 11 Index[14]. Due to existing economic conditions and actions of the Federal Reserve, current interest rates are very low compared to historical averages, and we decided to use the higher and more conservative rate. (The chart below tracks the Bond Buyer 11 Index for the 24-month period ending August 12, 2010; the average during that period was 4.41 %, and the rate at the end of the period was 3.80 %.) The interest rate used to model the 30-year debt is 4.85%, reflecting the approximate spread between 20 and 30-year general obligation bonds according to municipal market data published in The Bond Buyer.

Chart 1
Bond Buyer 11-Bond Index



- Principal Amortization. Consistent with past practice by the Commonwealth, the principal on bonds issued for a 20-year term is structured to result in level annual debt service payments over that 20-year period and the principal on bonds issued for a 30-year term is structured to result in level annual debt service payments over that 30-year period. The principal on the federal grant anticipation notes issued to finance a portion of the Bridge Program is assumed to be payable in the aggregate amount of $150 million each year in fiscal years 2015 through 2022.

- Unused Bond Cap. This analysis assumes that there will be no unused bond cap in fiscal year 2011 or any future fiscal year that will be carried forward and available for spending in a subsequent year.

In setting the annual administrative bond cap, the Administration has established a policy which sets a cap that will ensure debt service does not exceed 8% of annual budgeted revenues. By keeping total annual debt service within this limit, the

[14] The Bond Buyer 11 Index tracks the interest rates of 11 issues of 20-year municipal debt with a double-A credit rating.

Administration will be able to maximize needed capital investments while ensuring that debt service levels remain affordable.

For purposes of constraining growth in debt, the Administration has placed another restriction on its debt capacity model: growth in the annual bond cap for the regular capital program is limited to not more than $125 million each year (excluding carry forwards of unused bond cap from prior years). This limit will apply even if in some years the actual revenue growth projection provides capacity to issue a greater amount of debt. This additional constraint ensures stable and manageable growth and avoids taking on an unaffordable long-term debt burden on the basis of unusually robust short-term revenue growth.

The table below shows the level of annual bond funding planned to meet projected capital investment needs to be funded within the bond cap and Bridge Program.

Table 7
Capital Spending
Fiscal Years 2010-2015
($000s)

Fiscal Year	Bond Cap	Bridge Program
2010	*1,650,000*	*206,872*
2011	1,625,000	293,739
2012	1,750,000	492,964
2013	1,875,000	604,857
2014	2,000,000	564,732
2015	2,125,000	425,413

As shown in Table 8, funding the annual bond cap and the Bridge Program in the amounts shown above, together with the existing obligations, results in total annual debt service as a percent of budgeted revenues that is within the 8% limit described above[15].

[15] Table 8 excludes debt service on infrastructure development projects, fire fighting academy projects and energy efficiency projects which are self-supporting and funded with incremental new tax revenues, assessments and budgetary savings, respectively. Table 8 also excludes an equal amount from Budgeted Revenue. (See Table 6.)

Table 8
Projected Annual Debt Service as a Percentage of Budgeted Revenues
Fiscal Years 2010-2015
($000s)

	Debt Service					
Fiscal Year	**Total Existing Obligations**	**Cumulative New Debt Service from Annual Bond Cap Less Self Supporting Projects**	**Cumulative New Debt Service from Bridge Program**	**Total Annual Debt Service**	**Budgeted Revenue Growth 2.75% per year after FY11 Less Self Supporting Projects**	**Total Annual Debt Service as % of Revenues**
2010	*2,125,808*	*-1,648*	*0*	*2,124,160*	*29,123,752*	*7.29%*
2011	1,901,609	31,792	14,211	1,947,612	29,989,511	6.49%
2012	2,079,707	142,525	56,707	2,278,939	30,804,986	7.40%
2013	2,083,408	261,930	95,715	2,441,053	31,642,776	7.71%
2014	1,996,052	390,221	131,619	2,517,892	32,503,722	7.75%
2015	1,935,806	527,769	159,586	2,623,161	33,388,838	7.86%

The annual bond cap amounts reflected in the table above are less than had been previously projected in FY08-12 and the FY09-13 Plans published by the Patrick-Murray Administration. The reduction in the annual bond caps is a function of the Administration's disciplined approach to debt management through its formal debt affordability analysis and policy. The debt affordability analysis and policy ensure that planned borrowing to fund capital investments is periodically adjusted to take into account the Commonwealth's fiscal condition and capacity to pay debt. The following table shows the reductions in the annual bond caps from the Administration's original five-year capital spending plan resulting from the application of the Administration's debt affordability analysis and policy.

Table 9
Bond Cap Compared with Prior Capital Investment Plans
($000s)

Fiscal Year	**FY08-12 Plan**	**FY11-15 Plan**	**Difference Between FY11 and FY08 Plans**
2008	*1,661,000*	*1,319,600*	*-341,400*
2009	*1,625,000*	*1,521,000*	*-104,000*
2010	1,750,000	1,650,000	-100,000
2011	1,875,000	1,625,000	-250,000
2012	2,000,000	1,750,000	-250,000
2013	2,000,000	1,875,000	-125,000
2014	2,000,000	2,000,000	0
2015	2,000,000	2,125,000	125,000
			-1,045,400

The Patrick-Murray Administration will revisit the assumptions underlying this affordability model each year as part of the development of the following fiscal year's capital plan to adjust the model's assumptions as needed to reflect new trends in revenue growth, interest rates, and other factors. The Administration will also reassess the debt capacity model as a whole, including the limitations of keeping debt service below 8% of budgeted revenues and of keeping maximum annual bond cap increases for the regular capital program to the levels prescribed in this report, to ensure that it continues to be an appropriate and responsible model for measuring the Commonwealth's debt capacity in the future.

Exhibit A

FY2011 General Appropriations Act

Debt Service and Contract Assistance Payment Line Items

Account	Description
0699-0015	Consolidated Long Term Debt Service
0699-0016	Accelerated Structurally Deficient Bridge Program Debt Service
0699-2004	CA/T Debt Service
0699-9101	Federal Grant Anticipation Notes
1599-0093	Water Pollution Abatement Trust
1599-1970	Massachusetts Turnpike Authority Contract Assistance
1599-0050	Route 3 North Contract Assistance
8910-0000	Plymouth County Correctional Facilities (included in County Sheriffs' joint line item)
1102-3224	Saltonstall Building Lease
1599-1977	MassDevelopment Infrastructure Development Contract Assistance