Appendix A

Commonwealth of Massachusetts
Debt Affordability Analysis

Executive Office for Administration & Finance
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The Patrick-Murray Administration's capital investment program is 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 increasingly tight operating budget and an already high debt burden. In light of this challenge, it is critical 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. This debt affordability analysis and policy was first developed last year and is being followed again this year, as described below. 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 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 publication 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 on July 31, 2007. The Administration will update this analysis on an annual basis to inform its annual capital budgeting process.

The completion and publication of this year's updated analysis was delayed in order to take into account the impacts of the economic downturn and the turmoil in the financial markets. After experiencing declines in state tax revenues and receiving progressively worse projections of economic growth, the Secretary of Administration and Finance reduced the state tax revenue estimate for fiscal year 2009 by $1.1 billion on October 15, 2008. On that date, the Governor made budget cuts and took other actions to offset the reduction in budgetary revenues.

In addition, the credit crisis gripping the financial markets over the last several months has had significant implications for the municipal bond market. The auction rate bond market collapsed, the variable rate demand bond market has become highly illiquid and, for a period of time, the entire municipal bond market was inaccessible to governmental issuers. Although there have been positive developments in the municipal bond market in recent weeks, the Commonwealth and other governmental bond issuers will likely have a harder time selling bonds and will likely incur higher interest costs on bonds sold in the near term.

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.

For these reasons, this debt affordability analysis presents two different analyses in evaluating debt affordability. The first is the "Base Case Analysis" that is consistent with the analytical approach presented in the debt affordability policy published last year. The second is a "Modified Analysis" that adjusts certain of the assumptions underlying the Base Case Analysis to evaluate debt affordability if the adverse impact of the economy on state tax revenues were to worsen and be sustained for a longer period of time and if interest rates on governmental bonds were to be sustained at levels higher than historic trends suggest. As a result of this Modified Analysis, the Administration has determined that it must set the annual bond cap for fiscal year 2009 and the projected bond caps for fiscal years 2010-2013 at lower levels than previously planned in order to comply with the debt affordability policy.

Based on the debt affordability analysis and policy set forth below, the Administration has set the annual borrowing limit - or "administrative bond cap" – to fund the Commonwealth's regular capital budget for fiscal year 2009 at $1.575 billion (plus $152.3 million of the fiscal year 2008 administrative bond cap that was not used and that will carry forward into fiscal year 2009). In addition to this amount, the Administration expects to issue $164.9 million of debt to fund the fiscal year 2009 costs of the recently authorized accelerated structurally-deficient bridge program. This is an affordable level of new debt that will allow the Commonwealth to responsibly invest in the general capital infrastructure needs of the state.

Introduction

Although a portion of the Commonwealth's capital investments are funded from federal grants and other sources, 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 & Finance (A&F), approves and manages 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 debts 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

[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 Highway Fund or 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 2/3 approval of the Legislature) include payments to the Massachusetts Water Pollution Abatement Trust and the Massachusetts Turnpike Authority. Under recently passed legislation, debt for public infrastructure improvements to support approved economic development projects may be issued by the Massachusetts Development Finance Agency that would also constitute a general obligation contract assistance liability of the Commonwealth. Budgetary contract assistance liabilities (which are the result of certain capital leases and other contractual agreements) include payments on behalf of the Chelsea Industrial Development Financing Authority, 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 and the Massachusetts Housing Finance Agency. Under recently passed legislation, the Commonwealth is authorized to guarantee certain debt (subject to appropriation) that may be issued by the Massachusetts Turnpike Authority and to guarantee payment obligations of the Massachusetts Turnpike Authority under certain interest rate swap agreements. In addition, recently passed legislation reinstates a Commonwealth guarantee for revenue anticipation notes issued by regional transit authorities that was repealed in 2002.

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

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 Commonwealth.[6] The statutory debt limit on "direct" debt during fiscal year 2008 was approximately $15.6 billion, and the Commonwealth's outstanding direct debt subject to the limit at June 30, 2008 was $13.5 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. In fiscal year 2008, budgeted debt service on debt subject to this limit was approximately $1.6 billion, representing 4.9% of total budgeted expenditures, which were approximately $32.8 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).

[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 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 September and October 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, bonds payable from the Central Artery and Statewide Road and Bridge Infrastructure Fund, bonds issued to finance the Massachusetts School Building Authority and bonds and notes issued to finance the accelerated structurally-deficient bridge program. Contract assistance payments, lease payments, and contingent liabilities are also excluded.

[7] Commonwealth of Massachusetts, Statutory Basis Financial Report, Fiscal Year Ended June 30, 2008.

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

[9] Commonwealth of Massachusetts, Office of the Comptroller.

Existing Debt Burden

Despite statutory and administrative debt limits, the Commonwealth's debt burden remains among the highest in the nation by certain measures. A recent U.S. Census Bureau study of state finances ranks Massachusetts third in the nation in outstanding debt and first in the nation in debt per capita.[10] Moody's Investors Service ranks Massachusetts fourth in total net tax-supported debt, third in total gross tax-supported debt, second in net tax-supported debt as a percentage of personal income, and first in net tax-supported debt per capita.[11] Standard and Poor's Massachusetts rankings are similar: first in tax-supported debt per capita, second in tax-supported debt as a percentage of personal income, and fourth in total tax-supported debt.[12] 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., $3.95 billion of debt issued by the Massachusetts School Building Authority). In addition, these measures tend to 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 50 states in terms of local debt as a percent of total debt (local and state debt)[13], indicating that relative to other states, many of the capital needs of the entire state are borne by the Commonwealth itself.

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 our current obligations and our capacity to pay additional debt obligations. This report represents the second annual update of the analysis and the results inform the FY2009-2013 Five-Year Capital Investment Plan.

Methodology and Model for Analysis

Consistent with last year's 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 cost 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

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[10] U.S. Census Bureau, "2006 State Government Finance Data" (http://www.census.gov/govs/www/state06.html).

[11] Moody's Investors Service, "2008 State Debt Medians."

[12] Standard and Poor's, "State Debt Issuances Are Likely to Accelerate with Substantial Infrastructure Needs," June 5, 2007.

[13] U.S. Census Bureau, "State and Local Government Finances by Level of Government and by State: 2005-06".

taking into account the actual payment obligations on Commonwealth debt and the amount of revenue available to pay those obligations and other budgetary obligations.

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 all general obligation debt issued through June 30, 2008, as well as projected general obligation debt required to be issued in fiscal year 2009 to reimburse capital expenses incurred in prior fiscal years.[14] 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 taxes 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 taken into account in the budgeted revenue figures taken into account in this analysis.

The Commonwealth's existing debt service obligations for fiscal years 2008 – 2013 are presented in the following tables for both the Base Case Analysis and the Modified Analysis.[15] The only difference between the two analyses with respect to the

[14] Commonwealth bonds in the amount of $192.9 million must be issued in fiscal year 2009 to reimburse capital expenses incurred in prior fiscal years. It is estimated for purposes of this analysis that half of the bonds will be issued on a taxable basis with an interest rate assumption of 5.75% in the Base Case Analysis and of 6.75% in the Modified Analysis. The bonds are otherwise assumed to be issued in accordance with the assumptions used in this analysis for projecting the impact of future bond issues in the Base Case Analysis and in the Modified Analysis, respectively, as described below. In the General Obligations column of Table 1 – Base Case Analysis, the following portion of the existing direct debt service amount identified for each fiscal year between 2009 and 2013 is projected to result from the issuance in fiscal year 2009 of the $192.9 million bonds to fund prior fiscal year expenditures: $4.909 million in fiscal year 2009 and $15.609 million in each of fiscal years 2010 through 2013. In the General Obligations Column of Table 1a – Modified Analysis, the following portion of the existing direct debt service amount identified for each fiscal year between 2009 and 2013 is projected to result from the issuance in fiscal year 2009 of the $192.9 million bonds to fund prior fiscal year expenditures: $6.356 million in fiscal year 2009 and $17.643 million in each of fiscal years 2010 through 2013.

[15] Unmatured crossover refundings are included. The actual results of the following Commonwealth bonds issued to refinance certain outstanding bonds and to fund a portion of the Commonwealth's fiscal year 2009 capital program are not included in this analysis: (1) $652.8 million General Obligation Bonds Consolidated Loan of 2008, Series A issued on September 11, 2008, and (2) $554.1 million General Obligation Refunding Bonds, 2008 Series A issued on November 25, 2008. It should be noted, however, that the terms of those recently-issued bonds are generally consistent with the assumptions made for purposes of this analysis described below.

existing debt service obligations is the interest rate assumptions for the bonds that need to be issued in fiscal year 2009 to reimburse capital expenses incurred in prior fiscal years, as described in footnote 14.

Table 1 - Base Case Analysis
Existing Direct Debt Service Obligations
Fiscal Years 2008-2013
($000s)

Fiscal Year	General Obligations	Federal GANs (interest only)	Special Obligations (gas tax)	Total Existing Direct Debt Service Obligations
2008	*1,721,055*	*81,469*	*64,201*	*1,866,725*
2009	1,835,003	74,478	64,105	1,973,586
2010	1,736,631	66,835	64,112	1,867,578
2011	1,700,091	57,206	64,113	1,821,410
2012	1,534,603	45,694	64,119	1,644,416
2013	1,565,004	35,110	64,102	1,664,216

Table 1a - Modified Analysis
Existing Direct Debt Service Obligations
Fiscal Years 2008-2013
($000s)

Fiscal Year	General Obligations	Federal GANs (interest only)	Special Obligations (gas tax)	Total Existing Direct Debt Service Obligations
2008	*1,721,055*	*81,469*	*64,201*	*1,866,725*
2009	1,836,450	74,478	64,105	1,975,033
2010	1,738,665	66,835	64,112	1,869,612
2011	1,702,125	57,206	64,113	1,823,444
2012	1,536,637	45,694	64,119	1,646,450
2013	1,567,038	35,110	64,102	1,666,250

Contract assistance obligations, including certain capital lease obligations that relate to major capital projects, were also included in the examination of existing Commonwealth obligations.[16] These obligations for fiscal years 2008 – 2013 are

[16] The analysis includes major capital lease obligations, such as lease payments that support the Chelsea Industrial Development Financing Authority – Massachusetts Information Technology Center, 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 Water Pollution Abatement Trust, the contract assistance payment obligations shown for fiscal years 2010 through 2013 assume new contract assistance payment obligations will be incurred by the Commonwealth in connection with future bond issues of the Trust. For the Chelsea bonds, Table 2 includes interest based on the fixed rate stipulated in an interest rate swap agreement associated with the bonds, which are auction rate securities. The counterparty to the swap, Lehman Brothers Special Finance, recently declared bankruptcy following the bankruptcy of its parent and guarantor, Lehman Brothers Holdings. The Commonwealth is currently in the process of refinancing the bonds and terminating the swap. For certain Route 3 North bonds, Table 2 includes interest based on the fixed rate stipulated in an interest rate swap agreement associated with the bonds. Actual interest costs in recent months have been higher because of changes in the terms of payments received under the swap agreement as a result of an inability to remarket certain of the variable rate demand bonds. On November

provided in the following table and are the same for both the Base Case Analysis and the Modified Analysis.

Table 2
Existing Contract Assistance Obligations
Fiscal Years 2008-2013
($000s)

	General Obligation		Budgetary				
Fiscal Year	**Water Pollution Control Abatement Trust**	**Turnpike Authority**	**Chelsea Information Technology Center**	**Route 3 North Transportation Improvements Association**	**Plymouth County Correctional Facility**	**Saltonstall Building**	**Total Contract Assistance Obligations**
2008	*67,971*	*25,000*	*6,465*	*23,700*	*10,243*	*9,557*	*142,936*
2009	66,856	25,000	6,465	24,667	10,247	9,506	142,741
2010	70,000	25,000	6,465	24,145	10,244	9,578	145,432
2011	71,200	25,000	6,453	24,342	10,245	9,693	146,933
2012	73,000	25,000	6,453	22,756	10,240	9,770	147,219
2013	73,000	25,000	6,453	22,859	10,245	9,848	147,405

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 of 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 2009 in the Base Case Analysis is based on the budgeted revenue projection used for the General Appropriations Act for fiscal year 2009, as adjusted by the $1.1 billion reduction in the tax revenue estimate announced by the Secretary of Administration and Finance on October 15, 2008. For purposes of projecting budgeted revenue in future fiscal years, the Base Case Analysis applies the lesser of the following percentage growth rates to the fiscal year 2009 budgeted revenue projection: (a) the compound annual growth rate (CAGR) in actual budgeted revenues as identified in the audited annual statutory basis financial statements for fiscal years 1998 through 2008, which is 4.35%; and (b) 3%.

In light of the current economic downturn and the likelihood that it will persist into the next fiscal year, the Modified Analysis is based on two more conservative

25, 2008, these variable rate demand bonds were refunded with Commonwealth general obligation, fixed-rate bonds. The results of this recent refinancing are not reflected in the tables and analysis herein, but the refunding results in virtually no change in total payment liability as the new debt service related to the general obligation refunding bonds has effectively replaced the contract assistance payment liabilities related to the Route 3 North bonds that were refinanced. Minor capital costs, such as equipment lease purchases made by Agencies, are funded through the Agency's respective operating budgets and are not part of the state's capital budget and, accordingly, are not included in this analysis.

assumptions with respect to projected budgetary revenues. First, the Modified Analysis assumes that state tax revenues will fall an additional $300 million below the current revised estimate for fiscal year 2009, representing the high end of the range of potential state tax revenue shortfalls forecasted by economic models at the time of the recent tax revenue revision. This modified fiscal year 2009 tax revenue assumption results in essentially 0% growth in state tax revenues over fiscal year 2008. Second, the Modified Analysis assumes that there will be another year of 0% growth in state tax revenues in fiscal year 2010. The Modified Analysis assumes budgeted revenues will grow at a rate of 3% annually in fiscal years 2011, 2012 and 2013, still well below the 10-year historic CAGR of 4.35%.

To ensure consistency, the budgeted revenue projection for fiscal year 2009 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.[17] These budgeted revenue amounts do not include off-budget revenues or tax revenues dedicated to 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.

The actual budgeted revenues in fiscal year 2008 were $30.3 billion. The fiscal year 2009 budgeted revenue estimate used to support the fiscal year 2009 budget and used for purposes of the Base Case Analysis is $30.6 billion, which is based in part on the consensus tax revenue estimate announced in January 2008 by the Secretary of A&F and the chairs of the House and Senate Ways and Means Committees, as revised on October 15, 2008 by the Secretary of A&F. The fiscal year 2009 budgeted revenue estimate used for purposes of the Modified Analysis is $30.3 billion, $300 million less than the current fiscal year 2009 budgeted revenue estimate. Budgeted revenue estimates used in the Base Case Analysis for fiscal years 2010-2013 are calculated based on the fiscal year 2009 budgeted revenue estimate and an annual growth rate of 3%. Budgeted revenue estimates used in the Modified Analysis for fiscal years 2010-2013 are calculated based on the modified fiscal year 2009 budgeted revenue estimate, 0% growth in fiscal year 2010 and an annual growth rate in each subsequent year of 3%. The CAGR for budgeted revenue from fiscal years 1998 through 2008 as reported

[17] In the debt affordability analysis published last year, revenues applied to pay pensions were not included in the budgeted revenue projection for fiscal year 2008; this was inconsistent with the way in which budgeted revenues are calculated in the audited statutory basis financial statements, so such revenues are now included in the budgeted revenue projection in this updated analysis. Even if revenues applied to pay pension expenses were excluded from budgeted revenues for purposes of this analysis, debt service as a percentage of budgeted revenues would still be below the 8% limit in each fiscal year in both the Base Case Analysis (6.63% in fiscal year 2008; 7.44% in fiscal year 2009; 7.34% in fiscal year 2010; 7.46% in fiscal year 2011; 7.18% in fiscal year 2012; and 7.53% in fiscal year 2013) and in the Modified Analysis (6.97% in fiscal year 2008; 7.50% in fiscal year 2009; 7.67% in fiscal year 2010; 7.84% in fiscal year 2011; 7.58% in fiscal year 2012; and 7.99% in fiscal year 2013).

in the audited statutory basis financial reports was actually 4.35%; however, based on the conservative policy described above, the Base Case Analysis and the later years of the Modified Analysis use the lesser growth rate of 3%.

The budgeted revenues from fiscal years 1998 through 2008 are shown in the table below, as are the fiscal year 2009[18]-2013 estimates for both the Base Case Analysis and the Modified Analysis.

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

Fiscal Year	Actual Budgeted Revenues	Annual Growth Rate
1998	19,799,839	n/a
1999	20,165,000	1.84%
2000	22,587,100	12.01%
2001	22,860,600	1.21%
2002	21,174,800	-7.37%
2003	21,987,100	3.84%
2004	23,998,300	9.15%
2005	24,373,500	1.56%
2006	26,305,500	7.93%
2007	28,615,800	8.78%
2008	30,313,200	5.93%

1998-2008 compound annual growth rate (CAGR): 4.35%

Projected - Base Case Analysis

Fiscal Year	Projected Budgeted Revenue Growth	Annual Growth Rate
2009	30,624,600	n/a
2010	31,543,338	3%
2011	32,489,638	3%
2012	33,464,327	3%
2013	34,468,257	3%

Projected - Modified Analysis

Fiscal Year	Projected Budgeted Revenue Growth	Annual Growth Rate
2009	30,324,600	n/a
2010	30,324,600	0%
2011	31,234,338	3%
2012	32,171,368	3%
2013	33,136,509	3%

As a starting point for the analysis of future debt capacity, the following tables show existing debt service and contract assistance payment obligations in fiscal year 2008 and in each of the next five fiscal years as a percentage of the budgeted revenue projection for each of those fiscal years under both the Base Case Analysis and the Modified Analysis.

[18] On or before October 15, January 15 and April 15, the Secretary of Administration and Finance is required to submit to the Governor and to the House and Senate Committees on Ways and Means revised revenue estimates for the current fiscal year unless no significant changes have occurred since the last estimate of total available revenues.

Table 4 - Base Case Analysis
Exisiting Debt Obligations as Percentage of Budgeted Revenue
Fiscal Years 2008-2013
($000s)

Fiscal Year	Direct Debt Service	Contract Assistance	Total Existing Obligations	Projected Budgeted Revenue	Debt Service as % of Budgeted Revenue
2008	*1,866,725*	*142,936*	*2,009,661*	*30,313,200*	*6.63%*
2009	1,973,586	142,741	2,116,327	30,624,600	6.91%
2010	1,867,578	145,432	2,013,010	31,543,338	6.38%
2011	1,821,410	146,933	1,968,343	32,489,638	6.06%
2012	1,644,416	147,219	1,791,635	33,464,327	5.35%
2013	1,664,216	147,405	1,811,621	34,468,257	5.26%

Table 4a - Modified Analysis
Exisiting Debt Obligations as Percentage of Budgeted Revenue
Fiscal Years 2008-2013
($000s)

Fiscal Year	Direct Debt Service	Contract Assistance	Total Existing Obligations	Projected Budgeted Revenue	Debt Service as % of Budgeted Revenue
2008	*1,866,725*	*142,936*	*2,009,661*	*30,313,200*	*6.63%*
2009	1,975,033	142,741	2,117,774	30,324,600	6.98%
2010	1,869,612	145,432	2,015,044	30,324,600	6.64%
2011	1,823,444	146,933	1,970,377	31,234,338	6.31%
2012	1,646,450	147,219	1,793,669	32,171,368	5.58%
2013	1,666,250	147,405	1,813,655	33,136,509	5.47%

Accelerated Structurally-Deficient Bridge Program

In fiscal year 2009, the Commonwealth will implement a recently authorized capital investment program known as the "Accelerated Structurally-Deficient Bridge Program" (the Bridge Program). The Bridge Program is a $3 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 from two sources: (1) approximately $1.9 billion from special obligation gas tax bonds of the Commonwealth, and (2) approximately $1.1 billion from federal grant anticipation notes.

Based on current project cash flow projections and discussions with the Federal Highway Administration (FHWA) regarding eligibility for financing with federal grant anticipation notes, the following table shows the current estimate of annual special obligation gas tax bond and federal grant anticipation note issues to finance the Bridge Program. It should be noted that this table reflects only a preliminary estimate based on initial discussions with FHWA and not yet complete information regarding the scope of work and repair needs for eligible projects. These estimates are likely to change as this information is further developed, as FHWA reviews projects for approval for federal funding and as opportunities to accelerate bridge projects are further analyzed.

Table 5
Projected Issues to Fund Accelerated Bridge Program
Fiscal Years 2009-2016
($000s)

Fiscal Year	Gas Tax Bond Issues	Federal GANs Issues	Projected Issues to Fund Accelerated Bridge Program
2008			
2009	164,900	0	164,900
2010	289,800	8,000	297,800
2011	305,300	89,200	394,500
2012	284,200	261,600	545,800
2013	295,400	321,600	617,000
2014	302,800	280,500	583,300
2015	129,900	147,100	277,000
2016	103,700	0	103,700
Total	1,876,000	1,108,000	2,984,000

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 will, however, be 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 below. 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 outstanding gas tax bonds and GANs.

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 by 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 below. 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 that is targeted to the payment of such debt. In these limited circumstances when new state revenue is generated as a result of a capital project and when that new revenue is directly linked to and covers the debt service payment liability related to the project, 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.

One example of debt the Administration expects to exclude from the annual bond cap and debt affordability analysis is debt the Massachusetts Development Finance Agency was recently authorized to issue for public infrastructure improvements necessary to support significant new private development. 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. Another example is debt the Administration issues to fund fire training facility projects as legislation recently authorized the Commonwealth to raise the amounts needed to fund the related debt service costs for such projects through assessment on property insurance policies.

Fiscal Year 2009-2013 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 is assumed to be issued at the start of the fiscal year in which it will be spent. This assumption is a conservative one for modeling purposes, as it results in the debt service impact of bonds issued in a fiscal year being assumed as early as possible. In fact, some of the debt issued in fiscal year 2009 for the regular capital program and all of the debt issued for the Bridge Program in fiscal year 2009 will be issued in the second half of the fiscal year.

- 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 2021 and this analysis assumes that the special obligation gas tax bonds will have a 30-year term for that portion expected to be issued to finance major bridge rehabilitation projects (33%) and a 20-year term for that portion issued to finance bridge preservation projects (67%).

- Interest Rates. Interest rates in the Base Case Analysis reflect market conditions for the last 24 months: the interest rate used for 20-year debt and for the federal grant anticipation notes for the Bridge Program is 4.43%, which is the average of the Bond Buyer 11 Index[19] from mid-October 2006 through mid-October 2008; the interest rate used to model the 30-year debt is 4.61%, reflecting the approximate spread between 20 and 30 year general obligation bonds as of mid-October 2008, according to municipal market data published in The Bond Buyer. Interest rates in the Modified Analysis are assumed to be higher than the interest rates used for the Base Case Analysis as follows: 150 basis points higher in fiscal year 2009; 100 basis points higher for fiscal year 2010; and 50 basis points higher for fiscal years 2011 through 2013. This is a conservative interest rate assumption for the Modified Analysis as the maximum rate used is higher than the Bond Buyer 11 Index has been in any week during the 24-month period used in the analysis.[20] Exhibit B to this Debt Affordability Analysis shows the recent trend in interest rates upon which the assumptions made in this analysis were based.

- Principal Amortization. Principal amortization is structured to result in level annual debt service payments over the life of the related bonds, consistent with past practice by the Commonwealth. Specifically, the principal on bonds issued for a 20-year term is assumed to amortize on a level debt service basis over that 20-year period and the principal on bonds issued for a 30-year term is assumed to amortize on a level debt service basis 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 2021.

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

[20] Between mid-October 2006 and mid-October 2008, the highest point the Bond Buyer 11 reached was 5.89% on October 16, 2008.

- Carry Forward of Unused Bond Cap. There is a total of $341 million of unused bond cap from fiscal year 2008 that will carry forward and be available for capital investments in the current and future fiscal years. Based on the fiscal year 2009-2013 Capital Investment Plan, this unused bond issuing capacity from fiscal year 2008 is expected to be carried forward and issued in the following amounts in the following fiscal years to support capital investments planned for those fiscal years: $152.3 million in fiscal year 2009; $126.1 million in fiscal year 2010; and $62.6 million in fiscal year 2011. This analysis assumes that there will be no unused bond cap in fiscal year 2009 or any future fiscal year that will be carried forward and available for spending in a subsequent year. To the extent that there is unused bond cap in fiscal year 2009 or in future years, these amounts will be carried forward and considered available for the next year's capital budget, since the affordability analysis takes into account the full amount of the annual bond cap being issued at the start of each fiscal 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 Administration will be able to maximize desperately needed capital investments while ensuring that debt service levels remain affordable.

For purposes of projecting debt capacity in future fiscal years, we placed another restriction on our debt capacity model: growth in the annual bond cap for our 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. As a result of the projected decreased levels of projected revenue growth reflected in the Modified Analysis, this secondary $125 million cap on growth in the annual bond cap is not a factor as the primary 8% limit described above constrains growth in the annual bond cap to less than $125 million per year.

As shown in the Base Case Analysis table below, the $1.727 billion bond cap in fiscal year 2009 ($1.575 billion of new borrowing capacity and $152.3 million of borrowing capacity carried forward from fiscal year 2008), together with the $164.9 million of borrowing for the Bridge Program, results in total projected debt service payment obligations in fiscal year 2009 equal to approximately $2.116 billion, or 7.05% of budgeted revenues, which is within the 8% limit described above. The Modified Analysis table below shows that the fiscal year 2009 bond cap and the fiscal year 2009 Bridge Program borrowing result in total projected debt service payment obligations in fiscal year 2009 equal to approximately $2.118 billion, or 7.17% of budgeted revenues, which is also within the 8% limit described above. It is assumed that the annual bond cap will increase by a maximum of $100 million in each subsequent year through fiscal year 2013 (together with the $126.1 million and $62.6 million of unused fiscal year 2008 bond cap carried forward to fiscal years 2010 and 2011, respectively). The tables below show that, in both the Base Case Analysis and the Modified Analysis, the total annual debt service resulting from these bond cap amounts and from the projected Bridge Program borrowings is projected to be below 8% of budgeted revenues throughout the projection period.

Table 6 - Base Case Analysis
Projected Annual Debt Service as a Percentage of Budgeted Revenues
Fiscal Years 2008-2013
($000s)

Fiscal Year	Annual Bond Cap	Total Existing Obligations	Cumulative New Debt Service from Annual Bond Cap	Cumulative New Debt Service from Bridge Program	Total Annual Debt Service	Budgeted Revenue Growth Estimate 3% each year	Total Annual Debt Service as % of Revenues
2008	*1,319,600*	*2,009,661*			*2,009,661*	*30,313,200*	*6.63%*
2009	1,727,300	2,116,327	38,778	3,801	2,158,906	30,624,600	7.05%
2010	1,726,100	2,013,010	162,547	17,289	2,192,846	31,543,338	6.95%
2011	1,762,600	1,968,343	287,077	39,620	2,295,040	32,489,638	7.06%
2012	1,800,000	1,791,635	414,242	69,709	2,275,586	33,464,327	6.80%
2013	1,900,000	1,811,621	545,494	101,888	2,459,003	34,468,257	7.13%

Table 6a - Modified Analysis
Projected Annual Debt Service as a Percentage of Budgeted Revenues
Fiscal Years 2008-2013
($000s)

Fiscal Year	Annual Bond Cap	Total Existing Obligations	Cumulative New Debt Service from Annual Bond Cap	Cumulative New Debt Service from Bridge Program	Total Annual Debt Service	Budgeted Revenue Growth Estimate 0% in FY10 and 3% in FY11-13	Total Annual Debt Service as % of Revenues
2008	*1,319,600*	*2,009,661*			*2,009,661*	*30,313,200*	*6.63%*
2009	1,727,300	2,117,774	51,733	4,939	2,174,446	30,324,600	7.17%
2010	1,726,100	2,015,044	189,531	21,960	2,226,535	30,324,600	7.34%
2011	1,762,600	1,970,377	321,931	49,267	2,341,575	31,234,338	7.50%
2012	1,800,000	1,793,669	455,297	84,576	2,333,542	32,171,368	7.25%
2013	1,900,000	1,813,655	593,035	125,577	2,532,267	33,136,509	7.64%

The Patrick-Murray Administration intends to revisit the assumptions underlying this affordability model each year as part of the development of the following fiscal year's capital plan, and to adjust the model's assumptions as needed to reflect new trends in revenue growth, interest rates, and other factors. As a part of this annual review, the Administration will also reassess the debt capacity model as a whole, including the limitation of keeping debt service below 8% of budgeted revenues and the additional limitation 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.

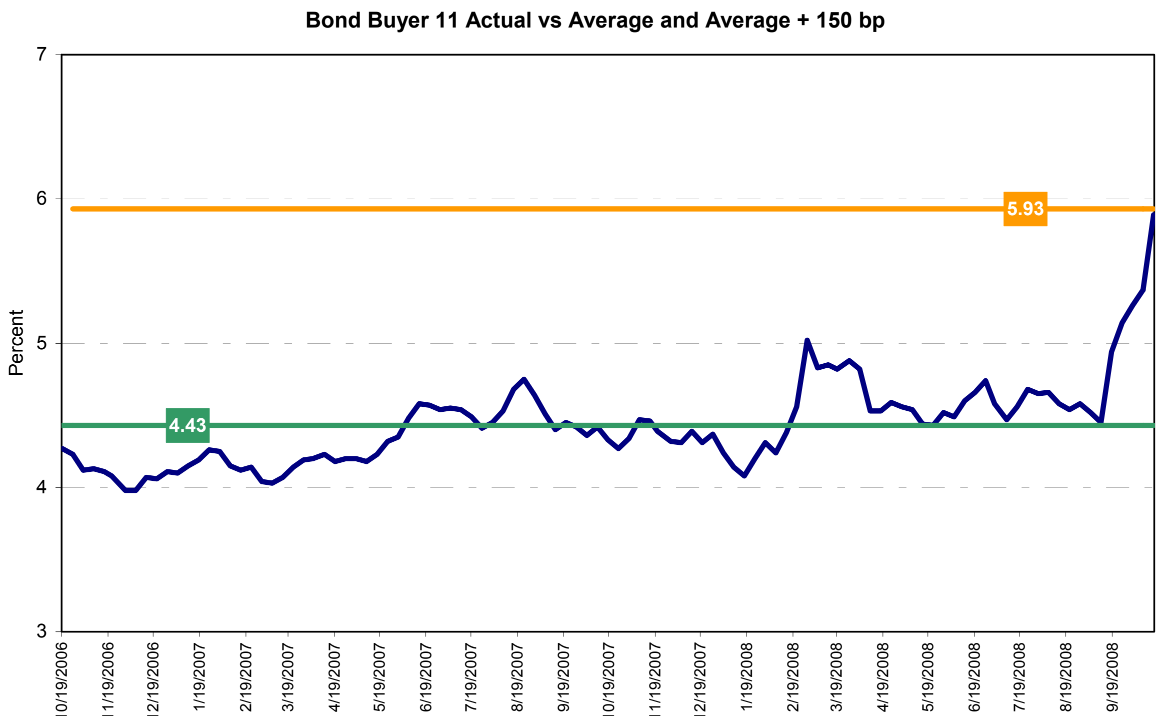
Exhibit A

FY2009 General Appropriations Act

Debt Service and Contract Assistance Payment Line Items

Account	Description
0699-0015	Consolidated LT Debt Service
0699-2004	CA/T Debt Service
0699-9101	Federal Grant Anticipation Notes
1599-0093	Water Pollution Abatement Trust
1599-1970	Mass Turnpike Authority Contract Assistance
1599-3856	Chelsea – MITC
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

Exhibit B


Bond Buyer 11 Actual vs Average and Average + 150 bp
Percent
7
6
5
4
3
5.93
4.43
10/19/2006
11/19/2006
12/19/2006
1/19/2007
2/19/2007
3/19/2007
4/19/2007
5/19/2007
6/19/2007
7/19/2007
8/19/2007
9/19/2007
10/19/2007
11/19/2007
12/19/2007
1/19/2008
2/19/2008
3/19/2008
4/19/2008
5/19/2008
6/19/2008
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8/19/2008
9/19/2008