MBTA Fiscal and Management Control Board

FIRST ANNUAL REPORT

December 22, 2015

Joseph Aiello, Chair

Steve Poftak, Vice Chair

Lisa A. Calise

Brian Lang

Monica Tibbits-Nutt

MBTA Fiscal and Management Control Board

December 22, 2015

Members of the General Court:

This document fulfills the requirements of Section 207 of Chapter 46 of the Acts of 2015 that the Fiscal and Management Control Board (FMCB) report annually on, among other things, the Massachusetts Bay Transportation Authority's "own source revenue, operating budget, capital plan and progress toward meeting performance metrics and targets."

In less than five months since it was created to oversee and improve the finances, management, and operations of the MBTA, the FMCB has established a solid analytic baseline. Some of that baseline was presented in the FMCB's September 22, 2015 report to the Legislature; additional findings are contained in this document. The FMCB is now moving from analysis to action. Many of the FMCB's decisions will be difficult and unpopular. But continued inaction on the MBTA is simply not an option. The riding public, MBTA employees, taxpayers, and the region's economy demand a well-functioning, efficient MBTA.

While this annual report offers updates on a range of topics involving MBTA budgets, customer services, and operations, the FMCB has developed a set of guiding goals and priorities (listed in Part I), including several key points that will shape FMCB decisions in the coming months and years:

- Reducing and soon eliminating the MBTA's structural operating budget deficit is an urgent priority, not just as a matter of fiscal responsibility, but to free up funds now going to operating expenses to meet pressing maintenance and other capital needs. Looking to the FY2017 budget, the FMCB believes it has identified sufficient operating budget savings for the Legislature to limit its assistance to the MBTA to the same $187 million it provided in FY2016. The FMCB's intent is to maximize the utilization of that funding for State of Good Repair (SGR) maintenance.

- Severe budgetary and managerial problems in the MBTA's handling of the Green Line Extension demonstrate the need for the FMCB to continue its efforts to establish accountability and create consequences for failure at the MBTA. The MBTA must properly train and invest in its staff to give them tools for success. The GLX experience will inform decisions going forward on how expansion and other MBTA capital projects are selected, designed, contracted, and managed.

- This does not mean the MBTA should retreat on making capital investments. To the contrary, the system faces dire State of Good Repair and other capital needs across all modes. While the annual cost to reduce the SGR backlog to zero in 25 years currently stands at $765 million, inflation increases that figure to more than $1.4 billion a year by the end of that period. The cumulative total to burn down the current $7.3 billion SGR backlog to zero over the next 25 years is $24.8 billion, in year of expenditure dollars (assuming annual construction inflation of 3 percent). Though the FMCB will institute policies and procedures to assure policy makers and the public that the MBTA will spend precious capital dollars wisely, efficiently, and appropriately, the system's urgent need for a long-term financial commitment to a capital plan cannot be overstated. The FMCB is not currently asking for additional capital assistance. The Board believes it must first demonstrate that it can make the best choices for allocating available capital and deploy that capital investment with accountability and results.

This report outlines urgent challenges facing the Board, but it also can report progress in some of the Legislature's areas of concern:

- The MBTA is developing a new Service Delivery Policy and will soon post online an interactive "Performance Dashboard" with metrics that align to and reflect actual customer experience.
- Winter resiliency efforts have positioned the commuter rail and transit systems to much better withstand major storms and extended cold weather.
- The FMCB is working with MBTA management to increase own-source revenues while reducing operating costs. The FMCB is considering an extensive range of options on both fronts, involving tough but necessary choices to close a structural operating budget deficit that will otherwise keep growing.
- On the capital side, funded SGR spending in the current fiscal year is forecast to be slightly ahead of budget projections. Progress has also been made on transferring employees out of the capital budget to the operating budget. Improved capital planning processes are being developed and implemented.
- The FMCB and MBTA leadership have taken steps to reduce absenteeism and increase workforce productivity.
- A more centralized procurement system is being instituted and plans are in process to further utilize the contracting flexibility provided by the Legislature.

The FMCB agenda will be very full in the coming months, from considering a much-needed MBTA Strategic Plan to analyzing the draft five-year Capital Investment Plan to repositioning the GLX project for success. Much work will be done because much work must be done. We look forward to continuing to collaborate with you on this critical mission.

Respectfully submitted,

Joseph Aiello, Chair

Steven Poftak, Vice Chair

Lisa A. Calise

Brian Lang

Monica Tibbits-Nutt

Table of Contents

I. Introduction: Time for Tough Choices 3

A Legislative Roadmap to this Report 6

II. Improving Customer Service 7

A. Setting Targets and Sharing Performance Data 7

B. Commuter Rail Performance 9

C. Resiliency, Planning, and Preparedness 10

D. Service Planning 13

III. Operating Budget 14

A. Overview: Action Can't Wait 14

B. Closing the Structural Deficit in the Operating Budget 24

1. Internal Cost Containment 24

2. Own-Source Revenues (Other than Fares) 26

3. Own-Source Revenues (Fare Policy and Fare Changes) 29

4. Major Vendor Contracts 30

5. Tough but Necessary Choices 32

6. MBTA Debt 35

IV. Capital Investments 40

A. FY2016 Capital Spend Rate 40

B. Adjusting State of Good Repair for Inflation 43

C. Progress on Transferring Employees from Capital to Operating Budget 45

D. Capital Planning 47

E. Capital Investment Criteria 49

1. Asset Management 49

2. State of the System Reports 50
3. Project Selection Advisory Council (PSAC) 52
4. Improving Capital Investment Planning 54
F. FMCB Capital Investment Priorities 55
1. Top Priority: State of Good Repair 55
2. Analyzing Proposals for System Expansion and Capacity 56
3. Non-SGR Capital Investment Priorities 58
V. Improving MBTA Operations 59
A. Workforce Absenteeism and Productivity Actions 59
1. Reducing Absenteeism 59
2. Improving Workforce Productivity 61
3. Filling Vacancies and Reducing Time to Hire 61
4. Need to Upgrade HR Technology 63
B. Internal reorganization 64
C. Provisioning of Services 66
VI. Conclusion 69

I. Introduction: Time for Tough Choices

It is about five months since the FMCB officially began its mission to bring systemic improvements to the MBTA. But this first annual FMCB report and the challenges and options it lays out could not come too soon. Rather than yet another document decrying the MBTA's dire condition, this report outlines some of the urgent and decisive steps necessary to remedy, not just patch, the system's fundamental and long-standing problems.

While the FMCB works closely with MBTA and MassDOT officials and staff, it is an independent entity, charged with undertaking a comprehensive and transparent analysis of the MBTA's core issues and then acting to resolve them. A decades-long failure to take such actions has enabled serious problems at the MBTA to grow exponentially. That inability to act must end.

Last winter exposed a broken MBTA, revealing not only immediate failures of infrastructure and planning, but deep-seated and fundamental deficiencies across the Authority that have built up over time, including burdensome debt service and unmet maintenance needs. The FMCB and the MBTA will no doubt still experience setbacks, but the Board believes that with the support of the Administration, the Legislature, the larger stakeholder community, and the hard work of MBTA employees, the system is much more prepared to improve service and efficiency, helping to restore badly needed public confidence in the MBTA and build support for an essential investment program.

Operational and managerial changes and smart investments that have been made to improve winter resiliency indicate the direction the FMCB must take going forward. The Board has an initial period of three to five years to transform the MBTA into a high-performing, efficient, and trusted system that meets the needs of its customers while supporting economic growth across the region. FMCB directors are reminded every day of the enormity, scale, and complexity of that challenge.

Rather than turn first to taxpayers and the fare-paying public, the FMCB has first asked the MBTA to look inward at its own costs and outward to increasing non-fare own-source revenues to end the MBTA's structural operating budget deficit. But the Board fully recognizes that it will also have to consider other options contained in this report and make decisions in the months ahead that will be unpopular, even painful. The Board hopes this clarity of tough but necessary choices will help all stakeholders to recognize the tradeoff between the MBTA we all want and the system we can afford and properly run.

The next section of this first annual FMCB report builds upon the 60-day Progress Report submitted to the Legislature last September 22 and provides further diagnosis of the MBTA's customer service delivery and other operations. It also updates the status of the system's operating and capital budgets. This section then describes some action already taken by the FMCB in these areas. It also outlines directions and options the FMCB must consider in the months ahead, focused on meeting operational and capital budget challenges. (FMCB presentations, reports, agendas and other information can be found at http://www.mbta.com/about_the_mbta/board_meetings/fmcb/).

As it prepares to undertake such actions, the FMCB has set some guiding goals and priorities. These include:

- The FMCB sees enormous opportunities for the MBTA to be more efficient in its operations, to improve own-source revenues, and to adjust existing levels of service. Some of these opportunities will be exercised in FY2016 and FY2017; others will take longer to implement.

- Though it will require difficult and sometimes unpopular decisions, the FMCB believes it is possible to move rapidly toward meeting the legislative goal to balance the MBTA operating budget, beginning in FY2017, primarily through a combination of greater own-source revenues, significant internal cost savings, and other measures, with most of the savings coming from cost containment. Bold action immediately to reset the structural deficit and reduce the rate of future forecast operating expense growth would significantly ease fiscal out-year pressures.

- These cost containment and revenue options will be more fully vetted by the FMCB itself and with stakeholders in the coming 60 days and beyond. The FMCB must also develop a sustainable debt management strategy as part of a long-term fiscal stability strategy.

- Based on five-year actuals, the annual rate of increase in MBTA operating expenses must align with annual revenue rate growth.

- The FMCB will consider changes in all modes of MBTA services. The purpose is not to solely reduce costs; rather, the FMCB will work with MBTA staff, outside parties, stakeholders and others to meet existing and additional needs of MBTA customers in more efficient and creative ways, including alternative approaches to service delivery.

- The purpose for reducing the operating deficit is to both make the system more efficient and to redirect revenues that are now used to cover operating expenses in order to increase spending on maintenance and capital needs. While some fixed costs, such as Big Dig and legacy debt, will continue to require fiscal support, the FMCB's goal is to dedicate a significant portion of the funds now appropriated by the Legislature for operating expenses to instead help pay for capital needs, such as power and signal improvements and improved fare technology. "Lock boxing" such funding for capital investments will improve system performance and reduce long-term operational costs.

- The FMCB will continue steps to dramatically improve the interface between the MBTA and its customers, providing them with real-time, accurate access to performance, finances, and other data.

- Rather than list specific projects for capital spending, the role of the FMCB for purposes of this first annual report is to identify capital spending priorities. This will help inform the five-year Capital Investment Plan that will be released in draft form in early 2016 as well as the 20-year capital plan that this Board is mandated to develop and that will be available for review prior to our next annual report. The FMCB's capital spending prioritization is discussed later in this report.

- The challenge facing the MBTA is to not only set spending priorities, but to be sure the MBTA spends its capital and operating funds wisely. Among other factors, the Board will apply lessons learned from the GLX experience to inform changes in MBTA project selection, cost estimation, project management, and contract procurement processes.

- Between now and its next annual report, the FMCB will review and recommend a series of changes in the governance, operations, and management of the MBTA beyond those already implemented.

- Even as these changes are implemented to make the current MBTA a more accountable, efficient, and customer-focused agency, the Board will work with stakeholders and others on an even more fundamental issue: What kind of MBTA do we want and how do we pay for and run it? This gets to the need for a strategic plan for the MBTA, which this Board is committed to develop.

A Legislative Roadmap to this Report

Section 207 of Chapter 46 of the Acts of 2015 requires the FMCB to report annual progress on:

Improving customer relations, including performance metrics and targets.....7

Planning and preparedness processes [including] adopting an incident command system 10

Maintaining 1-year and 5-year operating plans and budgets 14

Increasing own-source revenues; utilizing the lease and sale of real estate assets to support the long-term health of the system and implementing value capture strategies 26

Maintaining a 20-year capital plan for the restoration of physical assets and priority list of immediate capital needs for the next 5 years 40

Imposing a barrier between the commingling of operating and capital budgets.....45

Conducting thorough reviews and analyses of all proposals for system expansion.....56

Identifying and implementing best practices supporting workforce productivity and engagement; reducing employee absenteeism 59

Reorganizing internal structure along modal business lines.....64

Centralizing authority procurement and contracting, implementing best procurement and contracting practices [and] reducing barriers to public-private partnerships.....66

II. Improving Customer Service

A. Setting Targets and Sharing Performance Data

The FMCB has been engaged in an intensive and thorough analysis of MBTA operations, finance and management, paving the way for improvements, some of which have already been implemented. However, much more work and many difficult decisions will be required before the MBTA's most important constituency – its customers – see marked and consistent improvement.

The MBTA is in the process of revising its Service Delivery Policy. The Service Delivery Policy, last revised in 2010, sets the MBTA service objectives, including availability of service, reliability, safety and comfort, and productivity. It also sets service standards by which to measure progress towards those objectives as well as targets for the MBTA to achieve.

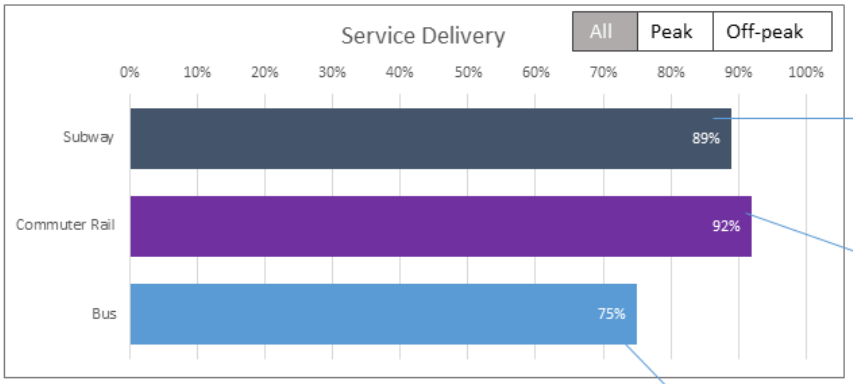
A main goal of the new Service Delivery Policy is to respond to the legislative mandate that this report update "progress toward meeting performance metrics and targets." The MBTA is continuing to develop metrics that more closely align with the actual customer experience. Rather than measuring the performance of vehicles, these metrics will reflect how passengers experience the service.

To improve its customer-facing transparency, the MBTA is developing an interactive "Performance Dashboard" that will enable customers to track multiple performance metrics. Once implemented early next year, the new interactive Dashboard will enable people to:

- See any given day's reliability for the subway, buses, and commuter rail, both in the aggregate and for an individual line.
- Review earlier performance.
- Isolate peak or off-peak performance for each mode and line
- See how performance measures against target goals for each metric

The Performance Dashboard will, for example, enable system users to learn the percentage of customers who waited more or less than the scheduled amount of time between trains on the Orange Line, or what percent of Needham line riders were both picked up and dropped off on time on a certain date.

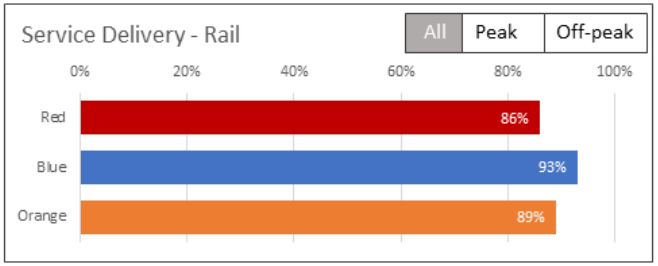
The mock-up below illustrates how the Dashboard will display service performance by mode (bus, commuter rail, subway) and then by specific routes within each mode.

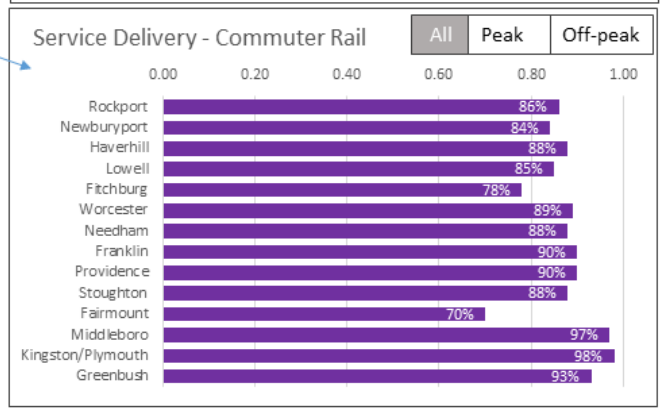


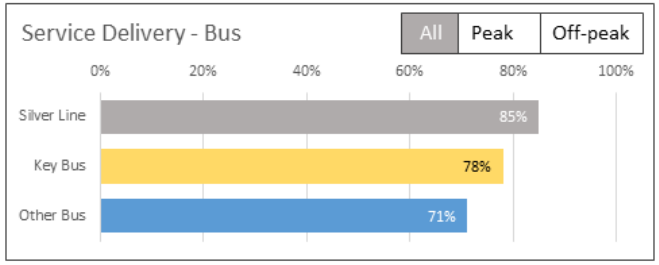
1.3

million

trips per day



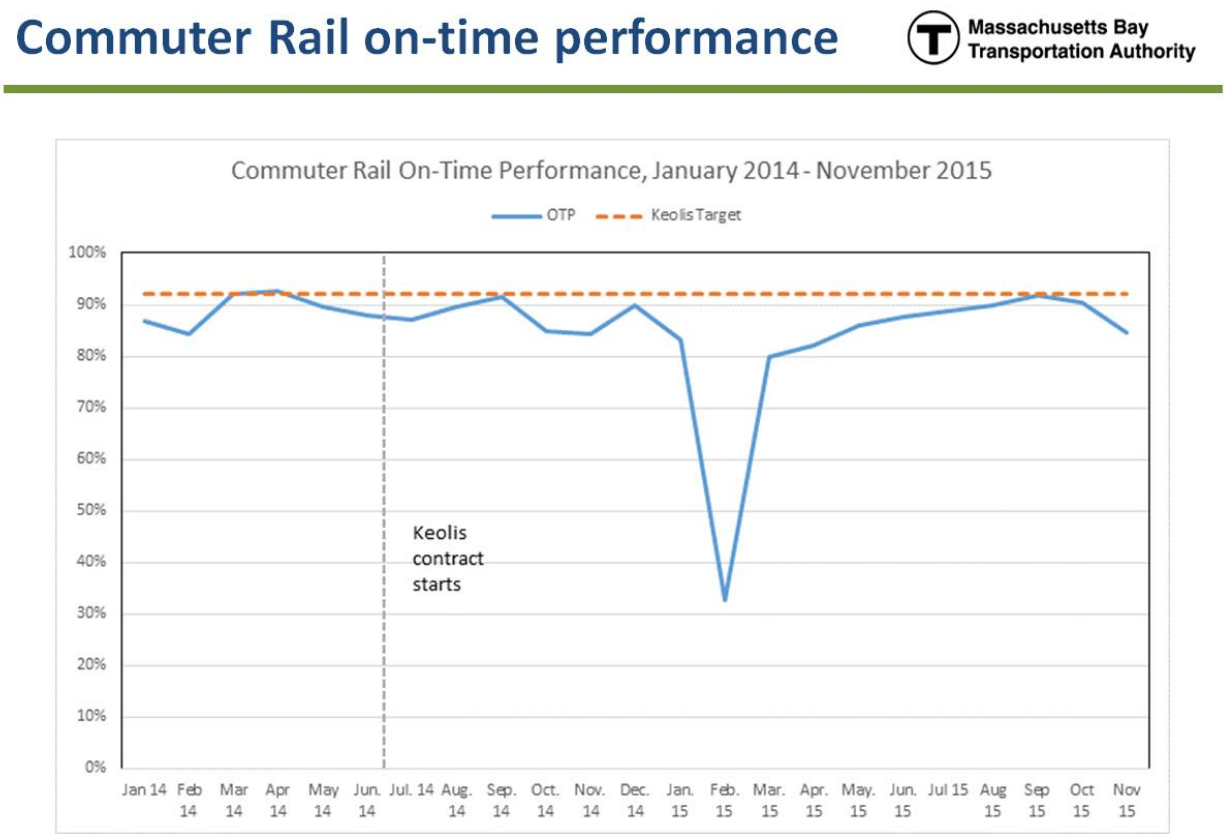




The Dashboard will include monthly ridership (by mode) with a target of increasing ridership. In addition, the public will be able to view revenue (overall) against operating expenditures and updates on capital spending by the MBTA.

B. Commuter Rail Performance

The MBTA is paying special attention to the performance of the Commuter Rail. The chart below tracks commuter rail on-time performance (unadjusted) since January 2014. While it shows clear improvement since last winter, overall performance has generally approached but has not always achieved the 92 percent on-time benchmark set in the Keolis Improvement Plan.



The Keolis Improvement Plan will have been in place for six months at the end of this year. While the FMCB will be carefully reviewing complete data about on-time performance, staffing levels, and other service metrics for commuter rail during that period, initial findings are that notable progress has been made. A fuller analysis of commuter rail performance will be presented to the FMCB in January.

C. Resiliency, Planning, and Preparedness

One imminent test of MBTA performance will, of course, be how well the system handles this winter. As noted earlier, the FMCB believes that the MBTA is much better positioned now to handle cold weather conditions. The MBTA has spent more than $90 million on a range of preventive measures. Among other steps, by the end of November 2015, MBTA workers had installed:

- Nearly 70,000 linear feet of brand new third rail between JFK/UMass Station and Quincy on the Red Line
- More than 36,000 linear feet of "Heater Element Infrastructure," which includes the conduit, wiring, and junction boxes to support the Red Line's third rail heating systems
- 200,000 linear feet of new wiring for the Orange Line's third rail heating system
- 5,321 linear feet of snow fencing along Orange Line tracks

The MBTA has also built 40 new stainless steel plows for Red and Orange Line trains and another forty are being purchased. The MBTA is also steadily increasing its stockpile of spare traction motors for Red and Orange Line trains and other special snow-fighting equipment, such as "Snowzilla" on the next page, is ready to go.

The FMCB expects these improvements to significantly enhance winter resiliency, but setbacks are still possible. And when these occur, riders and others dependent upon the MBTA must be able to learn of them as completely and accurately as possible.

Improved Communications

While positive steps have been taken to improve the flow of information, the FMCB will carefully monitor how well Keolis not only performs, but how well it communicates with riders. Keolis has established a dedicated storm desk to monitor weather conditions and provide up-to-date information to MBTA and Keolis managers. And a centralized Passenger Information Center has been created to better ensure that the information provided to the public is useful, accurate and timely via the Customer Service call center, in stations, on board trains, through the news media, and via MBTA T Alerts and other social media, including MBTA_CR, the official commuter rail mobile app. The MBTA is also cooperating with a range of private app developers to further expand customer access to timely information.

Incident Command System

The MBTA must be prepared for all emergencies, weather and otherwise. The MBTA's Incident Command System (ICS) has already been in place for security incidents and special event planning, but significant preparedness planning and training has occurred to ensure weather-related emergencies are now also managed via this same process. The MBTA has also built an Emergency Operations Center that will be staffed by senior leadership during any emergency event. This will ensure a more strategic approach to decision making, resource prioritization, stakeholder coordination and customer communications. Additionally, a completely new Snow and Ice Operations Plan was developed that includes key business continuity preparedness information related to key items such as power systems, vehicles, and personnel.

Employee Training

The MBTA has also trained more than 4,000 employees with a full-day Security Awareness and Emergency Preparedness course. This covers an overview of the National Incident Management System, ICS, emergency communications protocols, emergency evacuation procedures, suspicious package training as well as an active shooter module.

D. Service Planning

The MBTA has not conducted a comprehensive analysis of its service delivery for many years. Before undertaking such a service delivery exercise, the MBTA's outdated Service Delivery Policy must be updated. A revised Service Delivery Policy will be reviewed by the FMCB early next year. MBTA staff will then use the new standards to develop a new, comprehensive Service Plan. The FMCB will be setting the scope of the Service Plan early next year, with the full plan to be implemented in 2017.

The MBTA is currently conducting a system wide passenger survey to gather important demographic and origin-destination data. The new Service Plan will incorporate the survey results and findings from an internal review of MBTA facilities and fleet. Public outreach will also be a major part of the MBTA's process toward completion of its new Service Plan next year.

III. Operating Budget

The 2015 legislation that created the FMCB calls for it to, among other things, establish operating budgets, beginning in fiscal year 2017, "which are balanced primarily through a combination of internal cost controls and increase in own-source revenues."

A. Overview: Action Can't Wait

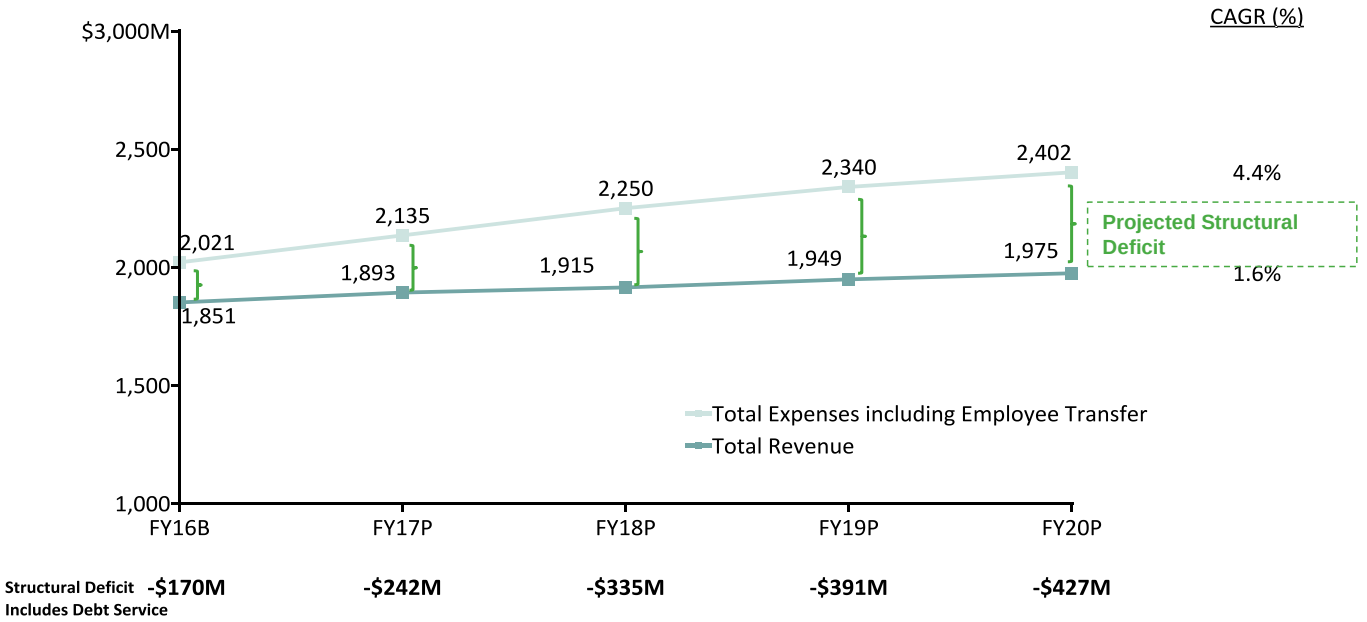
Reversing the trend of growing operating budget deficits at the MBTA is an urgent priority for the FMCB. As noted in the FMCB's September report to the Legislature, "The current course of the MBTA's operating budget is unsustainable. Without action to control costs and increase revenues, the MBTA's structural operating deficit – defined as the gap between revenues (including the base-revenue amount, local assessments, fares and other operating revenues, not including additional state assistance) and total expenses (operating and debt service costs) – will expand from a projected $170 million in FY2016 to a projected $427 million in FY2020." The chart on the next page shows the costs of inaction.

Without action, projected structural deficit will reach $427M by FY2020.

Massachusetts Bay Transportation Authority

STATUS QUO FY17 PRO FORMA

NOT INCLUDING ADDITIONAL STATE ASSISTANCE OF $187M in FY2016B



NOTE: Structural deficit includes debt service and transferred capital employees annual expense (scaling from $52M in FY17 to $88M in FY20

massDOT Massachusetts Department of Transportation

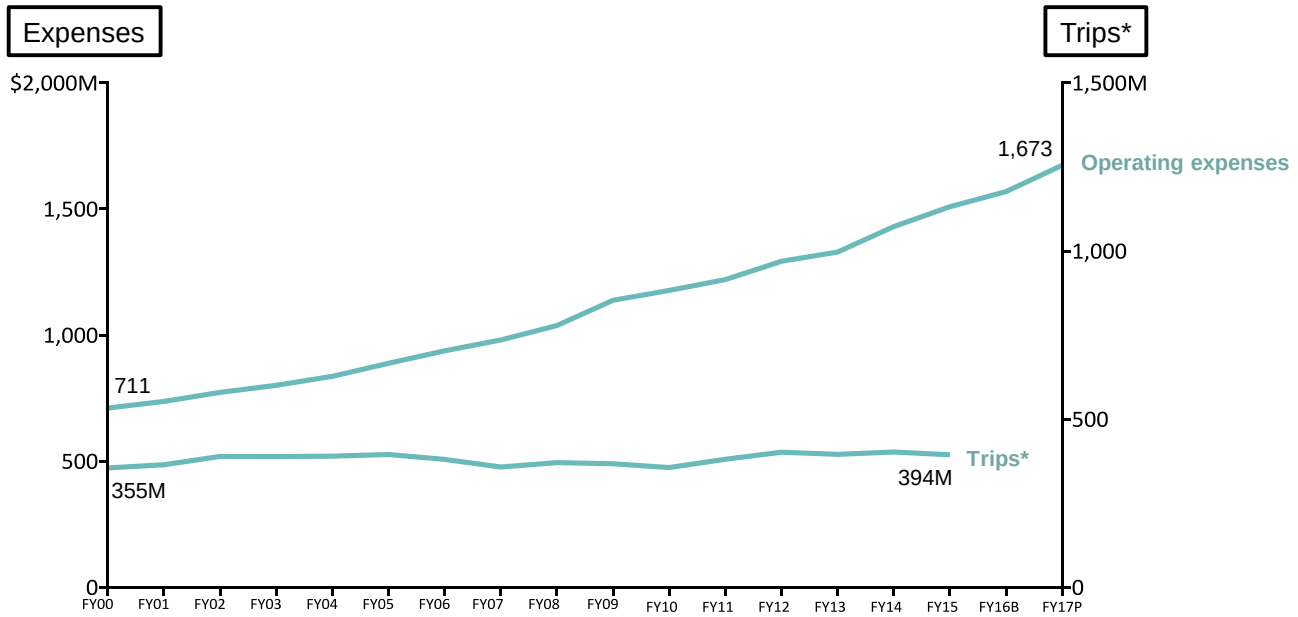
The reason for this growing structural deficit is clear. Operating expenses have grown by an annual average of about 5 percent over the past 15 year while revenue has grown at less than half that rate. Debt service is expected to increase by more than 17 percent or $78 million over the next four fiscal years.

The increase in operating costs has not been matched by an increase in ridership, which has remained basically flat. The FMCB calls for annual growth rate in MBTA operating expenses to align with the annual rate of revenue growth.

All agencies should operate within available resources as a basic tenet of responsible management, but in the case of the MBTA, a balanced and sustainable operating budget means more than just good basic business practice: Failure by the FMCB to decisively control and eventually balance the MBTA's structural operating budget will jeopardize even further the Authority's ability to make badly needed investments in maintenance State of Good Repair and other critical areas of capital spending. Increased operating expenses compound over time; the longer they are left unaddressed, the greater the exponential effect on future operating budgets.

Though ridership is flat, operating expenses are increasing by 5 percent a year.

Massachusetts Bay Transportation Authority



* Total number of unlinked trips, a standard measure of ridership

NOTE: FY14 and FY15 unlinked trip are internal MBTA figures and subject to revision.

massDOT
Massachusetts Department of Transportation

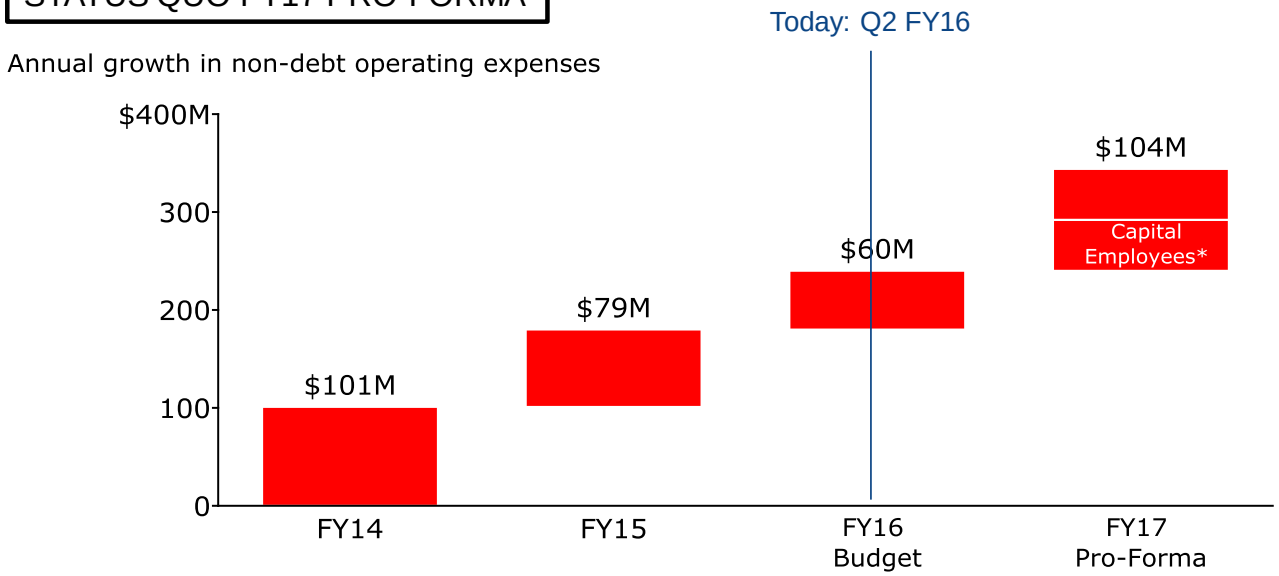
The FMCB is committed to making difficult but necessary actions to reverse that dangerous direction, including actions in the remaining half of the current fiscal year to reduce current costs and to fundamentally reset the structural deficit baseline for FY2017. Unless such moves are made now, the problems -- and the painful decisions -- will get even worse.

The chart on the next page shows what would happen if the FMCB took no action to close the deficit. While annual increases have declined since FY2014, non-debt operating expenses are still projected to go up by another $164 million by the end of FY2017. About $52 million of this $164 million growth in non-debt operating expenses in FY2017 represents the initial cost of moving MBTA employees now paid out of the capital budget to the operating budget; the total cost of moving capital employees is $88 million, the full impact of which will be realized by FY2018. (The transfer of MBTA employees from the capital to operating budgets is discussed further in the Capital Section of this report).

Without immediate action, MBTA operating expenses will increase by another $164 million in FY2016 and FY2017.

Massachusetts Bay Transportation Authority

STATUS QUO FY17 PRO-FORMA



* Includes cost of shifting existing capital employees from capital budget to operating budget

NOTE: FY14 and FY15 unlinked trip are internal MBTA figures and subject to revision.

massDOT Massachusetts Department of Transportation

One legislative mandate is for the FMCB to offer a balanced operating budget for FY2017. Achieving that goal now, including making the tough choices listed later in this section or others with equivalent dollar values, will not only balance the FY2017 budget, but will mean even greater savings in future years since costs compound over time.

Reductions in costs made now multiply over time. Currently, the FY2020 structural operating deficit is projected to reach $427 million. Assuming annual operating expense growth of 2 percent, resetting the FY2017 structural deficit to zero now would save the MBTA not only that $427 million, but a cumulative total of more than $1.2 billion in operating costs through FY2020, as shown in the next chart.

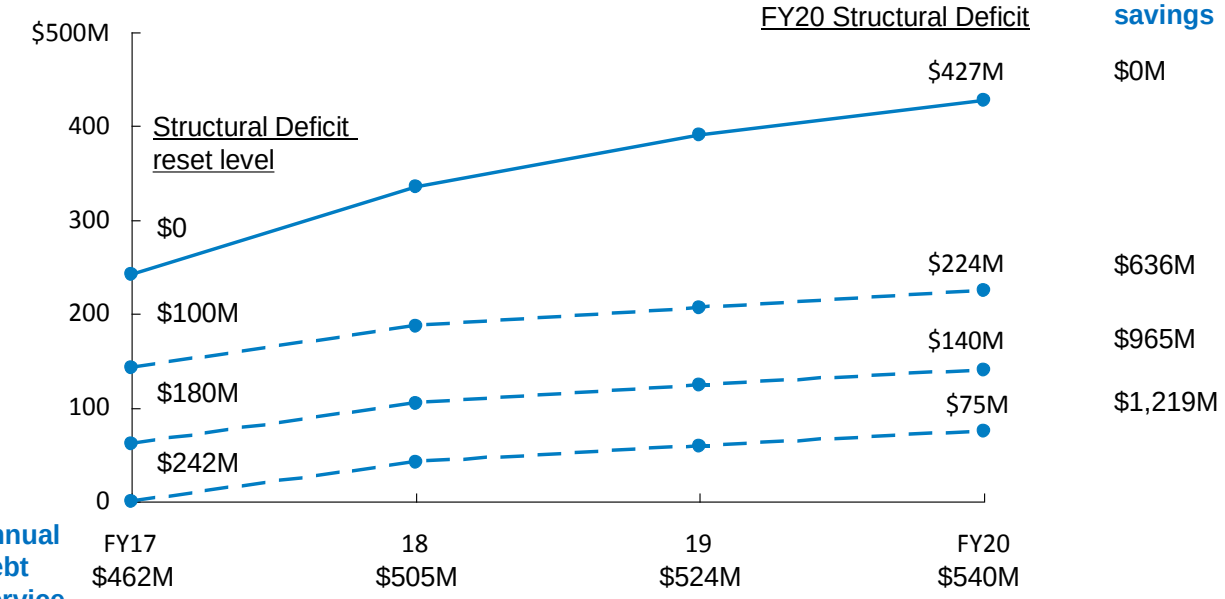
Immediate action to address structural deficit could yield $1.2B of cumulative operating budget savings over 4 years

Massachusetts Bay Transportation Authority

ILLUSTRATIVE – FOR DISCUSSION PURPOSES

2.0% opex growth scenario

Structural deficit (including debt service expense)



Cumulative operating savings

$0M

$636M

$965M

$1,219M

Assuming:

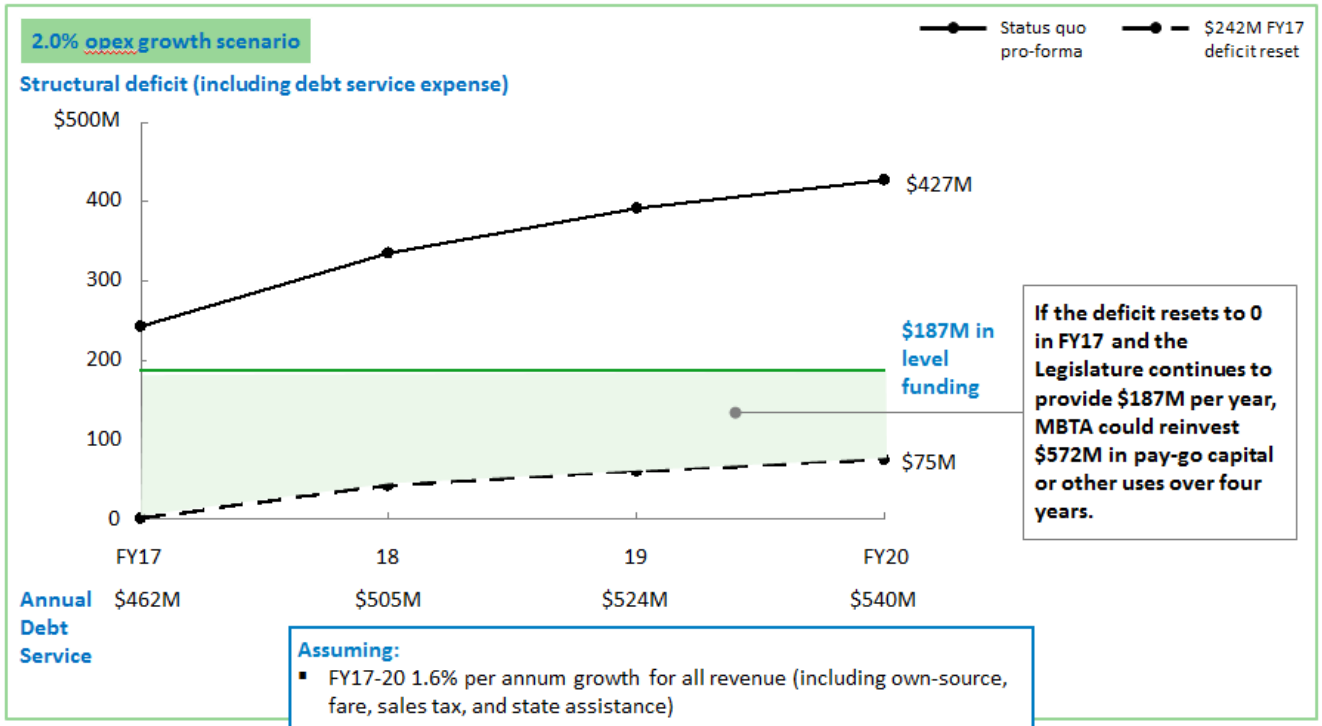
- FY17-20 1.6% per annum growth for all revenue (including own-source, fare, sales tax, and state assistance)
- FY17-20 2.0% per annum growth for non-debt opex
- Contractual debt service payments grow as projected in pro-forma from $462M in FY17 to $540M in FY20 ($78M total increase over 4 years)

massDOT Massachusetts Department of Transportation

In FY2016, the Legislature provided $187 million to the MBTA. If the Legislature were to continue that level of annual funding, rather than using it to cover growing budget deficits, the MBTA could instead use this funding to make badly needed investments in the core system, from new technology and repairs to aging signals and other infrastructure to customer-facing enhancements.

If the MBTA resets its FY2017 structural operating budget deficit to zero, by FY2020 it would have $572 million to invest in capital or other critical needs, assuming the Legislature continues to provide the same $187 million annually. (See next page). Steps to reduce MBTA operating costs now will help put the system on a path to fiscal sustainability.

Operating budget savings could be re-invested in pay-go capital or other critical uses.



massDOT

While the FMCB knows that the MBTA's operating budget must be structurally balanced, the process of reaching that goal should follow the sequence that follows. The first look must be to internal cost containment, followed by increasing system revenues from sources such as real estate, advertising, and parking. Only then should options that more directly affect system users, such as fare increases and service adjustments, be implemented.

B. Closing the Structural Deficit in the Operating Budget

The legislation that authorized the FMCB calls for it to "establish 1-year and 5-year operating budgets, beginning with the fiscal year 2017, which are balanced primarily through a combination of internal cost controls and increased own-source revenues." As noted earlier, the FMCB believes the FY2017 operating budget could be balanced, mainly by reducing forecast operating expenses along with increases in own-source revenues. Doing so, however, will require difficult decisions, including about some of the menu policy options listed later in this section.

Before taking any moves that could adversely affect MBTA users, however, the FMCB directed the MBTA to look internally and consider other alternatives. The first step toward reducing the rate of growth in operating expenses must be managing internal operating costs that can be controlled with minimal impacts on MBTA customers.

1. Internal Cost Containment

Working with the FMCB, the new management team at the MBTA has undertaken a complete, line-item review of the proposed FY2017 operating budget, with a focus on identifying areas of non-essential operating expense growth that could be saved now in order to reset the FY2017 pro-forma and help move the agency toward the FMCB goal that the rate of operating cost growth be no greater than that of system revenues. The Authority has rarely if ever conducted such a top-to-bottom review of its operating costs.

The team has worked with each of the MBTA budgeted departments in a collaborative, iterative manner. More than 60 internal meetings have occurred in the last two months and they are ongoing, with each department head proposing ideas to control cost growth in their FY2017 budgets. By launching the process for developing the FY2017 budget months in advance of when such planning has been traditionally done at the MBTA, managers have been able to think early about where to find savings and to refine proposals over the remaining months of FY2016.

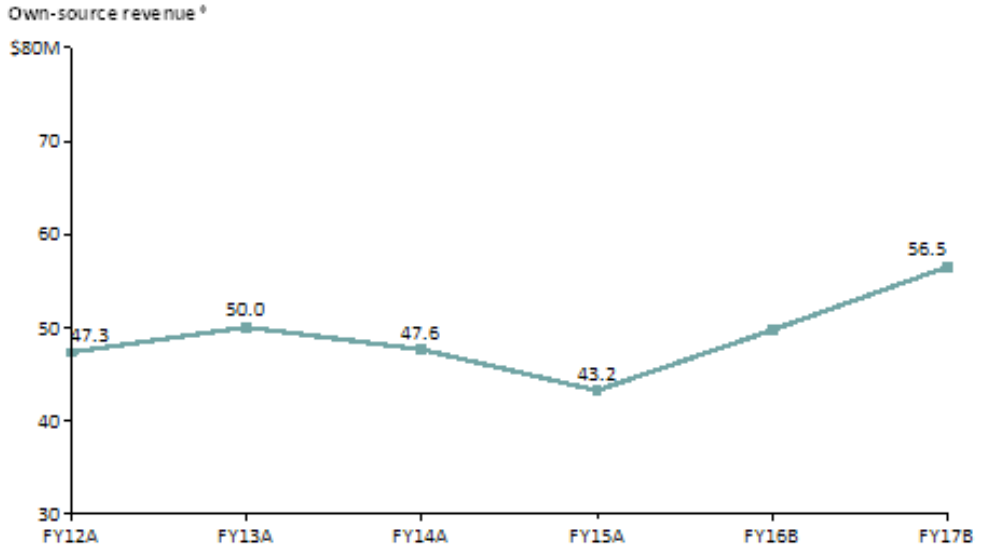
Every department has been asked to review budgets line by line, evaluating what they truly need as opposed to what they would like to have. So far, the MBTA management team has identified between $50 million and $60 million in non-essential cost growth, mainly in materials and services, unfilled vacancies, and outside service contracts. New energy contracts recently signed by the MBTA will result in operating budget savings of about $25 million over the five-year life of the contract, including $5 million in FY2016. These cost reductions will be integrated into the recast FY2017 operating budget.

Wanting to look even more deeply at its internal operations, the MBTA has engaged an outside firm to perform a comprehensive review of its organizational structure, with a focus on improving the efficiency and reducing the cost of the MBTA's administrative services and operations. This review includes identifying services unrelated to the MBTA's core operating mission that could be better and more efficiently performed by outside providers.

2. Own-Source Revenues (Other than Fares)

After first looking to control its own costs, the FMCB next asked MBTA to respond to the legislative request to update progress on "increasing own-source revenue" from the MBTA's real estate, advertising and parking operations. The current FY2017 operating budget projects the MBTA will collect $56.5 million in revenues from advertising, real estate, and parking. That would represent a 30 percent increase in own-source revenues from FY2015. (Own-source revenue growth from FY2012 to FY2015 was relatively flat.).

Own-source revenue has been steady since FY12, apart from a one-off dip in parking last winter

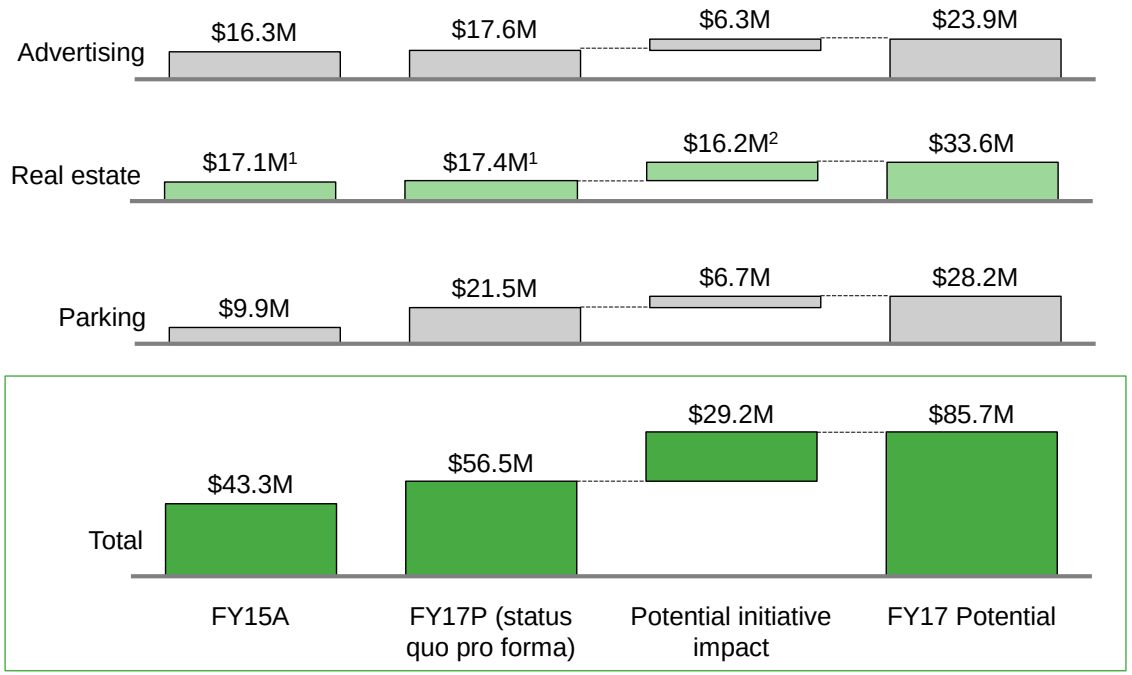


NOTE: Advertising and parking revenues (net of expenses paid to 3rd party providers) and real estate revenues (not including long-term leases or sales). See "Initial list of revenue and cost options" for details on projected ranges of FY17 own-source revenue

To further increase own-source revenues, MBTA management has identified another $28.8 million in potential revenues, which would increase FY2017 own-source revenues to $84.3 million, nearly double from two years ago. The next chart shows projected increases in own-source revenues from advertising, real estate (including up-front payments on long-term leases and property sales), and parking.

FY17 operating budget analysis: Opportunities to increase own-source revenues

Massachusetts Bay Transportation Authority



NOTES: See "Initial list of revenue and cost options" for full details – the "Potential initiative impact" above represent the low end of the range, except for real estate since:
1 FY15A and FY17P Real estate revenues are recurring revenues from advertising, concessions, telecomm and land rental only.
2 The $16.2M real estate "potential initiative impact" includes $14.1M revenue from long-term leases and sales, the bulk of which is made up by the South Station deal

massDOT Massachusetts Department of Transportation

Advertising revenues have only increased slightly, from $16.3 million in FY2015 to a projected $17.6 million for FY2017. The MBTA has identified another $6.3 million in potential advertising, including digital displays, advertising displays attached to MBTA stations, as well as station and line sponsorships. Parking revenues, which stood at $9.9 million in FY2015, will increase to a projected $21.5 million in FY2017. This increase is due mainly to the effects of the winter of 2014 to 2015, which saw snow removal costs soar and parking revenues decline due to storm-related system closures. Another $6.7 million in potential parking revenues has been identified that could be raised in FY2017, mainly from improved parking fee collection as well as a proposal the FMCB will take up for the first across-the-board parking fee increase since 2008.

On real estate, the MBTA could also collect more revenue from its real estate holdings, mainly through more aggressively targeting concession, telecom, billboard, and property lease opportunities. More fundamentally, the FMCB has directed the MBTA real estate team to focus on long-term leases of real estate assets that generate recurring annual income, not just one-time revenues.

3. Own-Source Revenues (Fare Policy and Fare Changes)

The FMCB is responsible for raising MBTA fares. On November 23, 2015, the MBTA released a draft MBTA Fare Policy, which will guide decisions on fare changes, for public comment. The draft policy highlights the multiple and competing objectives for MBTA fares: increasing revenue, improving operations, and advancing regional social, economic, and environmental goals.

The FMCB is seeking public input on a range of fare issues, such as a goal for fare box recovery ratio (what percent of the MBTA operating budget should be covered by fare revenue), pass products, and whether it is possible to implement income-based means-testing for a reduced fare, were the FMCB choose to pursue such a policy. The FMCB will likely vote on proposed fare changes early next year and will then conduct public hearings on the proposal. Though the FMCB has not yet approved it, the current FY2017 operating budget assumes a fare increase of 5 percent; without that additional fare revenue, the projected $242 million deficit would be even larger.

However, the public cannot be expected to support higher fares as long as current fares are not fully collected. While the MBTA clearly faces challenges in achieving full fare collection, it must take all steps possible. Some actions have been taken. Keolis, for example, has hired additional staff to specifically assist with collecting tickets. But much of the MBTA's fare collection effort, as well as its fare structure, is constrained by its existing automated fare collection (AFC) technology. The current system, which is internally managed and costs more than $30 million a year to operate, limits the MBTA's ability to implement a range of fare options that the FMCB might consider in the next year, such as fares based on distance traveled.

In order to meet many of the revenue and operating fare objectives, the MBTA is exploring updates to that technology which, once modernized, could significantly improve the fare collection system. The FMCB regards this as an urgent technology priority.
The MBTA's current fare collection technology and cash-handling system will require mid-life overhauling within three years, creating an opportunity for significant improvements. Most transit systems shift the responsibility for AFC maintenance and cash handling to an outside vendor, which the system manages through a set of agreements in which the vender guarantees performance and is penalized financially for system downtime. The benefits to this model are lower operating costs, better performance, and increased revenue collections. The MBTA will move quickly to analyze the opportunity to shift towards this business model for its existing system while the FMCB considers the MBTA's next-generation AFC system.

Newer technology will enable the system greater flexibility on fare policy and would improve fare collection with a new capacity for open payments, enabling riders to bypass fare gates completely by tapping their Charlie Cards, smart phone apps, or contactless credit cards. An upgraded automated fare collection system will also improve the collection of all fares and reduce the level of fare evasion.

In the meantime, the FMCB will work closely with both MBTA and Keolis staff to make sure that fares are collected consistently on all modes.

4. Major Vendor Contracts

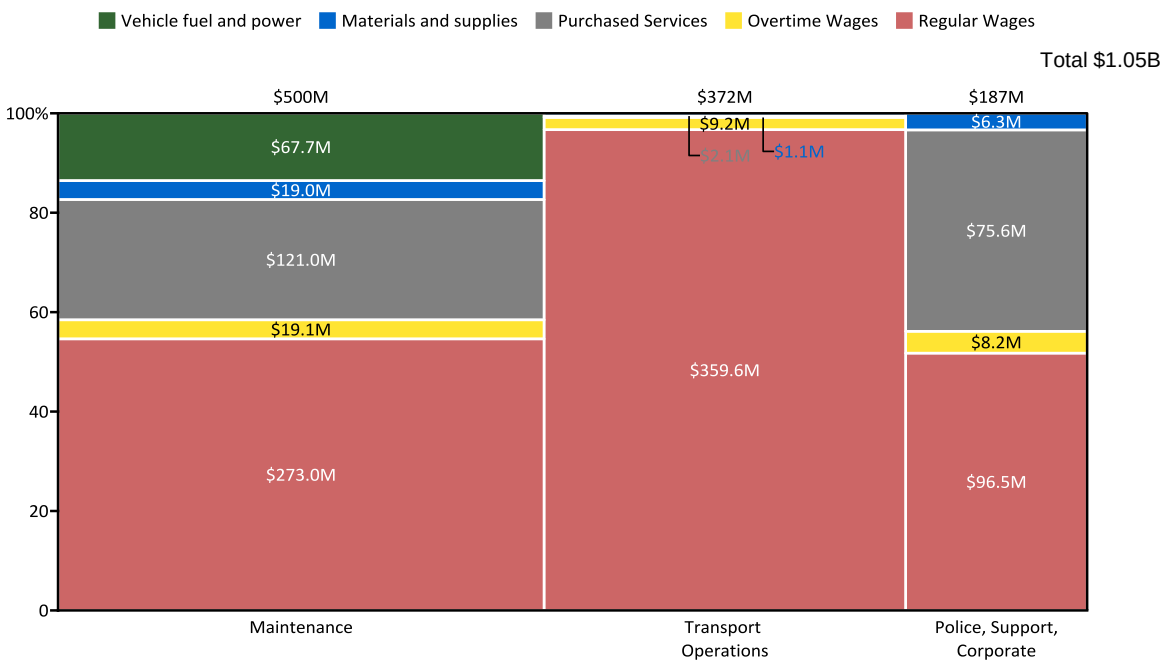
Excluding debt service, the largest single component of MBTA operating expenses is contracts to private vendors, mainly for The RIDE and commuter rail. Contracts to run The RIDE and commuter rail will cost the MBTA $495 million in the current fiscal year, with contracts to operate the ferry and certain bus routes adding another $11 million in contract costs. That total of $510 million in outsourced contracts exceeds how much the MBTA spends on maintenance ($500 million in FY2016) and what it spends to operate its trains and buses ($372 million).

The FMCB has been exploring options to reduce costs from these contracts. Efforts to rein in costs for The RIDE, for example, include a taxi pilot program and partnering with regional transit authorities.

Excluding Commuter Rail and The Ride, MBTA Opex is $1.06B (of which $765M - 72% - is wages & benefits)

Massachusetts Bay Transportation Authority

FY2016 budgeted operating costs, not including Commuter Rail, The Ride or debt service



NOTE: Benefits and payroll taxes are allocated according to regular wages

massDOT Massachusetts Department of Transportation

5. Tough but Necessary Choices

The FMCB has made it clear that the urgent goal of balancing the MBTA's operating budget must be achieved by first looking internally at ways for the MBTA to control its own costs and increase its own revenues. But if these steps, even with a fare increase, are insufficient, the FMCB's responsibility is to consider a full and sobering range of other actions between now and the next annual report if it is to achieve its mandate to eliminate the MBTA's operating budget structural deficit. The FMCB has already taken up some of these, voting on Dec. 14, for example, to initiate the process of ending late-night bus and transit service.

The following chart lists these as among 27 possible steps the FMCB could take to increase own-source revenues or reduce costs. If the FMCB is to balance the FY2017 operating budget, these are among the options that will be on the FMCB's table between now and the next annual report.

Revenue and cost options before the FMCB

Massachusetts Bay Transportation Authority

Budget recasting · Own-source revenue · Cost control · Service adjustments · Fare revenue

		Initiative	Range of impact (low-high)[1] $M	
Reducing FY2016 2H deficit, and resetting FY2017 baseline $80-106M	1	Budget recast: Elimination of non-essential spending increases in status-quo pro forma	35.7	35.7
	2	Budget recast: Department head-specified reductions in materials, services, supplies	3.7	14.8
	3	Budget recast: Department head-specified elimination of unfilled / vacant positions	15.5	15.5
	4	Discontinue late night bus and subway service Pilot (12am-2am Friday and Sat Nights)	10.0	14.8
	5	Advertising full potential: allow alcohol ads	1.5	2.0
	6	Advertising full potential: aggressive growth target for urban panels, station and line sponsorship	4.8	8.3
	7	Real estate full potential: aggressive growth target for concessions, telecom, land rentals, billboards (excludes long term leases/sales)	3.1	4.0
	8	RIDE reform: Eliminate non-ADA premium trips outside of ADA required service areas	5.2	10.4
		TOTAL	**79.5**	**105.5**
Changes impacting FY2017 $37-70M[2]	9	Target full potential to optimize parking revenue (with assistance of outside firms with experience optimizing revs)	6.7	9.9
	10	Aggressively market corporate pass (RFI in process to find a sales/marketing partner to promote corporate pass)	0.0	1.0
	11	Negotiate work rule adjustment to collective bargaining agreement for overtime / spread-time rules	3.8	7.5
	12	Freeze wages for non-union workforce (included in status-quo pro forma)	0.0	0.0
	13	Negotiate a one-time deferral of 1.0% collectively bargained FY17 wage increase	2.6	5.2
	14	Negotiate a one-time deferral of 1.5% collectively bargained FY17 wage increase (incremental increase to #13)	1.3	2.7
	15	Negotiate a one-time deferral of 2.5% of collectively bargained FY17 wage increase (incremental increase to #13, #14)	1.5	3.0
	16	Modernize Charlie Card store, focus store on senior population, transition all card exchanges to mail-in	0.6	0.7
	17	RIDE reform: shift 30% of Ride participants to taxis, ride-sharing and fixed route	12.8	25.5
	18	Adjust weekend commuter rail service (requires Keolis contract adjustment , scope change, and public comment period)	7.8	14.4
	19	Increase fares (beyond the 5% included in FY17 status-quo pro-forma) and increase link pass multiple	TBD	TBD
	20	RIDE reform: Increase fare for ADA and non-ADA rides	TBD	TBD
	21	Develop an incentive plan for retirement eligible employees in targeted departments with strict backfill limits	TBD	TBD
	22	Shift all automated revenue collection and handling operations (AFC, money-room, card sales) to AFC vender	TBD	TBD
	23	Modernize procurement operations, leveraging outside parties to help optimize materials management	TBD	TBD
		CUMULATIVE TOTAL[2]	**116.6**	**175.4**
Policy options	24	Adjust service on lowest ridership, highest cost per-trip bus routes	TBD	TBD
	25	Bus maintenance reform: 10% cost reduction (outside firm currently working on recommendations)	TBD	TBD
	26	Bus maintenance reform: 20% cost reduction (outside firm currently working on recommendations) (incremental to #25)	TBD	TBD
	27	Bus maintenance reform: 30% cost reduction (outside firm currently working on recommendations) (incremental to #25, #26)	TBD	TBD

1 Run-rate annualized operating budget impact when the initiative is fully implemented. 2 One-time wage deferrals #13, #14, and #15 are cumulative.

The above list can be broken down into several general categories.

Reducing Costs for the Rest of FY2016
Between $54.9 million and $66 million could be saved, mainly by eliminating spending increases that have been proposed but which are not essential. Additional immediate savings could come from reductions in departmental spending on supplies, materials and services and by not filling vacant positions.

Cost Containment
Though not all savings have been fully quantified for all categories, the FMCB will be reviewing a range of options for internal cost savings. These include workforce cost savings, including the potential to renegotiate one-time deferrals of collectively bargained FY2017 wage increases, a wage freeze for non-union employees, and developing retirement incentives for targeted departments. Other cost control can come from changes at The RIDE, contracting out fare collection, and reforming bus maintenance procedures and operations.

Increasing Own-Source Revenues
As noted above, aggressive efforts to increase revenues from parking, advertising, and real estate (excluding long-term leases and sales) could generate between $13.8 million and $17.7 million. Fare increases and policies will also be considered.

Though the FMCB has yet to vote on all of these measures, they indicate the range and severity of necessary choices to close the MBTA's structural operating deficit in order to reallocate additional resources to meet critical capital needs. The FMCB fully recognizes that many of the items on this list require difficult and unpopular decisions. But part of the FMCB's mission is to help all stakeholders understand the likelihood of a tradeoff between the MBTA we and they all desire and the MBTA we can afford. The task is daunting but necessary choices to reduce the structural operating deficit now will lead to longer term fiscal stability and lasting improvements for MBTA customers in the years and decades ahead.

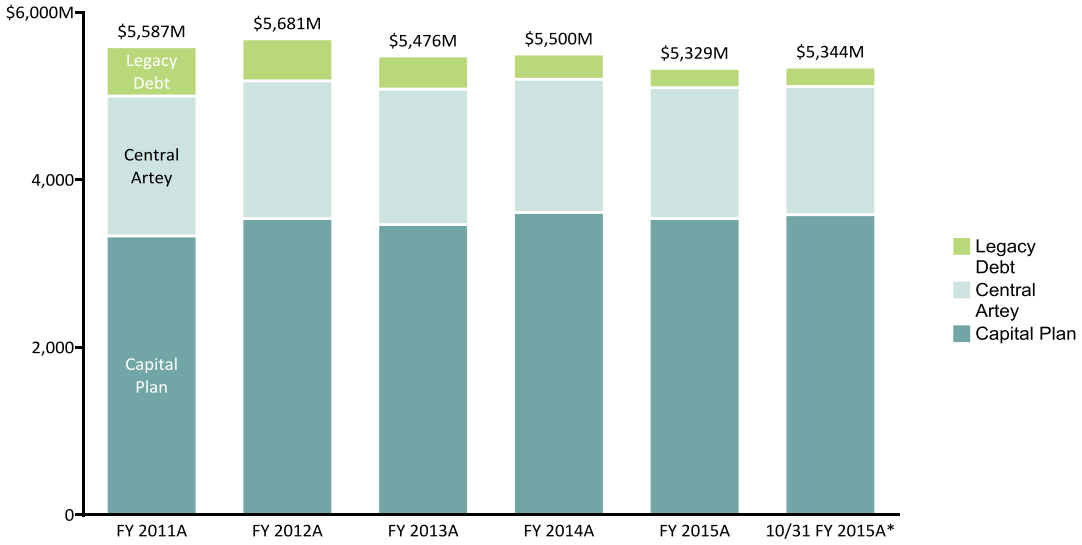
6. MBTA Debt

The MBTA's dire fiscal condition is exacerbated by the Authority's debt service, with a major operating cost burden from annual debt service on the Authority's total long-term debt of more than $5 billion. While the FMCB can take actions on other components of operating costs, the MBTA is contractually obligated to make these debt payments. In FY2016, debt service costs of $452 million represent about 30 percent of total annual operating expenses.

Total debt outstanding is $5.3B as of 10/31/15

Massachusetts Bay Transportation Authority

Total Debt Outstanding (including securitized parking bonds)



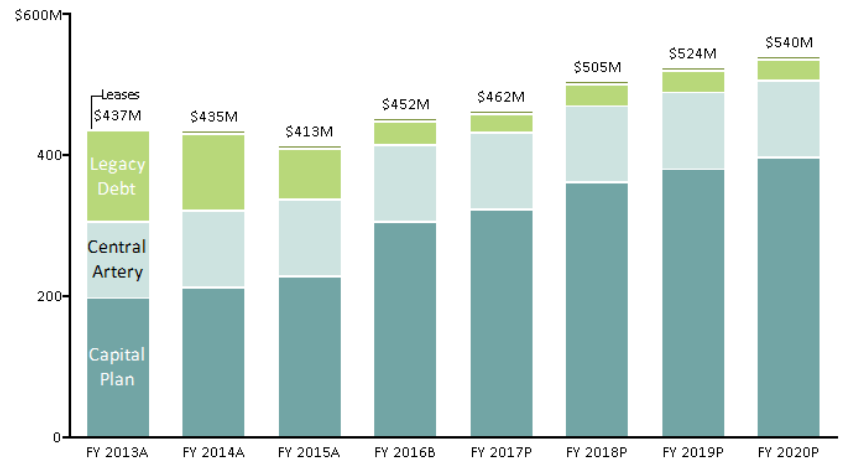
*Increase in total debt outstanding from FY 2015A to 10/31 FY 2015A is the Oct15 debt issuance

massDOT Massachusetts Department of Transportation

Of about $452 million in FY2016 debt payments, about $305 million goes to cover debt for the MBTA's own capital projects, while the rest goes to Central Artery debt (covering the financing costs of the Big Dig-related transit projects), and to "Legacy Debt" (inherited by the MBTA at the start of Forward Funding).

Debt service payments are split between debt incurred to fund capital plan, Legacy debt and Big Dig debt.

MBTA Annual Debt Service



	FY 2013A	FY 2014A	FY 2015A	FY 2016B	FY 2017P	FY 2018P	FY 2019P	FY 2020P
Legacy Debt	129	109	72	34	26	31	31	30
Central Artery	109	109	109	109	109	109	109	109
Capital Plan	197	212	228	305	323	361	380	396

CAGR FY16:FY20
0.0%
-3.0%
0.0%
6.8%

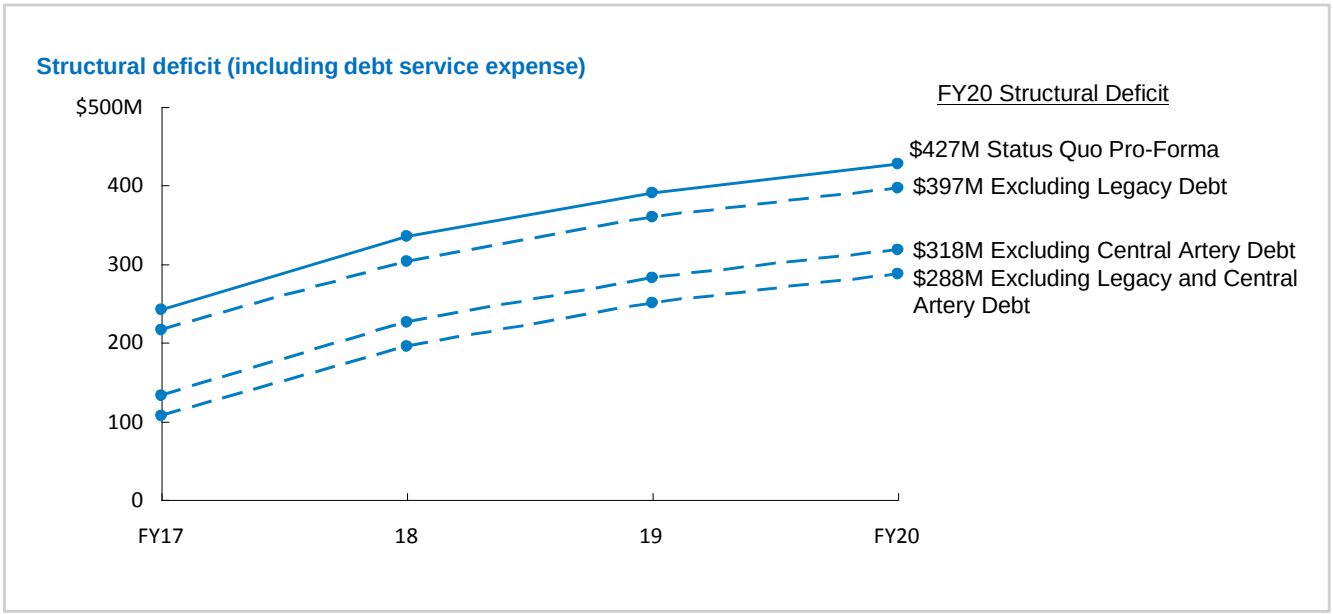
Note: Central Artery Debt refers to covering the financing costs of the Big Dig-related transit projects. Legacy Debt refers to debt inherited at the start of Forward Funding.
Source: MBTA Internal Data

The next chart shows what the FY2020 structural deficit would look like without Legacy debt, without Central Artery debt, and without both. Based on current revenue and operating expense growth projections, the structural deficit in the operating budget would reach $427 million in FY2020 but would drop to $288 million were the MBTA no longer required to cover Legacy and Big Dig debt.

FY20 structural deficit if legacy debt, central artery debt, or both legacy and central artery debt are excluded

Massachusetts Bay Transportation Authority

ILLUSTRATIVE – FOR DISCUSSION PURPOSES



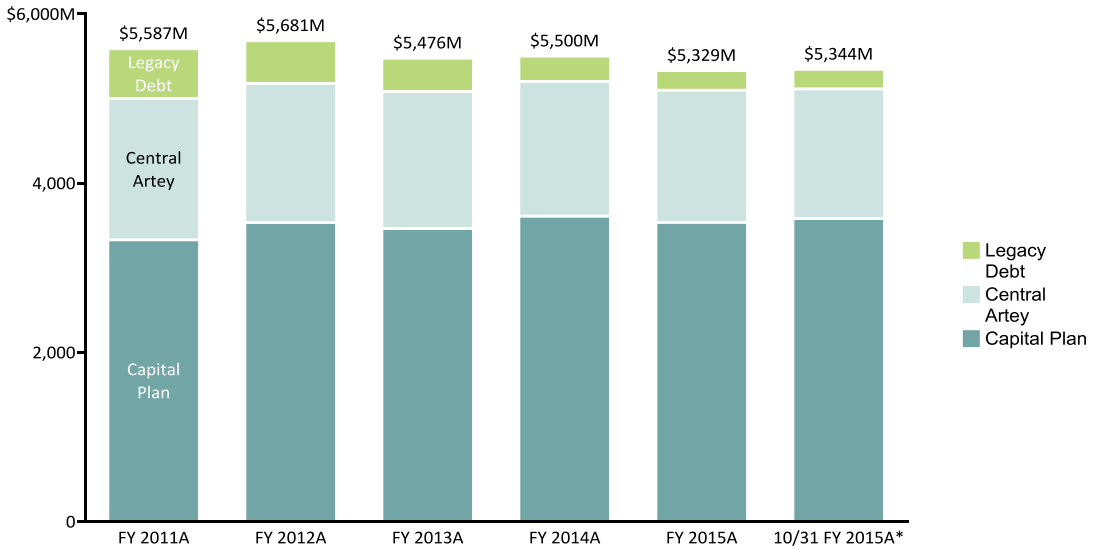
Note: Central Artery Debt refers to Financing Related to the Big Dig Project. Legacy Debt refers to debt inherited at the start of Forward Funding. FY20 Structural Deficit totals in above slide based on assumptions in the status-quo pro-forma

massDOT Massachusetts Department of Transportation

Total debt outstanding is $5.3B as of 10/31/15

Massachusetts Bay Transportation Authority

Total Debt Outstanding (including securitized parking bonds)



*Increase in total debt outstanding from FY 2015A to 10/31 FY 2015A is the Oct15 debt issuance

massDOT
Massachusetts Department of Transportation

The FMCB fully recognizes the enormous burden of this debt service load on the operating budget, which is why sustainable debt management and state assistance to help with Big Dig and legacy debt service should be examined. But at the same time, debt in itself is not a bad thing for the MBTA; it is the vehicle by which funding is obtained to meet essential capital needs, starting with SGR and on to important system improvements. In the past, the MBTA's mistake has been to take on more and more debt without setting a clear path to repay it; the FMCB will not allow that bad practice to continue.

The more the non-debt operating budget can be controlled, the better positioned the MBTA will be to either make capital investments without assuming more debt – by using operating funds now going to pay for the deficit for capital purposes – or by using that "freed up" revenue to help reduce debt service.

IV. Capital Investments

This report has already described the FMCB's intent to close the structural operating budget deficit, partly to reallocate funding that now covers operating expenses to meet pressing capital needs. And the MBTA's capital needs are many and pressing, with the top priority getting the system into a state of good repair (SGR).

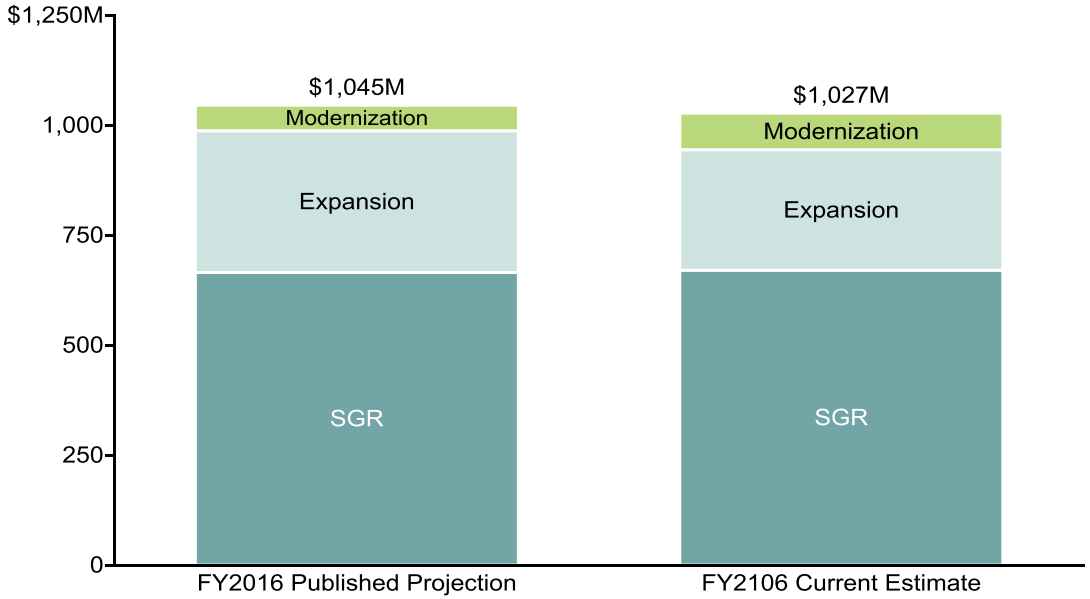
A. FY2016 Capital Spend Rate

Before discussing SGR and future capital needs, the FMCB sought to better understand the status of currently budgeted capital spending. How much revenue the system receives is partly shaped by the MBTA's ability to spend it wisely and efficiently.

The FY2016 Capital Investment Budget called for spending $1.06 billion in state of good repair, expansion and capacity and modernization improvements across the system. The following charts lay out the status of capital spending by category for the current fiscal year, which ends June 30, 2016.

The Budget Office is working with Operations, Design and Construction and Railroad Operations to monitor spending on a monthly basis. As of November, the Authority was at or near established benchmarks for spending on state of good repair projects that have been financed through existing federal grants, MBTA bonds and Commonwealth Special Obligation Bonds. Spending on expansion projects is falling below estimates for the year based on ongoing discussions about the Green Line Extension project.

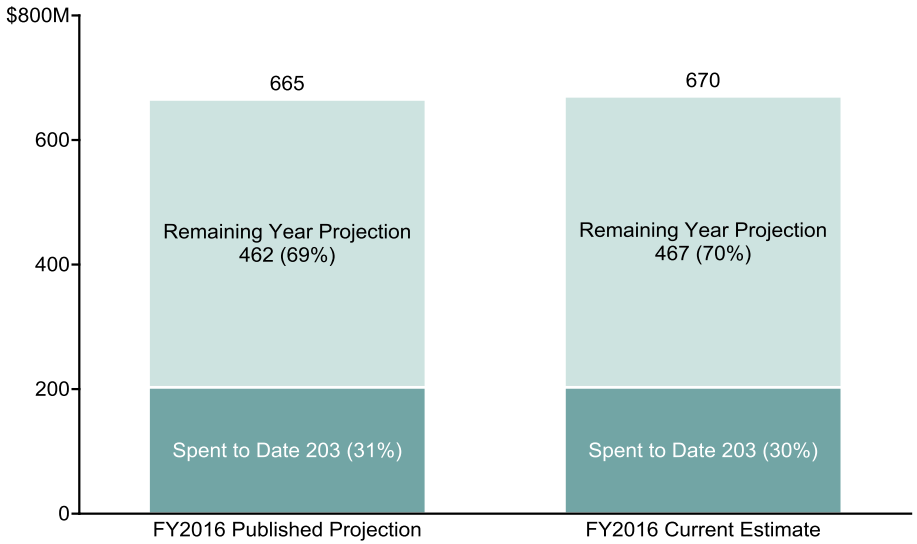
FY2016 total capital budget trends



While total capital spending is less than had been projected, SGR spending – a top priority -- is actually slightly ahead of projections.

FY2016 State of Good Repair trends

Massachusetts Bay Transportation Authority



massDOT
Massachusetts Department of Transportation

An updated assessment of capital investment plan and individual project status will be provided to the FMCB in February of 2016, the mid-point of the current fiscal year.

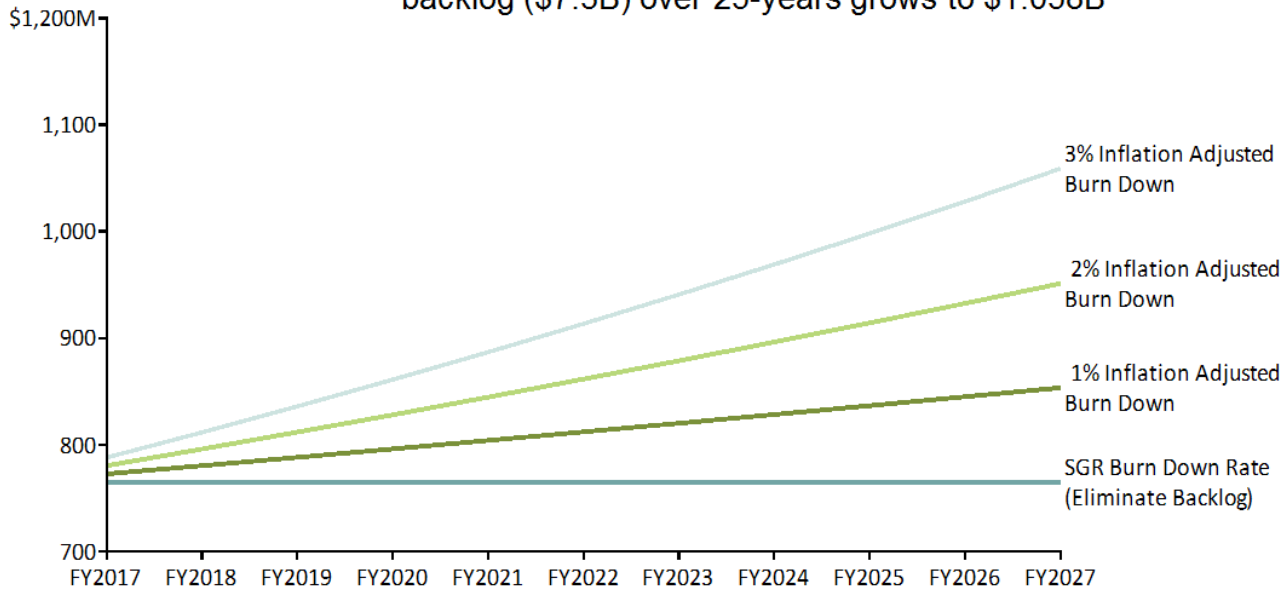
B. Adjusting State of Good Repair for Inflation

Though current SGR spending is slightly ahead of projections for FY2016, the annual cost of SGR will continue to increase due to inflation. As shown in the next chart, that same $765 million in FY2017 will cost $1.06 billion in FY2027; in 25 years, the annual SGR cost will rise to $1.47 billion, assuming annual inflation of 3 percent. The cumulative total to burn down the current $7.3 billion SGR backlog to zero over the next 25 years is $24.8 billion, in year of expenditure dollars.

$765M annual State of Good Repair target adjusted for inflation

Massachusetts Bay Transportation Authority

Adjusted for 3% inflation growth, by 2027 the $765M annual spending estimate necessary to eliminate the current backlog ($7.3B) over 25-years grows to $1.058B



massDOT

C. Progress on Transferring Employees from Capital to Operating Budget

In the past, the MBTA has used funds that should be used to meet capital needs to cover operating budget costs. The FMCB is committed to changing that practice.

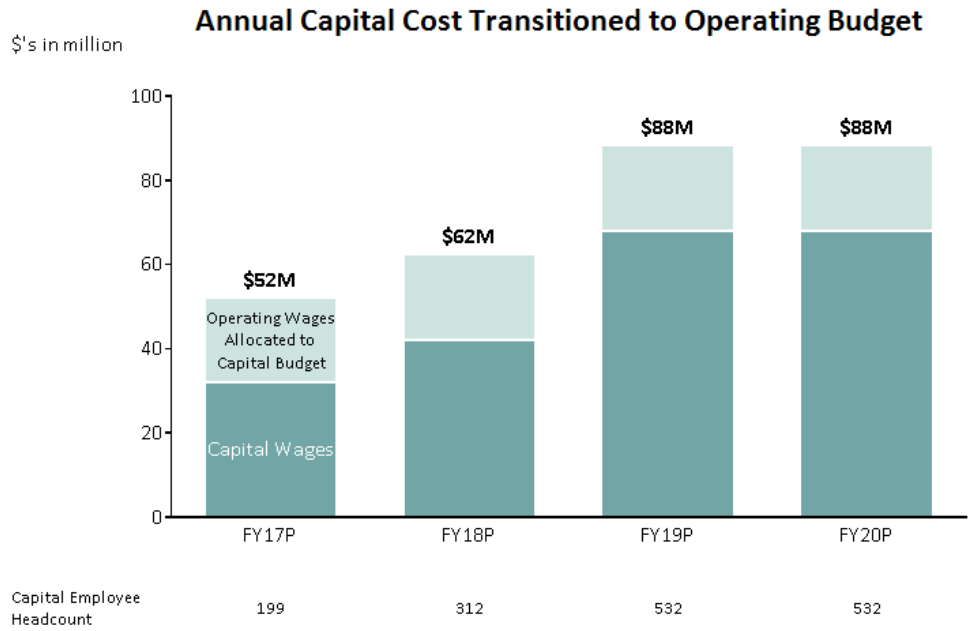
The MBTA currently has 532 employees who work on asset improvement projects and vehicle procurement for the Engineering and Maintenance, Vehicle Engineering and Design and Construction departments. Due to the character of this work, employees working on these projects have historically been charged to the capital budget. The MBTA also allocates certain salaries from the operating budget to the capital budget in instances where operating employees are working on capital projects. Funding for both of these types of employees is provided through MBTA bonds or federal grants.

Pursuant to the findings of the Governor's Special Panel, the MBTA determined that 532 employees should be transferred from the capital budget to the operating budget and that the practice of allocating operating costs to the capital budget should cease. Beginning with the FY2017 budget, the MBTA is going to transition the costs for both types of employees from the capital budget to the operating budget over a four-year period.

As shown below, this shift will add to the operating budget a projected total of $52 million in FY2017, $62 million in FY2018, $88 million in FY2019 and $88 million in FY2020.

Annual impact of the transitioning capital employee costs to the operating budget increases incrementally from $52M in FY17P to $88M in FY20P.

Massachusetts Bay Transportation Authority



massDOT Massachusetts Department of Transportation

The MBTA is reviewing all expenses to ensure that expenses are allocated correctly between the capital and operating budgets. When an expense is associated with an asset replacement or improvement, it should not be a part of annual operating expenses; rather, it should be capitalized according to generally accepted accounting principles and federal guidelines.

D. Capital Planning

MassDOT will complete a draft of its new fiscally constrained capital plan for FY2017 to FY2020 by early next year. This plan will serve as a blueprint for future investments in the statewide transportation system, including the MBTA. Rather than overlap efforts or identify particular capital projects, the FMCB will participate in the development of the results of the ongoing multi-modal transportation capital investment plan (CIP) process. The development of the next CIP is guided by the following approach:

- Develop a comprehensive universe of potential transportation investments across modes (roads, bridges, transit, bicycle, pedestrian) and types (maintenance and preservation, safety, accessibility, capacity, new service/expansion)
- Prioritize potential investments using project selection criteria that explicitly consider a broad range of potential returns on investment
- Develop a balanced portfolio of investments, focusing on high return investments and the creation of a strategic and statewide investment portfolio
- Use a range of public, private and public/private models to procure, finance and deliver the selected investments

The Legislature requires that this report update progress on "maintaining a 20-year capital plan for the restoration of physical assets." Rather than developing its own, separate 20-year capital plan, the FMCB will build upon the ongoing Program for Mass Transportation (PMT), which is developing a financially responsible, 25-year capital plan for MassDOT and the MBTA. The PMT effort is being informed by the Focus40 process, which is engaging MBTA riders, elected officials, major employers and business leaders, academic institutions, advocates, and other stakeholders in developing a financially responsible, long-term investment strategy that positions the MBTA to better serve both the region of today and the Greater Boston of 2040.

Focus40 will be a conversation about a number of critical issues, including:

- Necessary investments in state of good repair to keep the MBTA operating efficiently and safely
- The Commonwealth's financial capacity to expand the system's footprint
- The potential for transformative change on local streets through strong partnerships between the MBTA and municipalities
- The Boston Region in 2040: How shifting demographics, new technology, and climate change may all impact how the MBTA must operate in 2040.

The first phase of Focus40 was the release of the State of the System series described below. The next phase will analyze trends in demographics, mobility options, and climate change that may require the MBTA to plan and operate differently in 2040 than it does today. Focus40 will then work with the FMCB, public and stakeholders to develop and evaluate various investment scenarios to address current and future needs.

E. Capital Investment Criteria

The MBTA needs to further improve its capital project selection and management processes and efforts are underway in several areas to help the FMCB and the MBTA better assess and determine capital spending priorities and projects and to inform development of the CIP. These include:

1. Asset Management

Various state and federal laws require transit agencies to implement Asset Management Systems. In February 2014, the MBTA released and the Federal Transit Administration approved an Asset Management Plan (AMP) detailing ways to establish a common framework for MBTA decisions to acquire, maintain, renew, replace and dispose of transit assets. The purpose of such a program is to help ensure transparency and accountability while improving the decision-making processes and public trust in the system.

The MBTA has since taken additional steps, including publishing the AMP online, acquiring software to prioritize capital investments, the hiring of four asset information managers and instituting some staff training in asset management. The state of good repair data base has also been updated and revised and capital funding is being sought to initiate the asset management database and procedures.

However, the MBTA has yet to complete full asset management system staffing and must still fully populate the database and implement all procedures to have a functioning asset management program in place. The MBTA's goal is to have a fully functional Enterprise Asset Management System within two years.

2. State of the System Reports

The MBTA recently completed a series of State of the System reports that describe current MBTA assets across its bus, rapid transit, commuter rail, and ferry systems and the RIDE, as well as how the age and condition of these assets impact service and the customer experience. These reports, building upon the department's State of Good Repair database, provide the foundation for Focus40 process mentioned above. The full reports can be found at Mass.gov/massdot/focus40 .

Overall, the State of the System reports found basic deficiencies in a range of capital areas, from tracks and vehicles to power and signaling. Maintenance facilities are inadequate for all three major modes.

State of System Reports: Maintenance Facilities

Massachusetts Bay Transportation Authority

BUS

- Insufficient space to replace 40' buses with 60' buses to reduce crowding.
- Limited ability to proactively maintain vehicles as repair bays are at capacity with reactive maintenance needs.
- Lack of inside storage hinders severe weather operations

Facility	Year Built	Number of Buses	Repair Bays	Buses/ Repair Bay
Albany	1930	110	6	18
Arborway	2003	119	6	20
Cabot	1974	205	14	15
Charlestown	1979	218	12	18
Fellsway	1960	65	6	11
Lynn	1930	69	10	7
North Cambridge	1980	28	5	6
Quincy	1930	64	5	13
Southampton	2006	113	10	11

Industry practice: one repair bay for every 10 to 15 buses although most systems lack a central repair facility like Everett

COMMUTER RAIL

- South side layover capacity currently exists for 25 trainsets, below the 28 needed to effectively meet today's demand.
- The commuter rail maintenance facility's location on the north side creates logistical challenges for maintaining rolling stock, the majority of which operates on the south side.
- Many lines have either inadequate layover capacity, or have no layover facility at all.
- These issues result in an increase in non-revenue miles.

LINES WITH LAYOVER CAPACITY CONSTRAINTS

Line Terminus	Non-Revenue One-Way Trips	Early AM Outbound Scheduled Low Revenue Trips	Layover Facility	Layover Capacity (Trains)	Miles per Trip	Non-Revenue Miles	Low Revenue Miles
Lowell	6	0	Not in use	-	25	150	0
Haverhill	2	0	Bradford	4	32	64	0
Worcester	2	1	Worcester	5	44	88	44
Forge Park	2	1	Franklin	2	27	54	27
Wickford Junction	1	3	Pawtucket	-	23	23	69
Stoughton	0	2	N/A	-	19	0	38
TOTAL	13	7				379	178

RAPID TRANSIT

- Red and Orange Line facilities currently undergoing renovations to accommodate new car delivery
- Green Line facility in need of upgrades and expansion

massDOT Massachusetts Department of Transportation

This is a summary of State of the System findings for the MBTA's three major modes:

Bus

More than a third of all MBTA ridership occurs on bus routes but due to aging vehicles, inadequate maintenance facilities, and other problems, some of them beyond the MBTA's control, these 440,000 daily riders, many of them lower income and dependent upon bus service, are not receiving a level of service that meets the MBTA's own standards.

Rapid Transit

Carrying 60 percent of total MBTA ridership, the rapid transit system plays a critical role as the region's primary mover of people into Boston's central business district. But the aging system and its infrastructure are not able to fully meet current, let alone future, needs of its customers for reliability, efficiency, and carrying capacity.

Commuter rail

The MBTA and Keolis Commuter Services, the contractor who operates commuter rail, have taken steps to resolve delays and other operational problems that were exacerbated during the winter of 2015. But aging track and signal infrastructure and inadequate maintenance and layover facilities limit current capacity and future growth.

3. Project Selection Advisory Council (PSAC)

The PSAC was created as part of the 2013 Transportation Finance Act. The Council is charged with developing uniform project selection criteria for comprehensive state transportation plans, including the five-year capital investment plan, as well as a project prioritization formula or other data-driven process that includes assessments of engineering requirements, condition of existing assets, safety considerations, economic impact, regional priorities and anticipated project costs.

The Council has established the following criteria to guide the development of the FY2017-FY2020 CIP.

Since the release of the Council's recommendations, a stakeholder committee has been established to assist with the implementation of the project prioritization formula. Focus areas for the committee include regional equity, data issues, and assessing lessons learned to date. MassDOT and the MBTA are also collaborating with other state agencies to further refine environmental and economic impact criteria. The next steps for PSAC is the finalization of project selection criteria and scoring guidance to assure that the five-year CIP aligns with the recommendations outlined in the PSAC report.

The CIP and other capital project development is also being guided by findings and recommendations gathered from the public in a series of *Capital Conversations* conducted by MassDOT across the state this past fall.

4. Improving Capital Investment Planning

Though MassDOT and the MBTA spend billions of dollars annually in capital investments, together representing about half of the capital budget of the Commonwealth, they lack a comprehensive, data-driven, agency-wide capital planning process that benefits from both internal and external buy-in. This creates a situation in which both the transportation agencies themselves and key stakeholders lack confidence that the capital planning process is effectively prioritizing the most urgent and most beneficial transportation investments, and is doing so in an equitable and transparent way. The condition of the Commonwealth's transportation assets varies widely but they are key to the economic health and quality of life of Massachusetts.

The MBTA is partnering with MassDOT, the Executive Office for Administration and Finance, and others on a six-month, comprehensive review and redesign of the capital planning and budgeting process for transportation. This redesign will focus on improving how transportation system goals are identified and explained and on how proposed transportation projects align with these goals, including refinement of the PSAC scoring method.

The goal is to embed a new capital planning process into the regular operation of the transportation agencies further refine that process to better coordinate across the transportation agencies and with stakeholders.

F. FMCB Capital Investment Priorities

While the FMCB believes that processes such as the above will help improve MBTA capital investment criteria and decision making, it is also charged to include in this report steps toward "maintaining a priority list of immediate capital needs for the next 5 years" as well as progress toward "maintaining a 20-year capital plan for the restoration of physical assets."

1. Top Priority: State of Good Repair

Above all else, the FMCB believes the MBTA's top capital priority is to maintain SGR annual spending at the $765 million necessary to reduce the SGR backlog to zero within 25 years. While the upcoming FY2017-FY2020 CIP will outline SGR particular projects, the FMCB sees several SGR spending priorities, including:

- Address high need SGR issues that threaten to become acute safety concerns, especially over the next two years.
- Address lower need SGR safety issues can be accomplished as a complement to those projects at a lower cost or more rapidly
- Fund groups of complementary SGR projects that can be accomplished at lower costs and/or faster implementation through the clustered/FASTTRACK/large-scale diversion approach
- Fund SGR projects that are believed to provide the greatest lifecycle benefit/cost return, with a specific emphasis on those areas with the lowest SGR scores
- Fund SGR projects that increase system reliability

2. Analyzing Proposals for System Expansion and Capacity

The Legislature directed the FMCB to conduct "thorough reviews and analyses of all proposals for system expansion." To that end, the current status of the Green Line Extension project (GLX) provides several instructive lessons.
When the GLX price estimate exploded by a billion dollars earlier this year, the FMCB and MBTA froze any new work and commissioned a series of studies to review and analyze what happened and to fully share that information with the public.
The findings of this look-back effort were disturbing, revealing across-the-board failures. The MBTA's internal staff was not properly prepared to properly oversee the project and the situation worsened as the staff pursued policies that called for meeting a schedule at all costs. This must be corrected.
As a result of the Look Back and other studies as well as its own review of how the GLX project has been handled, the FMCB took several actions at its December 9 meeting:

- The FMCB made changes in the MBTA's management of the project.
- The FMCB acted to end several construction and professional service contracts.
- The FMCB launched a search for an outside GLX project manager.

Then, on December 14, the FMCB and MassDOT Board jointly and unanimously passed a resolution that the GLX project should proceed only subject to the following conditions:

- Value engineering and redesign will be undertaken to substantially reduce the cost of delivering the project while maintaining its core functionality;
- The FMCB acted to take approval for GLX-related contracts from the General Manager and into the hands of the Board;
- A new procurement strategy will be developed and presented to both Boards that will ensure that a reliable cost estimate, viable cost reduction strategies and appropriate risk allocation will be incorporated into the GLX project going forward;
- New project management [which will report regularly to the FMCB] will be put in place both within the MBTA and for needed outside professional services contracts.

The resolution continued, “Additional funding beyond that previously approved by the MassDOT Board for this project will need to be obtained from other sources such as the Boston Metropolitan Planning Organization, and the municipalities, landowners and developers benefitting from the project. Additional Commonwealth funding shall be limited to requirements set forth by federal requirements only.”

While these actions were specific to GLX, the FMCB intends to apply the lessons learned more broadly. The FMCB’s goal is to establish clear accountability throughout the organization on all projects. The FMCB will be reviewing all major expansion and high-value capital projects with great scrutiny.

In addition to expansion, the MBTA also considers proposal to modernize and improve current capacity. Additional capacity can be created through several means. These include the purchase of additional vehicles and rolling stock (to allow shorter headways) and related signals and equipment. The cost-benefits of creating additional capacity should be weighed in light of current and projected demand. In addition, situations where an incremental investment (above and beyond planned state of good repair investments) would expand capacity should be carefully reviewed to determine where investments will provide significant improvements in service to customers.

Whether for GLX or other expansion proposals, the MBTA must develop the ability to deliver accurate budgetary projections at the planning stage of projects. The ongoing pattern of early low estimates that balloon later in the process serves to distort the planning process, damages the MBTA's credibility with the public, and reduces needed spending on maintenance. The MBTA must also develop an effective process to manage construction projects. The current assessments of GLX suggest that the MBTA's internal capacity was insufficient and that outside managers did not receive rigorous oversight.

The GLX experience also show the importance of management measures in the MBTA’s planning and procurement process to ensure the reliability of cost projections. In addition, GLX and any future expansion projects should have finance plans that begin with first-dollar commitments from local and regional entities, with a specific focus on value-capture approaches.

As was made clear in both the FMCB’s own action and in the Dec. 14 joint resolution, for GLX to proceed, a combination of revisions in the project design and procurement process should occur. These revisions must be result in a project budget that utilizes the current state and federal funding commitment levels contained in the January 2015 budget in order for the project to remain viable. Additive contributions from local entities and the private sector should be sought and may contribute to the project budget.

Future expansion should be held to a rigorous standard of examination across multiple dimensions, including projected ridership, analysis of full life-cycle costs, cost-benefit, and cost per passenger. Finally, the MBTA should limit its participation in any expansion projects to a level that allows it to fully fund State of Good Repair commitments in current and future years.

This need for greater accountability, transparency and efficiency extends well beyond major capital investments. It extends to all MBTA operations, including procurement and contracting practices.

3. Non-SGR Capital Investment Priorities

Because of the priority need to continue funding SGR, difficult choices must be made about other areas of capital investment. However, as it considers both the five-year and longer term capital planning, the FMCB will target these priority concerns:

- Acute safety concerns
  The MBTA must meet mandates for Positive Train Control. It must also make investments in Green Line collision avoidance.
- Modernization and capacity
  The MBTA must continue to invest in necessary infrastructure and other improvements that will boost both ridership and improve the rider experience. For example, the MBTA must have sufficient signalizing and other systems in place so that the new Red and Orange Line cars coming on line in the next few years will operate safely and as intended. The system must also add capacity to high-volume routes and heavily congested areas that limit throughput.
- Accessibility
  The MBTA must address acute accessibility concerns. It should also put the system on a trajectory to address accessibility concerns in the core system within a specific time frame.

As noted earlier, the FMCB will incorporate these priorities as it reviews both the upcoming five-year CIP and the ongoing PMT process. The hard reality, however, is that not enough resources exist to meet all these important but competing needs. As is true with the operating budget, tough choices have to be made.

V. Improving MBTA Operations

A. Workforce Absenteeism and Productivity Actions

The FMCB is charged with addressing a range of workforce issues, including productivity improvements and reductions in employee absenteeism that impair the operational and financial performance of the MBTA and can adversely impact the experience of the riding public. Though much work remains to be done, progress can be reported in several areas identified by the FMCB.

1. Reducing Absenteeism

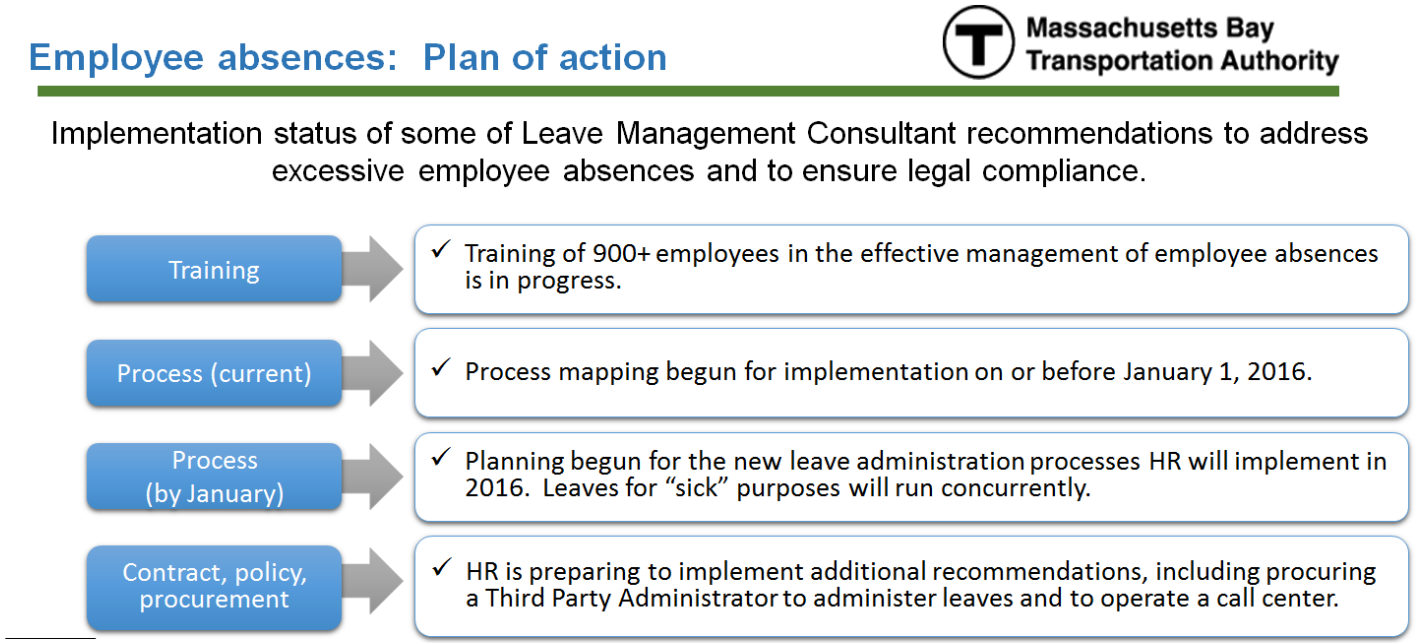
Several steps have been taken to improve the MBTA's management of employee absences, particularly unscheduled absences, which result in dropped trips and increased overtime. Of the $53 million spent on overtime in FY2015, $11 million was caused by the need to cover vacant positions and unscheduled absences.

The MBTA has begun an FMLA audit of the nearly 2000 MBTA employees currently approved for FMLA. The scope will include evaluating all approved FMLA leaves with respect to:

- Employee eligibility
- Adequacy of medical documentation
- Expiration or exhaustion of approved leave
- Usage in excess of approved frequency and duration
- Need for medical recertification
- Determining the number of employee absences which were coded FMLA where the employee did not have an approved FMLA leave

The Leave Management Consultant has identified disjointed personnel procedures and practices that were unclear and difficult to track and may have been inconsistent with collective bargaining agreements and standard leave policies. To remedy this, the MBTA has begun to implement the 21 recommendations made by the Leave Management Consultant regarding the MBTA's management of employee absences. Other steps include:

- Hired a Leave Manager and augmented the Leave Unit with temporary contract staff
- Trained more than 300 MBTA staff in the effective management of employee absences
- Developed the scope of a Request for Proposals for a Third Party Administrator to assist in the management of employee absences through the use of a call center and automated administration of leaves



2. Improving Workforce Productivity

MBTA management continues to meet with MBTA employee unions and other stakeholders to identify and resolve productivity and other issues. MBTA staff has also conducted informal meetings with employees and visited various worksites to develop a list of initiatives which may yield savings and improve productivity. Discussions are continuing on a range of possible initiatives, including:

- Converting part-time employees to full-time
- Improving the utilization of part-time hours
- Changing the trigger for overtime earning
- Increasing budgeted headcount to fully cover vacations, holidays, and paid sick time

3. Filling Vacancies and Reducing Time to Hire

The MBTA has taken several steps to meet its goal of maintaining full staffing levels, as well as to meet the hiring needs of the MBTA for both current and future needs. This is especially urgent in the face of looming retirements among MBTA employees, especially in mid-level management. A recruitment manager has been hired to perform shared recruiting services and implement best practices and additional staffing unit personnel have been re-deployed.

Plans are being implemented to accelerate hiring processes, with a goal to reduce “time to hire” from the current range of 108 to 284 days to approximately 100 days, assuming hiring backlog is reduced, for the four slowest of its six hiring methods (lottery, union referral, seniority, and selection process), which accounted for the majority of FY2015 hiring.

Time to hire comparison

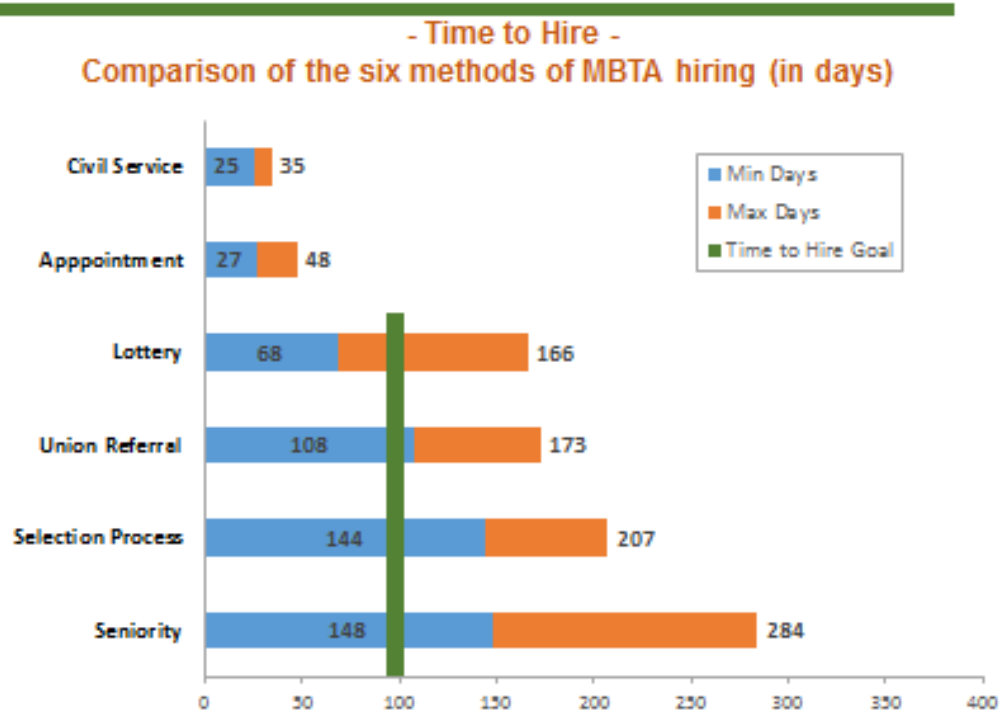
Massachusetts Bay Transportation Authority

Time to Hire: Currently over 100 days for four methods of hiring.

Time to Hire Goal : <100 days

Achieved by:

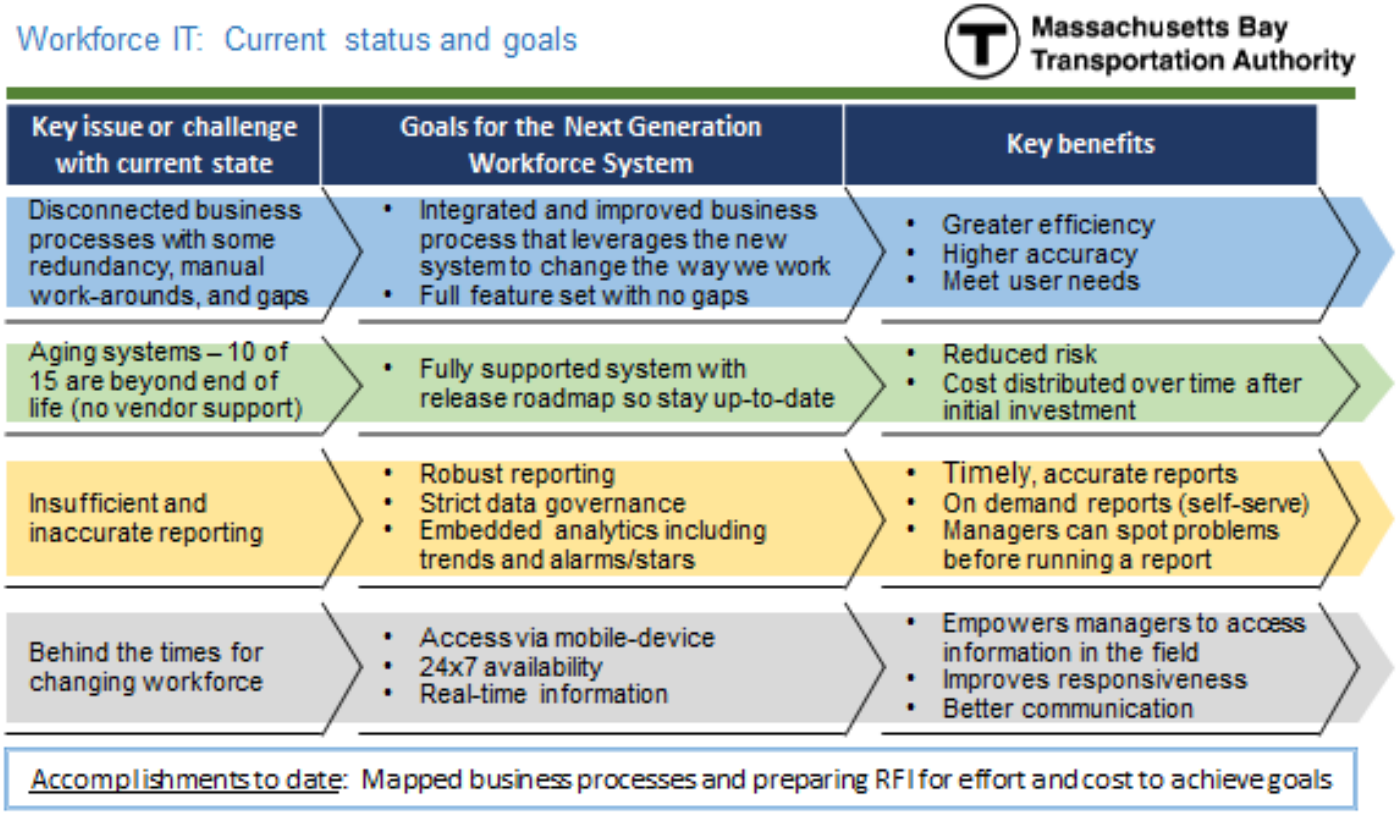
- Reviewing backlog of 180 open requisitions in light of 5% cut for FY17
- Eliminating redundant steps
- Adding personnel in staffing unit
- Partnering staffing group with assigned business units
- Setting and applying requisition response times
- Further potential improvement by updating to a better applicant tracking data system



4. Need to Upgrade HR Technology

Even as these efforts continue, the MBTA must upgrade its antiquated human resources technology. The Authority currently has 15 separate human capital management software systems, 10 of which are no longer supported by the software's developers. The systems are generally not integrated and do not link to a common data source.

A roadmap of HR's business technology needs is being developed and an RFI is being prepared to determine costs and timeline to achieve necessary IT goals.



In the meantime, to support more effective management of employee absences, an improved workforce database has been developed to permit users access to data on FMLA and Earned Sick Time. The existing attendance monitoring software is being modified to support the new attendance policy, which goes into effect on January 1, 2016.

B. Internal reorganization

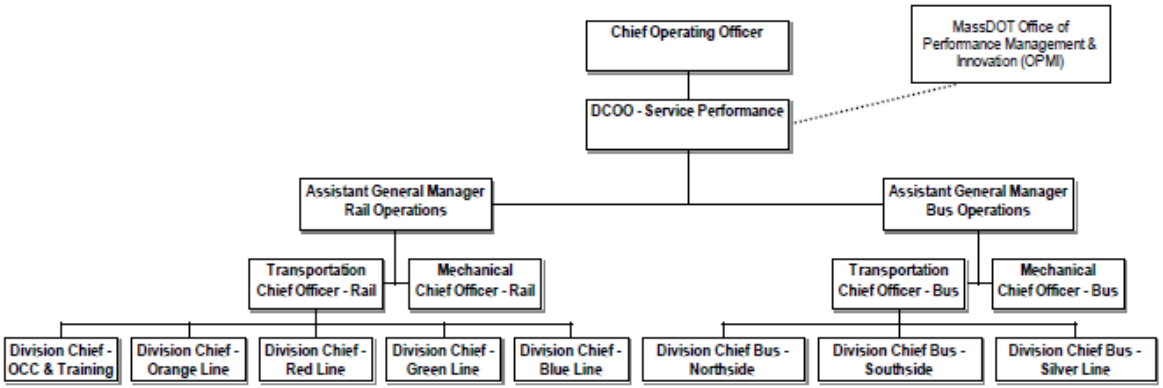
The Legislature asked that this annual report update progress on "reorganizing [the MBTA's] internal structure along modal business lines." The FMCB has worked with senior MBTA management to develop a much more efficient management structure, one that establishes much clearer lines of responsibility and accountability within each of the system's major modes.

Under the MBTA's prior organizational structure, operations within each major mode -- commuter rail, transit, and bus – were, at times, uncoordinated, allowing problems to either be neglected or to fall between the cracks. The new structure establishes a mode-based system, with eight division chiefs fully responsible for the customer experience along their entire mode, line, or route (Red Line, Blue Line, north side buses, south side buses, etc.). Each division chief will oversee all operation along their respective lines that impact and influence the customer experience. This ranges from monitoring station conditions and on-time performance to customer communications.

The MBTA hopes to have all eight division chiefs in place by the end of the first quarter of calendar 2016.

Service Performance Organizational Structure

Massachusetts Bay Transportation Authority



Service Performance Key Points

- Modal Structure for Bus and Rail
- Service Performance streamlines accountability
- Close coordination with MassDOT OPMI
- Continuous review of daily, weekly and monthly KPIs
- Division Chiefs to be directly responsible for enhanced customer experience

massDOT
Massachusetts Department of Transportation

Another important component of the MBTA's ongoing organizational restructuring is a greater focus on "succession planning." This involves giving current employees exposure to different disciplines so that they more well-rounded and more capable of taking on roles with greater responsibility. With nearly half of all operations senior managers at the MBTA eligible to retire within the next three years, it is critical that the MBTA do more to mentor and develop its next generation of managers.

C. Provisioning of Services

Centralizing and Improving Procurement Practices

The FMCB can state progress on the legislative mandate that it report on "centralizing authority procurement and contracting, implementing best procurement and contracting practices" and "reducing barriers to public-private partnerships." This progress can be reported as specific provisioning proposals as well as efforts to implement more systemic improvements in MBTA procurement procedures and practices.

In the past, different departments within the MBTA tended to handle their own contracting and procurement, with little central coordination and oversight. These contract decisions were often driven mainly by schedule, not necessarily by cost or long-term quality of the product or service being offered. The MBTA is now working to make fundamental changes to that former approach:

- All contracts (excluding, for now, Design and Construction) will now be developed and awarded through the central procurement office.
- All major contracts will be managed by cross-functional teams, involving the appropriate technical, safety, procurement and business groups.
- While schedule will remain an important factor in contract decisions, it will no longer be the sole or primary determinant. All procurements will manage tradeoffs between time, lifecycle cost, and risk management. Contracts will be awarded to best-value suppliers as determined by analytic cross-functional evaluation.
- Procurement will monitor contractor and supplier performance over the life of contracts.

This new procurement approach is already being applied to upcoming major contracts, such as Green Line Automated Train Protection and Positive Train Control.

It is also being applied in more basic, ongoing MBTA contracts. As a practical example, under the MBTA's former way of doing business, often bus mufflers were often ordered sporadically and in as-needed-now quantities. This was burdensome both for operations and for procurement. At times, it led to unanticipated shortages that could cause the loss of revenue service and customer inconvenience. Now, however, the MBTA is shifting to order parts using long-term contracts, leading to a more reliable and cost-efficient supply.

Contract Provisioning and Public-Private Partnerships

The Legislature instructed the FMCB to report progress on "reducing barriers to public-private partnerships." To that end, the FMCB is actively exploring opportunities to partner with outside firms in the provisioning of services. The FMCB has already issued or is in process of issuing Requests for Information (RFIs) for alternative service delivery models, corporate card program, Charlie Store, web advertising, cleaning contracts, advertising contracts, and absenteeism/leave management.

Working with MBTA management, the FMCB has identified numerous areas of possible engagement with private partners. The FMCB has not acted on all items below, and it may not choose to pursue them. However, the FMCB is obligated to consider all areas of opportunity, which include but are not limited to:

- **Information Technology and Communications**
  Provisioning opportunities here range from software and support, help desk, telecommunications services management (such as mobile and voice communications) and security administration.

- **Procurement**
  Possible provisioning opportunities include RFI/RFP development and process management, major procurement management (such as fleet and revenue vehicles, and capital construction), and contract and vendor management.

- **Environmental**
  Possibilities include safety and data reporting, environmental compliance management, inspection and reporting, remediation planning and program development and management.

- **Human Resources**
  Hiring process and benefits administration are potential provisioning areas.

- **Finance**
  Partners could be found for budget planning and reporting, back-office payroll, money room, revenue collection, and other operations.

- **Customer Service, Marketing and Advertising**
  This includes the MBTA call center, and the web and in-station advertising program.

The FMCB has not yet developed a formal strategy or implementation plan to utilize the provisioning power granted by the Legislature. It has set a goal to develop such a strategy and implementation plan by the end of the first quarter of 2016. The MBTA is also working to reduce barriers to public-private partnerships by expanding both the number and range of services and firms with which it works.

VI. Conclusion

In its first report to the Legislature last September, the FMCB offered a sobering assessment that underlying MBTA's problems at the MBTA "are even more deep-seated and serious" than the Governor's Special Panel to Review the MBTA had been able to uncover. This report expands upon that analytic baseline, but it also begins to scope out the path forward for the FMCB to confront and resolve these problems, some of which have been building for decades.

Winter will be an immediate operational test for the MBTA. But the FMCB faces its own test in the year ahead as it undertakes a series of fiscal, operational, and managerial actions. High on the list is decisive action to reduce and then eliminate the MBTA's structural operating budget deficit through a combination of cost containment and increased own-source revenues. Unchecked, the deficit will keep expanding. Closing it as much and as quickly as possible will accomplish two critical goals. First, it will help restore public confidence in the MBTA's ability to properly manage funding it receives from taxpayers and MBTA users. Second, rather than all going to reduce operating budget deficits, annual funding from the Legislature can be much more effectively used to help meet SGR and other critical capital needs.

The burden is on the FMCB to close the MBTA structural operating deficit and that will be a top FMCB priority between now and the next annual report. But even if the operating budget deficit is brought under control, the MBTA's much greater capital investment needs will remain. The MBTA must increase its capital spending to bring the current system into a state of good repair, to meet critical safety and accessibility goals, and to improve system capacity. The FMCB is doing what it must to end the structural operating budget deficit, but the capital challenge is one the FMCB cannot achieve alone.

In both the operating and capital areas, a top FMCB goal for the next year will be to improve delivery systems throughout the MBTA so that both the Board and the public can be sure that rider and taxpayer dollars are being used wisely and efficiently. The FMCB will want every MBTA department to set a series of five- and ten-year goals toward which each department shall move in their annual operating strategies. By doing so, the FMCB will develop a clearer sense of the MBTA's capital needs over the next 20 years, beyond achieving SGR.

For most of its first five months of existence, the FMCB faced the enormous task of grappling with the range and complexity of issues facing the MBTA. The Board has also had to react to immediate needs and unforeseen events, such as the Green Line Extension. In short, the FMCB has had to spend much of 2015 playing defense. In 2016, it will go on offense.