



**Massachusetts Bay
Transportation Authority**

Preview of the Capital Investment Plan (CIP)

Fiscal Management and Control Board

April 12, 2021

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CIP Development Overview

- Continued impacts and challenges due to COVID
 - Unknown future of travel patterns post-COVID and impacts to the transit system
 - Uncertainty over Federal legislation impacting future funding availability
- Consistent with state capital planning guidance, the MBTA will again focus on a “maintenance of effort” capital program
- Focus is on continuing projects already underway, with targeted investments for the future



Key Milestones for CIP Development

December

- CIP Kicked off, CIP Information Sessions held to detail the process and requirements
- Project proposals due via CIP intake process

January

- Develop initial estimates of capital funding sources
- Begin evaluation and scoring process for new project proposals (scoring using PSAC criteria)

February

- Set initial program sizes based on capital and asset needs
- Prioritization of project proposals, based on scoring and evaluation

March

- Develop initial project list – combine existing and new projects
- Refine sources and sequencing for draft project list

April

- Continue to refine sources and sequencing of draft project list
- Release 5-year TIP to the Boston Metropolitan Planning Organization (MPO)

May

- Finalize draft CIP and present to the FMCB, CPC and Joint Board; Vote to release draft CIP
- Post draft CIP for public comment; engage public through multiple avenues

June

- Public meetings and comment period; incorporate public comment into the CIP
- Joint Board vote to approve final CIP

Updated Sources and FY22 Spend Target



CIP Sources: Updated Assumptions

Federal Programs

- Reflects actual FFY21 Federal apportionments, including a 1.7% annual increase in formula funds
- Does not include any discretionary funds not yet awarded to the MBTA
- Reflects the reallocation of \$0M in preventative maintenance funds (reduced from \$460M) to support the operating budget shortfall
 - With CRRSAA funds, and future American Rescue Plan Act funds available to underwrite Operating costs, all preventative maintenance funds have been restored to the Capital plan

State funds

- Reflects current ISAs for GLX, RL/OL, SCR, funds available align with anticipated spending
- Assumptions reflect continued annual deposit of \$60M of bond cap per year
- \$140M in State Bond cap received in FY21 had to be expended in FY21 and is not included in these source assumptions
 - Using state bond cap in FY21 did minimize the impact of the formula fund reallocation on the capital program

MBTA Debt

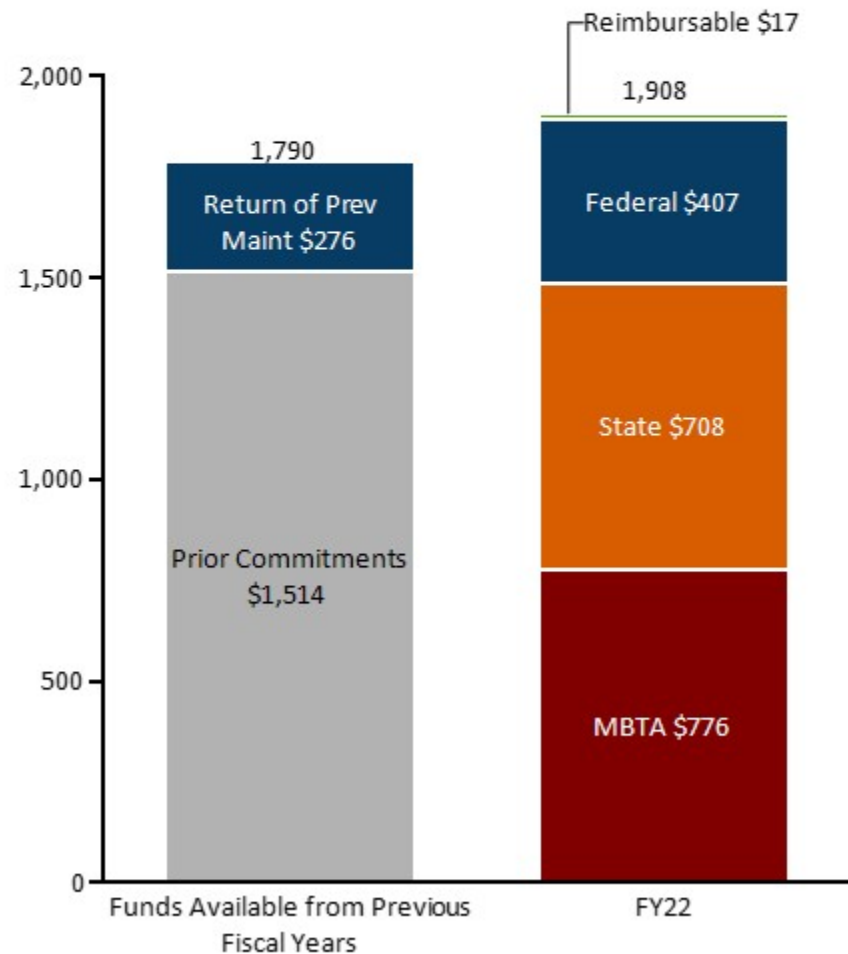
- Revenue bond issuance is shown at \$590M/year (up from \$500M/year to account for previously programmed lockbox funds)

Pay-Go/Lockbox

- Contributions are no longer reflected in the CIP, funds have been prioritized to the Operating budget and \$60M/year in state assistance via bond cap is included under state funds



Updated Source Estimate: Source Details



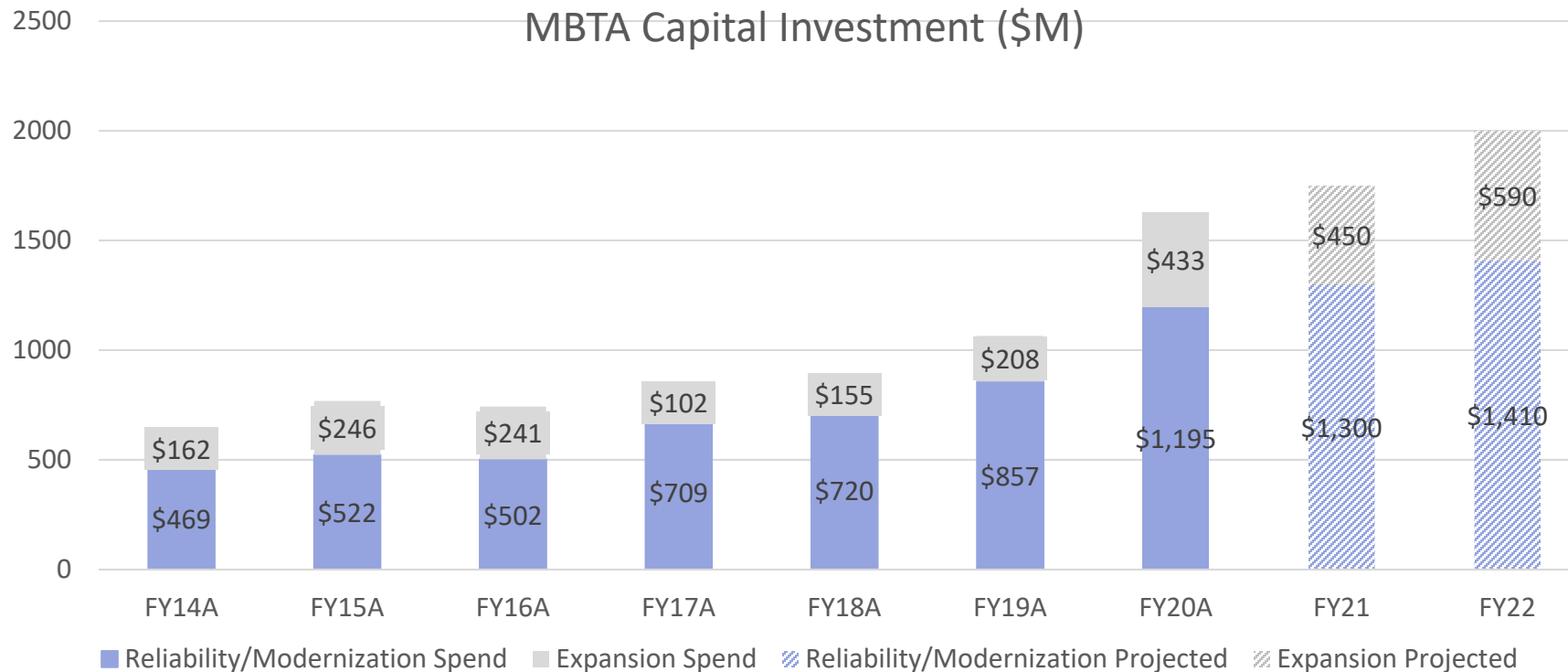
- With the receipt of CRRSSA funds and with the pending receipt of ARPA funds, the MBTA has been able to return all preventative maintenance funds to the capital program
- As a result, the remaining \$281M in preventative maintenance funds come back to the capital program as sources that will support the 5-year capital program

Forging Ahead – Capital Fund Transfer Assumptions		
Federal Fiscal Year	Original Forging Ahead Plan	Final Capital Transfer Source Assumptions
FFY20	\$171M	\$0M
FFY21	\$179M	\$0M
FFY22	\$30M	\$0M
FFY23	\$80M	\$0M
TOTAL	\$460M	\$0M

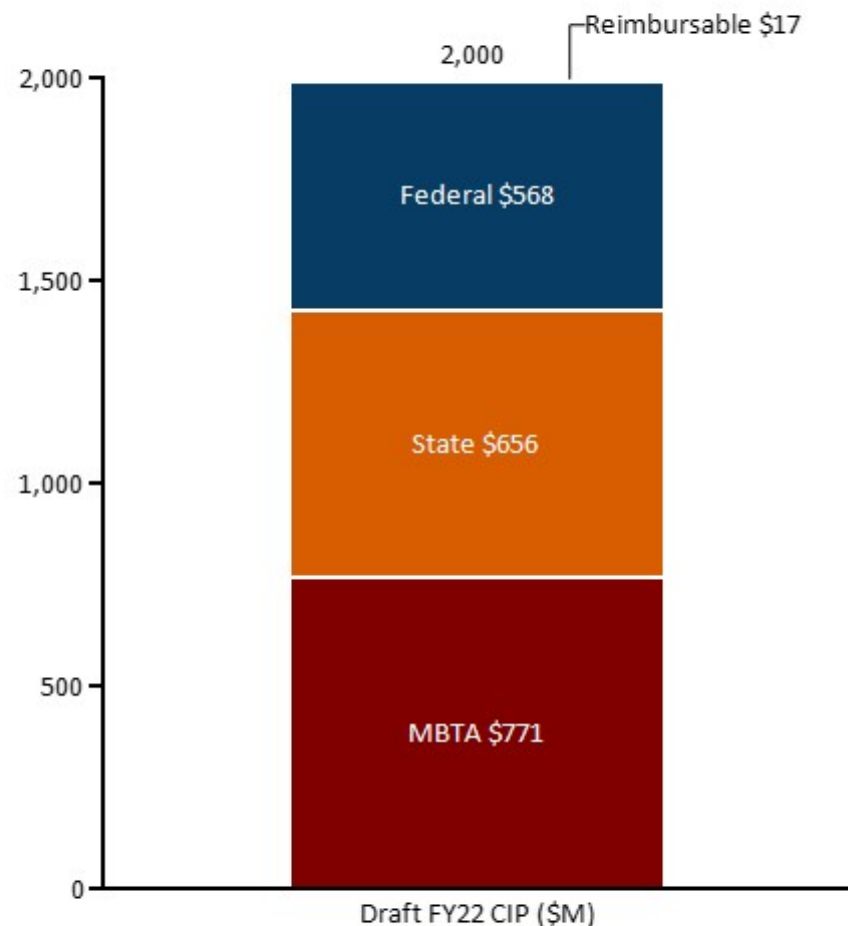


FY 2022 Spending Goal

- The capital program is on track to achieve its FY 2021 goal of \$1.75 billion in total investment, maintaining an unprecedented level of capital spending
 - As of March 31, the T had spent over \$1.33 billion year to date (preliminary)
- The spending goal for FY 2022 is \$2B, with \$1.41M in Reliability/Modernization and \$590M in Expansion.



FY 2022 Draft CIP Preview: Spending by Source



Spending Highlights:

- **Federal** fund spending is driven by progress on Green Line Extension and the continued drawdown of carry over funds
- **MBTA funds** includes Revenue Bonds to support the 20% match for Federal projects, as well as MBTA-only funded projects. Also includes financing for PTC, ATC and Fiber Burial programs
- **State** funds include Bond Cap and Rail Enhancement Program special obligation bonds for GLX, Red Line/Orange Line improvements, South Coast Rail, and other projects
- **Other** funding sources include municipal contributions and other reimbursements



Preparing for Future Federal Funds

American Rescue Plan Act of 2021, was signed into law on March 11, 2021, and includes \$30.5B in federal funding to support the national's public transportation systems.

- Eligible expenses focus on operations, payroll, preventative maintenance and cleaning and PPE
- \$1.675B was allocated toward Capital Investment Grants, which includes \$103.5M for the Green Line Extension

The MBTA is working closely with our Federal partners and is awaiting more specific details on the eligible uses for the support provided in the American Rescue Plan Act of 2021

The MBTA continues to actively prepare to capitalize on the prospect of additional federal investment, and will continue to rely on our annual Capital Investment Program planning process to inform how best to utilize any new capital Federal funding sources

Guiding Principle for Additional Capital Funds:

- Projects selected for funding should be drawn from the existing capital program, with relatively few exceptions for high priority unfunded projects that are well aligned with the program selection criteria

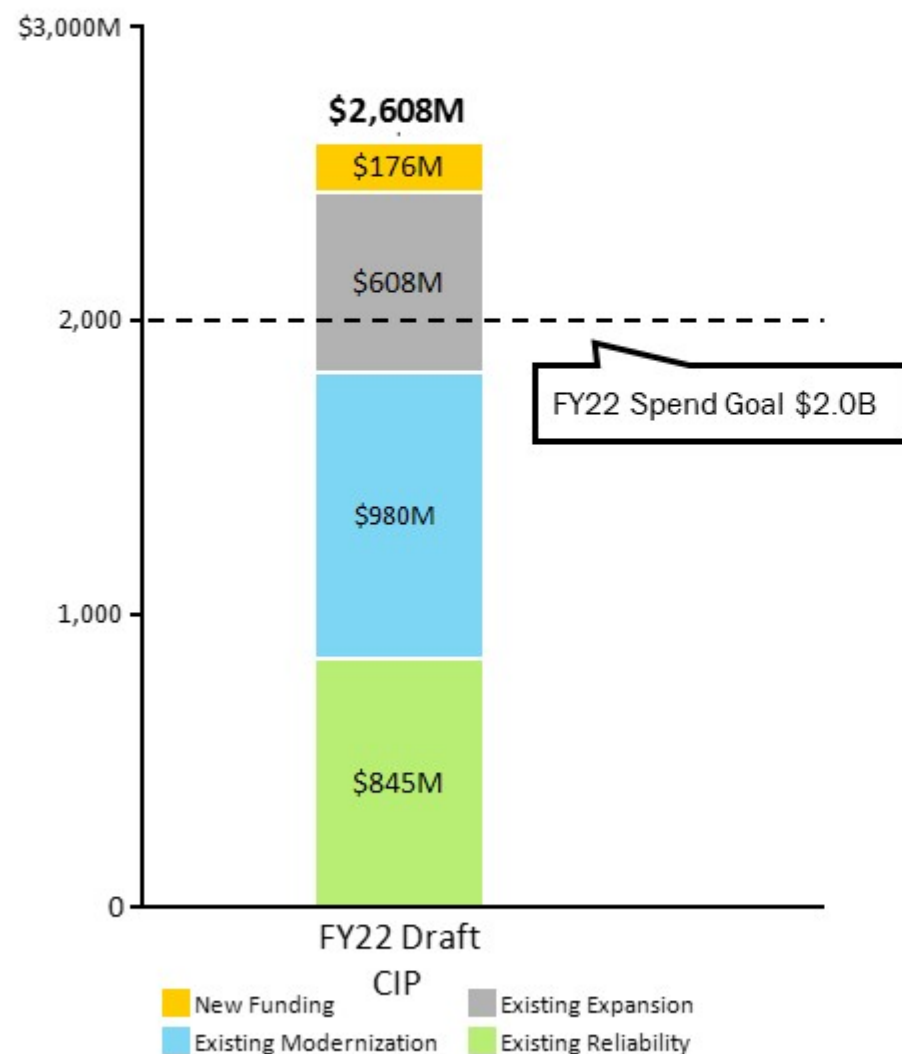


Priorities and New Investments



Priorities and Goals

With a “maintenance of effort” CIP, the MBTA will focus on continuing projects already underway, with targeted investments for the future



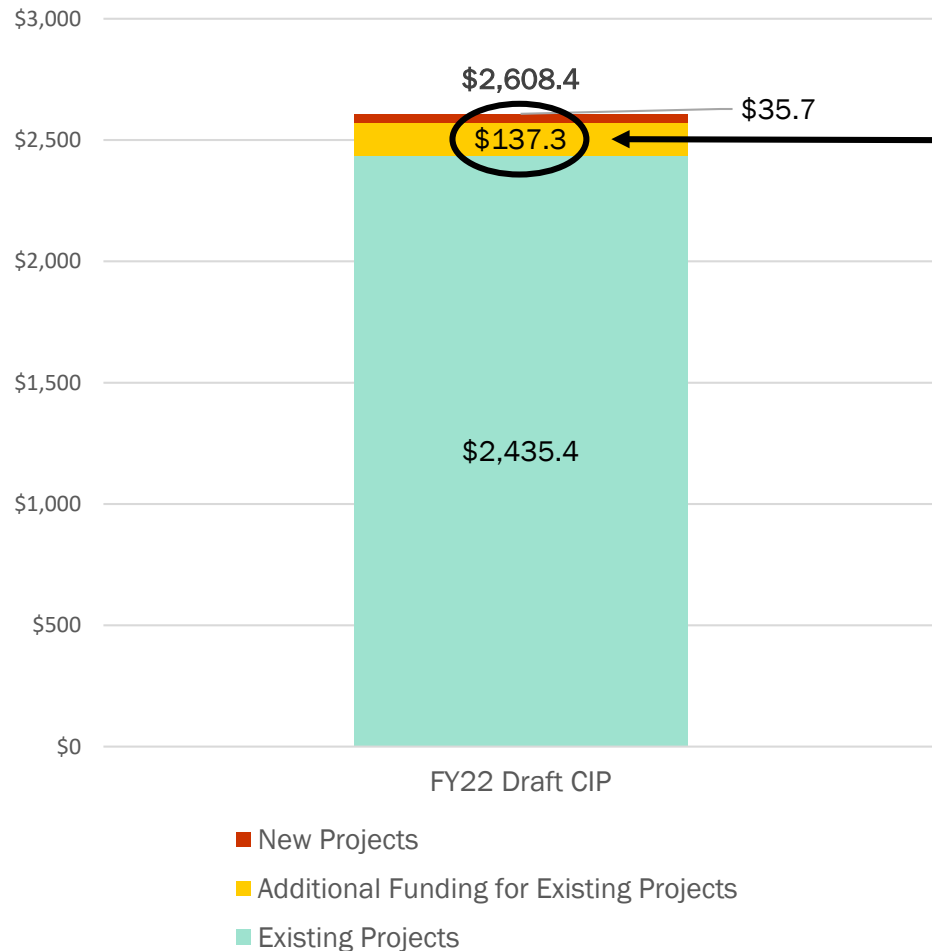
1. Continue to prioritize and invest in steady-state asset replacement and modernization
2. Continue to invest in and support through completion, a number of in-flight capital programs
 - South Coast Rail and Green Line Extension
 - Fare Transformation
 - RL/OL Transformation (to achieve headway reduction goals)
3. Make targeted investments in the next round of transformation programs and establish a strong foundation for future funding opportunities



FY 2022 Draft CIP – Targeted Investments

The draft FY22 CIP focuses on continuing projects already underway, with targeted investments for the future

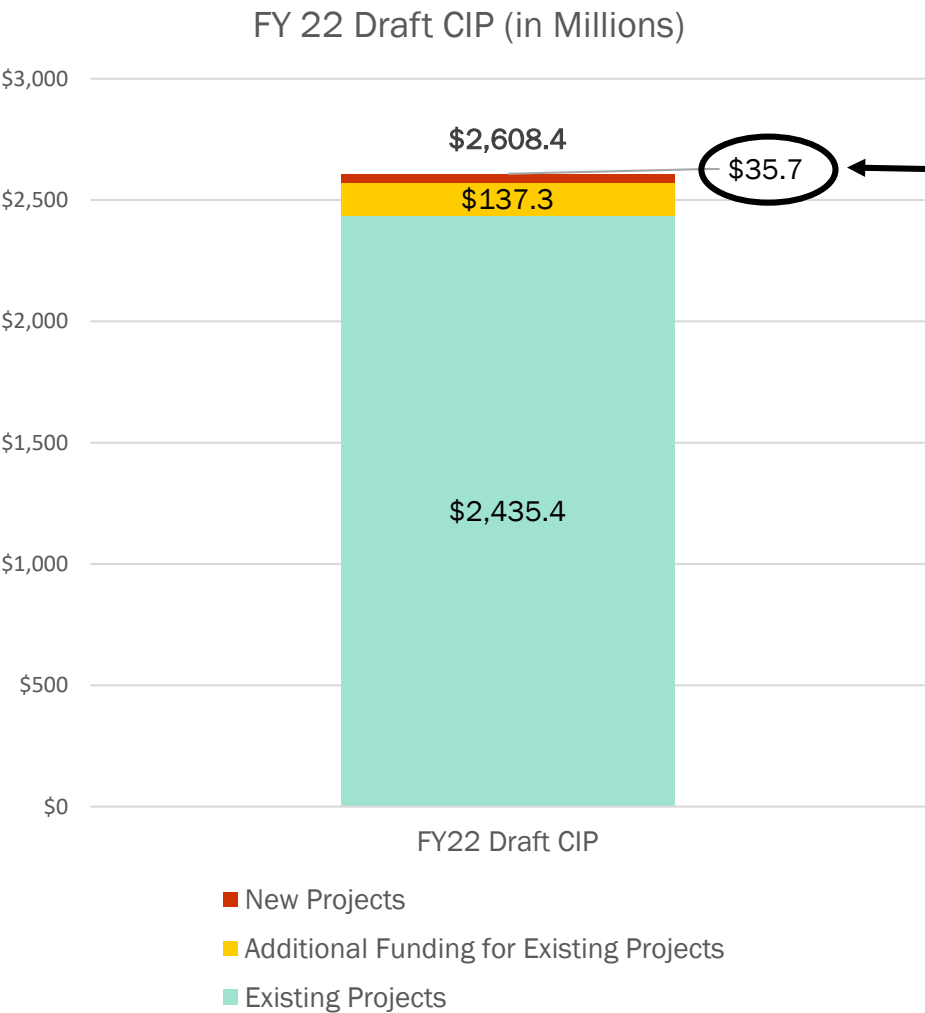
FY 22 Draft CIP (in Millions)



Existing Projects with Additional Funding	CIP Program	FY 2022 (M)
Reliability		
Structural Repairs Systemwide	Bridge and Tunnel	\$2.0
Widett Layover Facility	Facilities	\$30.0
BAE A123 Energy Storage System Replacement Program	Revenue Vehicles	\$2.3
Locomotive Overhaul	Revenue Vehicles	\$0.5
Capital Program Support	System Upgrades/Other	\$8.0
Modernization		
Bus Facility Modernization - Quincy Bus Facility	Bus Transformation	\$19.0
Lechmere Viaduct Rehabilitation Project	Green Line Transformation	\$25.8
Symphony Station Improvements	Green Line Transformation	\$5.0
Green Line Transformation	Green Line Transformation	\$4.9
Green Line Central Tunnel Signal - 25 Cycle	Green Line Transformation	\$2.0
Wellington Yard Complete Upgrade	Red/Orange Line Transformation	\$10.6
Red Line / Orange Line Infrastructure Improvements	Red/Orange Line Transformation	\$3.4
Workforce Modernization Program - HASTUS	Technology and Innovation	\$6.7
Total		\$137.3

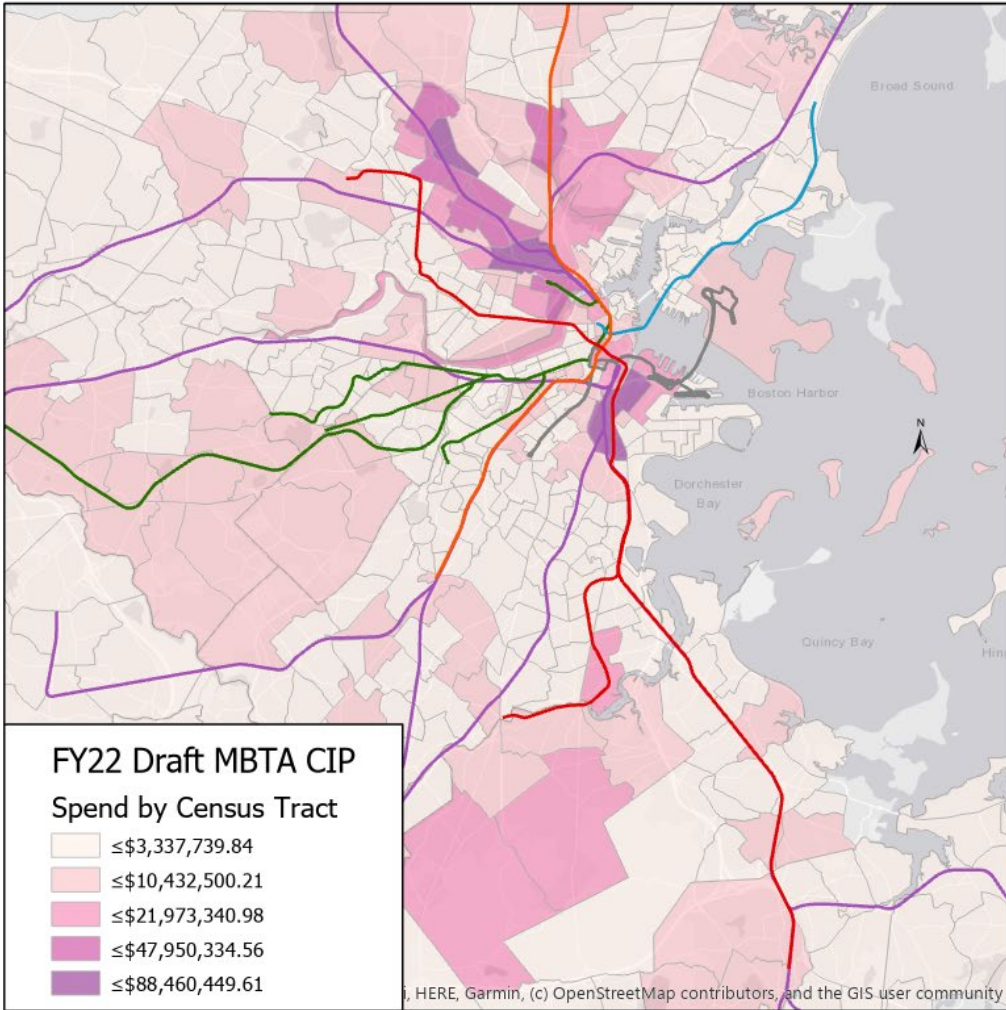
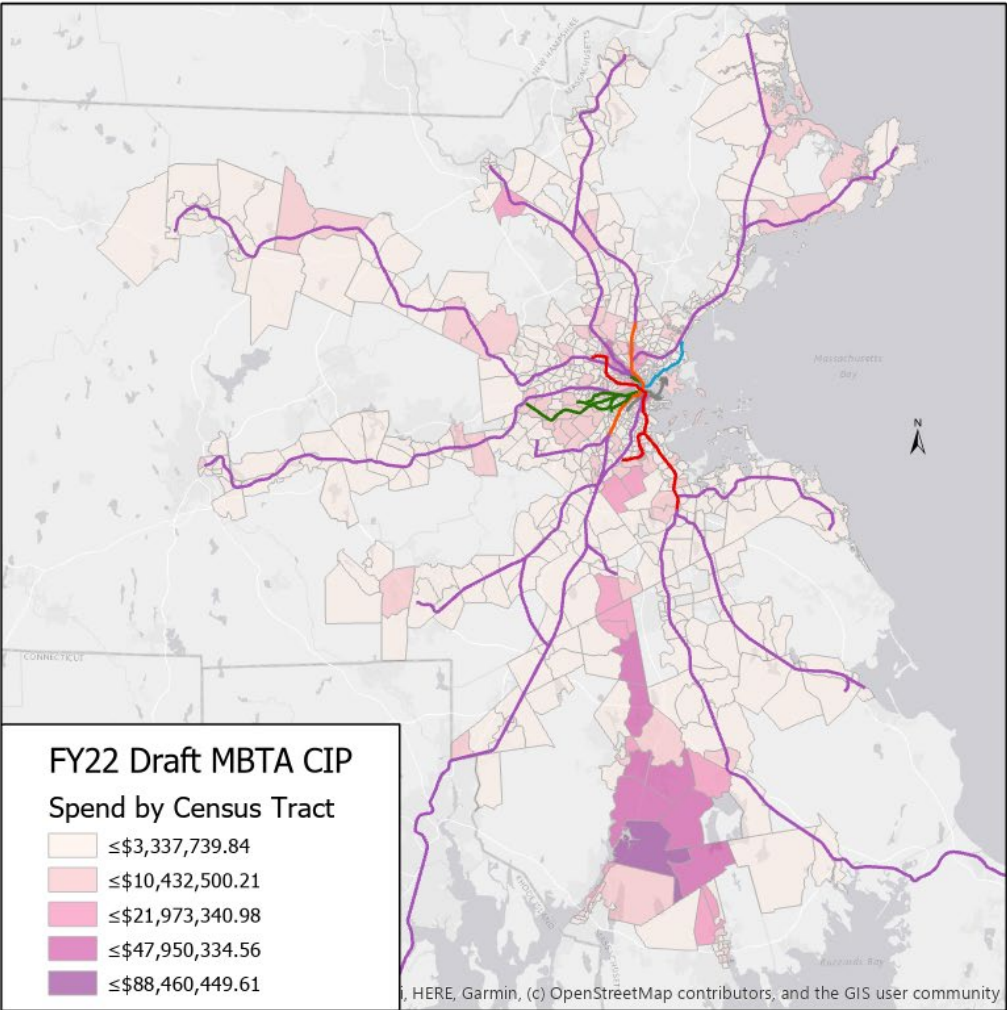
FY 2022 Draft CIP – Targeted New Investments

The draft FY22 CIP focuses on continuing projects already underway, with targeted investments for the future



New Projects	CIP Program	FY 2022 (M)
Reliability		
Urgent Structural Design Support	Bridge and Tunnel	\$0.5
Facility Circulation Safety Improvements	Facilities	\$3.5
Emergency Egress Ventilation and Lighting	Facilities	\$0.5
Keolis General & Administrative Contract	Track, Signal, and Power	\$6.0
Systemwide Bike Racks	Stations	\$0.1
Modernization		
Columbus Ave North Bus Lane	Bus Transformation	\$3.0
Bus Lanes and Other Bus Priority	Bus Transformation	\$2.0
Malden/Everett Main Street Transit Signal Priority	Bus Transformation	\$0.1
Accessible Fare Gate Opener	Fare Transformation	\$3.6
Short Term Accessibility Improvements - FTA Compliance Actions	Green Line Transformation	\$5.8
GLX Vehicle Maintenance Facility Modifications & Upgrades	Green Line Transformation	\$0.7
Red Line Orange Line PM/CM Professional Services	Red/Orange Line Transformation	\$6.8
Bus Video Security System Mandatory Platform Upgrade	Risk Management and Mitigation	\$3.3
Total		\$35.7

Draft FY 2022 CIP by Census Tract



Next Steps

Board Engagement

- Capital Programs Committee (subcommittee of MassDOT Board) is the forum for monthly MassDOT CIP updates and decisions; FMCB will be updated concurrently and upon request
- Next Capital Programs Committee meeting is scheduled for April 21st
 - MassDOT and the MBTA will present sources, uses and programs
- The next CIP update to the Joint Board is planned for April 26
 - MassDOT and the MBTA plan to present final draft sources and uses

Internal Engagement

- **Program Sequencing:** Continue to sequence and refine draft project list
- **TIP Development:** Update the MBTA's fiscally constrained 5-year Transportation Improvement Program (TIP) in preparation for presentation to the Boston Region Metropolitan Planning Organization (MPO)



Appendix: Project Highlights by CIP Program



Reliability – Bridge and Tunnel

Purpose and Need: This program repairs, reconstructs and replaces MBTA commuter rail and transit bridges and tunnels system-wide to ensure safe and reliable service for commuter rail and heavy rail riders.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	CR Repairs and Rehabilitation of MBTA-Owned Dams (P0909)	Funding the repair and rehabilitation of the Spillway Dam in Canton and the Cordaville Pond Dam in Southborough	\$0.7 M	\$10.0 M	✓	✓		✓	
	Tunnel Repairs On-Call (P0466)	On-call project funding construction services for steel and concrete tunnel repairs	\$2.8M	\$28.6M	✓	✓			
	Inspection and Rating of MBTA Systemwide Bridges (P0627)	Funds the inspection of bridges that serve Commuter Rail and Rapid Transit, cross over rail lines, or are located at facilities.	\$6.5M	\$83.4M	✓	✓			
	SW Structural Repairs Systemwide (P0852)	On-call program funding construction-related services supporting the structural repair of bridges, tunnels, retaining walls and stairs	\$5.0 M	\$25.1 M	✓	✓			
	Urgent Structural Design Support (NEW)	Addresses emergency structural or safety-related deficiencies that require immediate follow-up inspection or action	\$0.5 M	\$3.8 M					
	Tunnel Inspection Systemwide (R0074)	Funds the inspection and rating of Red Line, Orange Line, Green Line, and Blue Line tunnels	\$5.0 M	\$30.6 M	✓	✓			
	Urgent Structural Design Support (NEW)	Addresses emergency structural or safety-related deficiencies that require immediate follow-up inspection or action	\$0.5 M	\$3.8 M	✓	✓			
Ongoing Investments	CR North Station Draw 1 Bridge (P0018)	Ongoing design for replacement of bridge over the Charles River carrying Commuter Rail and Amtrak trains to North Station.	\$11.8 M	\$218.8 M	✓	✓		✓	
	Bridge Bundling Contract (P0495)	Rehabilitation of 4 bridges, all entering construction Spring 2021.	\$40.0 M	\$132.1 M					
	RL Longfellow Approach (P0551)	Rehabilitates the Longfellow Approach Viaduct, Charles/MGH station platform, and Span 1 of the Longfellow Bridge.	\$6.0 M	\$113.9 M	✓	✓			✓







Reliability – Facilities

Purpose and Need: This program rehabilitates and upgrades maintenance and administrative facilities that support MBTA operations.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	B Facility Circulation Safety Improvements (NEW)	Program funding the assessment of vehicular and pedestrian circulation at MBTA bus facilities, and the implementation of improvements to enhance employee safety.	\$3.5M	\$15.5M	✓	✓			
	B Arborway Bus Operators Trailer Replacement (NEW)	Planning, design and construction support services for the installation of permanent modular buildings at Arborway, to be utilized by bus operations staff.	\$0.0M	\$1.5M	✓	✓			
	SW Emergency Egress Ventilation and Lighting (NEW)	0-15% design for the replacement and rehabilitation of life safety systems at a number of MBTA facilities. Affected systems include back up generators, fire hydrants, ventilation, and others.	\$0.4M	\$1.0 M	✓				
	CR Widett Layover Facility (P0952)	Real estate acquisition and planning for a future commuter rail layover facility at Widett Circle in South Boston.	\$30.0M	\$30.0M	✓	✓	✓	✓	
Ongoing Investments	B Bus Maintenance Facility / Bus Facility Modernization (P0671)	Program to renovate or replace bus facilities to improve workforce conditions and prepare for future electric fleets. Includes planning and 0-30% design underway for North Cambridge, and a system wide prioritization plan for bus facilities.	\$11.1M	\$84.5M	✓	✓	✓	✓	
	B Bus Facility Interim Improvements (P0942)	Ongoing procurement and construction for lighting, drainage, paving, locker and break rooms, and other facility upgrades as part of the MBTA's commitment to Local 264. Includes replacement of overhead doors to increase height clearance at Albany Garage.	\$19.4M	\$62.3M	✓	✓			
	SW Wastewater Discharge Infrastructure (P0670)	Systemwide program to inventory, assess, and plan for the rehabilitation of the MBTA's underground pump infrastructure.	\$0.8M	\$3.4M		✓		✓	

Reliability – Revenue Vehicles

Purpose and Need: This program rehabilitates and replaces the MBTA revenue fleet, which includes commuter rail, heavy rail, light rail, bus, ferry, and paratransit vehicles, to allow the MBTA to improve service reliability and ensure safety for riders.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	 Replacement of RIDE Revenue Vehicles (P0656)	Ongoing replacement of RIDE vans and sedans, equipment of the full fleet with reliable in-vehicle technology, and procurement of a maintenance quality control consultant.	\$0.0M	\$7.5M	✓	✓	✓		✓
	 Locomotive Overhaul (P0239)	Overhaul of F40 commuter rail locomotives to improve reliability and reduce risk of unplanned maintenance.	\$0.5M	\$0.5M	✓	✓		✓	
	 BAE A123 Energy Storage System Replacement Program (P0902)	Replacement of battery system in 255 New Flyer buses, which are reaching their useful life.	\$2.3M	\$13.5M	✓	✓			
Ongoing Investments	 Delivery of 460 40ft Buses (P0618)	Procurement of 460 Enhanced Electric Hybrid (EEH) buses. RFP released in January 2021; award and NTP expected July 2021.	\$3.8M	\$166.4M	✓	✓		✓	
	 DMA Replacement (P0619)	Procurement of hybrid electric fleet for the Silver Line. Design review is nearing completion and pilot bus production begins in May 2021.	\$44.0M	\$86.6M			✓	✓	
	 Procure 64 Bi-Level CR Coaches (P0893)	Replacement of bi-level coaches to support South Coast Rail. Currently in design review.	\$6.0 M	\$113.9 M	✓	✓			

Reliability – Stations

Purpose and Need: This program rehabilitates and upgrades MBTA stations and parking facilities (e.g., commuter rail, commuter boat, subway and bus stations) to help make it easier for visitors and riders to navigate the MBTA system.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	SW Systemwide Bike Racks (NEW)	Increase bike parking at up to 40 MBTA stations and bring additional bike racks and cages into a state of good repair.	\$0.1 M	\$0.1 M		✓		✓	
Ongoing Investments	SL Court House Station Leaks (P0404)	Resiliency and infrastructure improvements at the Silver Line Station, includes remediation from water damage. Currently in Design.	\$7.4 M	\$32.1 M	✓	✓		✓	
	CR Worcester Union Station Accessibility and Infrastructure Improvements (P0395)	Creates new high-level platforms, new elevators, and other infrastructure upgrades at Worcester Union Station. Currently in Design.	\$9.0 M	\$64.1 M		✓			✓
	CR Back Bay Station Ventilation (P0108)	Replaces ventilation and air pressurization systems at the multimodal Back Bay station. Currently in Design.	\$5.0 M	\$43.1 M	✓	✓		✓	







Reliability – System Upgrades

Purpose and Need: This program upgrades a wide range of MBTA systems including communications, security, computer technology, fare collection, asset management and environmental remediation systems. Program includes the rehabilitation of non-revenue vehicles and equipment.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	SW Capital Program Support (P0886)	Funding to support capital staff augmentation and inspection-related fees.	\$8.9M	\$12.5M	✓	✓			
Ongoing Investments	SW Systemwide Radio (P0301)	Rehabilitation of MBTA radio infrastructure to provide critical communications for MBTA Transit Police.	\$12.2M	\$70.2M	✓				
	SW Systemwide Asset Management Program Phase 3 (P0904)	Continued implementation of updates to the MBTA's asset inventory for the National Transit Database (NTD) and Transit Asset Management Plan (TAMP).	\$2.5M	\$11.0M	✓	✓		✓	

Reliability – Track, Signal, and Power

Purpose and Need: This program rehabilitates, replaces and upgrades track, signal and power assets across the commuter rail and transit system to ensure safe and reliable service for commuter rail and heavy rail riders.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	 Keolis General & Administrative Contract (NEW)	Required annual payments to Keolis for maintenance and operations of commuter rail	\$6.0 M	\$30.0 M	✓	✓			
	 Keolis Capitalization Initiatives and Extra Work (P0553)	Program funding a variety of capital activities and improvements required as part of the Keolis Operating Agreement	\$13.5 M	\$137.4 M	✓	✓			
	 PRIIA-NEC Baseline Capital Charges (P0692)	Additional funding for PRIIA payments to Amtrak as part of the Attleboro Agreement	\$19.6 M	\$116.2 M	✓	✓			
Ongoing Investments	 Tower 1 Interlocking Early Action Project (P0889)	Early action project to support the South Station Expansion. Currently in construction.	\$8.0 M	\$82.4 M		✓	✓		
	 Blue Line Harbor Tunnel Infrastructure Improvements (P0631)	Ongoing assessment and rehabilitation of Blue Line tunnel infrastructure.	\$7.0 M	\$79.0 M	✓	✓		✓	
	 Mattapan High Speed Line Transformation (P0857)	State of good repair and accessibility improvements, power infrastructure upgrades, and other infrastructure investments. Currently in preliminary design.	\$5.0 M	\$43.1 M	✓	✓		✓	✓

Modernization – Accessibility

Purpose and Need: This program improves accessibility at MBTA commuter rail, subway and bus stations. This program is necessary to meet the goals of the Authority’s Plan for Accessible Transit Infrastructure (“PATI”). Investments will help ensure the vast majority of customers can use the MBTA’s increasingly accessible fixed-route system.

Project Name		Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
Ongoing Investments	SW	Elevator Program (P0075, P0066)	Funds design and construction for elevators system wide. Harvard Square station recently re-opened new elevators, and the replacement of Central Square escalators is currently in design.	\$6.0 M	\$54.7 M		✓		✓
	CR	Natick Center Station Accessibility Project (P0174)	Full accessibility upgrade at Natick Center commuter rail station. After completion, the station will include 2 new elevators, 2 accessible ramps, 6 stairways, new platform, pedestrian bridge, drainage improvements and bicycle parking. Construction began February 2020.	\$20.8 M	\$43.6 M		✓		✓
	OL	Oak Grove Station Vertical Transportation Improvements (P0076)	Accessibility Upgrades at Oak Grove Station, including 3 new elevators, replacement of 1 existing elevator, sidewalk upgrades/repairs, as well as wayfinding and station brightening improvements.	\$12.0 M	\$38.7 M		✓		✓

Modernization – Bus Transformation

Purpose and Need: This program aims to support a range of investments that strive to achieve better, faster, lower-emission bus service that is more aligned with where riders live, work and travel.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	Bus Facility Modernization – Quincy Bus Facility (P0671a)	Real estate acquisition and design for the new Quincy Bus Facility.	\$33.7M	\$371.9	✓	✓	✓	✓	
	Bus Lanes and Other Bus Priority (NEW)	Funds to provide local match for potential bus lane projects.	\$2.0M	\$7.0M		✓	✓	✓	
	Columbus Ave. Bus Lane Phase 2 (NEW)	Local match funding for Phase 2 of the Columbus Ave. center-running bus lane in Boston.	\$3.0M	\$3.0M		✓	✓		
	Malden/Everett Main Street Transit Signal Priority (NEW)	Local match funding for installation of transit signal priority infrastructure along Main St. in Malden and Everett	\$0.1M	\$0.1M		✓	✓		
Ongoing Investments	Bus Priority and Accessibility Improvements (P0613)	Funding for bus lanes, transit signal priority, and bus stop consolidation, as well as accessibility improvements at 300-500 high-priority bus stops.	\$12.0M	\$48.3M	✓	✓	✓		✓

Modernization – Commuter Rail Transformation

Purpose and Need: This program aims to support a range of investments that strive to achieve better, faster, lower-emission bus service that is more aligned with where riders live, work and travel.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
Ongoing Investments CR	Rail Transformation Planning Studies (P0934)	Planning and technical studies that build upon the findings of rail vision and system State of Good Repair Needs	\$3.6M	\$10.0M		✓	✓	✓	
	Worcester Line Track and Station Accessibility Improvements Project (P0261)	Construction of third track and full reconstruction of four stations along the Worcester Line between Weston and Framingham	\$6.9M	\$43.5M		✓	✓		✓
	Procurement of Passenger Locomotives – Future Fleet (P0918)	Planning for the procurement of 25 new diesel electric Commuter Rail locomotives by 2025	\$1.0M	\$30.0M		✓	✓	✓	

Modernization – Commuter Rail Safety and Resiliency

Purpose and Need: This program includes projects that improve the safety and resiliency of the Commuter Rail network, including the implementation of Positive Train Control (PTC) and related investments.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
Ongoing Investments CR	ATC Implementation on the MBTA North Side Commuter Rail Lines (P0606)	Funds the implementation of federally mandated Automatic Train Control. Currently in Construction.	\$154.0 M	\$368.7 M	✓	✓			
	Bury 100 Miles of Fiber Annually - Strategic Locations (P0612)	Buries fiber optic cables across commuter rail lines, promoting resiliency and redundancy across the system. Currently in design.	\$34.7 M	\$102.1 M	✓	✓		✓	
	Commuter Rail Positive Train Control (P0148)	On-going installation of federally mandated PTC equipment along CR lines.	\$15.9 M	\$456.3 M	✓	✓			
	PTC Startup After Implementation (P0913)	PTC Start up costs associated with the transition of the PTC system from the system integrator (Hitachi) to Keolis.	\$1.5 M	\$3.5 M	✓	✓			

Modernization – Fare Transformation

Purpose and Need: The Fare Transformation program will implement a new reliable and convenient fare payment and collection system, integrated across all modes, to replace CharlieCards/Tickets and their supporting hardware and software.

Project Name		Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	SW	Accessible Fare Gate Opener (P0265a)	Design and implementation of a technology solution to support hands-free operation of fare gates	\$3.6M	\$8.2M	✓			✓
Ongoing Investments	SW	Fare Transformation (P0265)	Upcoming project initiatives include expansion of CharlieCard access, implementation of contactless payment, and rear-door boarding capabilities.	\$12.0M	\$48.3M		✓	✓	

Modernization – Green Line Transformation

Purpose and Need: Green Line Transformation (GLT) improves the quality of service on the Green Line through fleet modernization and infrastructure/facilities upgrades, as well as improved capacity, accessibility and state-of-the-art technology. GLT is a multi-phase, multi-faceted effort to make the Green Line more reliable, robust, and resilient.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	GL	Short Term Accessibility Improvements – FTA Compliance Actions (NEW)	Addresses ADA compliance on Green Line B and C Branch street level stations. Funds design and construction for 14 stations	\$5.8 M	\$57.5 M	✓	✓		✓
		Riverside VMF Modifications and Upgrades (NEW)	Upgrades to existing hoists, pits and mezzanines at the Riverside VMF necessary for Type 10 Vehicle acceptance	\$0.0 M	\$49.4 M		✓		
		GLX VMF Modifications and Upgrades (NEW)	Design and installation of new hoist at the GLX Maintenance Facility to accommodate the Type 10 pilot vehicle	\$0.7 M	\$12.4 M		✓		
		Symphony Station Improvements (P0168)	Track work and associated power signal cabling, platform raising, and redundant elevators	\$15.5 M	\$46.8 M	✓	✓		✓
		Green Line Central Tunnel Signal – 25 Cycle (P0283)	Ongoing project completing infrastructure and signal repairs in the Green Line Central tunnel	\$2.0 M	\$17.0 M	✓	✓		
		Green Line Transformation (P0685)	Additional funding for program manager/construction manager	\$6.1 M	\$48.3 M		✓		
		Lechmere Viaduct Rehabilitation Project (P0850)	Active construction project accelerating its construction schedule to coordinate with the Green Line Extensions Project.	\$31.1 M	\$99.6 M	✓	✓	✓	
Ongoing Investments	GL	Type 10 Light Rail Fleet Replacement (P0369)	Procurement of fully-accessible fleet to allow retirement of Types 7 and 8 fleets that have surpassed their ULB.	\$7.6 M	\$800.0 M	✓	✓	✓	✓
		Green Line Train Protection (P0370)	Funds a train monitoring system that monitors tracks and vehicle speed to promote rider safety and reduce vehicle collisions. Currently in construction.	\$28.0 M	\$169.3 M	✓	✓		

Modernization – Red/Orange Line Transformation

Purpose and Need: The Red Line and Orange Line Improvements program includes the set of vehicle and infrastructure investments needed to fully modernize the fleet and achieve the service goal of three minute headways on the Red Line and three and a half minute headways on the Orange Line. These investments will help better meet the needs and connect residents to growing job centers.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding RO	Red Line Orange Line PM/CM Professional Services (NEW)	The PM/CM professional services team will provides support services to the MBTA management staff and support the delivery of the RL/OL Transformation program.	\$6.8 M	\$50.2 M		✓		✓	
	Red Line / Orange Line Infrastructure Improvements (P0157)	Repairs at Wellington Maintenance Facility necessary for repairs and maintenance of new Orange Line vehicles.	\$73.6 M	\$475.4 M	✓	✓			
	Cabot Yard Complete Upgrade Owner's Rep Services (P0512)	Continuation of Owners Representative Services for the Red Line Orange Line Transformation Program.	\$0.0 M	\$1.1 M	✓	✓			
	Codman Yard Expansion and Improvements (P0679)	Repairs and expansion of Codman Yard Maintenance facility necessary for repairs and maintenance of new Orange Line vehicles.	\$12.6 M	\$69.9 M	✓	✓	✓		
	Wellington Yard Complete Upgrade (P0514)	Funds the reconstruction of tracks at Wellington Yard and crossovers into Wellington Station.	\$45.3 M	\$71.2 M	✓	✓			
Ongoing Investments RO	Red/ Orange Line Vehicles (P0362)	Fund the procurement of the new fleet of Red and Orange Line Vehicles. Full acceptance of 252 new Red Line Vehicles and 152 new Orange Line Vehicles is expected by 2024.	\$75.5 M	\$1,073.5 M	✓	✓	✓	✓	✓
	Signal Program - Red/Orange Line (P0285)	Replaces aging analog signal systems on the Red and Orange Line with new, digital infrastructure. Currently in construction, with completion expected in 2022.	\$88.5 M	\$267.6 M	✓	✓			
	Cabot Yard Complete Upgrade (P0512)	Replaces the storage and maintenance facility for Red Line vehicles, including track replacement to service red line vehicles. Currently in Construction.	\$48.3 M	\$172.6 M	✓	✓			

Modernization – Risk Management and Mitigation

Purpose and Need: Implements risk management initiatives as well as proactive efforts to improve workplace safety and system security

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	B Bus Video Security Mandatory Platform Upgrade (NEW)	Purchase and installation of new video recording systems on the MBTA bus fleet to enable transition to updated security video software	\$3.3M	\$3.3M	✓				
Ongoing Investments	SW Safety Management System Implementation (P0931)	Implementation of a new Safety Management System, including safety reporting and safety risk management tools	\$4.0M	\$11.3M	✓	✓			
	Systemwide Security Upgrades (P0676)	Funding for a variety of projects led by the security department, including camera replacement and access control upgrades	\$4.2M	\$20.7M	✓	✓			
	OHS Program Development and Implementation (P0645)	Development and implementation of a Systemwide Occupational Health and Safety (OHS) Program	\$5.0M	\$22.3M	✓	✓			
	Climate Change Resiliency Vulnerability Assessment (P0680)	Systemwide program to evaluate climate change-related vulnerabilities and prioritize resiliency measures	\$1.1M	\$2.5M	✓	✓		✓	

Modernization – Technology and Innovation

Purpose and Need: This program includes investments in technology and innovations that enhance productivity, modernize the system and improve the quality of MBTA services.

	Project Name	Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
New Funding	SW Workforce Modernization Program – HASTUS (R0128)	Additional funding to support upgrade to newest version of HASTUS, the MBTA’s scheduling and pick software	\$8.5M	\$40.5		✓			
Ongoing Investments	SW FMIS Upgrade and Business Process Re-Design (P0683)	Upgrade of current financials information system, including integration of PeopleSoft module and additional modules and integration with Capital Management System (CMS)	\$2.3M	\$28.8M		✓			
	The Digital Ride (P0689m)	Creation of a unified “back-end” content management system for all rider-facing digital screens	\$0.3M	\$1.0	✓				
	B Bus Dispatching Technologies (P0689d)	Improvements of tools used by bus operations team to manage service, including the development and implementation of a web-based dispatching tool	\$1.4M	\$3.1M		✓	✓		

Expansion – South Coast Rail

Purpose and Need: The South Coast Rail project will restore commuter rail service between Boston and southeastern Massachusetts

Project Name		Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility	
Ongoing Investments	CR	South Coast Rail Expansion (P0160)	Expansion of the Commuter Rail system to southeastern Massachusetts, including Taunton, Fall River ,and New Bedford	\$262.2M	\$920.8M			✓	✓	✓
		South Coast Rail – Procurement of 16 Commuter Rail Coaches (P0160a)	Procurement of 16 Commuter Rail coaches to support South Coast Rail service	\$24.6M	\$69.0M			✓	✓	

Expansion – Green Line Extension

Purpose and Need: The Green Line Extension program includes the vehicles, stations and infrastructure to extend the Green Line from a relocated Lechmere Station in East Cambridge to Union Square in Somerville and College Avenue in Medford. The project’s six new stations will put 80 percent of all Somerville residents within walking distance of rapid transit.

Project Name		Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
Ongoing Investments	GL	Green Line Extension (P0095)	Extension of the Green Line to Union Square in Somerville and College Avenue in Medford	\$284.4M	\$2,118.6M			✓	✓
		Green Line Extension – Vehicles (P0095a)	Procurement of 24 Type 9 vehicles to support GLX	\$21.2M	\$170.0M	✓	✓	✓	✓

Expansion – Expansion Projects

Purpose and Need: This program makes targeted expansions in order to improve access to transit and supports planning and design for expansion projects identified as “Next Priorities” within Focus40.

Project Name		Investment Details	FY22 Funding	Total Auth. Budget	Safety	Reliability	Capacity	Sustainability	Accessibility
<div>Ongoing Investments</div> <div><div>SL</div><div>RL</div><div>BL</div></div>	Silver Line Gateway – Phase 2 (P0496)	Extension of Silver Line to the Chelsea Commuter Rail station.	\$7.0M	\$40.6			✓	✓	
	Red-Blue Connector (P0866)	Planning funds to extend the Blue Line to Charles/MGH, creating a direct connection with the Red Line.	\$3.6M	\$15M			✓	✓	