



MBTA Fiscal and Management Control Board

Fourth Annual Report

December 17, 2018

Joseph Aiello, Chair

Brian Lang

Brian Shortsleeve

Monica Tibbits-Nutt



MBTA Fiscal and Management Control Board

December 17, 2018

Members of the General Court:

The FMCB's charge is to oversee and improve the finances, management, and operations of the MBTA. This document fulfills the requirements of Section 207 of Chapter 46 of the Acts of 2015 specifying that the MBTA 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."

Just two months into this Board's existence, our first official filing to the Legislature made clear the daunting task ahead. "[We face] a series of tough choices as we consider options to bring the MBTA's operations and assets up to the level that is expected and deserved by its riders, employees, and the tax-paying public," said that Sept. 22, 2015, report. The FMCB will need to "make decisions in the months ahead that will be unpopular, even painful." The MBTA's collapse during the winter of 2015 forced such tough reckoning. We soon came to understand that the MBTA's problems were even worse than had been thought. Not nearly enough was being spent to prevent further decay of the system's aging infrastructure, let alone modernize it. The MBTA was losing critical talent and labor-management relations were poor. Huge operating budget deficits were an accepted fact of life. Even worse,

much of the public, including MBTA customers and other stakeholders, had little faith that the T could ever be “fixed.”

More than three years, 150 public meetings and a myriad of actions later, we can report that many of those dire challenges revealed in 2015 have been addressed. Much more must be done and it will take time for customers to more fully experience system improvements, but although the FMCB shares the frustration over the pace of change and the often disappointing customer experience, the Authority’s operational, fiscal, and managerial progress is real and meaningful. Steve Poftak, who becomes General Manager next month, will lead a team of dedicated MBTA employees and managers who are already helping the MBTA innovate and invest in its systems, workforce, and operations to secure a more resilient, reliable, and sustainable future:

- Ballooning operating budget deficits have been controlled, allowing hundreds of millions of dollars in what has been operating budget support to instead be spent on “pay-go” capital projects. Fare and taxpayer money is treated with diligence and care;
- Own-source revenues have increased from \$30 million in FY15 to a forecast \$90 million in FY19 through an aggressive strategy to fully monetize advertising, parking and real estate assets;
- Since 2015, the amount of money being invested to repair, upgrade, and modernize the system has more than tripled and the MBTA is on the way to its five-year goal of investing \$8.1 billion, including \$6.7 billion in State of Good Repair spending, into the system and daily commutes will get much better in the near future;

- The MBTA has been able to add new service while seeking to improve existing service :
 - The Green Line Extension, nearly buried by cost overruns just three years ago, is under construction and South Coast Rail has gone from promise to first phase implementation by MassDOT;
 - The MBTA has introduced additional late night and overnight bus service;
 - Entire new fleets of Orange and Red Line cars are on the way and train service will become faster and more reliable;
 - Since 2014, the MBTA has purchased 436 new buses, which now represents about 43 percent of the rolling fleet, and another 200 new buses are on the way;
 - Dedicated bus lane pilot programs have been successfully launched;
 - Commuter rail is now operating 10,000 more scheduled trips a year than it was in 2014.
- From steps to improve bus performance to smarter and better ways to communicate to a transformative Automated Fare Collection system, the Authority is focused on directly improving the customer experience;
- New talent is being recruited to help the MBTA innovate for a new era;
- The MBTA successfully re-negotiated labor agreements with its largest unions, setting the stage for a more cooperative relationship going forward in order to meet shared goals for the Authority.

As important as what the MBTA is achieving is how it is doing so. The FMCB and MBTA management will continue to act with full transparency. We want riders and other stakeholders to fully understand the Authority's challenges and the steps being taken to meet them.

To be clear: We know that delays, inconvenience, and unreliable service remain too frequent. We may know how far the system has come since 2015, but customers don't yet consistently feel that progress. That reality will change as major improvements already in place or imminent, including entire new fleets of Red and Orange Line cars and better bus service, come on line, delivering better capacity and more reliable commutes. More than any words in a

report, only better performance will convince riders, those we have and others we must either attract or win back, that the MBTA really is better. That is especially true with a possible fare increase on next year's FMCB agenda.

The transformation of the MBTA has been steady, if not as fast as we and many stakeholders would like. The lag time between identifying systemic problems and correcting them in a century-old system as big and complex as the MBTA can be frustratingly long. But when problems emerge or progress falters, we will continue to be been transparent about acknowledging them. And corrective steps, even very difficult ones, will be taken.

This Board is determined to maintain and accelerate customer-facing progress. We believe the MBTA has now moved beyond just fixing things. The years ahead will be about solidifying the fiscal and operational gains we have made and accelerating investments that directly improve service.

The MBTA must:

- **Maintain fiscal discipline:** The Authority faces a range of upward pressures on its operating budget, including escalating pension costs, rising interest rates, and a new commuter rail contract. And expanded services, from GLX to additional bus drivers and cutting Red Line headways in half, necessarily mean higher annual operating expenses. As it develops annual operating budgets, the Authority must calculate and budget for delivering new or improved service;
- **Expand and accelerate the investment pipeline:** Now as in 2015, our greatest challenge is to improve how much, how quickly, and how effectively the MBTA invests in reliability and modernization. The MBTA already has the \$8 billion it needs for the capital projects identified in the MBTA's five-year Capital Investment Plan. Now the Authority must be sure that it has the institutional capacity to fully utilize those funds to achieve those investments and begin to plan for the resources to finish the 15-year mission underway;

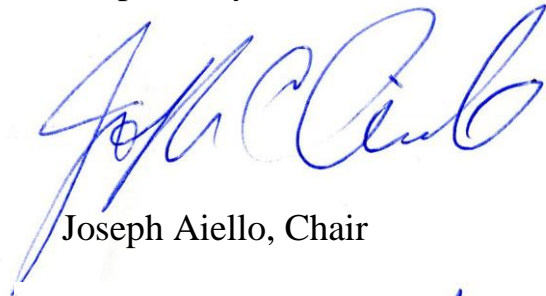
- **Attract and retain talent:** The MBTA's single most valuable asset is the dedicated workforce that keeps the system operating every day. The Authority must give its workforce the training and other resources it needs to succeed. The MBTA must also be able to attract the top management talent it will need to respond to fast-evolving climate, economic, and technological changes;
- **Improve system reliability and the customers' experience:** We expect 2019 to be a turning point during which customers see results from the last three years of effort, including new Green and Orange Line cars in service and improvements through the Better Bus Project. .

If last year's FMCB Annual Report found that "the groundwork is in place for a much better [MBTA] future," we can report this year that the building blocks for a completely different MBTA within five years are now rising upon that foundation.

This globally premier region needs and deserves a globally premier transit system. Such a lofty goal may have seemed unfathomable when we began in 2015. But back then, it was also unfathomable that the MBTA could handle severe winter weather and the massive crowds of a Super Bowl or World Series celebration with relatively few problems or complaints. The MBTA must to continue to deliver more positive results, not more bad headlines.

A world-class MBTA has always been essential to the people, economy, and communities of Massachusetts. More than ever, we are confident that with continued investment and focus, that goal can be achieved today.

Respectfully submitted, *



Joseph Aiello, Chair



Monica Tibbits-Nutt



Brian Shortsleeve



Brian Lang

*Steve Poftak served on the FMCB from its inception in 2015 until just before the submission of this report, when he was named MBTA General Manager. Steve's service and contributions to the FMCB were invaluable and we look forward to further collaboration in his new role.

Table of Contents

I. Fiscal Sustainability	9
A. Own-Source Revenues, Other than Fares	16
Advertising.....	18
Parking	19
Real Estate	19
B. Own-Source Revenues, Fares	20
C. Transferring Employees from Capital to Operating Budget.....	22
D. Fiscal Challenges Ahead.....	23
III. Infrastructure	24
A. FY19-23 Capital Investment Plan	28
B. Executing the Capital Program	30
C. Asset Management	30
D. Update on Key Projects.....	31
IV. Customers	36
B. Better Bus Project	42
C. Resiliency, Planning, and Preparedness.....	43
Winter Preparedness	43
D. Other Extreme Weather Events and Impacts of Climate Change	45
Incident Response	46
A. Workforce.....	51
Recruiting: Reducing Time to Hire and Critical Talent Hires	51

Absenteeism, Leaves Management and Overtime Management	53
Compensation	57
Performance Management: Pay for Performance.....	57
Succession Planning:	57
B. Improving procurement and contracting.....	58
VI. Conclusion: Future MBTA Governance.....	62

I. Fiscal Sustainability

Looking Back: From The Governor's Special Panel Report of 2015:

- Key Finding: “Due to a severe imbalance between costs and revenues, the MBTA would be insolvent if not for continuing and increasing Commonwealth subsidies.”
- Key recommendation: Prepare operating plans “that rely primarily on own-source revenue and cost containment to balance the agency’s budget.”

Since Then:

Though serious fiscal challenges remain, the Authority has made consistent progress controlling operating costs and growing revenues:

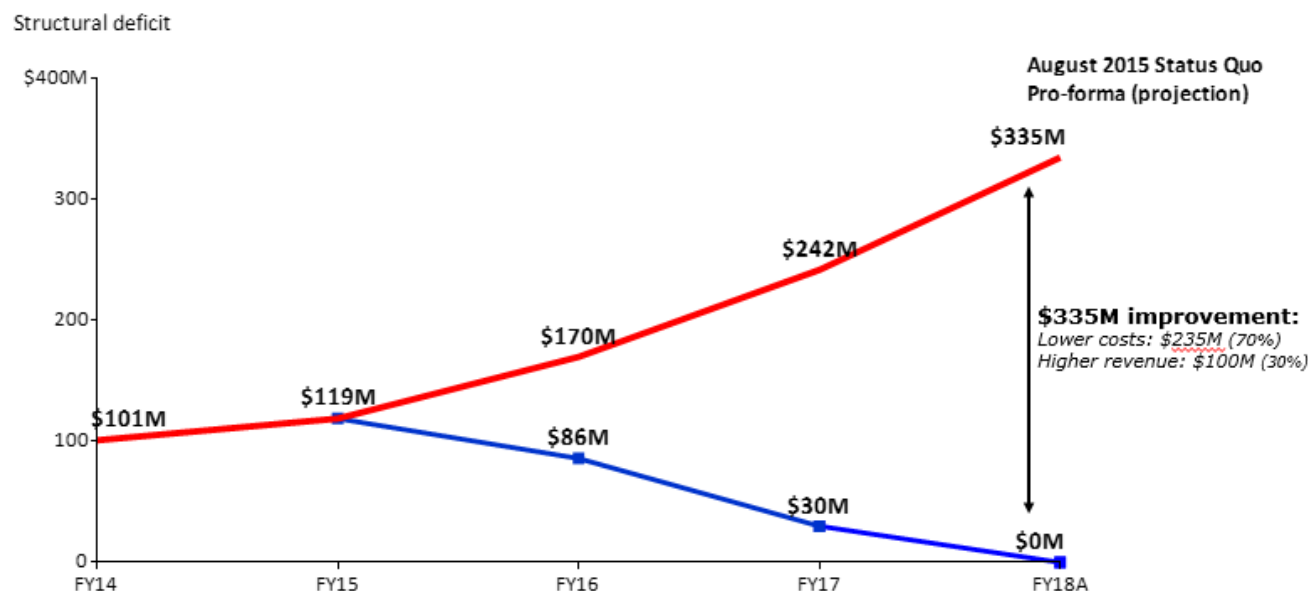
- For the first time in a decade, the Authority balanced its operating budget in FY18;
- The MBTA avoided an FY18 structural deficit that had been projected to reach \$335 million in the status-quo pro forma;
- Between FY00 and FY15, the average annual growth rate of operating expenses was 5 percent. By contrast, the average annual operating expense growth rate between FY16 to FY18 was flat, aligning with the FMCB goal that expense growth remain at or below the rate of revenue growth;
- While own-source revenues other than fares declined by an average of 1 percent annually between FY05 and FY15, they have grown by 28 percent annually between FY16 and FY18. The Authority expects to hit the MBTA Strategic Plan’s target of \$100 million in annual own-source before FY21;
- MBTA debt service has been reduced by refunding transactions, new credit facilities and federal loans. The Authority secured financing for the Positive Train Control project with the first-ever TIFIA/RRIF joint federal commitment and locked in a low long-term borrowing rate;

- The Authority brought innovation to debt issuance as well, selling the first ever tax-exempt Sustainability Bond, a feat that won Bond Buyer's Northeast Deal of the Year;
- Landmark labor agreements with the MBTA's two largest unions have reduced future operating costs by \$100 million over ten years.

Major Progress toward Fiscal Stability

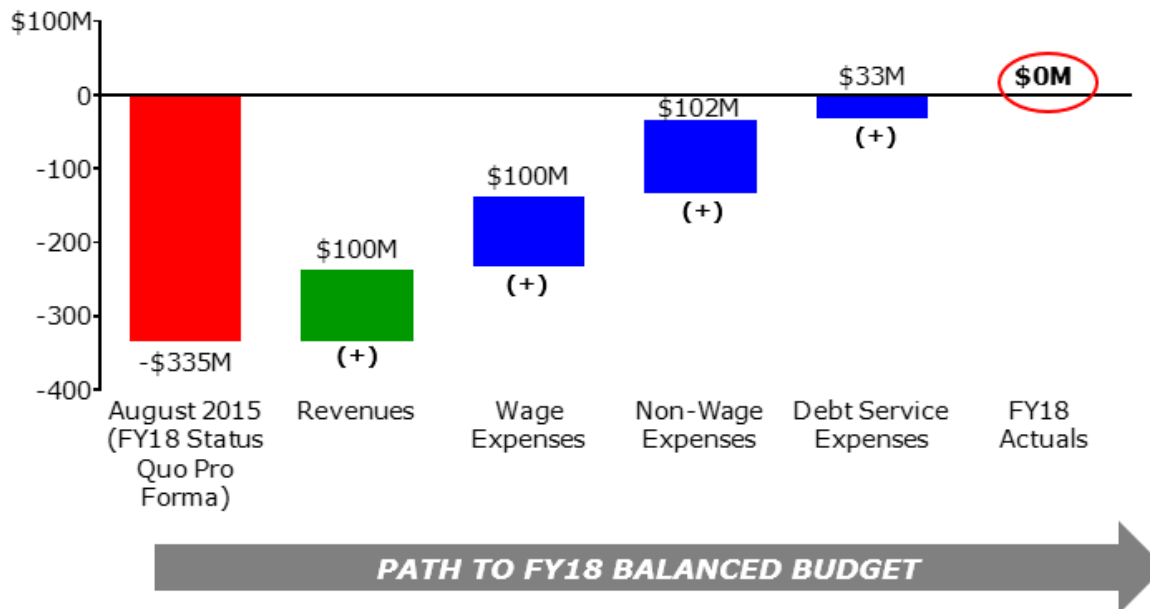
The MBTA Strategic Plan calls for the Authority to link financial resources to strategic planning and results. The Plan mandates the development of five- and ten-year pro formas and careful management of expenses so that they remain below projected revenue growth. While the FMCB is committed to achieving its goal of long-term fiscal sustainability for the MBTA, upward pressures on operating costs loom.

This Board's first annual report in December 2015 warned that without action, the MBTA's operating budget was heading for a structural deficit of \$335 million in FY18 and a staggering \$427 million in FY20.



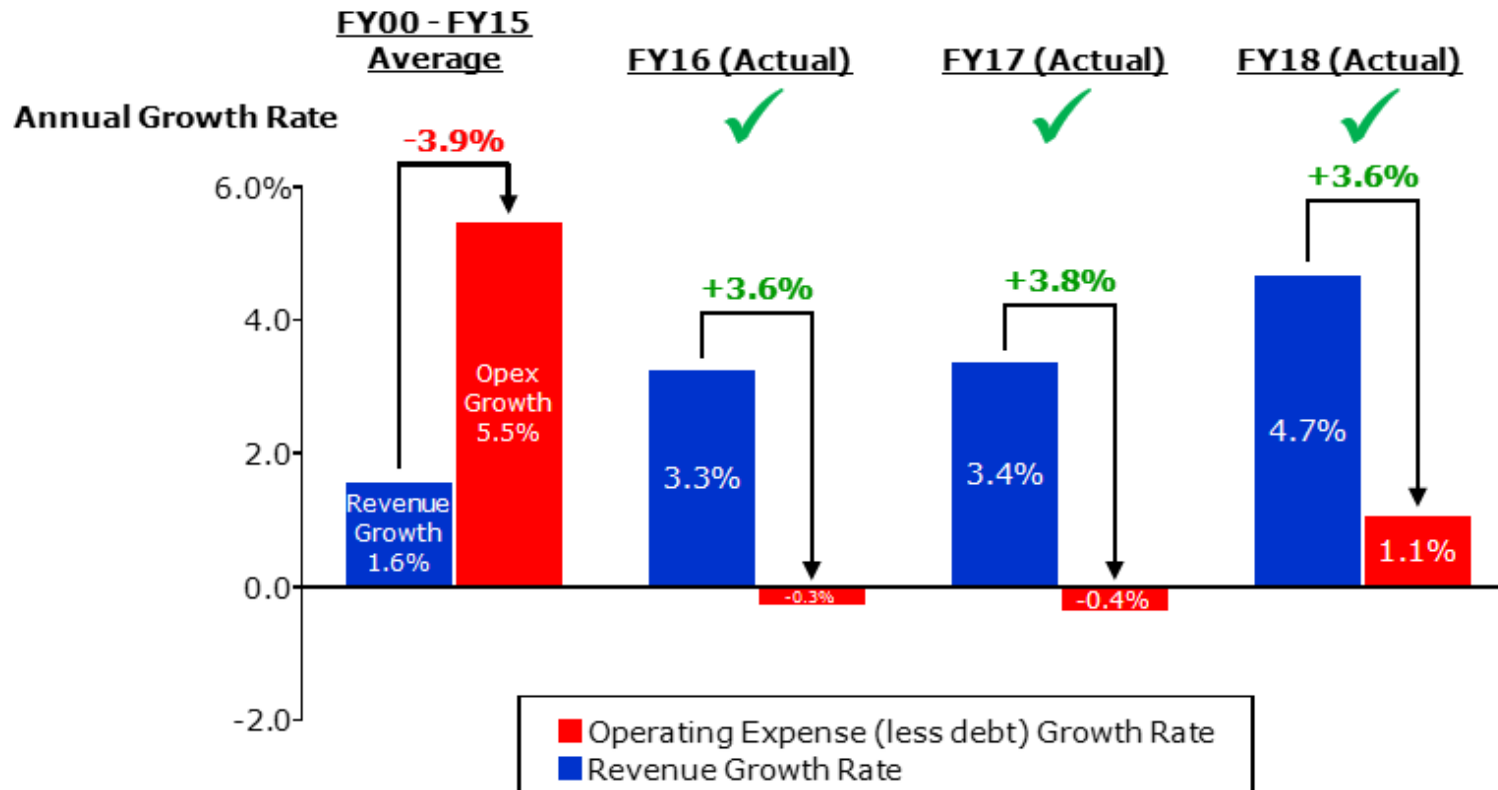
Instead, in April 2017, the FMCB approved a \$30 million MBTA operating budget deficit for FY18, with the stated goal of achieving a balanced budget. Instead, the Authority pursued a range of revenue and cost control measures posted its first balanced budget in a decade. A combination of a \$100 million increase in revenue, a \$205 million decline in wage and non-wage expenses, and \$33 million in debt service savings closed the operating budget gap.

**MBTA Operating Structural Deficit
(Status Quo Pro Forma vs. FY18 Actuals)**



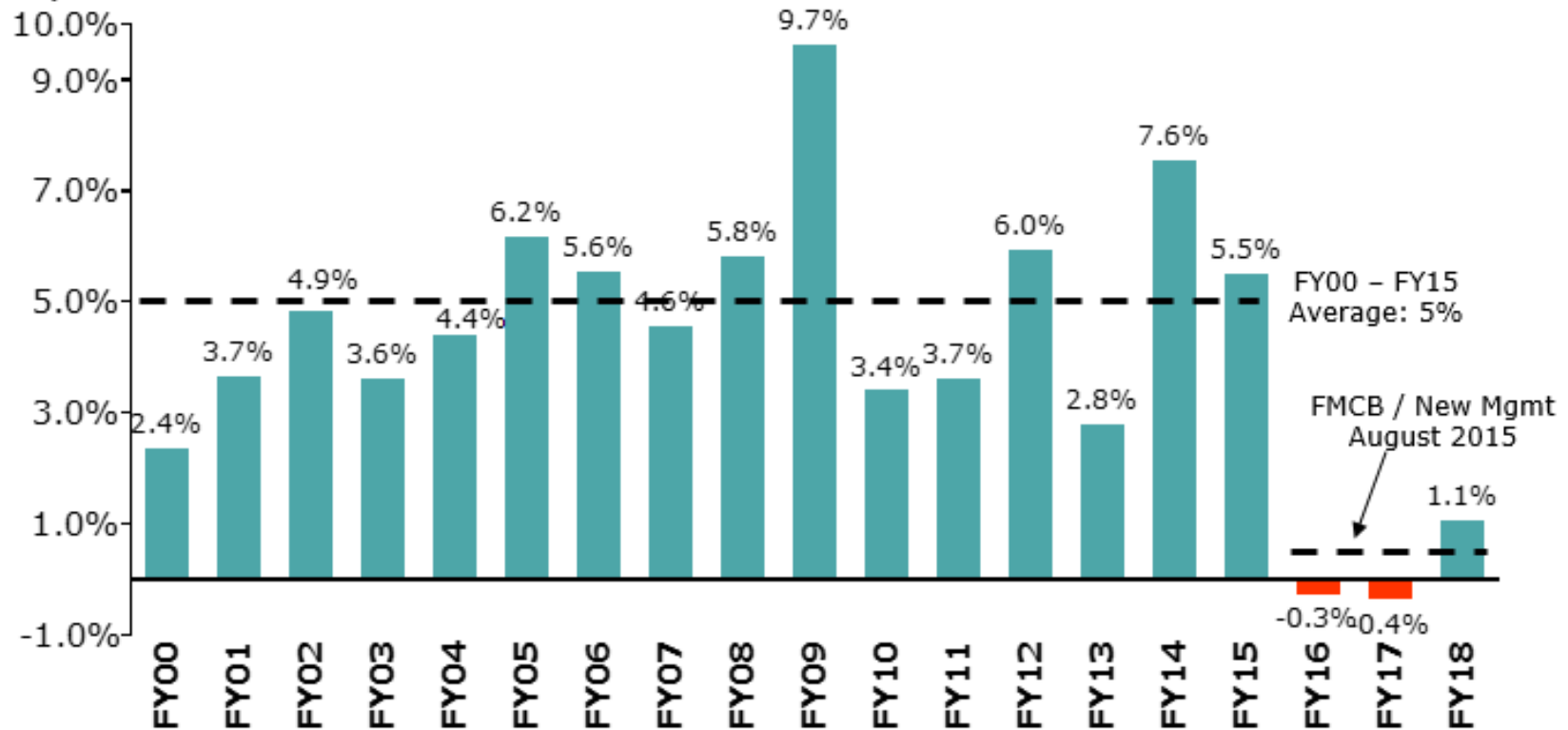
Through continued fiscal discipline, the growth rate in the Authority's core operating expenses remains at its lowest level in at least 15 years. Between FY15 and FY17, operating expenses declined for the first time in recent history (excluding the transfer of capital employees to the operating budget). Despite a small increase in operating expenses in FY18, the growth rate remains well below the 5 percent annual rate of operating expense growth that

the T experienced between FY00 and FY15. More importantly, revenue growth significantly outpaced the small uptick in operating expenses. (This section reflects financial data through September 30, 2018).



FY15-18 MBTA Expense Growth – Lowest in 15 Years

Annual Operating Expense Growth Rate
(Excluding Debt Service)

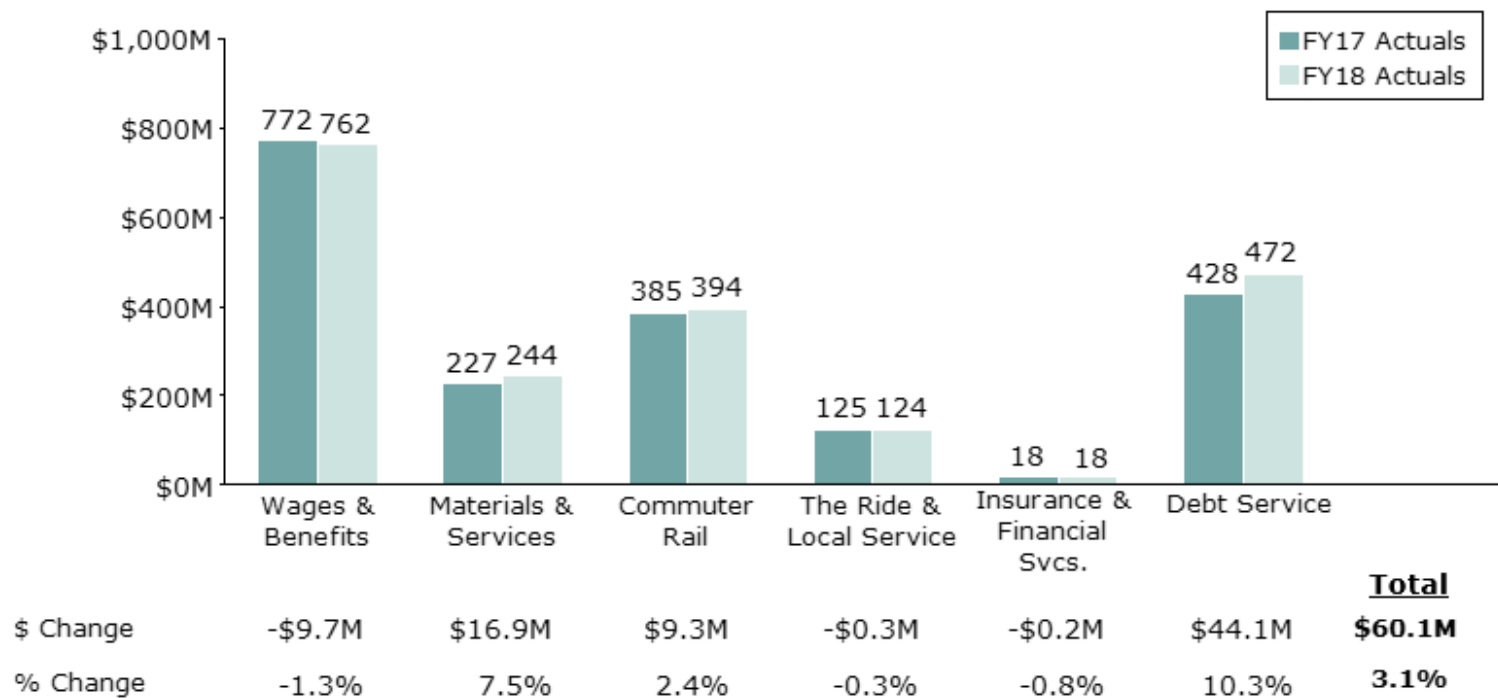


Significant operating budget savings in FY18 came from active headcount management. Total wage and benefit expense fell by 1.3 percent over FY17, while material and services moderately increased. A step up in scheduled principal repayment increased the amount of debt service due in FY18. The Authority also pulled forward several

FY19 debt obligations. This is consistent with the FMCB's goal of serving debt obligations as they come due, rather than kicking the can down the road for future Boards to address. Including debt service expenses, operating expenses increased by 3.1 percent in FY18.

Operating Expenses - Budget vs. Actual Comparison

Total Expenses (Including Debt Service) - FY17 Actuals vs. FY18 Actuals

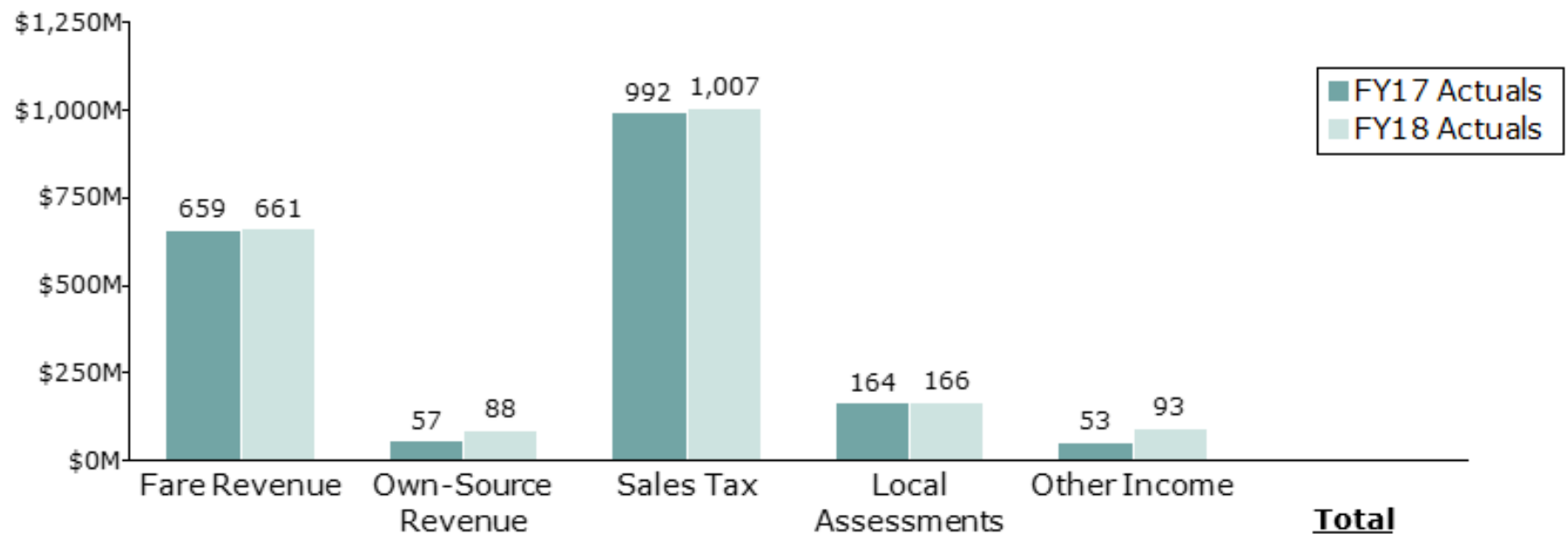


Revenue in FY18 grew by \$90 million, an overall 4.7 percent increase over FY17. New parking and advertising contracts were the drivers of an additional \$31.5 million in own-source revenue. Sales tax and local assessments

increased with inflation and provided an incremental \$17.1 million versus FY17. One-time revenues in other own-source income increased by a significant \$39.5 million, year-over-year. One-time items included property dispositions and legal settlements.

Total Revenue – FY18 vs. FY17

Total Revenue - FY17 Actuals vs. FY18 Actuals



\$ Variance	\$2.1M	\$31.5M	\$14.6M	\$2.5M	\$39.5M	\$90.1M
% Variance	0.3%	55.6%	1.5%	1.5%	74.1%	4.7%

A. Own-Source Revenues, Other than Fares

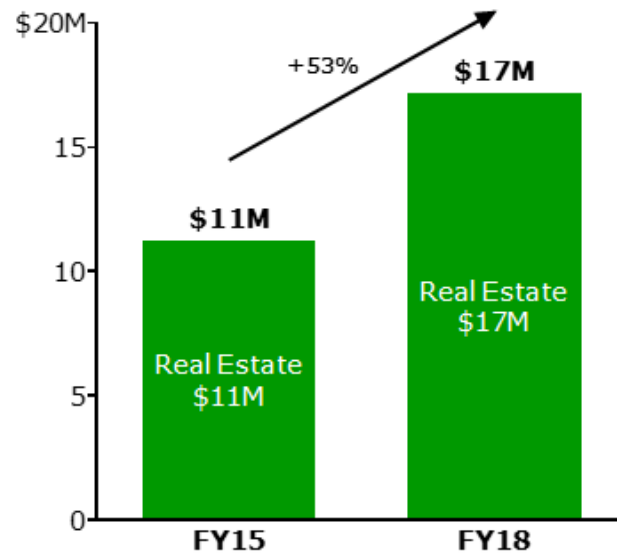
Annual Additional State Assistance to the MBTA is appropriated and not guaranteed beyond the current fiscal year. During FY17, the Commonwealth swapped \$47 million of an anticipated \$187 million in Additional State Assistance from operating to capital funds to support capital investment. The Commonwealth provided \$202 million in Additional State Assistance for FY18, with \$127 million available for operating purposes and \$75 million for capital investment. Because the MBTA had eliminated the structural deficit, the full operating appropriation could be transferred to the Authority's Capital Maintenance Lockbox and reinvested into the system. The Authority expects to receive \$172 million in Additional State Assistance for Fiscal 2019, which includes an operating allocation of \$127 million and capital allocation of \$45 million.

Since additional assistance is not guaranteed year to year, the MBTA must accelerate efforts to increase revenues from sources other than fares, namely advertising, parking, and real estate, in order to limit its reliance on annual appropriations.

In FY18, the MBTA exceeded revenue targets for each own-source revenue category:

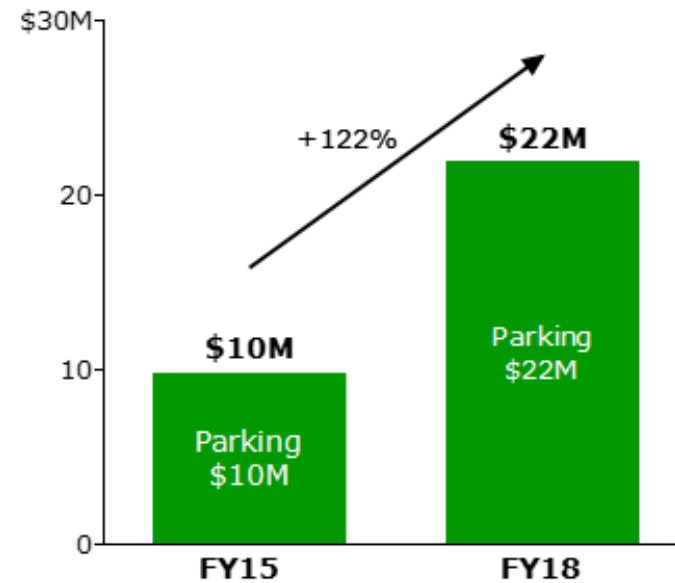
REAL ESTATE FINANCIAL PERFORMANCE

MBTA Real Estate Revenue
(FY15 - FY18, \$M)



PARKING FINANCIAL PERFORMANCE

MBTA Parking Revenue
(FY15 - FY18, \$M)

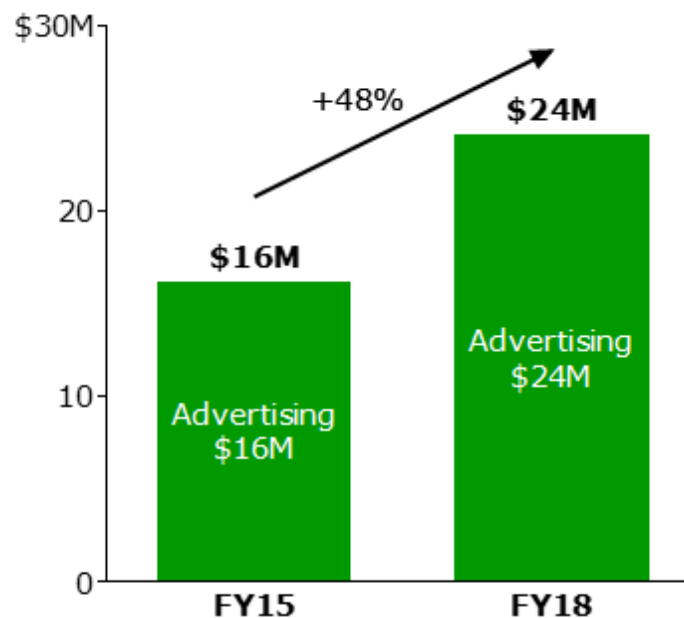


Note: \$4M recovered from LAZ parking settlement not included in FY18 Actual results



ADVERTISING FINANCIAL PERFORMANCE

MBTA Advertising Revenue
(FY15 - FY18, \$M)



Advertising

Since FY15, advertising revenue has increased by 42 percent.

The digital transformation of the Authority's advertising inventory continued in FY18. More than 225 new digital screens have been installed, with the expectation of 700 total screens to be installed by the end of 2018 – all at no cost to the MBTA. Customer-facing content is being rolled out across this new digital network. Digital currently

accounts for 30 percent of advertising revenue and is growing. In addition, the Authority will aggressively pursue market-leading terms for billboards and bus shelter advertising in FY19.

Parking

Since FY15, parking revenue has increased by 18 percent. The MBTA executed a new parking management contract in the spring of 2017 with Republic Parking System, which has deployed state-of-the-industry mobile license plate recognition equipment to enhance enforcement operations. Parking revenue reached a record high in FY18. Capital improvement projects at Alewife, Braintree and Quincy Adams are underway. The Authority is adjusting parking fees for the first time in a decade starting in FY19 to better reflect actual parking usage.

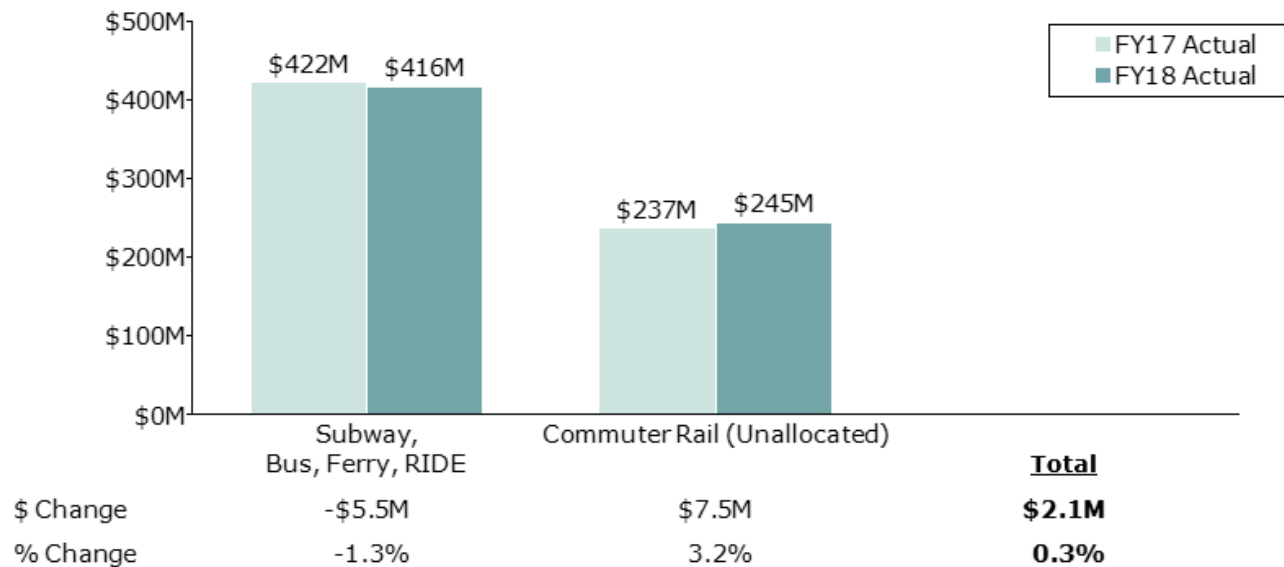
Real Estate

Since FY15, recurring real estate revenue has increased 53 percent. FY18 marked continued progress for the Authority's real estate department. An amended and restated lease agreement for South Station generated an additional \$1 million in revenue. Adjusting other tenant rents to market rates, a thorough audit of the existing portfolio and a focus on short-term licensing produced another \$1 million. New transit-oriented development guidelines are being developed to ensure the T's continued leadership in sponsoring and advocating for smart developments along its transit corridors. Creative initiatives, including solar canopy lease for several of the T's parking facilities, will combine with existing programs to continue to grow revenue.

B. Own-Source Revenues, Fares

The MBTA's fare recovery ratio in FY18 was 43.2 percent, higher than it was in FY16 and FY17 (at 40 percent and 42.8 percent, respectively). The MBTA has budgeted for a 44 percent fare recovery ratio in FY19, continuing this positive trend. The MBTA expects to grow fare revenue through expansion and rebranding of the corporate pass program in FY19. Fare revenue was up \$2 million in FY18 versus the prior year. Per statute, the MBTA will consider a fare increase in FY20.

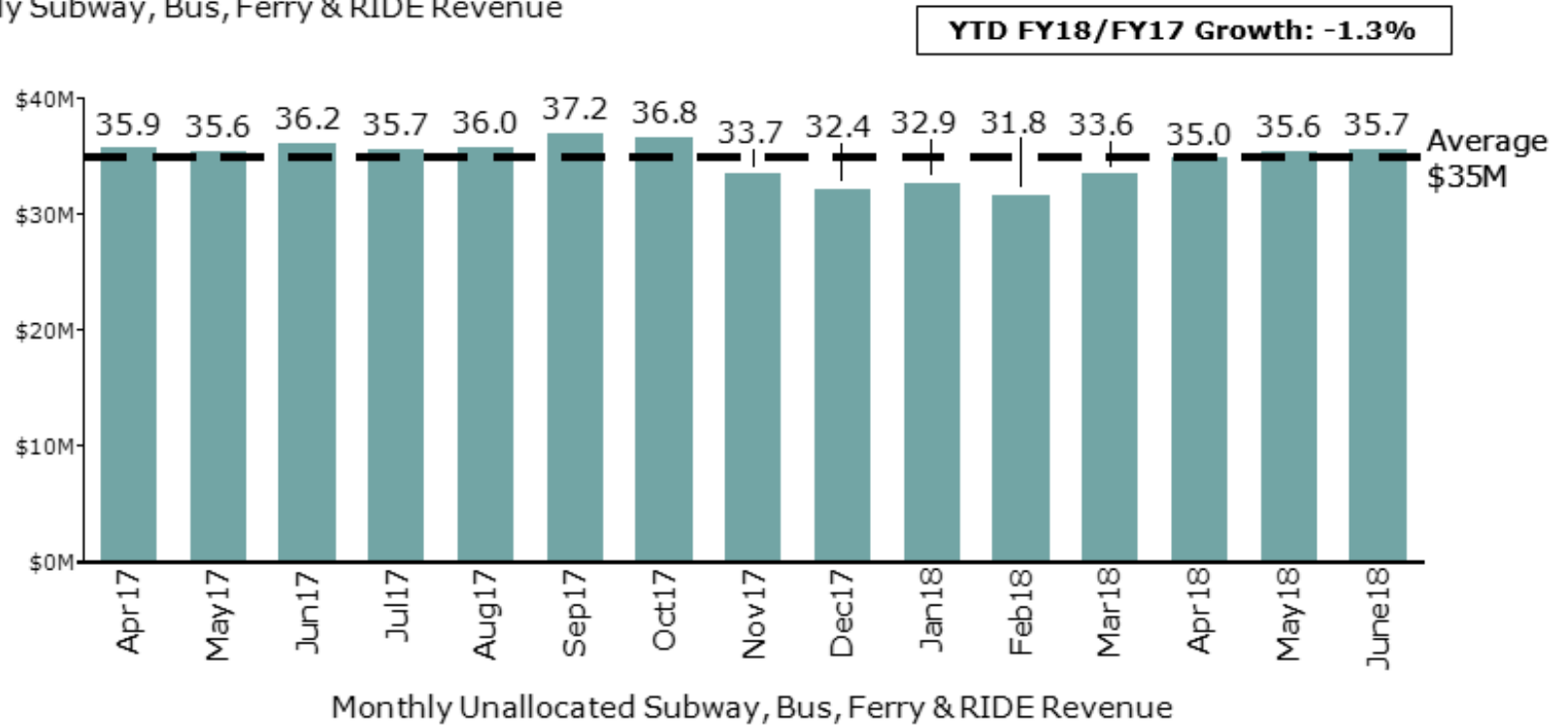
Fare Revenue - FY17 vs. FY18



In FY18, monthly unallocated fare revenue from subway, bus, ferry, and The RIDE was consistent with last year, while commuter rail revenue increased by 3.2 percent.

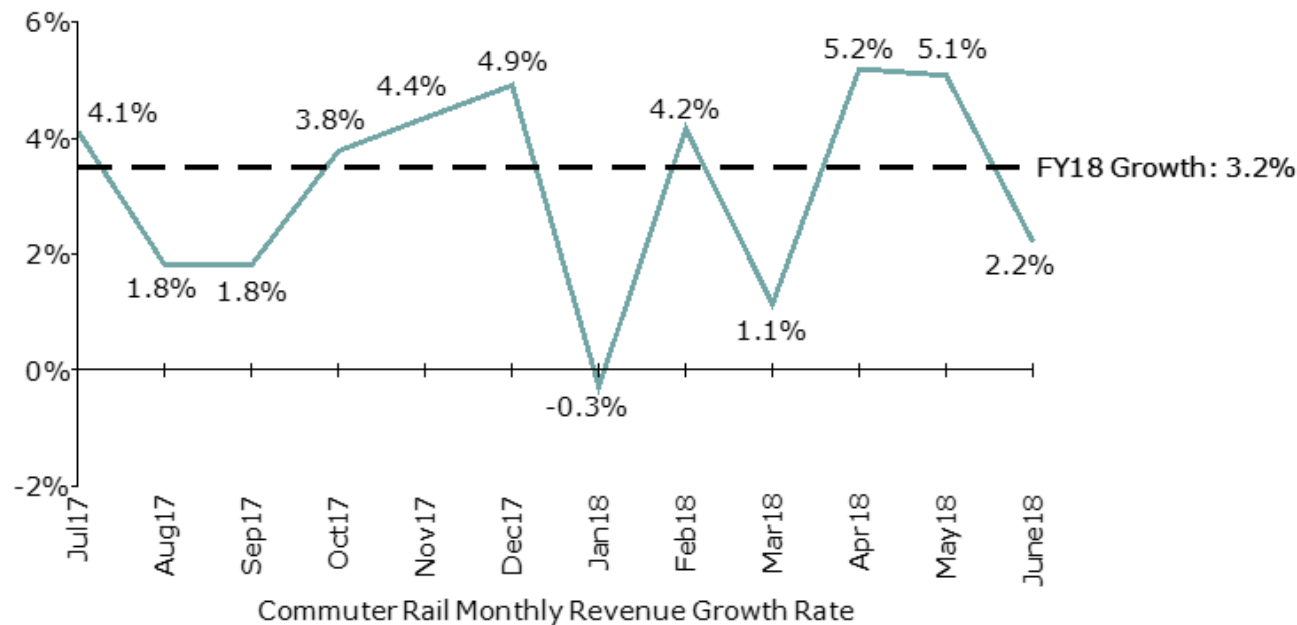
Monthly Unallocated Revenue - Subway, Bus, Ferry and The RIDE

Monthly Subway, Bus, Ferry & RIDE Revenue



Monthly Unallocated Revenue - Commuter Rail

Commuter Rail Fare Revenue (Unallocated)
Monthly Revenue Growth Rate over FY17



C. Transferring Employees from Capital to Operating Budget

Beginning in 2015, the Authority sought to reverse the practice of using capital funds to plug holes in its operating budget. Pursuant to the findings of the Governor's Special Panel on the MBTA in 2015, the MBTA identified 532 employees to transfer from the capital to the operating budget. That transfer was supposed to occur over four years in three phases but the T acted more aggressively and transferred 312 positions in FY17. Because the Legislature agreed in the FY19 budget that some employees are appropriately paid from capital budget funds, the Authority will not complete the transfer of all capital employees to its operating budget, reflecting this new guidance (see

Section III C, below). In FY19, the Authority will implement a Capital Policy to further ensure capital and operating funds are used appropriately in the future.

D. Fiscal Challenges Ahead

Despite the success that the Authority has achieved in recent years, a number of fiscal challenges lie ahead. In FY18, the Authority published an ambitious \$8 billion Capital Investment Plan spanning the next five years. The level of capital spending requires more MBTA debt issuance than ever before. Debt service is paid using operating funds. As projects called for in the Capital Investment Plan come on line with additional service and operations, they will require significant support by the Authority's operating departments.

Other challenges facing the MBTA operating budget include:

- Escalating pension costs, which are the fastest growing expense and continue to increase at an unsustainable rate. Pension costs to the Authority have nearly tripled since FY07, from \$37 million to a projected \$103 million in FY19;
- Increased operating expenses as major capital projects, including GLX and new subway car fleets, generate additional staffing, maintenance, and other operational expenses;
- Negotiating and implementing a new commuter rail operating and maintenance agreement after the Keolis agreement ends in June 2022;
- Realizing the full potential of AFC 2.0 to enhance customer service, improve performance and generate incremental revenue;
- Extending the labor agreements reached with Local 589 and Local 264 to other collective bargaining units;
- Fully achieving all approved initiatives, including savings in bus maintenance and from The RIDE.

III. Infrastructure

Looking Back: From The Governor's Special Panel Report of 2015:

- **Key Finding:** “[The MBTA] has been unable to spend the capital funds already available to it, contributing to chronic underinvestment and an acute backlog in fleet, facilities, systems, and infrastructure.”

Since Then:

- In FY18, the T invested \$875 million in the capital program, more than double what it was just five years ago;
- The T awarded more than \$2 billion in new capital contracts in FY18, including \$639 million in SGR construction contracts;
- In FY18, the T reached significant milestones for several major capital programs, including Positive Train Control, the Red and Orange Line Improvements Program, the Green Line Extension, and AFC 2.0.

Investing in a Better MBTA

The Strategic Plan calls for the MBTA to “expand capital delivery capacity to achieve a minimum of \$1 billion in annual State of Good Repair spending within four years and eliminate the backlog in 15 years.” Achieving that critical goal is a major challenge facing the MBTA.

Since 2015, the FMCB has made the T’s capital investment program a top priority. It remains paramount that the MBTA further increase its institutional capacity to effectively and efficiently invest all capital funds available to it.

In FY18, the MBTA delivered \$875 million in overall capital projects, more than it ever had before, with \$720 million dedicated to State of Good Repair projects and \$155 million for system expansion, including the Green Line Extension. Major projects in FY18 included:

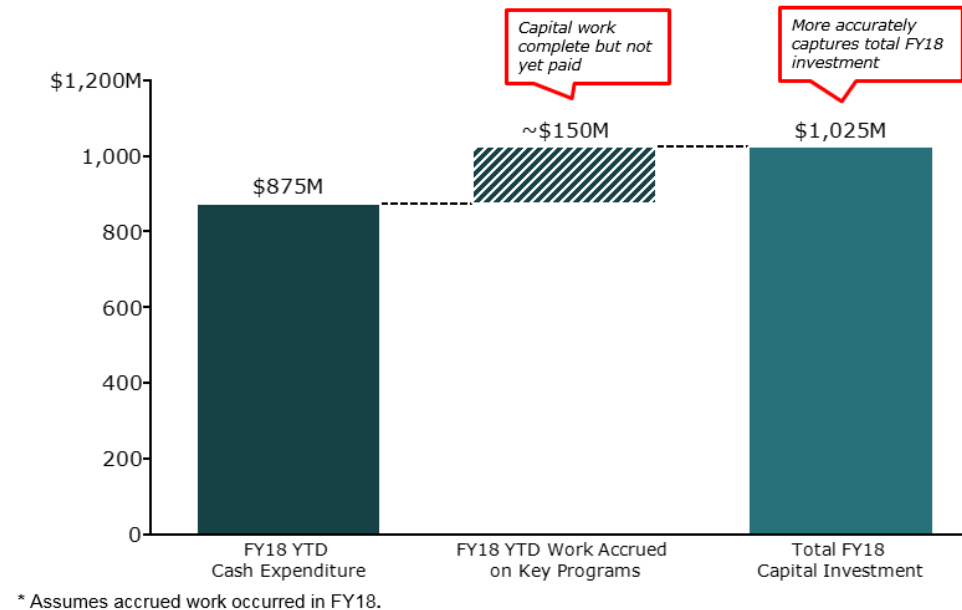
- Commuter Rail Positive Train Control;
- New Flyer Bus procurement;
- Red and Orange Line vehicle procurement;
- Red and Orange Line infrastructure upgrades;
- Wollaston Station reconstruction;
- Commuter Rail coach overhauls;
- Green Line vehicle overhauls;
- On-Call services for facilities, track improvements, and parking and paving.

Including accrued work completed on key programs but not paid until the following fiscal year, total capital investment exceeded \$1 billion for the first time.

FY 2018 Capital Program Recap



FY 2018 YTD Total Capital Investment, including accrued work



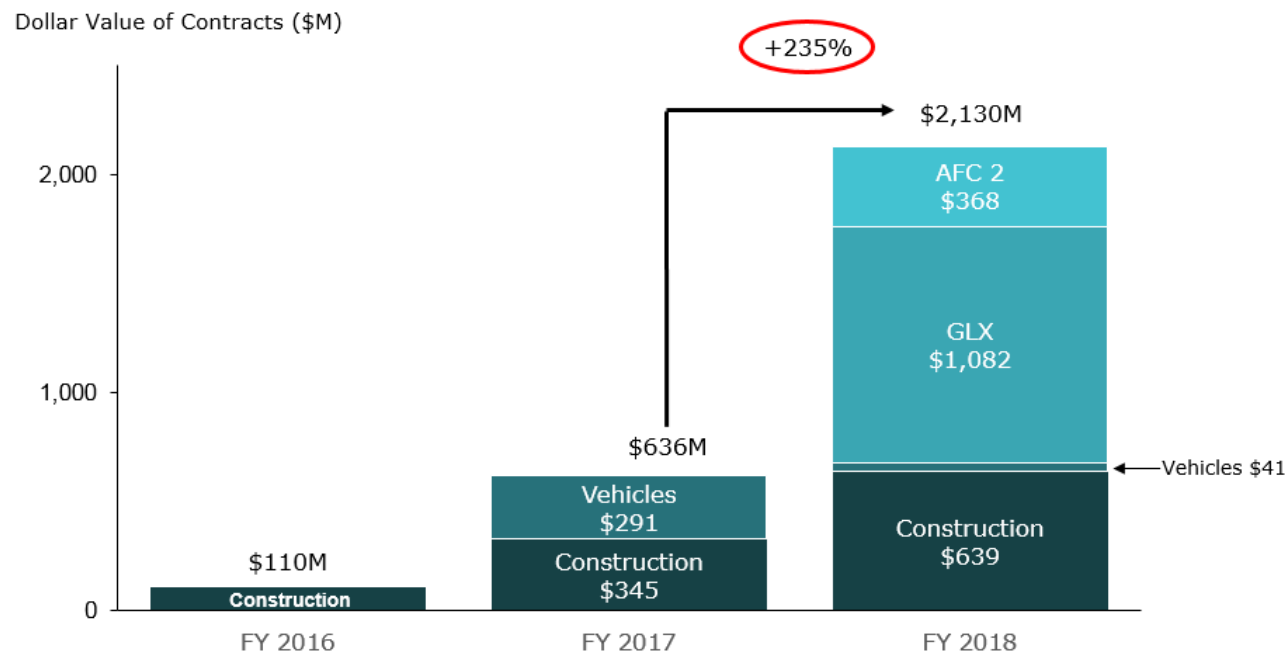
The MBTA is also focused on continuing to build its capital project pipeline. In FY18, the capital program awarded \$639 million in new SGR construction contracts, nearly twice the amount awarded in FY17 and nearly five times more than FY16. This is a leading indicator of a healthy pipeline of projects that will lead to significant investments in stations, facilities, and infrastructure. Combined with other contract awards, such as the procurement of a new fare collection system (AFC 2.0) and the selection of a Green Line Extension design-build

vendor, the MBTA capital program reached new heights in FY18. The \$2.1 billion in spending represented a 235 percent increase in spending over FY17, though much of this was driven by GLX.

FY 2018 Capital Program Recap



Overall, the MBTA awarded \$2.1 billion in new capital contracts in FY 2018



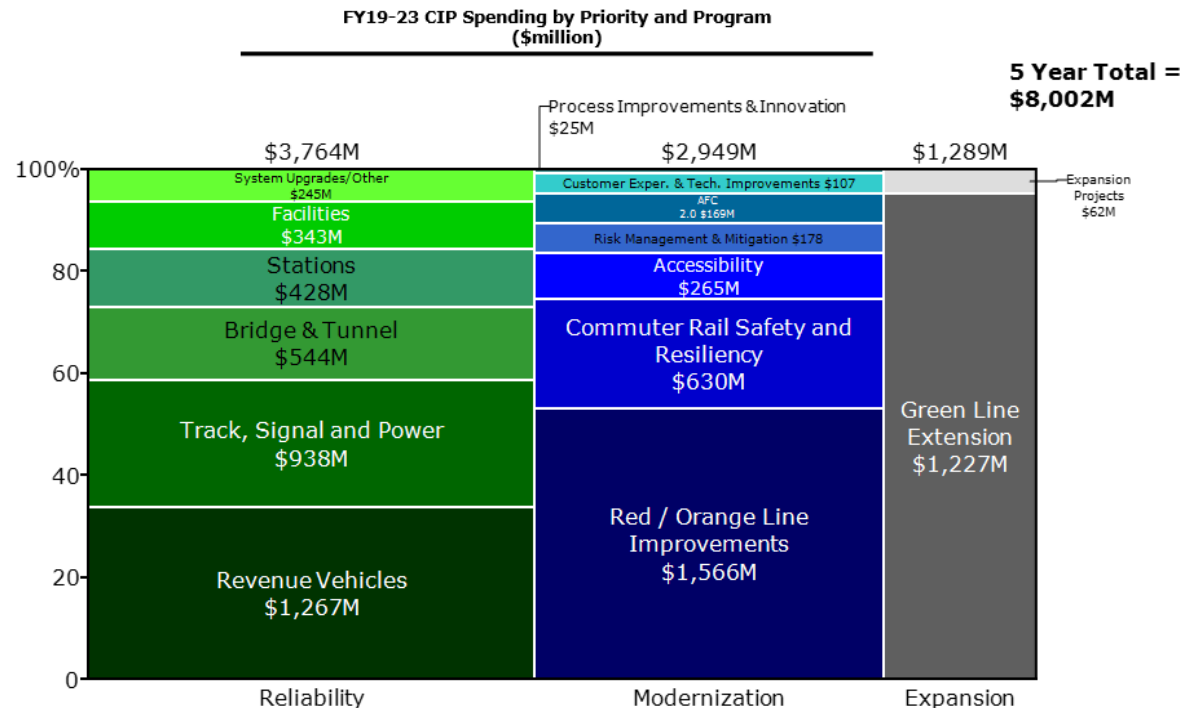
Looking to FY19, the MBTA anticipates awarding over \$1 billion in total capital contracts, including \$650 million in new SGR construction contracts.

A. FY19-23 Capital Investment Plan

In June, the FMCB approved the FY19-23 MBTA Capital Investment Plan (CIP). The most ambitious MBTA capital program ever, this CIP reflects more than \$8 billion of investment over the next five years, with a primary emphasis on state of good repair investments, which represent more than \$6.7 billion from FY19-23.

FY 2019 Capital Program Look Ahead

FY19-23 Capital Investment Plan calls for ~\$8B in capital spending over the next five years

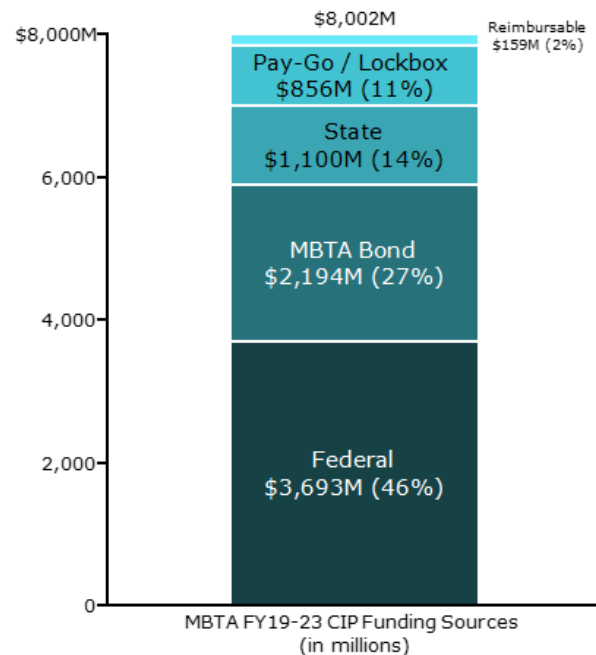


The FY19-23 CIP is fully funded, with a mix of federal grants, Commonwealth bonds, MBTA bonds, and other resources. The CIP assumes \$150 million in annual deposits to the capital maintenance “lockbox” resulting from continued operating budget fiscal discipline and continued annual additional assistance from the Legislature.

FY 2019 Capital Program Look Ahead



FY19-FY23 CIP Funding Sources



Note: Federal source includes GLX federal funding.

Sources highlights:

- **Federal** funds continue to be the single largest source of capital for the MBTA
 - GLX Full Funding Grant Agreement: \$996M overall; \$828M in FY19-23
 - FTA formula Funds: \$2.7B in FY19-23
 - Other federal: \$116M in FY19-23
- **MBTA Bonds**, including Sustainability Bonds, support the 20% match for Federal projects, as well as MBTA-only funded projects
- **State** funds include Rail Enhancement Program special obligation bonds for GLX, Red Line/Orange Line improvements, and other projects
- **Pay-Go/Lockbox** reflects an assumption of \$150M/year, plus prior year carryover
- **Other** funding sources include municipal contributions and other reimbursements

B. Executing the Capital Program

Sustaining and growing this ambitious capital program will require a well-coordinated focus on project delivery by teams across the MBTA, supported by streamlined policies, processes, and technology.

The 2019 Governor's Budget included language that would allow the MBTA to charge salaries of employees supporting capital projects to the capital budget. The FMCB and MBTA management recommended this change to be consistent with Generally Accepted Accounting Principles and federal guidance and reporting. Furthermore, this allows the MBTA to increase its internal capacity to plan and execute capital projects as needed without competing for scarce operating budget resources.

The FMCB approved a capital expense policy in August 2018 to implement the outside section, provide guidance on the appropriate use of capital funds, and require detailed implementation guidance and an annual third party review. While maintaining strong oversight, the FMCB will also work with the legislature to potentially eliminate the limitation on using bond funds to pay a capital employee's salary. Doing so would allow the MBTA to use MBTA and state bond proceeds to pay for all costs associated with capital projects, consistent with principles of full cost allocation and FTA guidance on direct and indirect project administration.

C. Asset Management

In response to new federal requirements, the MBTA has developed a Transit Asset Management Plan to set out the strategy for achieving and maintaining a State of Good Repair across the system. The MBTA has made tremendous progress in prioritizing and accelerating capital projects to address State of Good Repair needs. Since FY15, the MBTA has invested nearly \$2 billion in projects to improve bridges, tunnels, facilities, stations, vehicles, track, signals, power, and other assets and systems. Many of these projects not only bring the asset to an acceptable state of good repair but also modernize and upgrade the station, vehicle, or infrastructure to meet other strategic priorities like accessibility, sustainability, and capacity. For example, the procurement of new fleets of

Red and Orange Line vehicles supports goals of reliability and capacity, and will also bring the entire Heavy Rail fleet (Red, Orange, and Blue lines) to a state of good repair by 2022.

During 2018, the Authority undertook a comprehensive data collection effort to develop an inventory of MBTA assets, including vehicles, equipment, facilities, stations, parking, power, signals, track, bridges, tunnels, and more. This inventory, which will be the “single source of truth” for several exercises, was used to inform the Transit Asset Management Plan, submitted to the FTA in October via the National Transit Database and is being used to populate the MBTA Enterprise Asset Management system and to support a thorough reevaluation and assessment of the Authority’s capital needs, including a re-estimate of the SGR backlog.

D. Update on Key Projects

Since the last annual report, the MBTA achieved significant milestones in several key programs, including Commuter Rail Positive Train Control (PTC), the Red and Orange Line Improvements Program, and the newly formed Green Line Transformation Program.

Positive Train Control

By the end of 2018, the MBTA will have reached a critical milestone in implementing the federally mandated Positive Train Control technology and associated infrastructure on all MBTA Commuter Rail Lines. PTC is an advanced system designed to automatically stop a train before certain accidents, including train-to-train collisions, can occur. Integrated command, control, communications, and information PTC systems control train movements with safety, security, precision, and efficiency.

The T’s \$459 million PTC program is being applied to all MBTA Commuter Rail lines, covering about 394 combined route miles of service. (The MBTA program is being designed to be consistent with the PTC system that already exists on the Northeast Corridor’s Providence Line).

In 2018, the MBTA received an additional \$20 million grant from the FRA for the implementation of PTC. This is in addition to the previously approved RRIF and TIFIA loans secured from the Build America Bureau at the relatively low interest rate of 2.6 percent and previously secured \$12 million grant from the FTA for the implementation of PTC.

During 2018, the MBTA will have satisfied all requirements in order to achieve an extension for implementation of Positive Train Control on all Commuter Rail Line. On September 21, 2018 the MBTA formally submitted to the FRA for approval a Request for Extension for implementing PTC on the MBTA Commuter Rail Lines in accordance with 49 U.S.C. 20157(a)(2)(B). The MBTA was able to submit this request having completed all necessary requirements to qualify for an extension including:

- Installing all positive train control system hardware consistent with its PTC Implementation Plan (PTCIP), including installation of:
 - PTC equipment on 95 locomotives and 84 control cars
 - 194 Wayside Interface Units (WIUs)
 - 181 Wayside Radios
 - 181 Antennas
 - 3097 Transponders
 - 223 miles of Fiber Optic Cable;
- Acquiring all radio spectrum necessary for implementation of its PTC system consistent with its PTCIP;
- Completing employee training required for testing and implementation of the PTC system;
- Including in its approved PTCIP its schedule and sequence for implementing a PTC system as soon as practicable;
- Certifying to the U.S. Secretary of Transportation that it will be in full compliance on or before the December 31, 2020;
- Meeting the requirements of the Substitute Criteria approved by the FRA by completing the FQT testing on the Stoughton Branch and has furthermore submitted on September 18, 2018 a request to enter RSD on that line.

The FRA subsequently approved initiation of Revenue Service Demonstration on the Stoughton Line and the MBTA started Revenue Service Demonstration on this line on November 12, 2018. By the end of 2018 the MBTA will complete testing on the Lowell Line and submit an application to the FRA for Revenue Service Demonstration on that line.

During 2019, the MBTA will continue testing Commuter Rail lines and will place those lines into Revenue Service Demonstration, allowing the T to continue the path towards full implementation of Positive Train Control on all MBTA Commuter Rail lines by the end of 2020.

Red Line/Orange Line Improvements Program

In addition to 252 new Red Line and Orange Line vehicles currently in production, a number of other projects are underway that will support reducing headways and increasing capacity on both the Red Line and Orange Line.

Orange Line Projects

- **Orange Line Test Track.** The Orange Line Test Track allows for the dedicated dynamic testing of the new Orange Line vehicles. This \$5.9 million project was substantially complete by August 29, 2018;
- **Wellington Yard Expansion, Track 33 – 38.** This project provides additional capacity within the yard to accept and maneuver new vehicles through the yard. This \$18 million project will be substantially complete by 2019;
- **Wellington Maintenance Facility Improvements.** The Maintenance Facility will be rehabilitated and updated to meet current codes and expanded by one bay to provide additional maintenance capacity necessary to support the new vehicles. Construction of this \$72.6 million project is scheduled to be complete in the summer of 2020;
- **Wellington Yard Rebuild.** Construction of this \$102.7 million began in 2018 and is scheduled to be complete in the spring of 2021.

Red Line Projects

- **Red Line Test Track.** The Red Line Test Track allows for the dedicated dynamic testing of the new Red Line vehicles. In addition, the project includes construction of a shed for static testing of the Red Line vehicles. Construction of this project is well underway, with substantial completion set for next spring.
- **Cabot Yard and Maintenance Facility Improvements.** Construction of this \$213.8 million project is scheduled to be complete in the winter 2021/2022.

In addition, the Red Line/Orange Line Signals Design-Build Project, which will provide for an upgraded signal system on both the Red Line and Orange Line, was awarded in October, 2018, is expected to be completed by the spring of 2022.

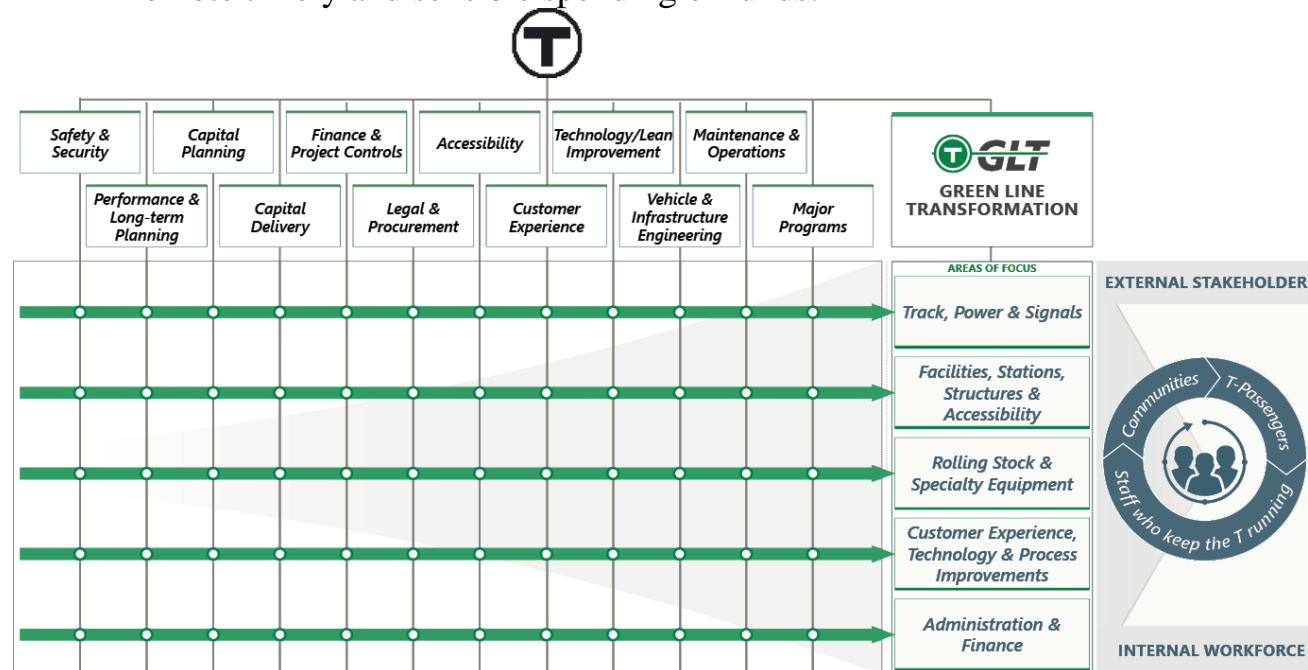
Green Line Transformation Program

The Green Line Transformation (GLT), a new, multi-billion dollar program to transform the first subway established in the country, will improve the Green Line's reliability, robustness, and resiliency to satisfy the future needs of Greater Boston's passengers and communities. Peak core capacity will increase by 50 percent or more. The customer experience will be transformed, stations will be made more accessible to those of all abilities, infrastructure will be brought to a State of Good Repair, and the latest technologies will be incorporated. .

Currently, the GLT consists of a portfolio of over 50 projects to revitalize this 120-year old line. The GLT team will actively oversee this portfolio to minimize the impact to the riding public and ensure that cost and schedule efficiency is driven through the entire life cycle, from design and construction through operation and maintenance.

The GLT will establish a matrix organization to work in partnership with Project Managers/MBTA functional leads in order to:

- Establish and implement program management best practices;
- Leverage deep institutional knowledge;
- Establish transparent communication;
- Delineate clear roles and responsibilities;
- Promote timely and sensible spending of funds.



The GLT team will meet regularly with the Green Line Alliance, a steering committee representing all the functional leads, to report progress and to work through challenges. This program will communicate its progress quarterly to the Fiscal and Management Control Board (FMCB).

IV. Customers

Looking Back: From The Governor's Special Panel Report of 2015:

- Key Finding: “The MBTA is not organized to operate as the customer-oriented business it is...The MBTA does not emphasize customer-centered performance management in its operations.”
- Key recommendation: “The MBTA should implement a rigorous, customer-oriented performance management system [and] strengthen its customer communications capabilities, using both traditional and innovative ways of information sharing ...”

Since Then:

The MBTA has taken significant steps to improve performance as well as customer satisfaction and to improve communication between the MBTA and its many stakeholders about performance and other information they can use during their daily commute:

On-time performance and other system metrics have been improved and are much more readily accessible. Over the past year, reliability has varied by mode due to seasonal and other performance factors;

- The T Alerts system now includes specific time estimates for delays similar to the information long provided to commuter rail riders. Until recently, riders were only told if their delays were minor, moderate or severe;
- The MBTA Customer Service Department is adding capacity to improve the specific communication channels used with MBTA stakeholders and to augment how stakeholders can communicate their needs and complaints directly to MBTA staff.

Putting Customers First

The MBTA wants system users and the general public to be readily able to obtain information on system performance. Annual data are available in the MassDOT Annual Performance report Tracker. Daily reliability is reported on the MBTA performance dashboard at www.mbtabackontrack.com.

The MBTA recognizes that in addition to actual service performance, understanding riders' experience and perception of the service is critical to making improvements. The Authority has a monthly satisfaction survey to gather system user opinions. The results are reported on the MBTA Back On Track dashboard and used to inform decision-making on how to improve service. The MBTA also collects customer feedback as part of its community outreach for projects such as AFC 2.0 and the Better Bus Project.

Performance by Mode

Reliability is critical to improving service. That is why capital projects to upgrade fleet, signal, power, and other infrastructure are so important to subway reliability and why improving operational consistency and maintaining equipment is central to improving commuter rail reliability. Improving the reliability of the bus system, which continues to clearly lag other modes, is a primary goal of the upcoming service plan.

Because performance in each mode is measured differently, it is difficult to compare between modes. In this section, the average weekly reliability of the Subway and Light Rail, Bus, and Commuter Rail are presented for regular weekdays from October 1, 2017 through September 30, 2018. Over the past year, reliability has varied due to seasonal and other performance factors. Another factor that may affect current performance data is that throughout 2018, the MBTA acted to improve the quality of its on-time performance data. This was important to make sure that both staff was working with the most accurate underlying data and that customers also had access to more accurate, real-time information.

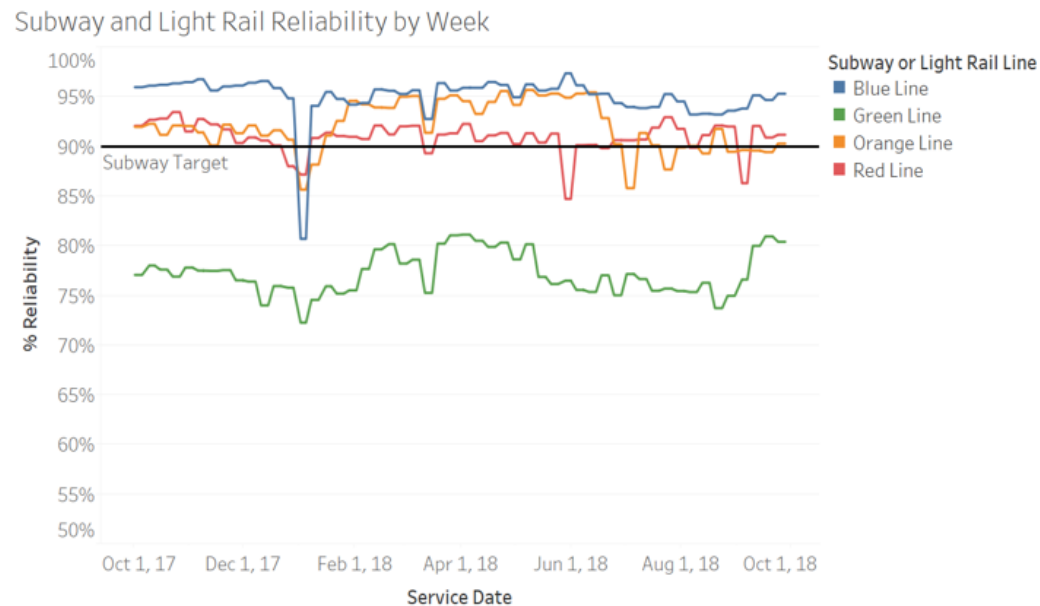
The MBTA experienced notable dips in service reliability across modes during weeks with large snowstorms (January 4, 2018, and March 1, 2018 are particularly apparent).

Subway and Light Rail

The Blue Line has shown the most consistent above-target performance, while the Red and Orange Lines trend closer to the target of 90 percent reliability.



Blue Line shows consistent above-target reliability performance



Bus

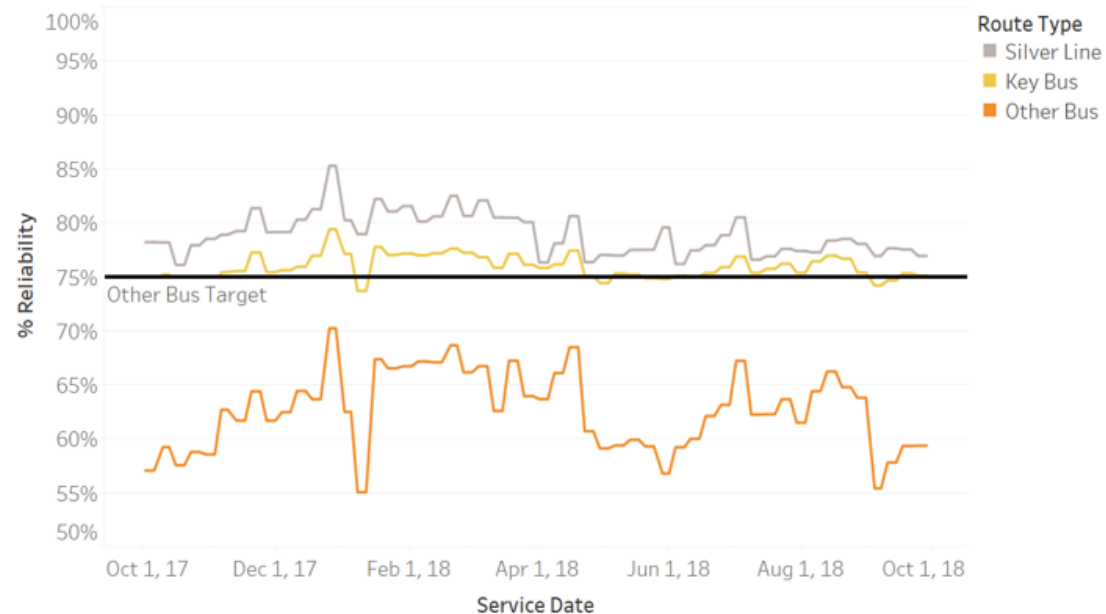
Bus reliability performance similarly reflects seasonal patterns due to traffic and weather. The Silver Line and Key Bus Routes have a higher reliability target of 80 percent reliability. Silver Line performance hovers around that target, but Key Bus Routes hover around the “Other Bus” target of 75 percent.

Projects like the Better Bus Project and the Bus Network Redesign aim to improve the performance of bus lines in all three categories.



Silver Line and Key Bus Routes fall short of their higher reliability target of 80%

Bus Reliability by Week



Since 2014, the MBTA has purchased 436 new buses, which now represents about 43 percent of the rolling fleet, and another 200 are scheduled for delivery in 2019 and 2020.

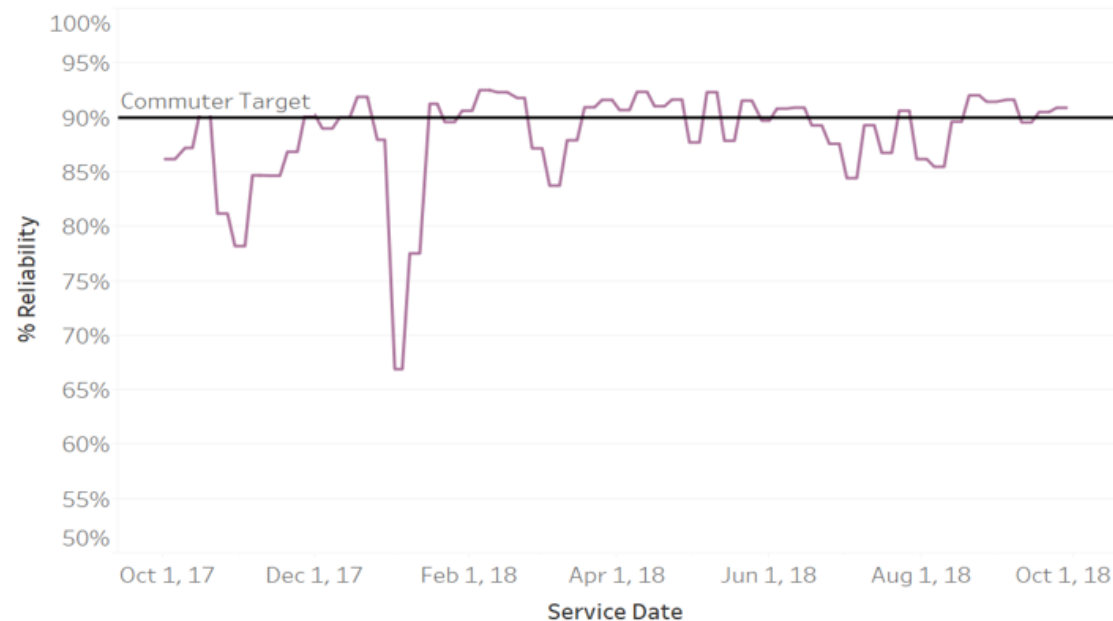
Commuter Rail

Seasonal impacts also affect Commuter Rail reliability. The MBTA is working with Keolis to ensure that commuter rail performance consistently matches or exceeds the standard.



Commuter Rail shows seasonal impacts on reliability

Commuter Rail Reliability by Week (unadjusted)



The FMCB and MBTA continue to work with Keolis to improve commuter rail performance and reliability. Current and planned commuter rail initiatives include:

- Extended the \$10 Weekend Fare Pilot to December 9, 2018;
- Construct and implement Positive Train Control;
- System-wide tie replacement – 51,000 ties;
- Continue Worcester Line rail replacement;
- Slippery Rail treatment systems, including new rail washing equipment;
- Winter Resiliency infrastructure initiatives, such as installation of gas switch heaters;
- Locomotive investment initiatives (UTEX, F40 overhaul, GP40 overhaul, engine replacement program);
- Install “Smart Coach” Automatic Passenger Counting devices on entire coach fleet;
- Implemented “RailSales” mobile hand-held ticketing devices for conductors to accept credit cards on board trains;
- Fairmount and Needham Line stations received a deep cleaning and stairs were replaced at Natick Station;
- Worcester Station improvements and South Station pit lighting; stations at Natick Center and Wellesley Square in design;
- Upgrade signal system between Framingham and Boston;
- Interlocking upgrades;
- Franklin double track;
- Study of third track from Framingham to Auburndale;
- Bridges at Bacon St. in Wellesley and Intervale Road. in Weston are being rebuilt;
- Foxboro service pilot is set to launch in mid-2019.

Future Commuter Rail Contract

The term of the current operator, Keolis Commuter Services, ends June 30, 2022, with possible extensions through 2024 and 2026. The MBTA intends to develop an RFP to award a successor contract. It is a priority for the MBTA to prepare quickly and effectively for the next commuter rail contract procurement.

Toward that end, the MBTA will conduct a comprehensive study, analyzing various management and contract scenarios, including potential changes in the term and conditions of the current contract, aimed at incentivizing operator investment in the system and high levels of customer service. This future contract study, along with the conclusions of the Rail Vision study currently underway, will inform the design and procurement of the next commuter rail operating contract.

B. Better Bus Project

The goal of the Better Bus Project, which was launched in March 2017 to improve overall bus service delivery for MBTA riders, is focused on reliability, frequency, comfort and span of service.

Improvements are categorized into internal and external approaches. The first set of changes, identified as ongoing, are internal MBTA changes that focus on updating run times and schedules. Additional changes that can be absorbed into the operating budget are also planned. The second set of changes, which is more significant changes, will require stakeholder engagement due to the level of impact. These changes include, but are not limited to, bus route realignments, and/or the relocation, consolidation or elimination of bus stops, and dedicated bus lanes. These changes do not require operating budget investment.

The third set of changes are internal MBTA changes that will require an operating budget request to close the gap between more effective and efficient service (achieved through the first and second sets of change) and bus service with even greater reliability and frequency. This resource request will be made as part of the FY20 operating

budget discussion. The fourth set of changes, which are ongoing, are optimization enhancements that are achievable through external partnerships with municipalities. These changes include dedicated bus lanes, such as those introduced in Arlington, Boston, Everett and Cambridge in 2018, the implementation of transit signal prioritization and the installation of signal optimization. Lastly, the MBTA is working with MassDOT Planning to implement a network redesign, which will identify areas of high employment and residential growth and enhance the connectivity between those areas by utilizing economic corridors. This set of changes will require internal and external approaches to achieve a further improved bus network.

Through these five types of change, MBTA bus riders are beginning to experience enhanced reliability, frequency, comfort and span of service. Further bus network improvements will come as the Better Bus Project continues to develop.

C. Resiliency, Planning, and Preparedness

Winter Preparedness

The MBTA continues to invest considerable resources into a range of preventive measures to handle the effects of winter weather. For example, MBTA workers have installed:

- Nearly 105,000 linear feet of brand new third rail between JFK/UMass Station and Quincy on the Red Line;
- More than 52,000 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 also has 80 stainless steel plows for Red and Orange Line trains and continues to equip trains with rail de-icing equipment. Yearly testing of all equipment has been designed into normal vehicle inspection and will take place as part of the Winter Preparedness Drill.

To further enhance the T's efforts to operate as reliably as possible during winter conditions, the T added a 1.5 megawatt portable generator, which is capable of temporarily replacing the traction power feed at a substation. This is the first time the T has had such an important resiliency tool.

During the winter of 2017 and 2018 the Boston area had over 70 inches of snow including four Nor'easters. These events identified areas that the Authority can further evolve our resiliency for this season. Since last winter, for example, the MBTA has executed a system-wide tree management program, clearing brush and tree limbs over 100 miles of right of way. Weather stations and real-time monitoring are being deployed at 65 locations across the commuter rail network. The Authority has installed emergency stand-by generators to support the Orange Line signal system. The MBTA has also purchased 50 additional portable generators for distribution and usage this winter.

To prepare for this winter, Keolis has purchased long lead time spare parts to support the new MPI locomotive fleet. The availability of these components, which were not available last winter, will expedite the repairs of locomotives to support service following major storm events.

As part of its ongoing emphasis on winter preparation and resiliency, the MBTA continues to prepare employees for incidents dealing with snow, fire, smoke, security situations, or other disruptions. Increased training and focusing of customer disruptions has become the center of the Emergency Preparedness program. In addition, the MBTA continues to coordinate closely with the Massachusetts Emergency Management Agency during severe storms and special events.

D. Other Extreme Weather Events and Impacts of Climate Change

Anticipating the impacts of climate change in Massachusetts, Governor Baker issued an Executive Order in 2016 that requires state agencies to identify vulnerabilities to climate change that may interfere with each organization's ability to function efficiently and provide critical services.

The FMCB recognizes that the MBTA's operations, services, and infrastructure assets are unquestionably sensitive to both short-term intense weather events and long-term incremental changes in climate. In coming decades, risks from extreme heat events, heavy rainfall, winter weather, extreme cold, storm surge, and sea-level rise need further examination. Based on recent climate models for the region, the Boston metropolitan area will experience sea-level rise of three to seven feet and as many as 90 extreme heat days each year. Intense rain events are also trending upward.

In its Strategic Plan, the FMCB directed the MBTA to assess system-wide vulnerability to climate and weather stressors. As a result, the MBTA has begun to take steps to embed climate resiliency into its activities so as to help make the system more resilient to the impacts of global climate change. These steps, which are now underway, include:

- Integrating cost-effective climate change adaptation planning, implementation and reporting into all operations, financial planning, and key agency functions;
- Embedding resiliency into capital programs by incorporating future projections for extreme weather and climate risk into all project development;
- Developing and using climate risk vulnerability assessments to identify critical locations in the transit system. The MBTA has conducted a climate change vulnerability assessment of the Blue Line and will shortly begin assessments has plans to conduct similar assessments for the entire MBTA system.

The MBTA will continue to conduct vulnerability assessments, identifying critical vulnerabilities among assets and services, and pursuing resiliency planning to minimize such vulnerabilities. The MBTA will utilize the vulnerability results to prioritize resiliency measures for the most vulnerable assets and services. Resiliency

measures may be incorporated into existing capital projects and may occur as new resiliency-focused projects. The MBTA expects the vulnerability assessments and resiliency projects to be iterative as new information on climate risk and the system's State of Good Repair becomes available.

Resiliency planning may leverage newly available funding from the MBTA's Sustainability Bonds, which may also encourage the prioritization of projects that reduce the Authority's risk to weather and climate stressors. The MBTA will train Capital Delivery project managers on the processes for incorporating resiliency into project design and will introduce resiliency as a standard consideration in to policy and planning documents moving forward. The MBTA will continue to identify new opportunities to incorporate resiliency into key Authority functions and capital projects.

E. Additional Preparedness Measures

Incident Response

In order to prevent customer disruptions, After Action Reviews (AARs) have been conducted for incidents requiring service disruption, rules violations or operational deficiencies. Twenty nine AARs have been performed as part of this program, with assigned corrective actions tracked for remediation by relevant departments. Corrective actions are reviewed monthly and are discussed at various senior management meetings.

One corrective action from such meetings was to establish coordination meetings of incidents requiring response by the Boston Fire Department. These monthly reviews have led to numerous improvements in the relationship, including emphasis of the ICS command structure, standpipe testing procedures and signage coordination. The MBTA and Boston Fire Department continue to implement joint changes to standard operating procedures, ensuring all roles and responsibilities are clearly defined when responding to an incident.

Periodically, the MBTA finds itself affected by external incidents impacting service that also provide opportunities to assist the communities it serves. For example, during the 2018 gas explosions in the Merrimack Valley, MBTA representatives coordinated on scene and remotely to restore MBTA commuter rail service through the area as well as provide extensive bussing support to the affected communities and their residents.

Threat and Vulnerability Assessment

Over the past year, the MBTA has developed a new physical security Threat and Vulnerability Assessment (TVA). The TVA was conducted by an external consultant that objectively assessed the MBTA's many systems, facilities, processes, and infrastructure with the purpose of identifying possible vulnerabilities and proposing cost-effective mitigation measures.

Drills and Exercises

The MBTA, which must be prepared for all emergencies, weather and otherwise, continues to conduct multiple drills to improve employee awareness and communication relating to train evacuation.

In December 2017, the MBTA conducted its annual subway drill, consisting of a simulated subway train derailment at the MBTA's state-of-the-art Emergency Training Center. As part of the exercise, about 50 volunteers simulated being trapped or injured in a subway train. Boston Fire, Boston EMS, and the MBTA Transit Police joined MBTA Operations as they responded to the incident, coordinated to identify and utilize the nearest emergency exit, evacuated injured and trapped passengers. The exercise was also filmed to create a future training video for first responders.

In May 2018, the MBTA, MassDOT, Keolis, and other responders joined Amtrak's Back Bay Station emergency evacuation drill. This exercise provided the MBTA with a unique opportunity to respond to an incident requiring close coordination with Amtrak, whose operations share much of the MBTA commuter rail track. The exercise involved IED explosions that affected both Amtrak and MBTA trains in a tunnel, requiring the evacuation of numerous passengers, some injured.

The MBTA conducted a Terrorism Response Workshop in n September, where MBTA Operations and Transit Police leaders assembled to review and revise guidance and plans relating to a terrorist attack in or near the MBTA system. The MBTA is also conducting a subway evacuation exercise, which will be followed by bus emergency preparedness drills.

Employee Training

The MBTA continues to train employees through its Security Awareness and Emergency Preparedness training program. This comprehensive course covers topics that include the National Incident Management System, the Incident Command System, emergency communications protocols, emergency evacuation procedures, suspicious package training, active shooter response, among many others. The training is offered as a day-long course to front-line personnel and has been shortened for presentation to all employees. The MBTA is rolling out a new version of this program specifically designed for administrative employees.

Further Employee Outreach

MBTA front-line workers, from CSAs and operators to commuter rail conductors, face a range of challenges. Providing them with proper facilities, essential tools, and more timely communication resources will help those workers provide the highest level of service to riders.

Recognizing that increasing morale and enhancing communication among front-line workers contributes also to an improved customer experience, MBTA management last year initiated a series of outreach efforts to T employees in order to make them feel heard and to collect the kind of first-hand feedback that can help improve riders' experience. The outreach included informal gatherings at area garages, where employees could speak about concerns, questions, and issues that matter to them.

The major feedback collected during this outreach included:

- Some operators indicated a desire to change current uniforms for greater comfort and seasonal versatility;
- The condition of break areas and their furnishings, which bus and train operators use during split shifts to rest, eat, stay warm in winter, was found in many cases to be subpar;
- Technology and equipment for employee communications was either lacking or out-of-date, including the equipment necessary for workers to receive news, weather, traffic information, alerts, and important information from the Authority. Such information helps employees feel more included and better informed and thus able to do their jobs better.

Responding to what employees had to say, the FMCB approved the use of pay-go capital in May 2017 to act on some of this employee feedback. Some operating funds are being used to purchase new uniforms, upgrade employee breaks areas, and procure better communications technology. Other planned employee-facing improvements include new fitness equipment in various locations and more nutritional options in work areas.

While these employee improvements continue, the MBTA is also initiating a series of steps to improve workplace safety across the Authority. The FMCB supports and looks forward to updates about these efforts.

F. Customer Experience Department

The MBTA continues to improve both the staffing and functionality of its customer service department and related activities to better serve riders. This includes establishing a more robust presence on social media with the addition of a dedicated social media unit whose opening assignment would be to gain a greater understanding of the social media platforms MBTA customers currently use, such as Twitter, Facebook, Instagram, and YouTube.

With large-scale capital projects such as GLX in the Authority's \$8 billion capital improvement plan impacting MBTA customers directly, it is especially important to communicate accurately and effectively. Equally important is to follow up on what customers are saying, which would be the primary responsibility of the Customer Advocacy Unit that is also being created.

V. Management

Looking Back: From The Governor's Special Panel Report of 2015:

Key Findings:

- “The MBTA is largely ineffective in managing its work due to weak workplace customs and practices.”
- “MBTA procurement and contract management is inefficient and decentralized.”

Since then:

The T has greatly improved its organizational capacity, reorganizing departments and taking significant steps to attract and retain the talent it needs to complete the Authority's transformation. The T also continues to seek further improvements in workforce productivity.

- Senior management at the T has been revitalized, with 70 percent of the senior leadership team joining the T within the last two years;
- The T has sharply reduced how long it takes to hire new employees, from an average of 137 days per hire in 2015 to about 70 days now;
- Reorganizing and strengthening human resources procedures, including the use of a Third Party Administrator, has helped to reduce absenteeism and overtime, reducing both costs and service disruptions;

- Improved efficiencies and cost savings from deliberate use of the Pacheco waiver include:
 - **Cash processing:** MBTA money is now collected, processed, and deposited more efficiently and cost-effectively. The time it takes to deposit funds collected has been reduced by 80 percent and monthly cash processing costs have dropped from nearly \$1 million to under \$300,000;
 - **Warehouse and logistics operations:** T mechanics now get the parts they need to keep the T fleet running much more quickly and the MBTA has avoided the need to invest capital dollars in a new warehouse facility to replace its own dilapidated facilities;

A. Workforce

Of all the pieces required to transform the MBTA into a premier transit agency, none is as critical as the people who operate, maintain, and manage the system every day. Making the system more reliable today and achieving tomorrow's strategic priorities cannot happen without managers and employees who are motivated, productive, well-trained, and appropriately compensated.

While challenges remain, the FMCB can report improvement in both the productivity of MBTA employees and in its Human Resources operation, including developing and implementing strategies to attract and retain talent for the MBTA.

The MBTA has continued to improve its Human Resources operation in fiscal year 2018. Strategic initiatives include development of Key Performance Indicators and improved organizational development and employee engagement.

Recruiting: Reducing Time to Hire and Critical Talent Hires

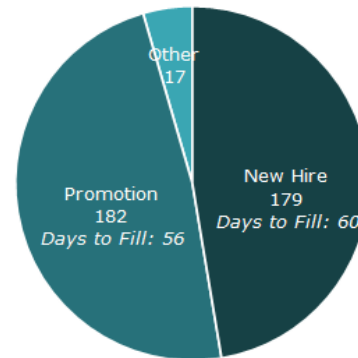
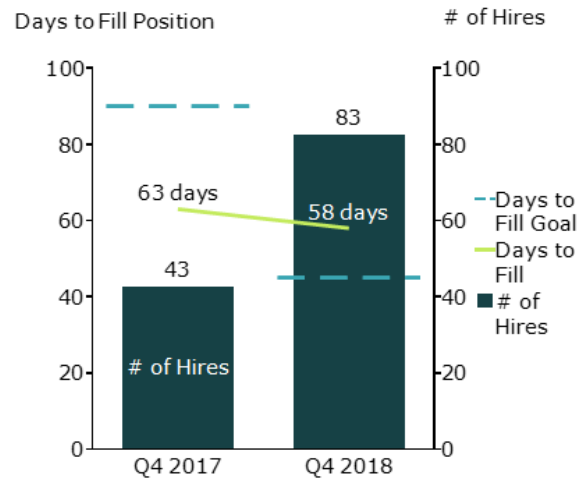
The MBTA exceeded the FMCB's goals to reduce the time-to-hire in 2016, when the goal was 100 days, and 2017's goal 90 days. In 2018, the MBTA remained committed to filling jobs in a timely manner by assessing the time to hire goals based on the type and difficulty of the position.



Time to Fill FY18 Posted Roles

- **58 days average Time to Fill**
(not including programmed hiring or TPD)
- **378 Hires & Promotions**

- 100+ days to fill include unique, niche roles difficult to find in market and constrained by compensation package – 13 @ 140+ days
- 37% (141) filled within 40 days – 55+% filled in 60



To help fuel the hiring pipeline, a position was created for an External Engagement Specialists to focus on:

- Using Community Outreach to attract candidates;
- Forging relationships with support organizations for veterans, transition groups and vocational/training centers;
- Partnering with resources to help potential candidates re-enter the workforce;
- Targeting higher education institutions that offer alumni support programs to create pipelines for hard to fill/niche roles.

A review was completed of the programmed hiring workflow, which was complex and lengthy. By applying LEAN practices, the steps to complete the programmed hiring were cut in half.

The MBTA has changed how it identifies candidates for executive positions by hiring Talent Acquisition specialists. The approach has saved the MBTA money that had been spent on retained searches through the referral of external talent.

Absenteeism, Leaves Management and Overtime Management

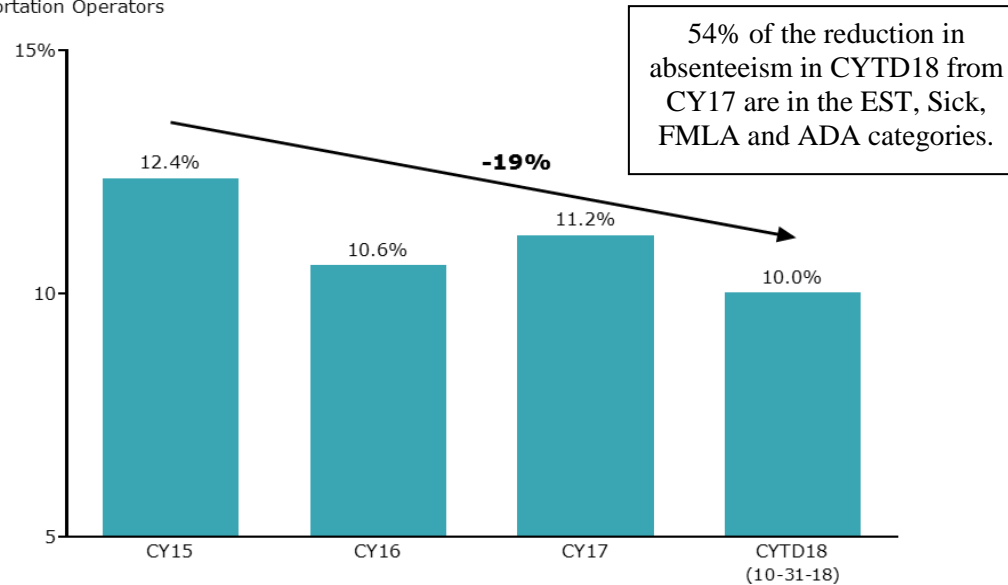
Further progress has been made toward improving the MBTA's management of employee absences, particularly unscheduled absences, which result in dropped trips that inconvenience customers and cause higher operating expenses due to overtime.

The declining trend of unscheduled absenteeism reflects improved attendance policy enforcement, implementation of leave management recommendations including a third party administrator for leaves, better usage of budgeted workforce for absence coverage and continuous daily absence monitoring and cause analysis. This trend is seen despite the numerous federal and state leave benefits that challenge the Authority to meet its service goals.



Declining trend of unscheduled absence rate for Transportation Operators CY15 to CYTD18

Unscheduled Absence %
- Transportation Operators



Source: Internal MBTA data

Note: Transportation Operators include the titles of FT & PT Bus Operators, RTL Motorpersons, Streetcar Motorpersons

Unscheduled Absence Types

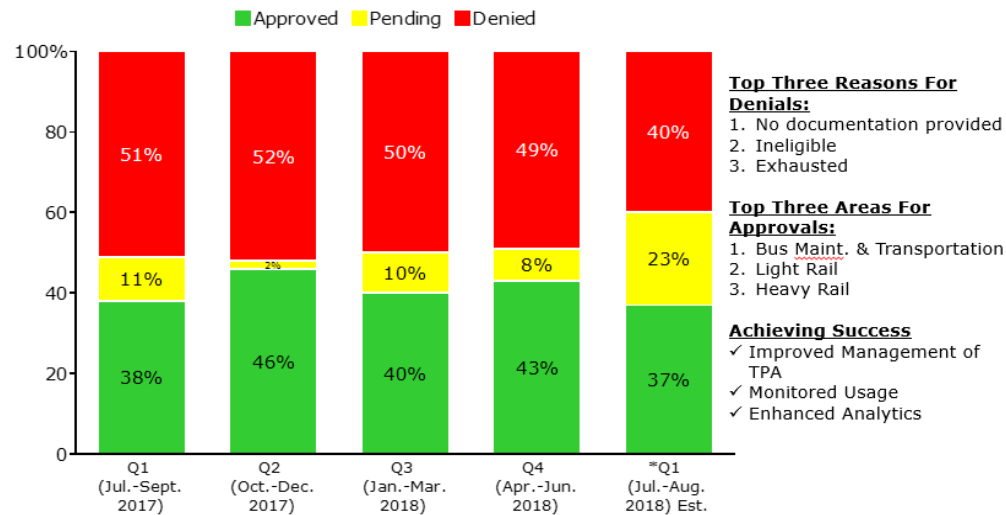
- Family Medical Leave Act (FMLA)
- MA Earned Sick Time (EST)
- Other Sick (Contractual)
- Reported Injury/Worker's Comp
- Excused/Waiver
- Accommodations Leave (ADA)
- Absent Without Leave (AWOL)
- Bereavement
- Small Necessities Leave Act (SNLA)
- Tardiness

Unscheduled absences still create occasional disruption for system users. The unscheduled absence rate for transportation operators must continue to decline and the MBTA is performing a more consistent job of enforcing its attendance policies. For all of 2015, the T terminated 32 employees for attendance violations. In 2016, there were 24 terminations and in 2017, 65 terminations for this reason as the MBTA hold employees accountable for their attendance.

The percentage of approved versus denied requests for the FMLA has declined year over year. The percentage of certifications denied continues to decline, reflecting more scrutiny of requests for leave and ensuring that the leave requests qualify and the time requested is reasonable to the condition.



Managing the FMLA Caseload – FY18



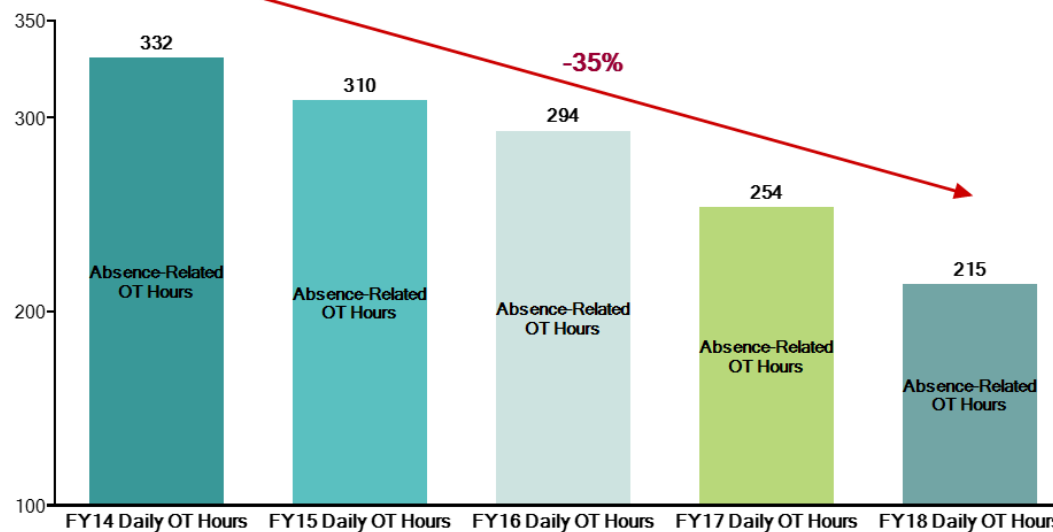
* Federal regulation mandating timeframe of required paperwork

Overtime management, particularly the excessive use of overtime, with insufficient controls, continues to be a key challenge at the MBTA. With more effective policies and procedures now in place, the overall use of overtime should continue to trend down. The consequence of not covering employee absences is an increase of dropped trips due to having no operator available to work.



Average Daily Absence-Related Overtime Hours are trending down when compared to past years.

Average Absence Related OT Hours per Day (Operators)



Source: MBTA Internal Data.

Draft for Discussion & Policy Purposes Only

Compensation

The MBTA seeks to attract, retain and motivate people. Toward that end, the MBTA worked to better understand the current state of compensation at the MBTA, titles, grades and levels. To ensure on-going equity a merit program will be developed for FY19.

Performance Management: Pay for Performance

For 2018 the MBTA introduced Key Performance Indicators (KPI's) as a baseline for measuring the success of the organizations performance against the five key initiatives the General Manager set for the Authority. A performance program that will include the values/competencies the Senior Management team is being developed to help inform the pay for performance philosophy of the merit program.

Succession Planning:

To build upon and expand the pool of talent already working at the Authority, the Human Resources team has adopted a disciplined approach to succession planning to ensure that future leadership was identified and available. It has developed and implemented a process to identify high potential talent and develop plans to invest in their futures. Using a succession planning tool, 15 MBTA senior managers identified the current and future talent pools within their organizations. This exercise also helps to better inform the management team of retention risks and promotional opportunities.

The next phase of this program will be to develop individual plans to address any skill gaps that may have come to light through this process.

B. Improving procurement and contracting

The MBTA works with an array of partners to support operations, including human resources, financial management, procurement, information technology and communications, marketing and advertising, and real estate management.

Building upon work in recent years, the MBTA focused during 2018 on continuous improvement of its procurement practices through a variety of business process and technology changes. The full adoption of the technology-focused e-bidding platform called FairmarkIT for goods or services worth less than \$50,000 was used to generate \$10.6 million of purchases.

Even more important than cost savings, this platform creates an efficient, transparent and measurable procurement process. Historically, the small purchasing process was inefficient and difficult to monitor and manage work flow. With 95 percent of all purchase order issuance at a \$50,000 level and below, the system allows gathering of processing time and future ability to strategically consolidate purchases.

Future focus must be on the ability to consolidate same-supply purchase orders to cut down processing time and unneeded purchase order issuance so more time can be spent on high value procurements.

Electronic Purchase Order

The MBTA's fully electronic Purchase Order approval process has been live for one year. The system in procurement alone processed more than 12,000 purchase orders with a total value in excess of \$1.1 billion. By streamlining and standardizing the purchase order process, which in the past often involved four separate steps, including manually carrying hard copy purchase orders from place to place for signature, proper financial controls and accountability have been created.

Procurement Processes

The MBTA has streamlined and reevaluated its documentation requirements from vendors. The MBTA “Request for Proposal” and “Invitation to Bid” forms were modified to make them easier to read and understand. The most important data and information needed for user to see and understand was made simpler and brought forward in documents. For example, users no longer have to read through various standard legal terms in order to understand the “Proposal Request and Invitation to Bid.”

Continuous improvement must be made on the procurement time line, which can take from 21 days to 74 days.

Combined Purchasing Power

The MBTA continues to explore using the various statewide contracts and using statewide pricing to achieve efficiencies and cost savings. During past year, the Authority made in excess \$125 million in procurement purchases through CommBuys, the electronic system that enables the MBTA to post bids that anyone can see and access.

The utilization of an application outside of the MBTA (CommBuys) does require additional work to maintain accurate records. In the coming year, alternatives must be evaluated to eliminate any additional work and streamline the process.

Further Improvement Needed

These steps all mark significant progress and set the stage for more efficient, cost-effective, and innovative procurement practices and actions going forward. At the same time, however, the MBTA continues to face challenges when it comes to monitoring and enforcing contracts that have already been procured and implemented.

Improving the Authority's ability to properly develop and oversee contracts will remain a major focus of this Board in the year ahead. Among other things, management needs to:

- Establish a Vendor and Contract Management program to evaluate vendor performance, negotiate contracts, establish KPI and SLA's accordingly, and manage relationship from beginning to end;
- Ensure in key contracts have a consistent template for measuring performance with proper measuring mechanisms in place;
- Continue to hire sufficient staff to develop, implement, and oversee contracts.

Utilization of the "Pacheco Law" waiver

Following the MBTA's systemic collapse in the winter of 2015, the General Court granted the Authority a three-year exemption from the requirements of sections 52 to 55 of Chapter 7 of the General Laws, commonly known as the Pacheco Law. That waiver expired in June, 2018.

The purpose of the waiver was to advance the system's performance by introducing best practices and innovations. The selective and careful use of the waiver proved to be an important tool to help transform the MBTA, yielding fundamental improvements including significant cost savings, increased efficiencies, and better performance.

Improved performance requires a solid fiscal foundation. The waiver not only resulted in a projected savings of more than \$450 million over ten years, but it helped the MBTA achieve its first balanced operating budget in a decade and provided greater internal accountability and managerial capacity to identify and resolve problems in the years to come.

More detail about the MBTA's utilization of the waiver can be found in the annual report filed with the Legislature on Sept. 1, 2018 at <https://malegislature.gov/Bills/190/SD2757.pdf>.

VI. Conclusion: Future MBTA Governance

Like previous FMCB Annual Reports, this one has described a steady arc of progress since the low points of 2015, when this Board came into existence. Also like previous reports, this document acknowledges that MBTA customers have yet to fully feel systemic improvements in their daily commutes. We have always cautioned that transforming the MBTA from what it was in 2015 to the premier transit service it can and must become can be neither fast nor without setbacks. This Board, for example, has acted to reduce from 25 years to 15 how long it will take to eliminate the \$7.3 billion State of Good Repair backlog identified in 2015. That's a full decade faster – but 15 years is still a long time for impatient riders.

This effort to give a world-class region a world-class transit system will continue long after the FMCB's statutory existence ends by June 30, 2020. The FMCB will keep working to maintain the positive momentum it has achieved until its last day. But it is also critical that a new governance structure for the MBTA be identified and put into place before this Board's final meeting.

The FMCB has already sought public input into what kind of governance structure should succeed the FMCB. Based on what we have heard from stakeholders and learned from the experience of both the Commonwealth and other transit jurisdictions, we recommend that the new governance structure provide the MBTA with an independent governance body that, at a minimum, is:

- Appointed by and accountable to the Governor, with subject matter or professional expertise a factor in the selection of members;
- Independent of the MassDOT and other boards;
- Relatively small and includes the Secretary of Transportation;
- Committed to conducting public meetings at least twice a month;
- Fully authorized to approve financial and debt-related transactions.

Whether the FMCB or its successor is governing the MBTA, opportunities and challenges remain. Fiscal discipline must be maintained. The pipeline of capital projects must continue to accelerate, with the MBTA having the capacity to develop and execute robust five-year and 20-year plans for system investments. The Authority must continue to attract and retain dedicated employees and properly manage them.

The FMCB is grateful to the commitment MBTA employees, riders, and other stakeholders have made to working with us as we seek to improve the MBTA. Even when comments and advice have been critical, we have sought to listen and learn. We will continue to do so.