

# Massachusetts Bay Transportation Authority FY24-28 Capital Investment Plan (CIP)

Proposed - March 2023



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# Glossary of Acronyms

A&F - Executive Office for Administration and Finance

ACE - Agile Carrier Ethernet

ADA - Americans with Disabilities Act of 1990

AFC - Automated Fare Collection

APC - Automated Passenger Counters

APS - Adaptive Power System

ATC - Automated Train Control

BCIL - Boston Center for Independent Living

BEB - Battery Electric Bus

BET - Boston Engine Terminal

BIL - Bipartisan Infrastructure Law

BLITS - Bus Location Instant Tracking Solution

BTC - Blind Trailer Coach

CIP - Capital Investment Plan

CMF - Capital Maintenance Fund

CNG - Compressed Natural Gas

CRMF - Commuter Rail Maintenance Facility

CTC - Control Trailer Coach

CWR - Continuously Welded Rail

DMA - Dual Mode Articulated

DPU - Distributed Power Unit

DTX - Downtown Crossing Station

E&M - Engineering and Maintenance

EEH - Enhanced Electric Hybrid

EJ - Environmental Justice

ESS - Electronic Signage System

ETB - Electric Trolleybus

FHWA - Federal Highway Administration

FRP - Fiber Reinforced Polymer

FTA - Federal Transit Administration

GATRA - Greater Attleboro Taunton Regional Transit Authority

GLT - Green Line Transformation

GLTPS - Green Line Train Protection System

GLTS - Green Line Tracking System

HSL - High Speed Line

HVAC - Heating, Ventilation, and Air Conditioning

IT - Information Technology

LRV - Light Rail Vehicle

MassDOT - Massachusetts Department of Transportation

MOW - Maintenance of Way

MPO - Metropolitan Planning Organization

NEC - Northeast Corridor

NNEPRA - Northern New England Passenger Rail Authority

NTD - National Transit Database



OCC - Operations Control Center

OCS - Overhead Contact System

OHS - Occupational Health and Safety

OLT - Orange Line Transformation

PA - Public Announcement

PATI - Plan for Accessible Infrastructure

PCB - Polychlorinated Biphenyl

PCC - Presidents' Conference Committee

PLC - Programmable Logic Controller

PM/CM - Project Management/Construction Management

PPE - Personal Protective Equipment

PRIIA - Passenger Rail Investment and Improvement Act of 2008

PSAC - Project Selection Advisory Council

PTC - Positive Train Control

PTIS - Passenger Train Information System

PVC - Polyvinyl Chloride

RCM - Reliability-Centered Maintenance

REP - Rail Enhancement Program

RFID - Radio Frequency Identification Detection

RGS - Rigid Galvanized Steel

RIDOT - Rhode Island Department of Transportation

RLT - Red Line Transformation

ROW - Right-of-Way

RRIF - Railroad Rehabilitation and Improvement Financing

RTAG - Riders' Transportation Access Group

S&I - Service and Inspection

SCADA - Supervisory Control and Data Acquisition

SGR - State of Good Repair

SMS - Safety Management System

SONET - Synchronous Optical Network

STIP - State Transportation Improvement Program

SWAN - Security Wide Area Network

TAMP - Transit Asset Management Plan

TIFIA - Transportation Infrastructure Finance and Innovation Act

TIP - Transportation Improvement Program

TPSS - Traction Power Substation

VMF - Vehicle Maintenance Facility

WILD - Wheel Impact Load Detector



# Nondiscrimination Statement

## Federal Title VI Rights and Protections

The Massachusetts Bay Transportation Authority (MBTA) operates its programs, services, and activities in compliance with federal nondiscrimination laws, including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin (including limited English proficiency), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, the Federal Transit Administration, or both prohibit discrimination on the basis of age, sex, and disability. These protected categories are contemplated within the MBTA Title VI Program consistent with federal interpretation and administration. Additionally, the MBTA provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with US Department of Transportation policy and guidance on federal Executive Order 13166.

## State Nondiscrimination Protections

The MBTA also complies with the Massachusetts Public Accommodation Law, M.G.L. c 272 §§ 92a, 98, 98a, prohibiting making any distinction, discrimination, or restriction in admission to or treatment in a place of public accommodation based on race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry. Likewise, the MBTA complies with the Governor's Executive Order 526, section 4 requiring all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background.

## ADA/504 Notice of Nondiscrimination

The MBTA does not discriminate on the basis of disability in admission to its programs, services, or activities; in access to them; in treatment of individuals with disabilities; or in any aspect of their operations. The MBTA also does not discriminate on the basis of disability in its hiring or employment practices. This notice is provided as required by Title II of the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973.

## Contact Us

### Request Information

To request additional information regarding Title VI and related federal and state nondiscrimination obligations, please contact:

MBTA Office of Diversity and Civil Rights  
Title VI Unit  
10 Park Plaza, Suite 3800  
Boston, MA 02116  
Phone: 857-368-8580  
Fax: 617-222-3263  
TTY: 711  
Email: MBTACivilRights@mbta.com

### Language Services

The MBTA offers various services (such as translation assistance and interpretation) to customers in a range of languages.

If this information is needed in another language, please contact the MBTA Title VI Unit at 857-368-8580.

[Learn more about our language services](#)

### File a Discrimination Complaint

If your civil rights have been violated, you can file a complaint with the MBTA Office of Diversity and Civil Rights.

Download, print, and complete the [Discrimination Complaint Form](#) before sending it in, or stop by the office to request a hard copy.

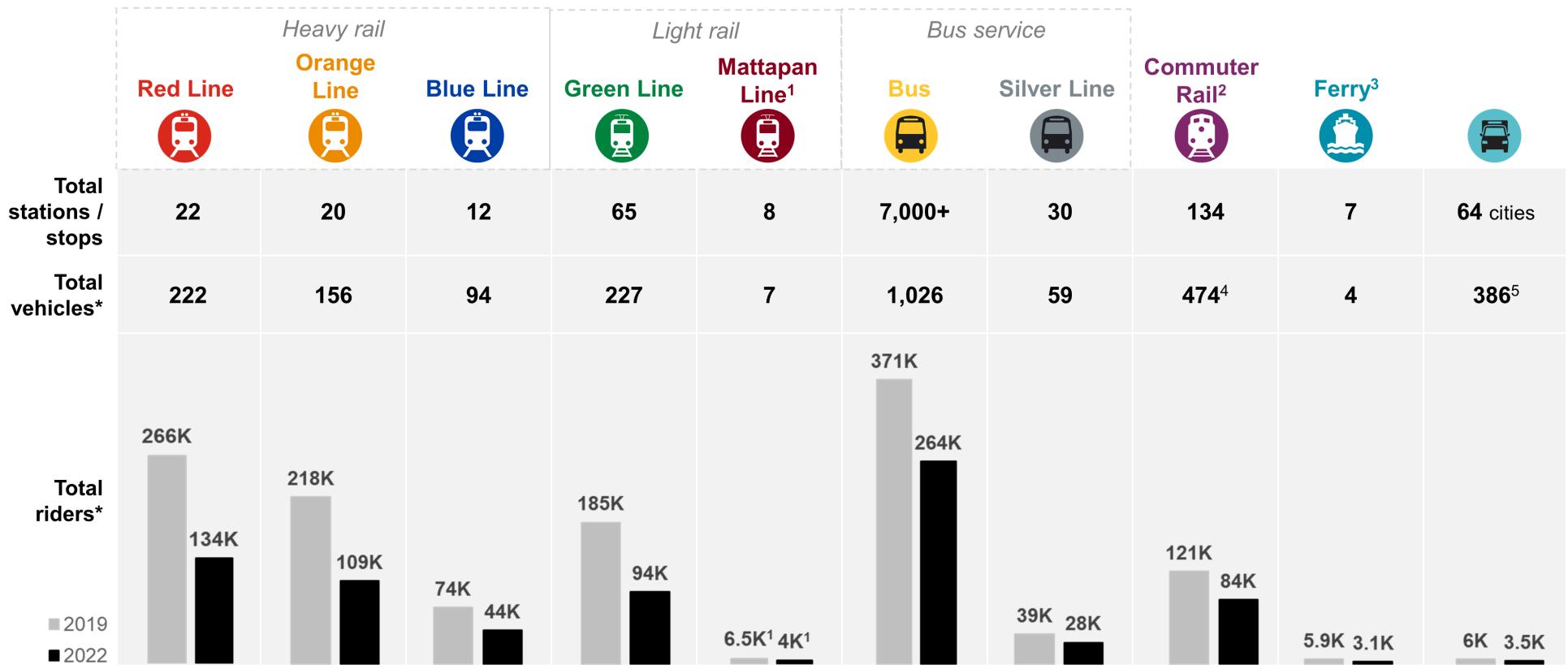
A complaint alleging a violation of Title VI and/or the MBTA's nondiscrimination policies must be filed no later than one hundred and eighty (180) days from the date of the alleged violation. Complaints alleging violations of state or federal law must be filed within the timeframes established by statute, regulation, or case law (usually 300 days).

To speak with our Customer Support team, call 617-222-3200.

[Learn more about filing a discrimination complaint](#)



# MBTA by the Numbers



\*Reflects active vehicle counts as of June 2022 and average weekday trips as of Oct-19 and Oct-22

<sup>1</sup>2019 Mattapan Line ridership estimated as of Fall 2018. 2022 average weekday trips on the Mattapan Line is estimated as 4000-4500 daily boarding

<sup>2</sup> Operated by Keolis

<sup>3</sup> Operated by Boston Harbor Cruises

<sup>4</sup> Operated by National Express Transit and Veterans Transportation Services

<sup>5</sup> 81 locomotives and 393 coaches

<sup>6</sup> 151 automobiles and 235 vans

# Document Overview

This document comprises the proposed State Fiscal Year 2024-2028 (FY24-28) Capital Investment Plan (CIP) of the Massachusetts Bay Transportation Authority (MBTA). It is structured around the following major components:

## 1. About the Capital Investment Plan

This section includes basic information about what the CIP is, how it is funded, and how it is developed each year.

## 2. FY24-28 CIP Summary

Overview of the FY24-28 CIP, overviews of our investment priorities, and a summary of our public engagement process.

## 3. FY24-28 Investments by CIP Program

One-page overview for each CIP program, summarizing program goals and planned investment level for FY24-28.

## 4. FY24-28 Investments by Mode/Line

One-page overview for each CIP mode summarizing key initiatives and planned investment level for FY24-28.

## 5. FY24-28 Project List

Detailed listing of all capital projects included in the FY24-28 CIP. Includes project description, phase, primary mode, planned five-year spend, and total authorized budget.

The proposed FY24-28 CIP will be released for public comment on March 23, 2023. It will be further refined before being submitted to the MBTA Board of Directors for approval on May 25, 2023. It will go into effect on July 1, 2023.

## Roadmap to Final CIP

March

**9<sup>th</sup>:** Finance and Audit Subcommittee: Presentation on proposed FY24-28 CIP

**23<sup>rd</sup>:** MBTA Full Board: Presentation on proposed FY24-28 CIP and release of document for public comment

*Public comment period begins*

**30<sup>th</sup>:** CIP Public Meeting #1 (virtual)

April

**4<sup>th</sup>:** CIP Public Meeting #2 (in-person)

**6<sup>th</sup>:** Boston Region Metropolitan Planning Organization: Presentation on proposed FY24-28 CIP (subject to change)

**12<sup>th</sup>:** CIP Public Meeting #3 (virtual)

**24<sup>th</sup>:** *Public comment period ends*

**CIP 30-day Public Comment Period**

May

**11<sup>th</sup>:** Finance and Audit Subcommittee: Presentation on final FY24-28 CIP

**25<sup>th</sup>:** MBTA Full Board: Presentation on final FY24-28 CIP and release of final plan

June

High-level responses to public comments published on [mbta.com/cip](http://mbta.com/cip) with final CIP document

# How to Read the CIP

Investment details for the FY24-28 CIP are presented in this document using four different formats: a one-page summary of our full five-year capital plan; a collection of one-page overviews for each CIP program; a collection of one-page overviews of investments by mode; and a detailed project list containing scope, funding, and phase information for every project in the FY24-28 CIP.

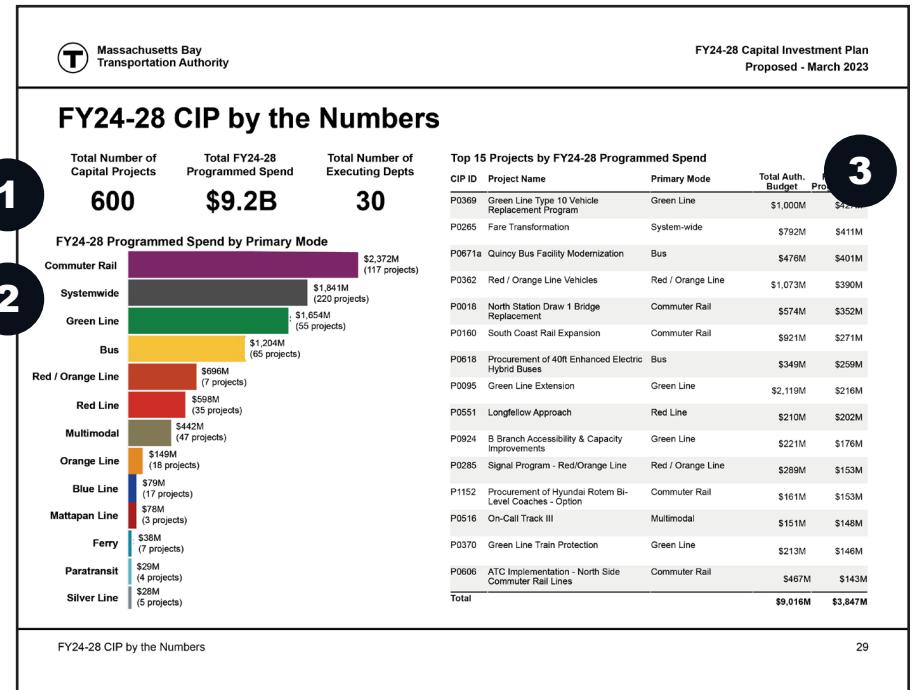
The next few pages describe what is included in each section and explain how to read and interpret this information.

## FY24-28 CIP by the Numbers

This section provides a high-level overview of the FY24-28 CIP, including how funding is allocated across the Reliability and Modernization priority, the Expansion priority, as well as across modes. The components of this section are as follows:

- 1** Summary of the total number of capital projects, the total amount of funding programmed in FY24-28, and the total number of MBTA **Executing Departments** delivering these projects.
- 2** Breakdown of programmed FY24-28 funding by CIP Priority and mode. **Primary Mode/Line** refers to the transit mode most impacted by a given capital project. Some projects that equally impact both the Red and Orange Line are classified under the **Red / Orange Line** category. **Multimodal** projects are those that can be equally attributed to more than one specific mode. **Systemwide** projects cannot be linked to one or more specific modes.

- 3** Table listing the 15 projects with the highest total programmed spend in FY24-28. **Total Authorized Budget** refers to the total amount of funding programmed to a project to date, and may include funding programmed before FY24 or beyond FY28.



The table provides a high-level overview of the FY24-28 Capital Investment Plan. It includes the total number of capital projects (600), the total FY24-28 Programmed Spend (\$9.2B), and the total number of Executing Departments (30). Below this, a bar chart shows the breakdown of programmed spend by primary mode: Commuter Rail (\$2.37B), Systemwide (\$1.84B), Green Line (\$1.65B), Bus (\$1.20B), Red / Orange Line (\$0.99B), Red Line (\$0.56B), Multimodal (\$0.44B), Orange Line (\$0.14B), Blue Line (\$0.07B), Mattapan Line (\$0.03B), Ferry (\$0.03B), Paratransit (\$0.02B), and Silver Line (\$0.02B). The final section, 'Top 15 Projects by FY24-28 Programmed Spend', lists 15 individual projects with their respective authorized budgets and primary modes.

FY24-28 CIP by the Numbers			
Total Number of Capital Projects	Total FY24-28 Programmed Spend	Total Number of Executing Depts	Top 15 Projects by FY24-28 Programmed Spend
<b>600</b>	<b>\$9.2B</b>	<b>30</b>	<b>CIP ID</b> <b>Project Name</b> <b>Primary Mode</b> <b>Total Auth. Budget</b> <b>Proj.</b> P0369 Green Line Type 10 Vehicle Replacement Program Green Line \$1,000M \$42M P0285 Fare Transformation System-wide \$792M \$411M P0671a Quincy Bus Facility Modernization Bus \$476M \$401M P0362 Red / Orange Line Vehicles Red / Orange Line \$1,073M \$390M P0018 North Station Draw 1 Bridge Replacement Commuter Rail \$574M \$352M P0160 South Coast Rail Expansion Commuter Rail \$921M \$271M P0618 Procurement of 40ft Enhanced Electric Hybrid Buses Bus \$349M \$259M P0095 Green Line Extension Green Line \$2,119M \$216M P0551 Longfellow Approach Red Line \$210M \$202M P0924 B Branch Accessibility & Capacity Improvements Green Line \$221M \$176M P0285 Signal Program - Red/Orange Line Red / Orange Line \$289M \$153M P1152 Procurement of Hyundai Rotem Bi-Level Coaches - Option Commuter Rail \$161M \$153M P0516 On-Call Track III Multimodal \$151M \$148M P0370 Green Line Train Protection Green Line \$213M \$146M P0606 ATC Implementation - North Side Commuter Rail Lines Commuter Rail \$467M \$143M Total \$9,016M \$3,847M

## FY24-28 CIP New Funding

This section provides an overview of new funding programmed to new and existing projects in the FY24-28 CIP, including how that funding is distributed by each CIP Program. The components of this section are as follows:

- 1** Summary indicating the total number of capital projects that received new funding, the total amount of new funding programmed in FY24-28, and the total number of new projects included in the CIP.
- 2** Breakdown of new and existing funding programmed in FY24-28 by CIP Program.
- 3** Table listing new and existing safety-sensitive projects that received new funding in FY24-28. **Total Authorized Budget** refers to the total amount of funding programmed to a project to date, and may include funding programmed before FY24 or beyond FY28.

1
FY24-28 CIP New Funding
3

2
FY24-28 New and Existing Funding by CIP Program

FY24-28 CIP by the Numbers
30

Projects Receiving New Funding	New Funding Programmed in FY24-28	Total Number of New Projects
<b>78</b>	<b>\$956M</b>	<b>43</b>

Newly Funded Safety-Sensitive Projects, by FY24-28 Program		
CIP ID	Project Name	FY24-28 New Funding
P0871a	Quincy Bus Facility Modernization	\$74M
P0516	On-Call Track III	\$81M
P0806	ATC Implementation - North Side Commuter Rail	\$50M
P0911	Hybrid and CNG Bus Overhaul	\$95M
P0856	Ruggles Station Improvements Phase 2	\$25M
P1107	Bridge Program Pipeline - Rehabilitation, Repair and Replacement	\$66M
P1139	Systemwide Asset Management Program Phase 4	\$42M
P0992	PRRA-NEC Baseline Capital Charges	\$13M
P0129	Newton Highlands Green Line Station Accessibility	\$16M
P0128	Facility Roof Replacement	\$20M
P1238	Additional FTA Directive-Related Costs	\$40M
P1239	Red Line Type 3 Vehicle Selective Systems Upgrade	\$39M
P0871c	North Cambridge Bus Facility Retrofit	\$11M
P0886	Capital Program Support	\$20M
Others		\$326M
Total		<b>\$917M</b>
		<b>\$1,791M</b>
		<b>\$2,769M</b>

■ Existing Funding
■ New Funding

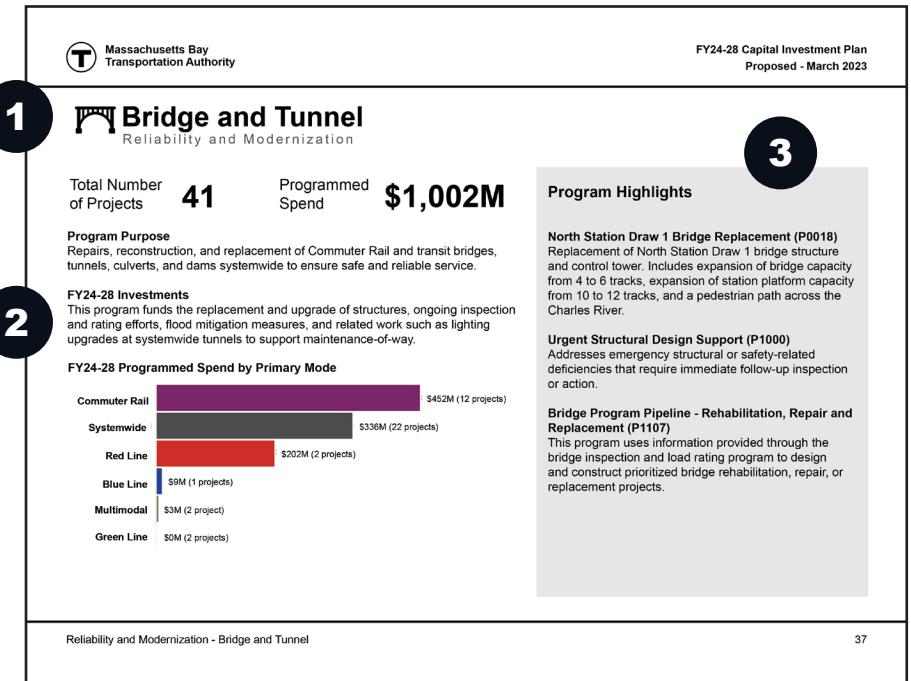
## FY24-28 Investments by CIP Program

The CIP sorts all capital projects into ten unique investment programs that align with the MBTA's asset classes and reliability, modernization, and expansion priorities.

This section provides an overview of these programs that make up the full CIP. Each program has a one-page summary that highlights its purpose, FY24-28 investment level, and some of its notable projects.

The program summaries are divided into three major components, as highlighted in the figure to the right and described below:

- 1** The top section of each program overview page indicates the name of the program, the CIP priority it falls under, the total number of capital projects in the program, and the total amount of funding programmed in FY24-28. It also includes a short description summarizing the program's purpose.
- 2** Below the program purpose is a breakdown of this program's investments by mode. **Primary Mode/Line** refers to the transit mode most impacted by a given capital project. Some projects that equally impact both the Red and Orange Line are classified under the **Red / Orange Line** category. **Multimodal** projects are those that can be equally attributed to more than one specific mode. **Systemwide** projects cannot be linked to one or more specific modes.
- 3** On the right side of the page is a box highlighting some of the notable ongoing projects in this program.



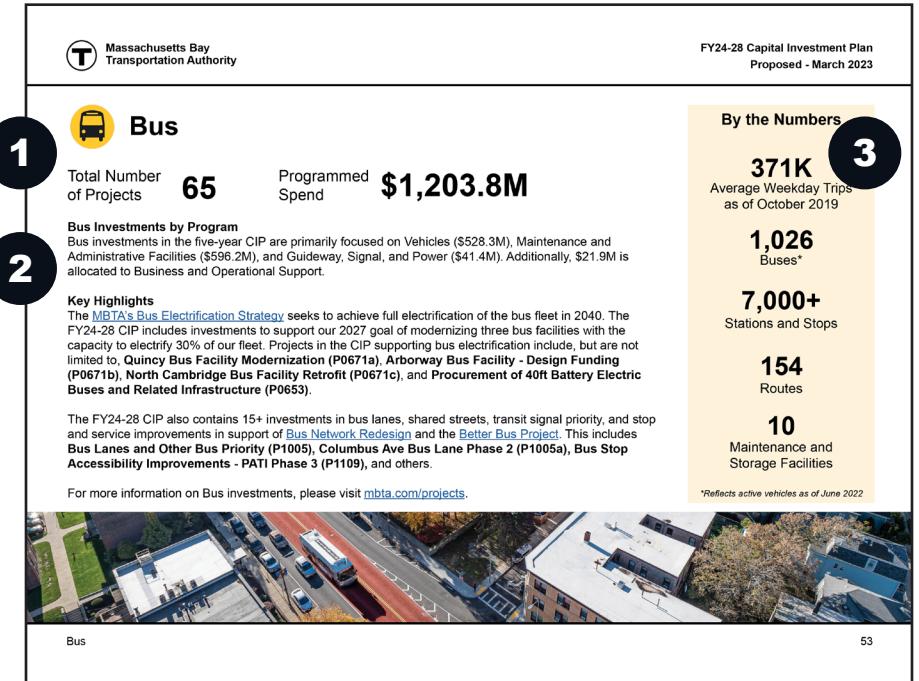
## FY24-28 Investments by Mode/Line

This section provides an overview of our FY24-28 investments by Mode/Line, as well as some key facts about each mode/line.

**Primary Mode/Line** refers to the transit mode most impacted by a given capital project. Some projects that equally impact both the Red and Orange Line are classified under the **Red / Orange Line** category. **Multimodal** projects are those that can be equally attributed to more than one specific mode. **Systemwide** projects cannot be linked to one or more specific modes.

Each Mode/Line in the CIP has a one-page summary that highlights our investments, ridership, and assets for that mode. These modal summaries are divided in three major components, as highlighted in the figure to the right and described below:

- 1 The top section of each modal summary page is a header that indicates the Mode/Line as well as the number of projects and amount of funding programmed in FY24-28.
- 2 Below the header is a summary of investment levels by program and key projects within the Mode/Line.
- 3 On the right hand side of the page is a box highlighting ridership as of October 2019 and the count of assets as of June 2022.



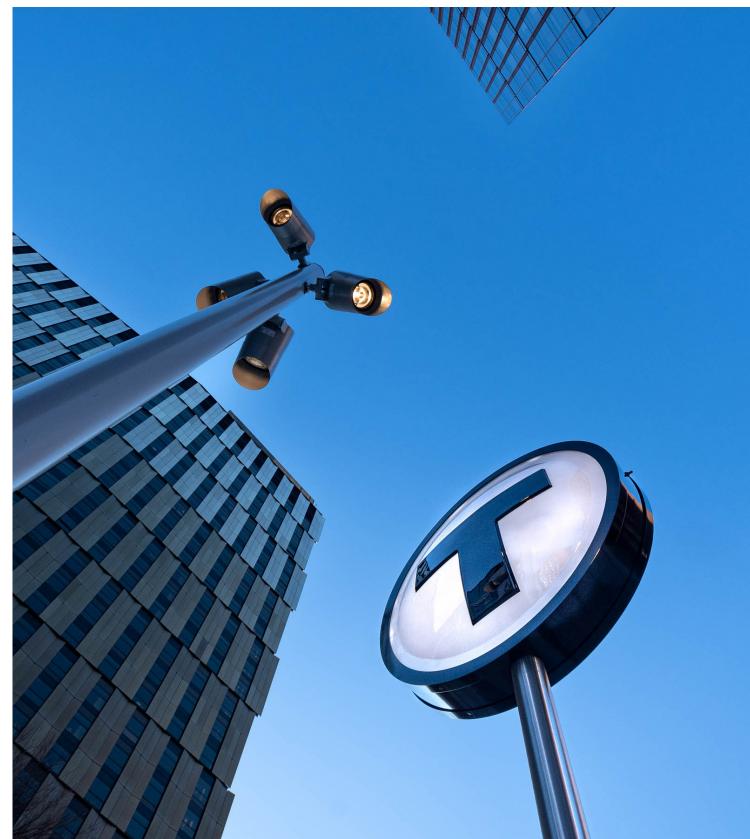
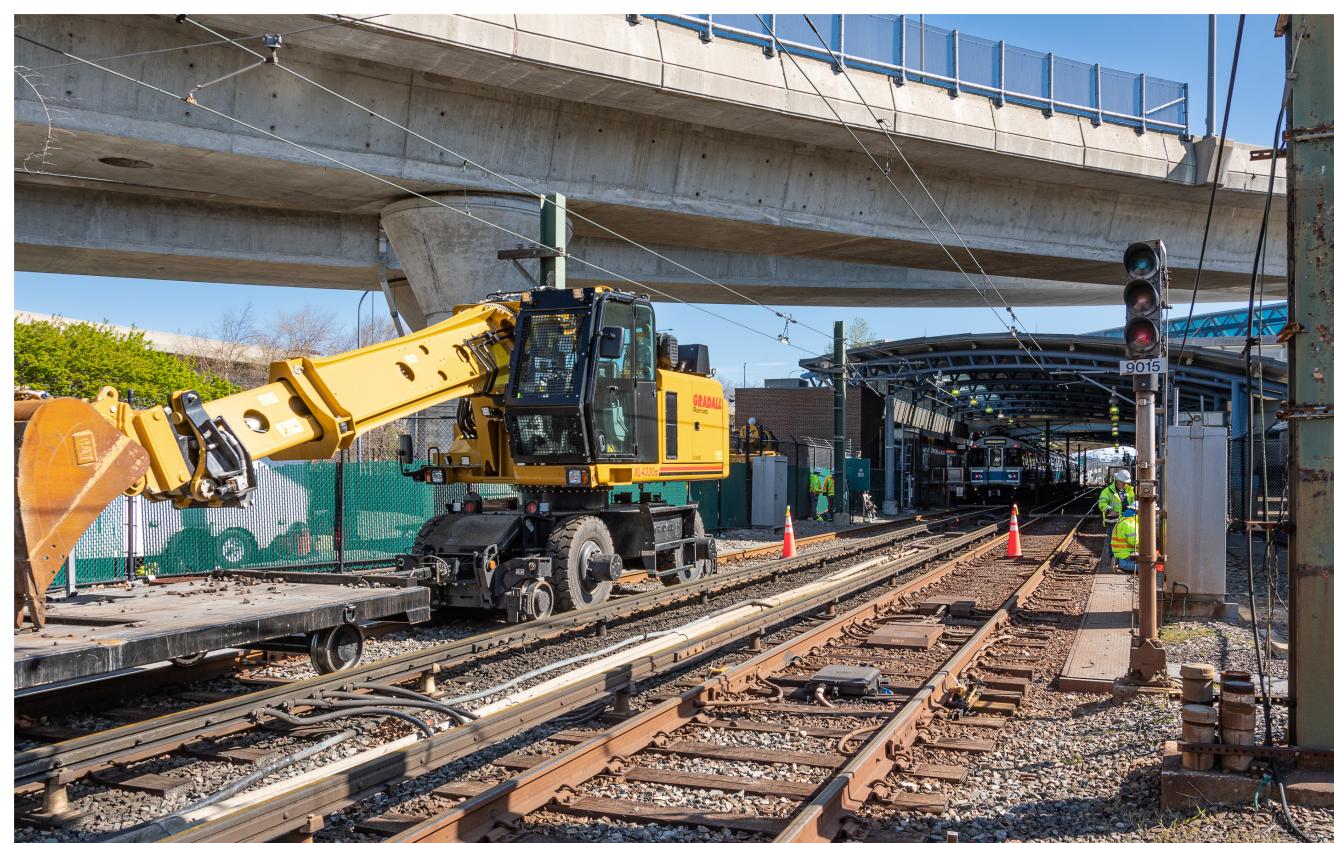
## FY24-28 Project List

Detailed information about each of the capital projects in the CIP can be found in the Project List. Organized by CIP Program and Primary Mode/Line, and ordered by FY24-28 Programmed Spend, the tables in this section include the following project details:

- 1** **Project Name** and **CIP ID** number, the two unique identifiers that indicate a specific capital project.
- 2** A short **Description** of the project's scope and purpose.
- 3** The **Primary Mode/Line** associated with this project. **Primary Mode/Line** refers to the transit mode most impacted by a given capital project.
- 4** The **Current Phase**, indicating the current stage of development or implementation of a project:
  - **New Projects** are in the early stages of development
  - **Planning or Pre-Design** may refer to assessments, feasibility studies, and other related preliminary work
  - Many projects require an extensive **Design** stage to develop specifications and fully define the project scope
  - Some projects involve a brief stage of **Procurement** for materials, services, or assets, such as vehicles
  - **Construction** indicates a project is physically being built
  - **Implementation** indicates a project is being implemented/advanced. This typically applies to projects that do not have a traditional construction phase, such as technology upgrades
  - The **Closeout** phase is an administrative period after a project's construction or implementation is complete

- 5** **Funding information**, including the **FY24-28 Programmed Spend** and current **Total Authorized Budget** for the project. **FY24-28 Programmed Spend** refers to the amount of spending anticipated within the five-year window. Some CIP projects may show \$0 programmed spend in FY24-28 as they are expected to complete in FY23 but are not yet formally finalized or closed out. The **Total Authorized Budget** refers to the total amount of funding programmed to a project to date, and may include funding programmed before FY24 or beyond FY28.

Bridge and Tunnel Program		Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
<b>1</b>	Rehabilitation of Longfellow Bridge, Span 1 of the Longfellow Bridge, and staff at Charles/MGH Station. Includes new track, power, communication and signal systems, and additional emergency egress and redundant elevators.	Red Line	Design	\$0.0M	\$9.5M
<b>2</b>	Stabilization of the Savin Hill Underpass carrying the Red Line beneath Savin Hill Avenue in Dorchester.	Red Line	Closeout	\$0.0M	\$3.6M
<b>3</b>	Includes rebuilding of the Long Wharf Emergency Egress; track and tunnel infrastructure improvements between Bowdoin and Airport Stations; communication rooms improvements; and Suffolk Downs station reconstruction.	Blue Line	Design	\$8.8M	\$31.4M
<b>4</b>	Addition of floodgates and large steel doors to the entrance of the Green Line tunnel near Fenway Station to prevent flooding. Includes updated pumping station and new cameras to monitor rising water levels.	Green Line	Closeout	\$0.0M	\$32.3M
<b>5</b>	Rehabilitation of Lechmere viaduct to support increased train frequency and heavier loads associated with the Green Line Extension. This work includes complete reconstruction of the track, signals, and traction power on the viaduct.	Green Line	Closeout	\$0.0M	\$99.6M
<small>*Project received new funding or is new in the FY24-28 CIP Note: Some CIP projects may show \$0 programmed spend in FY24-28, as they are expected to complete in FY23 but are not yet formally finalized or closed out.</small>					
Reliability and Modernization - Bridge and Tunnel					



# About the Capital Investment Plan



# Introduction

## What is the CIP?

The MBTA's Capital Investment Plan (CIP) is a short-term, financially constrained investment program that funds the planning, construction, and capital maintenance of assets across the MBTA. It is a rolling five-year plan, updated annually in coordination with MassDOT and the Boston Region Metropolitan Planning Organization.

The CIP, also referred to as the capital plan or the capital budget, encompasses 600 unique capital projects across a variety of asset types. It includes all capital expenditures planned over the next five years. These investments aim to maintain a state of good repair, modernize our assets, expand service, and meet our strategic priorities and performance goals. It is informed by several short- and long-term plans and policies, including:

- [Strategic Planning Report \(2020\)](#)
- [Safety Review Panel Report \(2019\)](#)
- [Rail Vision \(2019\)](#)
- [Bus Network Redesign](#)
- [Focus40: The 2040 Investment Plan for the MBTA \(2019\)](#)
- [Transit Asset Management Plan \(2022\)](#)

## Structure of the CIP

The CIP is driven by two overarching priorities, which help to shape the overall strategy for capital investment:

- Improve the **safety** and **reliability** of the system and **modernize** existing assets to reduce safety risks, lower maintenance costs, enhance system performance, and accommodate current or anticipated growth.
- Make targeted investments in the **expansion** of the transportation network, in an effort to increase capacity or multimodal options.

Each priority is broken out into programs, which are sized annually to align with our needs and strategic goals. Programs under the Reliability and Modernization priority are largely asset-based, while the Expansion programs fund South Coast Rail, Green Line Extension, and planning and design for additional targeted expansion projects.

## Reliability and Modernization Programs



### Bridge and Tunnel

Repairs, reconstructs, and replaces Commuter Rail and transit bridges, tunnels, culverts, and dams



### Guideway, Signal, and Power

Rehabilitates, replaces, and upgrades guideway, signal, and power assets across Commuter Rail and transit systems



### Maintenance and Administrative Facilities

Rehabilitates and upgrades maintenance and administrative facilities



### Passenger Facilities

Rehabilitates and upgrades stations, stops, and parking facilities to improve accessibility and customer experience



### Vehicles

Rehabilitates and replaces the revenue and non-revenue fleet and equipment for reliable and safe operations



### Business and Operational Support

Investments in asset management, safety and security, communications, and other systems



### Technology and Innovation

Investments in technology to enhance productivity, modernize the system, and improve the quality of service

## Expansion Programs



### Green Line Extension (GLX)

Extension of Green Line service from Lechmere to Somerville and Medford



### South Coast Rail (SCR)

Extension of Commuter Rail service to Fall River, New Bedford, and Taunton on the South Coast of Massachusetts



### Expansion Projects

Planning and design of targeted expansion projects identified as next priorities

# Our Investment Objectives

## Safety and Reliability, System Accessibility, and System Sustainability and Resiliency

Central to the development of the MBTA's FY24-28 proposed CIP are three policy objectives that help sustain an unprecedented level of investment focused on the **reliability** and **modernization** of our transit system:

- **Prioritizing safety and reliability investments:** critical to addressing safety risks, these projects support the on-going inspection, repair, and upgrades to infrastructure across the system; increase system reliability; and improve system performance.
- **Building toward enhanced and improved system accessibility:** system accessibility projects focus on enhanced accessibility at stations and bus stops as it relates to upgrades and improvements to elevators, escalators and wayfinding, as well as vehicle procurements with improved accessibility features.
- **Promoting system sustainability and resiliency:** these projects promote electrification and resource efficiency and support the hardening of the system against extreme weather events, including flooding and extreme heat.

Each project in the CIP may help fulfill more than one policy objective.

## Why is the CIP focused on Reliability and Modernization Investments?

As the first subway of the United States, the MBTA is a [legacy system](#). Some elements of the network date back to 1897. Many of our assets are 50 years old or more, and requiring significant investment to operate at peak performance.

Our **Reliability** and **Modernization** projects focus on bringing the system into a state of good repair, maximizing the lifespan of our infrastructure, and ensuring the continued safety of our riders and employees.

In the FY24-28 CIP, the MBTA will continue to invest heavily in these priorities to advance underway and newly planned investments that are instrumental to reduce safety risks, increase system reliability, lower maintenance costs, and improve system performance.



## How does the MBTA track State of Good Repair and capital needs?

The MBTA is required by the Federal Transit Administration (FTA) to develop an asset management program to prioritize asset investments in our transit inventory based on current condition assessments. Annually, we report information about the assets we own or manage to the National Transit Database (NTD) and set forward-looking asset performance targets for fleet age, speed restrictions, and facility condition. These targets are reviewed and approved each year by the Boston Metropolitan Planning Organization and the FTA.

We also update our [Transit Asset Management Plan \(TAMP\)](#) every four years to identify existing and proposed levels of service and determine life cycle management needs by asset class. The TAMP is intended to document our asset portfolio, current condition, and asset management practices and establish the MBTA's approach to maintaining the more than 50,000 assets and 11 asset classes that make up our transit system.

In addition to the asset management practices outlined above, the MBTA carries out an assessment of our capital needs every three to four years. This process seeks to better understand the condition and age of our capital assets, and the approximate costs to replace or repair them. This information is then leveraged to support smarter capital investment decision-making.

## How does the CIP respond to the FTA's Safety Management Inspection findings?

The Federal Transit Administration (FTA) released a report of their Safety Management Inspection (SMI) of the MBTA on August 31, 2022. The report covered all rail transit and safety disciplines, including a review of rail transit operations, training, vehicle maintenance, signals and train control, and track access. It also covered capital project delivery, traction power, facilities, and safety management.

In August 2022, the MBTA launched the Quality, Compliance and Oversight Office (QCO) to implement and oversee the MBTA's response to the FTA's findings and directives in the SMI report. The MBTA has developed a series of [Corrective Action Plans \(CAPs\)](#) to detail how we will implement improvements across the organization, and in January 2023, the FTA approved all the CAPs submitted by the MBTA. Led by QCO, the T remains focused on the strategic and thoughtful implementation of improvements across the Agency to address the documented findings.

The FY24-28 CIP development process was refined in light of the development of the CAPs to ensure the identification and prioritization of funding for safety-critical activities linked to the FTA's directives. The MBTA will continue to align capital investments with the FTA's findings.

# Funding Sources

The CIP is funded by a mix of federal, state, and local sources, as well as third-party reimbursements. The flexibility of these funding sources vary. Some must be spent on specific policy goals or modes, while others may be applied across the transportation network.



## Federal funding

### FTA Formula funds

- Urbanized Area Program (Section 5307)
- Buses and Bus Facilities (Section 5339)
- State of Good Repair (Section 5337)

### Discretionary funds

- Competitive processes run by federal agencies. Funds included in the CIP after award



## State funding

### Project-Specific

- Commonwealth bond proceeds for specific projects including:
  - South Coast Rail Phase 1, including Commuter Rail coaches
  - Green Line Extension
  - Red Line/Orange Line vehicles and infrastructure improvements
  - Procurement of Bi-Level Commuter Rail Coaches



## MBTA sources

### Bond

- Taxable, tax-exempt, and sustainability bonds

### Loans

- Build America Bureau (BAB) loans through TIFIA and RRIF

### Operating Budget Transfer

- Funds transferred from MBTA's operating budget to the capital program

### Capital Maintenance Fund (CMF)

- Authority's fund to be used at the discretion of the CFO

*Note - The sum of MBTA bonds and loans is limited by the overall coverage ratio in order to maintain the MBTA's credit rating*



## Others

### Reimbursable

- Outside funds through partnerships and formal agreements



## Federal Sources

There are several categories of federal funding available to the MBTA, broadly organized into formula funds (which are allocated to the region based on a predetermined formula), discretionary funds (which are distributed based on a competitive application and selection process), and loans. The MBTA receives and is eligible to receive federal funding from several U.S. Department of Transportation agencies, including the Federal Transit Administration (FTA), the Federal Railroad Administration (FRA), and the Federal Highway Administration (FHWA). The federal share of eligible capital costs is typically 80 percent for formula funds and can vary by program for discretionary funds.

In addition to the five-year CIP, the MBTA must also include all federally funded transportation projects in the Boston Region Metropolitan Planning Organization's (MPO) five-year Transportation Improvement Program (TIP). The TIP is the near-term investment program for the region's transportation system. It includes a financial plan that shows the current or proposed revenue sources for each project and is updated annually. An MPO-endorsed TIP is incorporated into the State Transportation Improvement Program (STIP) for submission to the FHWA, FTA, and United States Environmental Protection Agency (EPA) for approval.

Additional details about the Boston Region MPO's TIP can be found on the MPO website, [ctps.org/tip](http://ctps.org/tip).

## Federal Formula Funds

Formula funds are FTA funds made available through three programs funded by the Highway Trust Fund, generally referred to by their subsection of US code:

- **Section 5307 Urbanized Area Formula Funding** makes federal resources available to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning. Broad eligibility for transit capital projects includes planning, design, and engineering activities, bus and fixed guideway (rail) capital investments, vehicle investments, track, signals, and power. Urbanized areas of 200,000+ inhabitants, including Boston, may not use funds for operating assistance. However, some preventative maintenance expenses are considered capital costs under this program.
- **Section 5337 State of Good Repair** funding provides capital assistance for maintenance, replacement, and rehabilitation projects of high-intensity fixed guideway and bus systems to help transit agencies maintain assets in a state of good repair. Additionally, SGR grants are eligible for developing and implementing Transit Asset Management (TAM) Plans.
- The **Section 5339 Bus and Bus Facilities** program provides funding to states and transit agencies through a statutory formula to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities.

## Discretionary Grants

Discretionary grants are funding available through competitive programs administered by Federal agencies. The MBTA is an eligible recipient of a number of grant programs administered by USDOT and its modal agencies (FTA, FRA, etc). The MBTA is also an eligible recipient of Department of Homeland Security funds under the Transit Security Grant Program and some Federal Emergency Management Agency (FEMA) programs. Most competitive funding opportunities run on annual award cycle, have unique eligibility requirements, and require local matching funds.

## Other Federal Sources

Loans and credit assistance programs are administered by USDOT to provide low-cost financing for large-scale surface transportation projects. The two programs relevant to the MBTA are Transportation Infrastructure Finance and Innovation Act (TIFIA) credit assistance for projects of national and regional significance, and Railroad Rehabilitation and Improvement Financing (RRIF) loans for railroad infrastructure.



## State Sources

State funding is authorized by the legislature through the Transportation Bond Bill and allocated by the Executive Office for Administration and Finance (A&F) through the Commonwealth capital plan. Authorized funding is not available to the MBTA until it is allocated in the State's budget cycle. Currently, the MBTA has authorization and allocated bond funding through the Rail Enhancement Program, with a smaller amount allocated as traditional "bond cap."

- The **Rail Enhancement Program (REP)** provides for the issuance of either general obligation or special obligation bonds to fund MBTA capital expenditures and for other rail improvements in the Commonwealth. The bonds are repaid from the Commonwealth Transportation Fund. REP funds can support reliability, modernization, and expansion initiatives and currently support the State's share of the Green Line Extension, the Red and Orange Line Improvements Program, and a portion of South Coast Rail.
- **Bond Cap** refers to general obligation bonds backed by the Commonwealth's revenues. Currently, a portion of South Coast Rail is funded through bond cap.

## MBTA Sources

MBTA sources refers to the proceeds of debt instruments issued by the MBTA to fund capital projects, which can include, bonds, sustainability bonds, commercial paper, and bond anticipation notes. These funds are used to support projects 100 percent funded by MBTA debt and also provide the local match (typically 20 to 50 percent) for federally-funded projects.

The Capital Maintenance Fund (CMF) is a fund held by the Authority that may be used at the discretion of the CFO to pay a portion of unexpected costs of maintenance, improvement, and replacement of the equipment, facilities, and assets of the Authority.



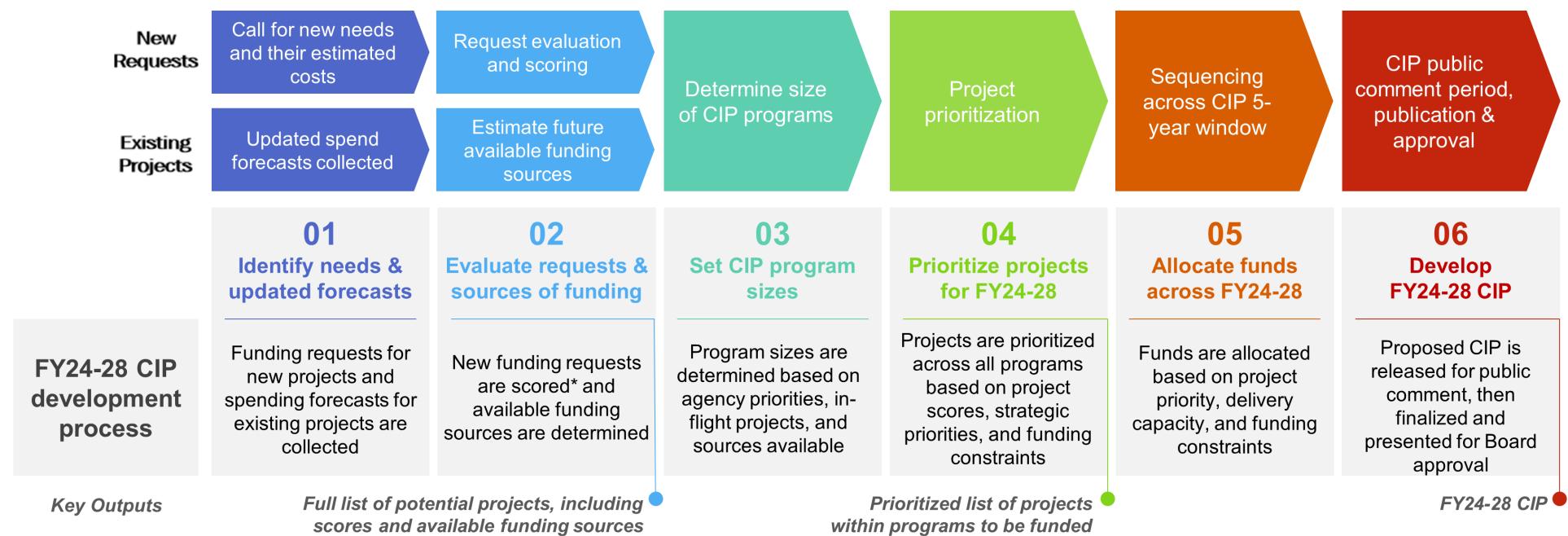
## Reimbursable Sources

Reimbursable sources refers to funding the MBTA receives to mitigate transportation impacts of development projects or as part of a joint development agreement with public or private entities.

# Developing the CIP

## Annual Development Cycle

The CIP is updated on an annual basis to align with current investment priorities and program new funding sources. The annual CIP development cycle runs from September to June, beginning with an internal call for projects and the evaluation and scoring of funding requests. We prioritize funding recommendations to align with the Agency's goals and project scoring outcomes. This allows us to match planned investments with available funding. A full draft of the five-year CIP, including both existing projects and new investments, is assembled and posted for public comment. We then refine the CIP further and submit it to the MBTA Board of Directors for approval before it is finalized and published in June.



\*Requests are evaluated with an increased emphasis on system safety and security (asset conditions and inputs from Safety and Security departments), in addition to mobility, cost effectiveness, sustainability and resiliency, policy support, social equity and economic impact.

## Project Scoring and Selection

A key aspect in the CIP development process is the evaluation, scoring, and prioritization of capital funding requests. This process is necessary to understanding the impacts of our proposed capital projects and building the five-year capital plan. Cross-functional evaluation teams representing diverse perspectives across the MBTA and MassDOT review and score each funding request using standard criteria mandated by [MassDOT's Project Selection Advisory Council \(PSAC\)](#). In the FY24-28 CIP, scoring has been modified to emphasize both State of Good Repair and Safety, with these topics making up half of a project's total weighted score. Aspects related to climate mitigation and adaptation have been consolidated in a new Sustainability and Resiliency criterion.

Criteria	Description
<b>State of Good Repair</b>	The extent to which the project contributes to a state of good repair on the transportation system and aligns with asset management goals.
<b>Safety and Security</b>	The extent to which the project addresses documented or identified safety issues and hazards, as well as security vulnerabilities and risks.
<b>Mobility</b>	The extent to which the project is intended to provide modal options efficiently and effectively for all users through benefits to reliability, accessibility, and other measures of service quality.
<b>Cost Effectiveness</b>	The extent to which the project impacts operating costs and revenues and maximizes the return on the public's investment.
<b>Sustainability and Resiliency</b>	The extent to which the project supports climate sustainability and resiliency, meets state goals of improving air quality and reducing greenhouse gases, and results in a reduction of pollution.
<b>Policy Support</b>	The extent to which the project is aligned with MBTA policy priorities, including Focus 40.
<b>Social Equity</b>	The extent to which the project equitably distributes social, economic, and health benefits to residents and local businesses.
<b>Economic Impact</b>	The extent to which the project supports economic growth in the Commonwealth.



## Safety Impact Evaluation of Funded Requests

Safety was the top priority when allocating new funding to new and existing projects in the FY24-28 CIP, throughout our evaluation, scoring, and prioritization processes. To support prioritization through a safety lens, the MBTA developed a Safety Impact Matrix (SIM) to serve as an additional input in funding decisions for the CIP.

The goal of the SIM is to support project prioritization and funding decisions by elevating projects that have a high impact on safety. These are the projects that address safety-critical elements that can negatively impact the highest number of riders and cause service disruptions.

In the SIM, “safety impact” is conceptualized as the relationship between Safety and Service. It builds upon data from the MBTA’s Safety Management System (SMS), Transit Asset Management Plan (TAMP), and the CIP request evaluation and scoring process.

This framework allowed us to assess a project’s impact on safety separately from a project’s impact on service so that projects with significant impacts in both areas became priority considerations.

Funding requests categorized as having a “critical” and “very high” safety impact are related, but are not limited to:

- State of good repair of our facilities, guideway, signal, and power assets.
- Life and fire safety systems at our maintenance and passenger facilities.
- Our vehicle assets.

Over half of the requests prioritized for new funding in the proposed FY24-28 CIP were categorized as having at least a “very high” safety impact. Capital funding requests related to the FTA’s SMI were categorized as having a “critical” safety impact to our transit system.

# Public Engagement

We want to hear from you! The MBTA is seeking comments from the public on the proposed FY24-28 CIP. Tell us how we can improve our transportation system, enhance our capacity where needed, and build new projects to help communities prosper and get residents where they need to go. Public feedback is important to the CIP development process, and we appreciate your input.

The public comment period for the proposed FY24-28 MBTA CIP will open on March 23, 2023 and close on April 24, 2023. All comments will be reviewed by MBTA staff, and summary responses will be shared on [mbta.com/cip](http://mbta.com/cip).

## Attend a Public Meeting

Join us for one of our public meetings, where we will provide an overview of the proposed FY24-28 CIP and invite attendees to share their comments:

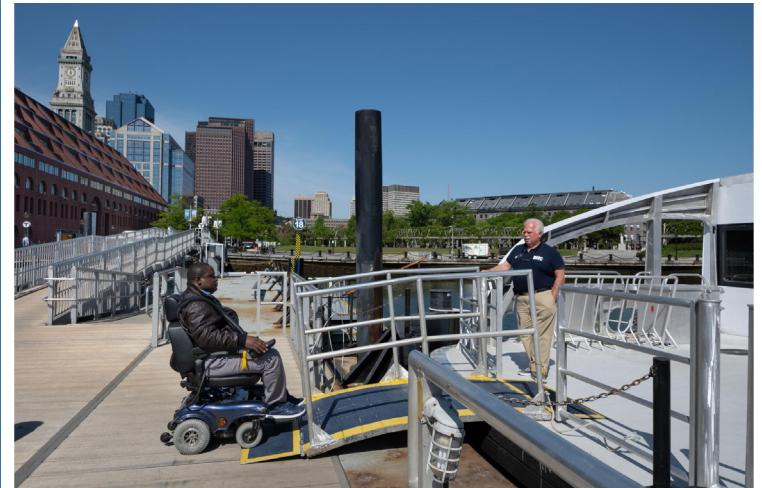
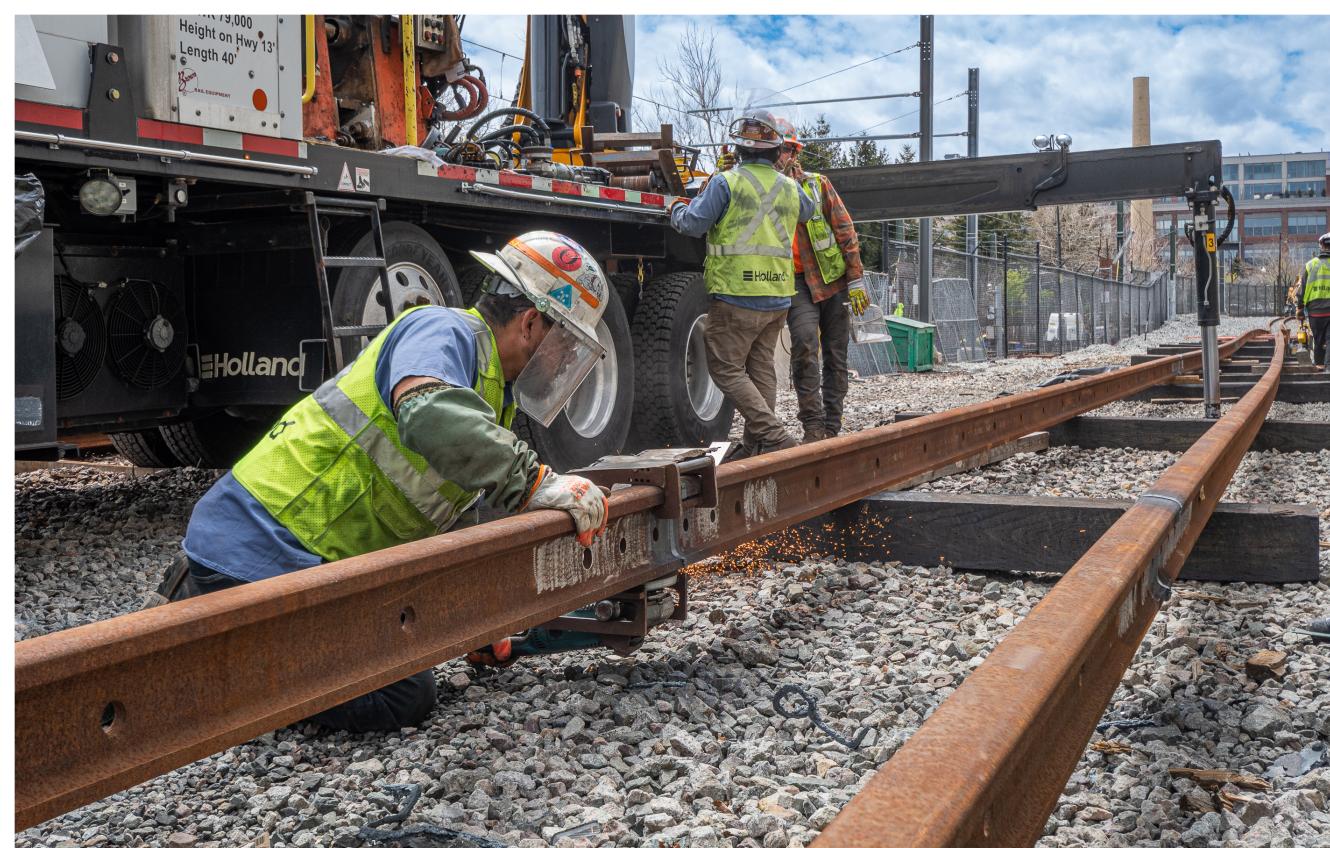
- **Thursday, March 30, 2023, 6:30 pm**  
Virtual public meeting via Zoom
- **Tuesday, April 4, 2023, 6:30 pm (in-person meeting)**  
Location: MassDOT Board Room, 10 Park Plaza, Boston, MA 02116
- **Wednesday, April 12, 2023, 6:30pm**  
Virtual public meeting via Zoom

Meeting registration links, presentation materials, and recordings will be made available on [mbta.com/cip](http://mbta.com/cip).

## Submit your Feedback

If you are unable to attend a public meeting, you are welcome to share your comments by:

- Completing our [CIP online comment form](#)
- Sending an email to [cipengagement@mbta.com](mailto:cipengagement@mbta.com)
- Sending a letter to: MBTA Capital Investment Plan  
c/o MBTA General Manager  
10 Park Plaza, Suite 3830  
Boston, MA 02116



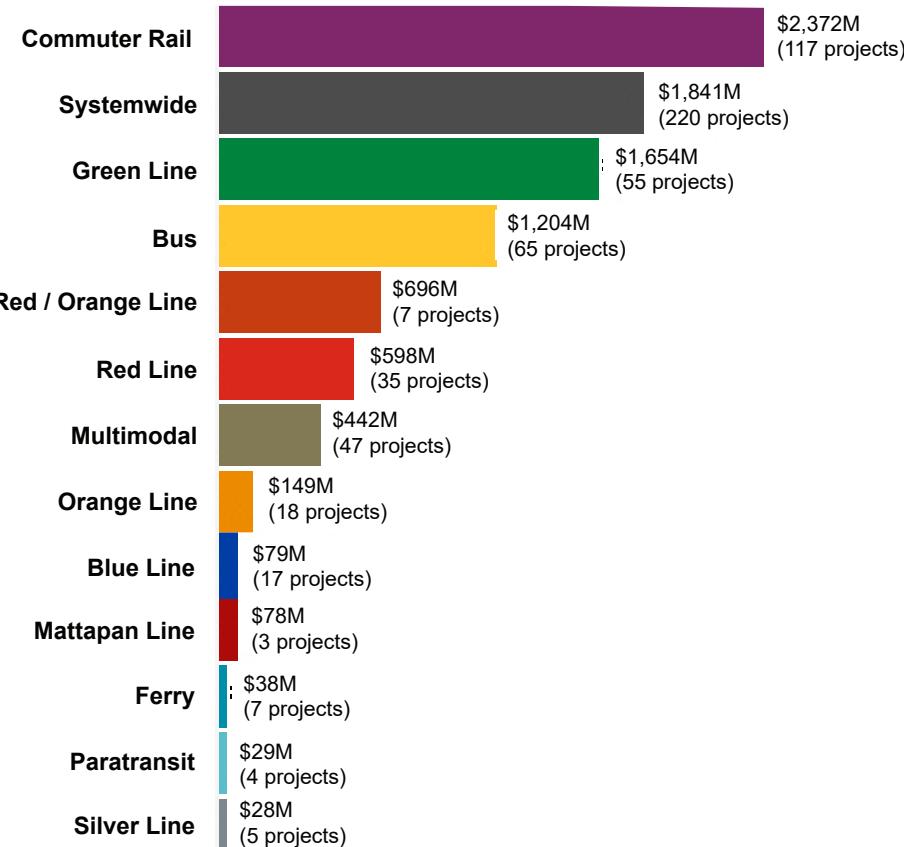
# FY24-28 CIP Summary



# FY24-28 CIP by the Numbers

Total Number of Capital Projects	Total FY24-28 Programmed Spend	Total Number of Executing Depts
<b>600</b>	<b>\$9.2B</b>	<b>30</b>

## FY24-28 Programmed Spend by Primary Mode



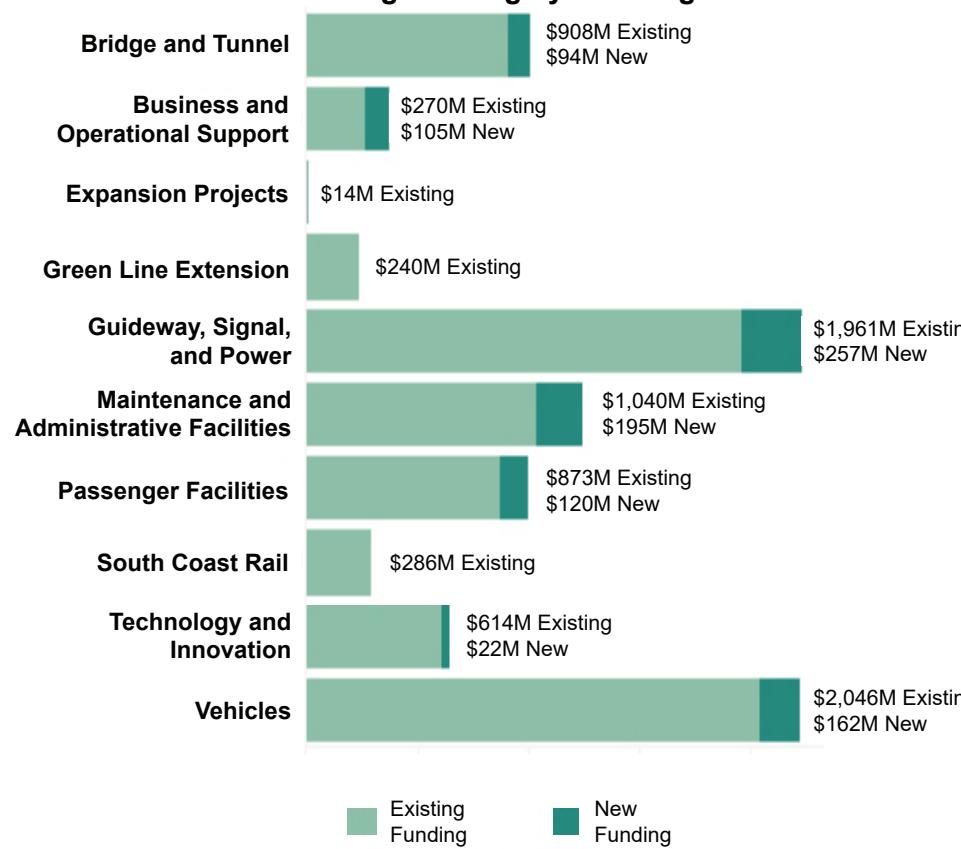
## Top 15 Projects by FY24-28 Programmed Spend

CIP ID	Project Name	Primary Mode	Total Auth. Budget	FY24-28 Programmed
P0369	Green Line Type 10 Vehicle Replacement Program	Green Line	\$1,000M	\$427M
P0265	Fare Transformation	System-wide	\$792M	\$411M
P0671a	Quincy Bus Facility Modernization	Bus	\$476M	\$401M
P0362	Red / Orange Line Vehicles	Red / Orange Line	\$1,073M	\$390M
P0018	North Station Draw 1 Bridge Replacement	Commuter Rail	\$574M	\$352M
P0160	South Coast Rail Expansion	Commuter Rail	\$921M	\$271M
P0618	Procurement of 40ft Enhanced Electric Hybrid Buses	Bus	\$349M	\$259M
P0095	Green Line Extension	Green Line	\$2,119M	\$216M
P0551	Longfellow Approach	Red Line	\$210M	\$202M
P0924	B Branch Accessibility & Capacity Improvements	Green Line	\$221M	\$176M
P0285	Signal Program - Red/Orange Line	Red / Orange Line	\$289M	\$153M
P1152	Procurement of Hyundai Rotem Bi-Level Coaches - Option	Commuter Rail	\$161M	\$153M
P0516	On-Call Track III	Multimodal	\$151M	\$148M
P0370	Green Line Train Protection	Green Line	\$213M	\$146M
P0606	ATC Implementation - North Side Commuter Rail Lines	Commuter Rail	\$467M	\$143M
Total			<b>\$9,016M</b>	<b>\$3,847M</b>

# FY24-28 CIP New Funding

Projects Receiving New Funding	New Funding Programmed in FY24-28	Total Number of New Projects
<b>78</b>	<b>\$956M</b>	<b>43</b>

## FY24-28 New and Existing Funding by CIP Program



## Newly Funded Safety-Related Projects, by FY24-28 Programmed Spend

CIP ID	Project Name	FY24-28 New Funding	Total Auth. Budget	FY24-28 Programmed
P0671a	Quincy Bus Facility Modernization	\$74M	\$401M	\$476M
P0516	On-Call Track III	\$81M	\$148M	\$151M
P0606	ATC Implementation - North Side Commuter Rail	\$50M	\$143M	\$467M
P0911	Hybrid and CNG Bus Overhaul	\$95M	\$121M	\$121M
P0856	Ruggles Station Improvements Phase 2	\$25M	\$120M	\$125M
P1107	Bridge Program Pipeline - Rehabilitation, Repair and Replacement	\$66M	\$85M	\$295M
P1139	Systemwide Asset Management Program Phase 4	\$42M	\$53M	\$54M
P0692	PRIIA-NEC Baseline Capital Charges	\$13M	\$51M	\$119M
P0129	Newton Highlands Green Line Station Accessibility	\$16M	\$42M	\$48M
P0126	Facility Roof Replacement	\$20M	\$41M	\$72M
P1238	Additional FTA Directive-Related Costs	\$40M	\$40M	\$40M
P1239	Red Line Type 3 Vehicle Selective Systems Upgrade	\$39M	\$39M	\$39M
P0671c	North Cambridge Bus Facility Retrofit	\$11M	\$35M	\$36M
P0886	Capital Program Support	\$20M	\$31M	\$35M
Others		\$326M	\$440M	\$692M
<b>Total</b>		<b>\$917M</b>	<b>\$1,791M</b>	<b>\$2,769M</b>

# Prioritizing Safety and Reliability

Investments in Safety-Sensitive Projects

Safety-Related Projects **475+** Estimated Spending **\$7.6B**

**Safety-related investments in the CIP** are those projects with safety components or related safety benefits across all of the MBTA's executing departments. These include but are not limited to:

- 15+ projects related to the findings of the FTA's SMI that include systemwide maintenance-of-way (MOW) rehabilitation, procurement of non-revenue equipment, and capital program safety assurance.
- 300+ critical reliability projects to inspect, repair, and upgrade stations, tracks, bridges, tunnels, signals, power, and IT infrastructure and components.
- 20+ projects focused on safety systems, employee training, and asset management efforts to better track, address, and improve systemwide safety and reliability.

For more information on safety initiatives and the FTA's SMI, visit [mbta.com/safety](http://mbta.com/safety) and [mbta.com/qco](http://mbta.com/qco).

## Key Safety Projects

Safety is one of the eight criteria used to evaluate funding requests for new and existing projects. Below is a list of key safety projects by mode.

### Rapid Transit

- Green Line Train Protection (P0370)
- Rapid Transit Tunnel Lighting Upgrades (P1200)

### Commuter Rail

- ATC Implementation – North Side Commuter Rail Lines (P0606)
- Rail Crossing Safety Updates (P1146)

### Bus

- Bus Facility Interim Improvements (P0942)
- Facility Circulation Safety Improvements (P1003)
- Charlestown Campus State of Good Repair (P1136)

### Systemwide

- Facility Roof Replacement (P0126)
- Facility Safety Improvements (P1219)

For project descriptions, please refer to the Project List.



# Building System Accessibility

Investments with Significant Accessibility Benefits

Accessibility-  
Related Projects **90+**      Estimated  
Spending **\$1.9B**

**Accessibility-related investments** in the CIP are those projects with accessibility components or significant accessibility benefits that enhance and improve system accessibility. These include, but are not limited to:

- 40+ projects to enhance accessibility at stations, bus stops, and rail and grade crossings, ranging from upgrades to platforms, paths of travel, surfaces, public announcement systems, and other components.
- 35+ projects to upgrade and improve elevators, escalators, wayfinding, and accessways at key stations, bringing them into compliance with ADA/MAAB, BCIL, and internal standards to create system access and equity.
- 7 projects to procure and overhaul rail, bus, and ferry vehicles with improved accessibility features that amount to roughly \$542M in additional accessibility-related spending to enhance and improve system access.

For more information on accessibility initiatives, visit [mbta.com/accessibility](http://mbta.com/accessibility).

## Key Accessibility Projects

All funding requests for new and existing projects are evaluated for the Mobility criterion, which includes potential accessibility benefits. Below is a list of key accessibility projects by mode.

### Rapid Transit

- Symphony Station Improvements (P0168)
- Green Line D Branch Enhanced Accessibility Improvements (P1233)
- Systemwide Escalator and Elevator Replacement Program (P1225)

### Commuter Rail

- High Priority Stations Accessibility Improvements Program (P1150)
- Winchester Center Station (P0179)

### Bus

- Bus Priority and Accessibility Improvements (P0613)
- Bus Route Safety and Service Improvements (P0044)

For project descriptions, please refer to the Project List.



# Sustainability and Resiliency (S&R)

Investments in Climate Change Adaptation and Mitigation

S&R-Related Projects **150+** Estimated Spending **\$3.6B**

**Sustainability-related investments** help reduce the MBTA's carbon footprint.

**Resiliency-related investments** help harden the MBTA's system against extreme weather events. Encompassing projects with varying S&R benefits, they include, but are not limited to:

- 70+ projects with system resiliency benefits, including vulnerability assessments, asset hardening, and management to curb climate change and environmental impacts systemwide.
- 20+ projects with system sustainability benefits related to fleet, facilities, and energy assets to support system electrification and efficient use of system resources.
- 50+ projects with varying resiliency and sustainability benefits related to facility repairs, vehicle overhauls, and asset management to help build a green future and a resilient transit system.

For more information on S&R initiatives, visit [mbta.com/sustainability](http://mbta.com/sustainability).

## Key S&R Projects

Requests for new and existing projects are evaluated using eight criteria, which include a Sustainability and Resiliency criterion. Below is a list of key S&R projects by mode.

### Commuter Rail

- Future Rolling Stock Fleet (P0918)
- Billerica MOW Repair and Storage Facility (P1171)

### Bus

- Procurement of 40ft Battery Electric Buses and Related infrastructure (P0653)
- Quincy Bus Facility Modernization (P0671a)
- Arborway Bus Facility - Design Funding (P0671b)
- North Cambridge Bus Facility Retrofit (P0671c)

### Systemwide

- Systemwide Climate Resiliency Program (P1205)
- Communications Resiliency Master Plan (P1206)
- Systemwide Drainage Mapping and Repairs Program (P1227)

For project descriptions, please refer to the Project List.



## Bus Electrification



The CIP supports the MBTA's Bus Electrification Strategy that seeks to achieve full bus electrification by 2040. It includes investments aligned with the 2027 goals of the Bus Electrification Strategy that target:

- Modernization of three bus facilities to provide facility capacity to electrify 30 percent of our fleet, and
- Ongoing conversion of bus fleet to zero emissions technology

The CIP includes projects focused on bus facility modernization and procurement of battery-electric buses (BEBs), including, but not limited to:

- Quincy Bus Facility Modernization (P0671a)
- Arborway Bus Facility - Design Funding (P0671b)
- North Cambridge Bus Facility Retrofit (P0671c)
- Procurement of 40ft Battery Electric Buses and Related Infrastructure (P0653)

## Rail Electrification



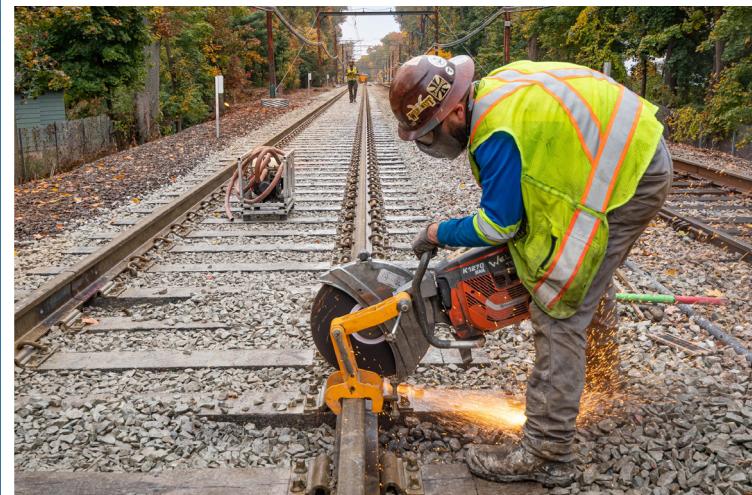
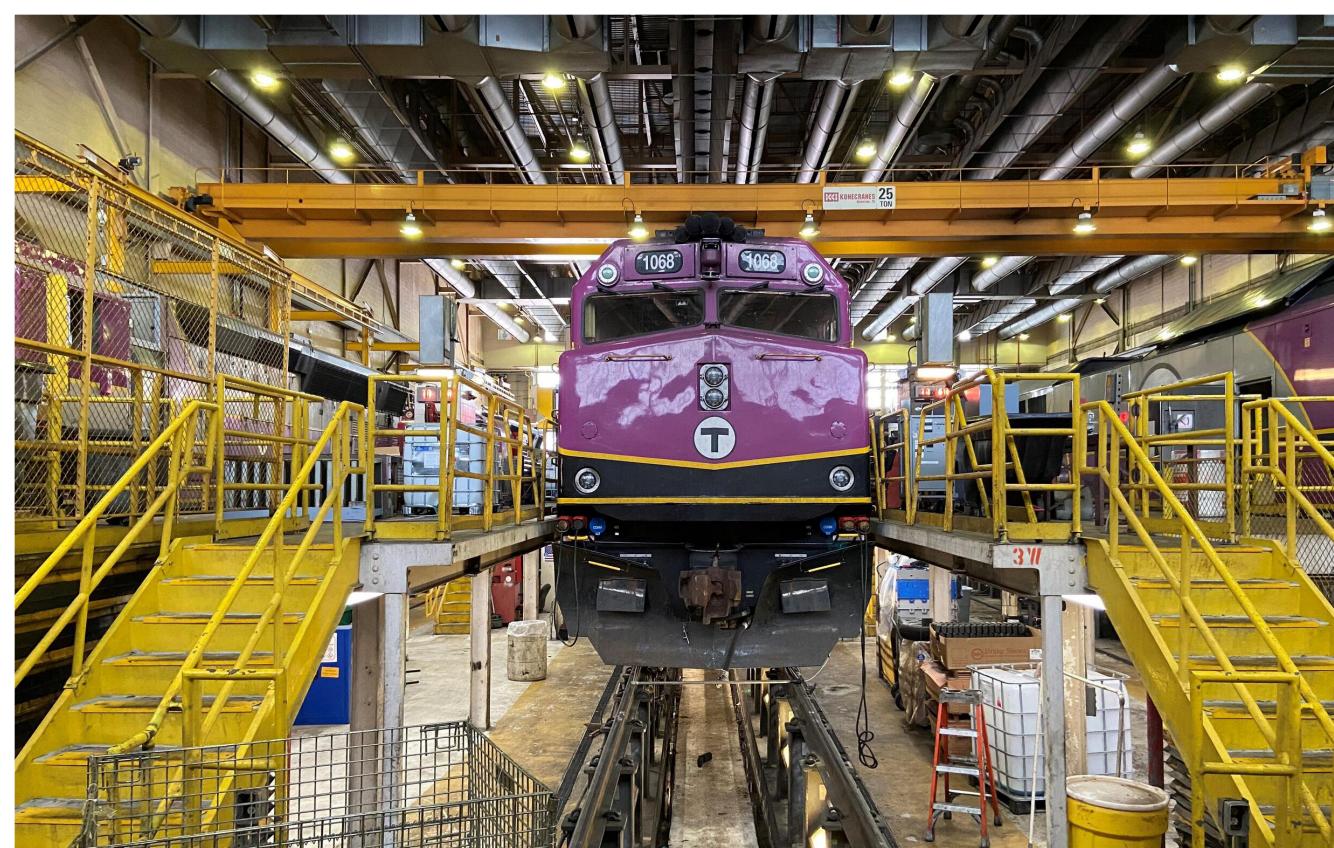
The CIP supports the MBTA's commitment to the first phase of Regional Rail Transformation as defined by the Fiscal Management and Control Board in 2019:

- To deliver electrified service to the Providence/Stoughton Line, Fairmount Line, and Environmental Justice Corridor (the Boston North Station to Beverly section of the Rockport Line)

The CIP includes projects focused on completing necessary technology and planning studies, funds to support future fleet procurements of battery-electric or electric rolling stock, and "no regrets" capital investments which will provide customer benefits and allow for increased frequency in the short term, including, but not limited to:

- Rail Transformation – Early Action Items (P0940)
- Rail Transformation Early Actions - Old Colony Double Track (P1209)
- Rail Transformation Planning Studies (P0934)
- Future Rolling Stock Fleet (P0918)





# FY24-28 Investments by CIP Program



# Bridge and Tunnel

Reliability and Modernization

Total Number  
of Projects      **41**      Programmed  
Spend      **\$1,002M**

## Program Purpose

Repairs, reconstruction, and replacement of Commuter Rail and transit bridges, tunnels, culverts, and dams systemwide to ensure safe and reliable service.

## FY24-28 Investments

This program funds the replacement and upgrade of structures, ongoing inspection and rating efforts, flood mitigation measures, and related work, such as lighting upgrades at systemwide tunnels to support maintenance-of-way.

## FY24-28 Programmed Spend by Primary Mode



## Program Highlights

### North Station Draw 1 Bridge Replacement (P0018)

Replacement of North Station Draw 1 bridge structure and control tower. Includes expansion of bridge capacity from 4 to 6 tracks, expansion of station platform capacity from 10 to 12 tracks, and a pedestrian path across the Charles River.

### Urgent Structural Design Support (P1000)

Addresses emergency structural or safety-related deficiencies that require immediate follow-up inspection or action.

### Bridge Program Pipeline - Rehabilitation, Repair and Replacement (P1107)

This program uses information provided through the bridge inspection and load rating program to design and construct prioritized bridge rehabilitation, repair, or replacement projects.



# Guideway, Signal, and Power

Reliability and Modernization

Total Number of Projects **140** Programmed Spend **\$2,218M**

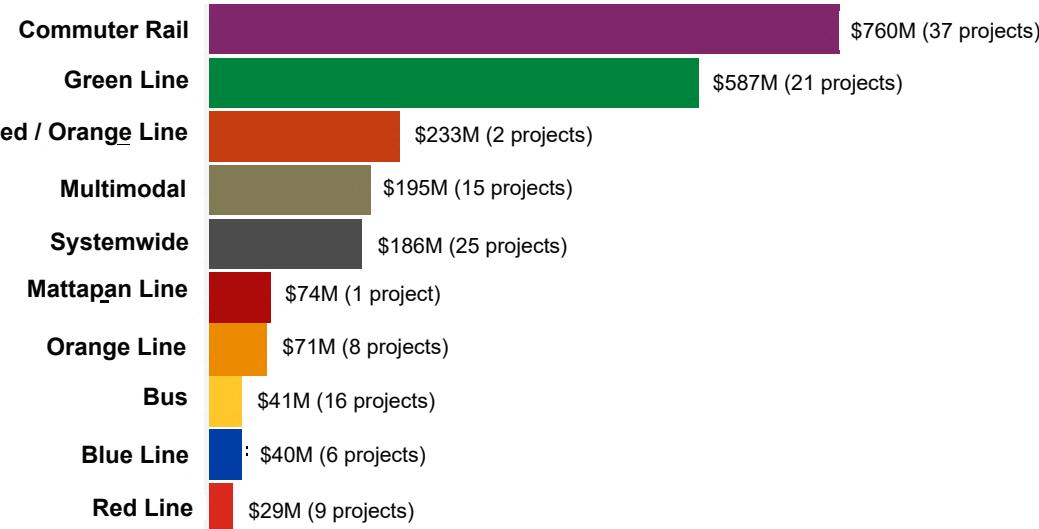
## Program Purpose

Rehabilitation, replacement, and upgrade of guideway, signal, and power assets across Commuter Rail and transit systems.

## FY24-28 Investments

Major investments include replacement and upgrade of track, signal, and power assets, expansion of the bus lane and transit signal priority network, and implementation of the MBTA's PTC and ATC systems.

## FY24-28 Programmed Spend by Primary Mode



## Program Highlights

### Green Line Train Protection (P0370)

Procurement and installation of on-board and wayside equipment for a train protection and information system on the Green Line to mitigate red signal violations, train-to-train collisions, derailments, and intrusions into work zones.

### Bus Lanes and Other Bus Priority (P1005)

This program provides local match funding for potential bus lane projects.

### Traction Power Substation Upgrades (P1104)

Complete replacement of electrical systems and structural, mechanical, and plumbing improvements at nine aging traction power substations (TPSS). This scope also includes a TPSS Design Guide to standardize future improvements..



# Maintenance and Administrative Facilities

## Reliability and Modernization

Total Number of Projects **87** Programmed Spend **\$1,235M**

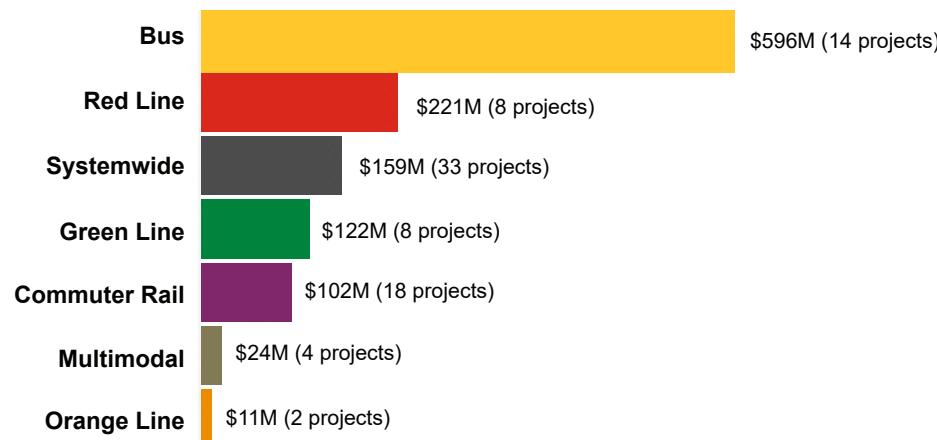
### Program Purpose

Rehabilitation, replacement, and upgrade of maintenance and administrative facilities supporting MBTA service.

### FY24-28 Investments

Major investments in this program focus on the modernization and expansion of our bus and rail facilities to accommodate new vehicle fleets and increase system reliability. This program also includes improvements to roofing, life and fire safety systems, upgrades to employee facilities, and other facility elements.

### FY24-28 Programmed Spend by Primary Mode



### Program Highlights

#### Arborway Bus Facility - Design Funding (P0671b)

Design funding to support the construction of a new Arborway bus facility to accommodate battery electric bus (BEB) infrastructure.

#### Widett Layover and Maintenance Facility (P0952)

Real estate acquisition and preliminary design for a Commuter Rail layover facility at Widett Circle in South Boston.

#### Facility Safety Improvements (P1219)

Funds to ensure that facilities and buildings are compliant with safety regulations. This includes, but is not limited to, fall-hazard elimination, upgrades to bus entry doorways, maintenance of exhaust fans, and other safety related initiatives.

#### Employee Breakroom and Bathroom Upgrades Program (P1220)

Systemwide improvements and renovations to MBTA's employee breakrooms and bathrooms.

# Passenger Facilities

Reliability and Modernization

Total Number of Projects **96** Programmed Spend **\$993M**

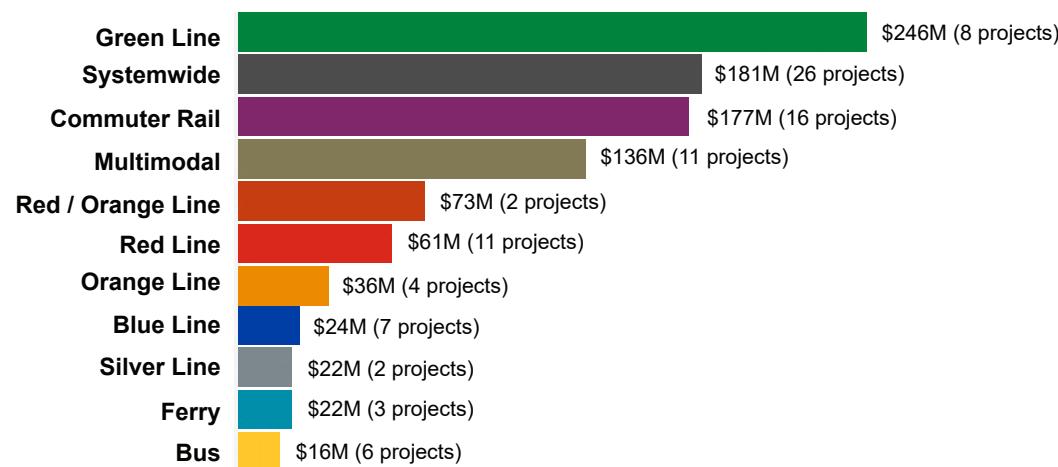
## Program Purpose

Rehabilitation and upgrade of MBTA's stations, stops, and parking facilities to improve accessibility and customer experience.

## FY24-28 Investments

This program focuses on accessibility improvements, elevator replacement, platform upgrades, improved paths of travel, parking upgrades, and other station improvements.

## FY24-28 CIP Programmed Spend by Primary Mode



## Program Highlights

### Symphony Station Improvements (P0168)

Upgrade Symphony Station to a modern and fully accessible passenger facility. Includes construction of four new elevators, raised platforms, accessible restrooms, installation of egress stairs, and upgraded fire alarm systems.

### Ruggles Station Improvements Phase 2 (P0856)

Continuation of Ruggles Station Improvements to address accessibility, code-compliance, and state-of-good repair issues. Includes repair, reconstruction, and improvements to platforms, entrances, stairs, elevators, ramps, restrooms, and wayfinding.

### JFK Station and Busway Safety and Accessibility Reconstruction (P1231)

Planning of a new JFK/UMass station and busway to increase safety, accessibility, and climate resiliency through station redesign, new stairs and elevators, and busway alterations.



# Vehicles

## Reliability and Modernization

Total Number of Projects **91** Programmed Spend **\$2,208M**

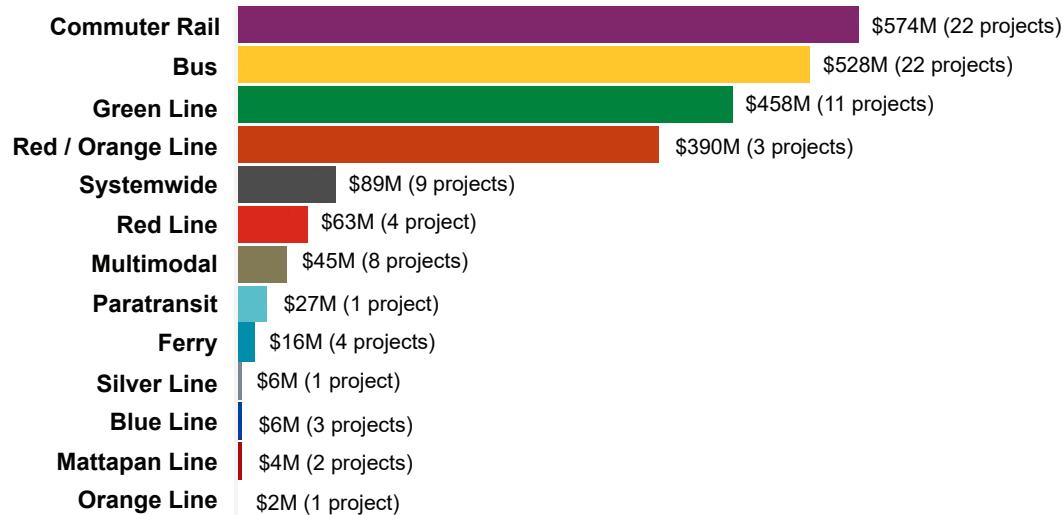
### Program Purpose

Rehabilitation and replacement of MBTA's revenue and non-revenue fleet and equipment for reliable and safe operations.

### FY24-28 Investments

Major investments include new Green Line, Red Line, and Orange Line fleets; bi-level Commuter Rail coaches; hybrid and electric vehicles; and overhaul programs.

### FY24-28 Programmed Spend by Primary Mode



### Program Highlights

#### Procurement of Battery Electric 40ft Buses and Related Infrastructure (P0653)

Purchase of 80 40ft battery electric buses (BEBs) to replace fleets currently running diesel bus service out of Quincy and trolleybus service out of North Cambridge.

#### Systemwide Non-Revenue Vehicles Program (P1157)

Replacement of non-revenue vehicles in the authority's fleet. Non-revenue vehicles include first response vehicles, service cars and trucks, and many other types of vehicles that support operations and maintenance of the system.

#### HSP46 Locomotive Overhaul (P1173)

Midlife overhaul of 40 HSP46 Locomotives to improve reliability and reduce risk of unplanned maintenance.

# Business and Operational Support

Reliability and Modernization

Total Number of Projects **81** Programmed Spend **\$375M**

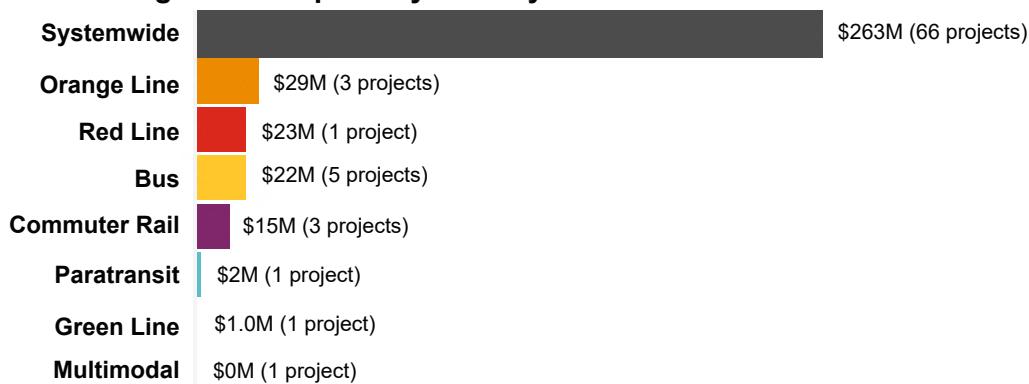
## Program Purpose

Investments in systems, including asset management, safety and security, and communications.

## FY24-28 Investments

Major investments include our ongoing asset management program and systemwide security improvements, safety assurance support, the systemwide climate resiliency program, as well as upgrades to MBTA's workforce system, business processes, standards, and guidelines.

## FY24-28 Programmed Spend by Primary Mode



## Program Highlights

### Systemwide Asset Management Program Phase 4 (P1139)

Implementation of the Asset Management Program in accordance with FTA req. Includes asset inventory and condition assessments; updates to the National Transit Database (NTD) and the Transit Asset Management Plan (TAMP); and EAMS implementation.

### Capital Programs Safety Assurance Support (P1201)

Funds to support the capital program safety assurance through proactive safety measures at construction worksites, as well as the development of analytical tools to capture data, draw safety insights, and implement preventive actions.

### Systemwide Climate Resiliency Program (P1205)

Planning funds for the development of a resiliency program with solutions for the long-term protection of the Authority's assets against climate change impacts.

# Technology and Innovation

Reliability and Modernization

Total Number of Projects **54** Programmed Spend **\$636M**

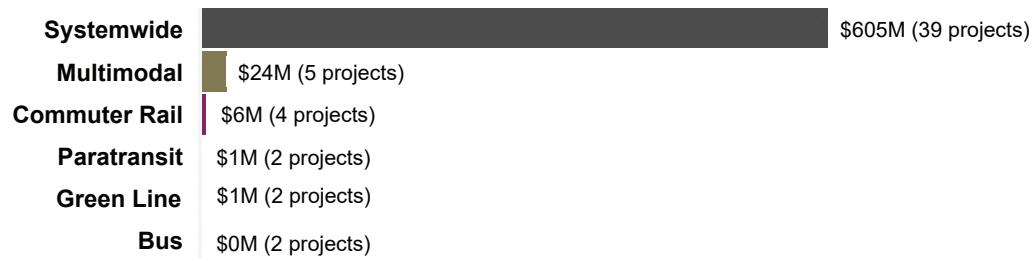
## Program Purpose

Investments in technology to enhance productivity, modernize the system, and improve the quality of MBTA services.

## FY24-28 Investments

Major investments include the Fare Transformation initiative, improvements to systemwide radio, tracking, and communications systems, upgrades to the MBTA's IT infrastructure, and implementation of a new software and call center solution for The RIDE paratransit service.

## FY24-28 Programmed Spend by Primary Mode



## Program Highlights

### Fare Transformation (P0265)

Replacement of outdated and overly complex fare system with new fare technologies to ensure equal access and improve operations.

### Communications Rooms Remediation (P0908)

Upgrades to mechanical, electrical, and fire protection systems and other related infrastructure to support Fare Transformation at various communications rooms at 20 Orange Line stations, 22 Red Line stations, and the Green Line's Riverside Station.

### PA/ESS Critical Upgrades (P0972)

Major overhaul of the hardware and software that makes up the in-station countdown clocks and PA system.

### Light Rail Safety Dispatch and Tracking Improvements (P1028)

Assessment of various technologies used to track light rail vehicles to recommend future enhancements that contribute to service safety and reliability.

# Green Line Extension (GLX) Expansion

Total Number of Projects	<b>2</b>	Programmed Spend	<b>\$240M</b>
--------------------------	----------	------------------	---------------

## Program Purpose

Extension of Green Line service from Lechmere to Somerville and Medford.

## FY24-28 Investments

The Green Line Extension's Union and Medford Branches are open, providing service in areas that historically did not have access to fast and reliable public transit and supporting an increased ridership of more than 50,000 trips per day. Ongoing investments in the Green Line Extension program include project closeout costs, as well as the procurement of new Green Line vehicles to support existing and new transit service.

## Program Highlights

### Green Line Extension (P0095)

Extension of the northern end of the Green Line from Lechmere to Union Square in Somerville and College Avenue in Medford.

### Green Line Extension - Vehicles (P0095a)

Procurement of 24 Type 9 light rail vehicles to support the Green Line Extension. All vehicles have been received and are in service as of July 2021.



Expansion - Green Line Extension (GLX)

# South Coast Rail (SCR) Expansion

Total Number of Projects	<b>2</b>	Programmed Spend	<b>\$286M</b>
--------------------------	----------	------------------	---------------

## Program Purpose

Extension of Commuter Rail service to Fall River, New Bedford, and Taunton on the South Coast of Massachusetts.

## FY24-28 Investments

South Coast Rail will extend Commuter Rail service to provide a reliable transit connection between southeastern Massachusetts and Boston. Ongoing investments in this program include planning, design, and construction of new tracks and stations, as well as the procurement of locomotives and coaches to provide service on the South Coast Rail.

## Program Highlights

### South Coast Rail Expansion (P0160)

Extension of Commuter Rail service to Fall River, New Bedford, and Taunton on the South Coast of Massachusetts.

### SCR - Procurement 16 CR Coaches (P0160a)

Procurement of additional coaches to support the expansion of Commuter Rail service to the South Coast.





# Expansion Projects

Expansion

Total Number of Projects **6** Programmed Spend **\$14M**

## Program Purpose

Planning and design of targeted expansion projects identified as next priorities for the MBTA.

## FY24-28 Investments

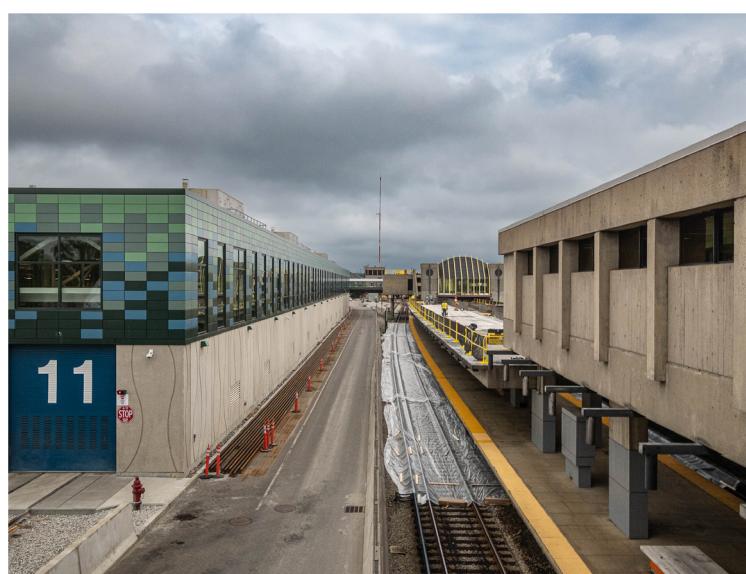
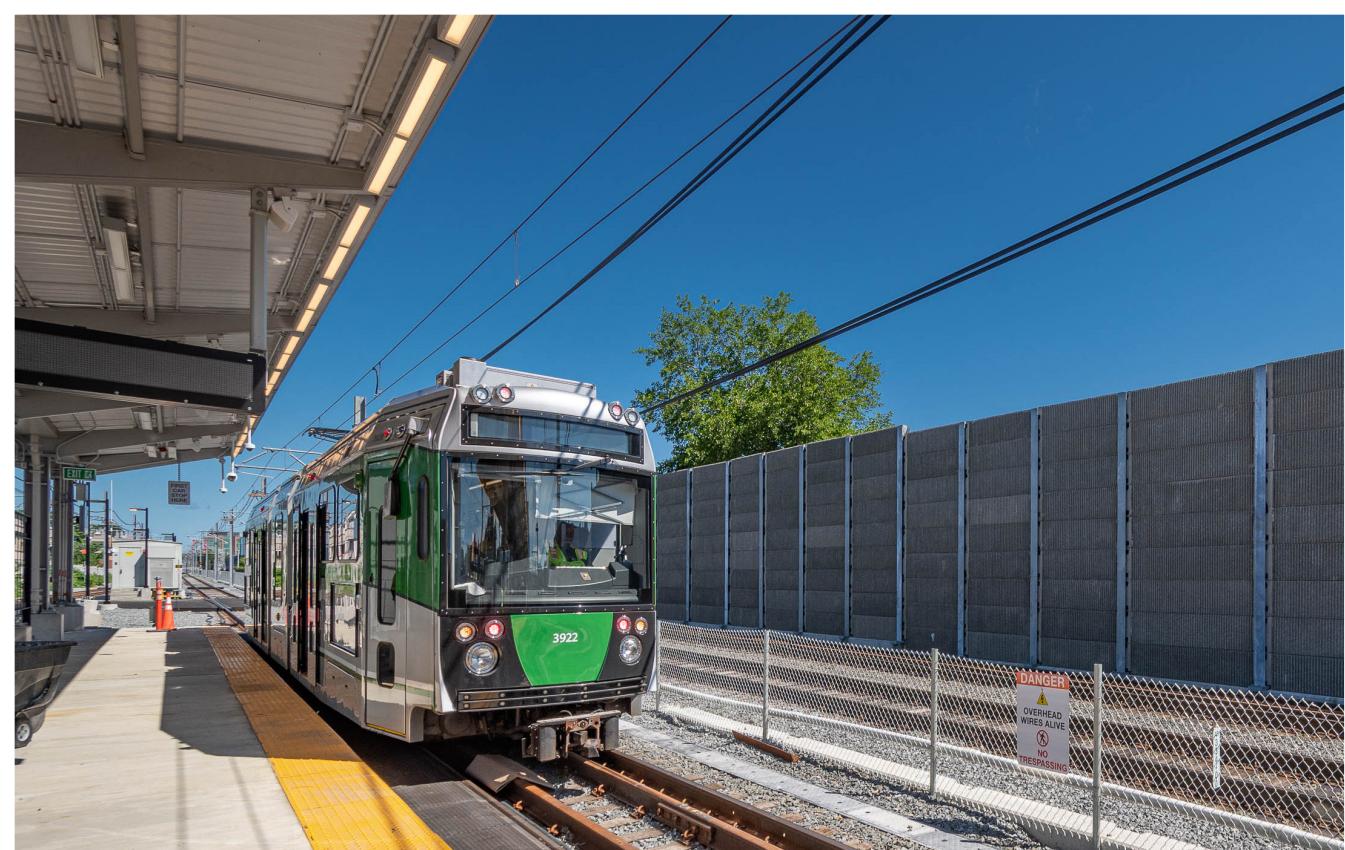
Major investments in this program include planning and early design of rail and bus expansion projects.

## Program Highlights

### Red-Blue Connector (P0866)

Extension of the Blue Line from its current terminus at Bowdoin Station to Charles/MGH station, in order to establish a direct connection between the Blue and Red Lines. This project is currently funded for planning and initial design.





# FY24-28 Investments by Mode/Line

 Red Line

Total Number  
of Projects      **35**      Programmed  
Spend      **\$598.1M**

#### Red Line Investments by Program

Red Line investments in the five-year CIP are primarily focused on Maintenance and Administrative Facilities (\$221.2M), Bridge and Tunnel (\$201.9M), Passenger Facilities (\$63.2M), and Vehicles (\$60.6M). Additionally, \$28.6M is allocated to Guideway, Signal, and Power.

#### Key Highlights

Red Line investments in the CIP support the [Red Line Transformation Program \(RLT\)](#) and related efforts, such as the overhaul of the existing fleet. RLT is aimed at improving the quality of service and reliability of the Red Line through fleet expansion and major upgrades to train yards, maintenance facilities, testing facilities, signals, and power systems.

Key projects under RLT and across other executing departments include Cabot Yard Complete Upgrade (P0512), Braintree and Quincy Adams Garage Rehabilitation (P0087), targeted upgrades of vehicle selective systems (P1239) and vehicle suspension (P1242) on the existing Red Line fleet, and Red Line Interlock Upgrades (P0654), among others. Additional key investments impacting the Red and Orange Lines are summarized on page 49.

For more information on Red Line investments and projects, please visit [mbta.com/projects](http://mbta.com/projects).

#### By the Numbers

**266K**  
Average Weekday Trips  
as of October 2019

**222**  
Heavy Rail Vehicles\*

**22**  
Stations and Stops

**4**  
Maintenance and  
Storage Facilities

\*Reflects active vehicles as of June 2022





## Orange Line

Total Number of Projects **18** Programmed Spend **\$149.3M**

### Orange Line Investments by Program

Orange Line investments in the five-year CIP are primarily focused on Guideway, Signal and Power (\$71.3M), Passenger Facilities (\$36M), and Business and Operational Support (\$29.2M). Additionally, \$10.9M is allocated for Maintenance and Administrative Facilities.

### Key Highlights

The [Orange Line Transformation Program \(OLT\)](#) focuses on improved reliability and expansion of the Orange Line fleet, which will create space for 30,000 more riders per day. To achieve this, the CIP funds major upgrades to train yards, maintenance facilities, testing facilities, signals, and power systems.

Key projects under OLT include Wellington Yard Complete Upgrade (P0514), Oak Grove Station Vertical Transportation Improvements (P0076), Orange Line Traction Power Upgrade (P0139), Orange Line Southwest Corridor Track Replacement (P0675), and Forest Hills Improvement Project (P0163). Additional key investments impacting the Red and Orange Lines are summarized on page 49.

For more information on Orange Line investments and projects, please visit [mbta.com/projects](http://mbta.com/projects).

### By the Numbers

**218K**  
Average Weekday Trips  
as of October 2019

**156**  
Heavy Rail Vehicles\*

**20**  
Stations and Stops

**1**  
Maintenance and Storage Facility

\*Reflects active vehicles as of June 2022





# Red / Orange Line

Total Number  
of Projects      **7**

Programmed  
Spend      **\$696.2M**

## Red / Orange Line Investments by Program

Projects with Red / Orange Line as the Primary Mode/Line are investments that impact both the Red and Orange Lines. These projects focus on Vehicles (\$389.8M), Guideway, Signal, and Power (\$233.5M), and Passenger Facilities (\$72.9M).

## Key Highlights

The key Red / Orange Line effort included in the CIP is the procurement of 252 new vehicles for the Red Line and 152 vehicles for the Orange Line. These vehicles are designed to have capacity and accessibility enhancements, as well as improved onboard diagnostics. Other investments are related to signal, maintenance facilities, and station improvements impacting both lines.

Key projects that impact both the Red and Orange Lines include Red / Orange Line Vehicles (P0362), Signal Program – Red/Orange Line (P0285), Red Line / Orange Line Infrastructure Improvements (P0157), and Downtown Crossing Vertical Transportation Improvements Phase 2 (P0074).

For more information on Red / Orange Line investments and projects, please visit [mbta.com/projects](http://mbta.com/projects).

## By the Numbers

**484K**

Average Weekday Trips  
as of October 2019

**378**

Heavy Rail Vehicles\*

**42**

Stations and Stops

**2**

Heavy Rail Lines

**5**

Maintenance and  
Storage Facilities

\*Reflects active vehicles as of June 2022



 **Blue Line**

Total Number  
of Projects **17**

Programmed  
Spend **\$79.4M**

**Blue Line Investments by Program**

Blue Line investments in the five-year CIP window are primarily focused on Guideway, Signal, and Power (\$40.4M), Passenger Facilities (\$24.3M), and Bridge and Tunnel (\$8.8M). Additionally, \$5.8M is allocated for Vehicles.

**Key Highlights**

Blue Line investments in the CIP support infrastructure improvements aimed at improving the quality and reliability of service through track and tunnel infrastructure improvements, upgrades to communications rooms, flood proofing measures, and station improvements.

Key projects for the Blue Line include the Blue Line Infrastructure Improvements (P0631), Bowdoin to Aquarium Infrastructure Improvements (P0631a), Blue Line Communications Room Improvements (P0631b), Suffolk Downs Station Reconstruction (P0631c), Long Wharf Egress & Maverick Communications Room (P0631d), and others related to guideway, signal, and power assets.

For more information on Blue Line projects and investments, please visit [mbta.com/projects](http://mbta.com/projects).

**By the Numbers****74K**

Average Weekday Trips  
as of October 2019

**94**

Heavy Rail Vehicles\*

**12**

Stations and Stops

**2**

Maintenance and  
Storage Facilities

\*Reflects active vehicles as of June 2022





# Green Line

Total Number of Projects **55** Programmed Spend **\$1,654.4M**

## Green Line Investments by Program

Green Line investments in the five-year CIP window are primarily focused on Guideway, Signal, and Power (\$587.2M), Vehicles (\$458.4M), and Passenger Facilities (\$245.6M). Additionally, \$240M is allocated for the [Green Line Extension to Somerville and Medford](#), comprising both infrastructure and vehicles.

## Key Highlights

The [Green Line Transformation \(GLT\)](#) program is focused on improving the quality of Green Line service through increased capacity and improved reliability. To achieve this, the CIP funds the Green Line's fleet modernization, infrastructure and facility upgrades, and implementation of state-of-the-art technology.

Key projects under GLT include Green Line Train Protection (P0370), Green Line Type 10 Light Rail Fleet Replacement (P0369), Green Line Microlok and Fiber Modernization (P1211), Symphony Station Improvements (P0168), Newton Highlands Green Line Station Accessibility Project (P0129), and D Branch Enhanced Accessibility Improvements (P1233).

For more information on Green Line investments and projects, please visit [mbta.com/projects](http://mbta.com/projects).

## By the Numbers

**185K**

Average Weekday Trips  
as of October 2019

**227**

Light Rail Vehicles\*

**70**

Stations and Stops

**5**

Lines and Branches

**4**

Maintenance and  
Storage Facilities

\* Reflects active vehicles as of June 2022





# Mattapan Line

Total Number  
of Projects

**3**

Programmed  
Spend

**\$78.1M**

## Mattapan Line Investments by Program

Mattapan Line investments in the five-year CIP are primarily focused on Guideway, Signal and Power (\$74.3M) and Vehicles (\$3.8M) programs.

## Key Highlights

The Mattapan Line investments included in the CIP are aimed at supporting the [Mattapan Line Transformation](#) to ensure accessible, reliable, and modern service for Dorchester, Mattapan, and Milton. The Mattapan Line serves approximately 6,600 riders every day, and the historic 1940s trolley fleet runs on 2.6 miles of track between Ashmont and Mattapan Stations.

Key projects for the Mattapan Line include the Mattapan HSL Transformation (P0857) and Mattapan Trolley Select System Upgrade (P1016). These projects include state of good repair and accessibility improvements at stations, power upgrades, and other infrastructure investments, as well as the overhaul of the 75+-year-old PCC cars operating on the line.

For more information on Mattapan Line investments and projects, please visit [mbta.com/projects](http://mbta.com/projects).

## By the Numbers

**6.5K**

Average Weekday Trips  
as of Fall 2018

**7**

Light Rail Vehicles\*

**8**

Stations and Stops

**1**

Lines and Branches

**1**

Maintenance and  
Storage Facility

\*Reflects active vehicles as of June 2022





# Bus

Total Number  
of Projects      **65**

Programmed  
Spend      **\$1,203.8M**

## Bus Investments by Program

Bus investments in the five-year CIP are primarily focused on Vehicles (\$528.3M), Maintenance and Administrative Facilities (\$596.2M), and Guideway, Signal, and Power (\$41.4M). Additionally, \$21.9M is allocated to Business and Operational Support.

## Key Highlights

The [MBTA's Bus Electrification Strategy](#) seeks to achieve full electrification of the bus fleet in 2040. The FY24-28 CIP includes investments to support our 2027 goal of modernizing three bus facilities with the capacity to electrify 30 percent of our fleet. Projects in the CIP supporting bus electrification include, but are not limited to, Quincy Bus Facility Modernization (P0671a), Arborway Bus Facility - Design Funding (P0671b), North Cambridge Bus Facility Retrofit (P0671c), and Procurement of 40ft Battery Electric Buses and Related Infrastructure (P0653).

The FY24-28 CIP also contains 15+ investments in bus lanes, shared streets, transit signal priority, and stop and service improvements in support of [Bus Network Redesign](#) and the [Better Bus Project](#). This includes Bus Lanes and Other Bus Priority (P1005), Columbus Ave Bus Lane Phase 2 (P1005a), Bus Stop Accessibility Improvements - PATI Phase 3 (P1109), and others.

For more information on bus investments, please visit [mbta.com/projects](http://mbta.com/projects).

## By the Numbers

**371K**

Average Weekday Trips  
as of October 2019

**1,026**

Buses\*

**7,000+**

Stations and Stops

**154**

Routes

**10**

Maintenance and  
Storage Facilities

\*Reflects active vehicles as of June 2022





# Silver Line

Total Number  
of Projects

**5**

Programmed  
Spend

**\$27.9M**

## Silver Line Investments by Program

Silver Line investments in the five-year CIP are primarily focused on Passenger Facilities (\$21.9M) and Vehicles (\$6M) programs.

## Key Highlights

The FY24-28 CIP includes funding to support fleet replacement and system enhancements. Our ongoing Procurement of 60ft Enhanced Electric Hybrid Buses (P0619) is intended to replace aging vehicles and expand the total size of the fleet to support service in the zero-emissions tunnel, Chelsea gateway expansion, Logan Airport, and other high-density routes.

Additional Silver Line investments include Courthouse Station improvements related to the Courthouse Station Leaks (P0404) and Courthouse NE Headhouse (P0858) projects.

For more information on Silver Line investments, please visit [mbta.com/projects](http://mbta.com/projects).

## By the Numbers

**39K**

Average Weekday Trips  
as of October 2019

**59**

Buses\*

**30**

Stations and Stops

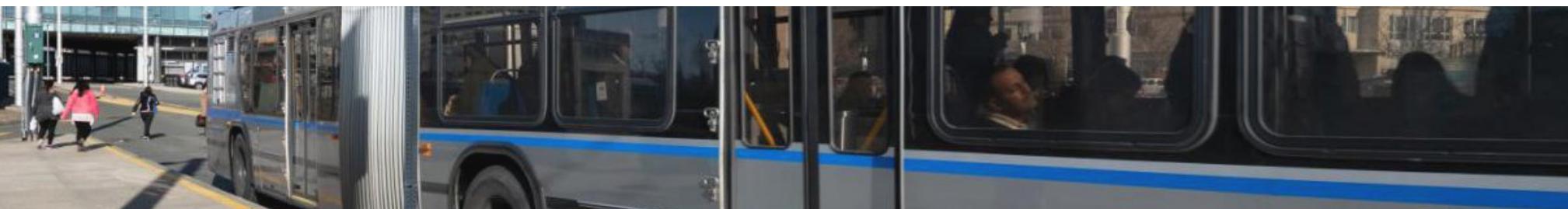
**5**

Routes

**1**

Maintenance and  
Storage Facility\*

\*Reflects active vehicles as of June 2022  
\*Southampton Facility serves Bus & Silver Line





# Commuter Rail

Operated by Keolis

Total Number of Projects **117** Programmed Spend **\$2,372.4M**

## Commuter Rail Investments by Program

Commuter Rail investments in the five-year CIP window are primarily focused on Guideway, Signal, and Power (\$759.5M), Vehicles (\$573.6M), Bridge and Tunnel (\$452.5M), and Passenger Facilities (\$176.9M). Additionally, \$286.3M is allocated for South Coast Rail expansion to Fall River, New Bedford, and Taunton.

## Key Highlights

The CIP supports the MBTA's commitment to the first phase of [Regional Rail Transformation](#) as defined by the Fiscal Management and Control Board in 2019: to deliver electrified service to the Providence/Stoughton and Fairmount Lines, and the Environmental Justice Corridor (the section of the Newburyport/Rockport Line from Boston's North station to Beverly).

Projects that support these initiatives include, but are not limited to, Rail Transformation - Early Action Items (P0940), Rail Transformation Early Actions - Old Colony Double Track (P1209), Rail Transformation Contract Procurement Support (P1202), and Future Rolling Stock Fleet (P0918). Their focus lies in completing necessary technology and planning studies, funds to support fleet procurement of battery-electric or electric rolling stock, and no-regrets capital investments which will allow for increased frequency in the short term.

For more information on Commuter Rail projects and investments, please visit [mbta.com/projects](http://mbta.com/projects).

## By the Numbers

**121K**

Average Weekday Trips  
as of October 2019

**474**

Vehicles\*

**134**

Stations and Stops

**12**

Lines and Branches

**15**

Maintenance and  
Storage Facilities

\*Reflects active vehicles as of June 2022





## Ferry

Operated by Boston Harbor Cruises

Total Number  
of Projects      **7**

Programmed  
Spend            **\$37.6M**

### Ferry Investments by Program

Ferry investments in the five-year CIP are focused on Passenger Facilities (\$21.7M) and Vehicles (\$15.9M).

### Key Highlights

Our Hingham Ferry Dock Modification (P0078) project focuses on the replacement of Hingham Ferry's existing floating dock, access gangway, canopy, and walkways, as well as the extension of canopy structure to the Hingham Intermodal Center. The project also includes upgraded lighting, safety, and security systems to improve customer experience.

Our MBTA Catamaran Overhauls (P0633) project focuses on overhauling the MBTA's oldest two passenger subchapter "T" ferries that were originally built in 1996. It is expected that the overhaul shall bring the vessels into a state of good repair and extend the service life of the vessels by a minimum of 10 years. Upgrades will include navigation equipment, passenger information systems, safety devices, lightning, HVAC and other related systems. Additionally, the Ferry Enhancements - Vessel, Docks & Infrastructure (P0928) project focuses on improvements to infrastructure and studies to increase service and fuel efficiency.

For more information on ferry investments, please visit [mbta.com/projects](http://mbta.com/projects).

### By the Numbers

**5.9K**

Average Weekday Trips  
as of October 2019

**4**

MBTA-Owned Vessels\*

**7**

Stops

**3**

Routes

\*Reflects active vehicles as of June 2022





## Paratransit

Operated by National Express Transit and Veterans Transportation Services

Total Number of Projects	<b>4</b>	Programmed Spend	<b>\$29.5M</b>
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### Paratransit Investments by Program

FY24-28 CIP investments in the RIDE paratransit system are focused on Vehicles (\$27.1M), Business and Operational Support (\$1.6M), and Technology and Innovation (\$0.8M).

### Key Highlights

Capital investments related to The RIDE seek to support the MBTA's paratransit service by replacing vans and sedans through the Replacement of RIDE Revenue Vehicles (P0656) project.

Additionally, to improve customer experience and operational efficiency, investments also target the replacement of vehicle communications; upgrades to our call center; and the implementation of updated software for reserving and scheduling trips, managing vehicle dispatch, and reporting trip information. These projects include New Paratransit Software Solution (P0643), TRAC Technology Improvements (P0643a), and The RIDE Vehicle Radio Upgrade (P0699).

For more information on The RIDE projects and services, please visit [mbta.com/projects](http://mbta.com/projects) and [mbta.com/accessibility/the-ride](http://mbta.com/accessibility/the-ride).

### By the Numbers

**6K**

Average Weekday Trips  
as of October 2019

**151**

Sedans\*

**235**

Vans\*

**64**

Municipalities

\*Reflects active vehicles as of June 2022



# Systemwide and Multimodal

Total Number of Projects	<b>267</b>	Programmed Spend	<b>\$2,282.1M</b>
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## Systemwide and Multimodal Investments by Program

Systemwide investments comprise 220 projects that are not linked to specific modes, but rather impact the system as a whole. The CIP addresses 47 multimodal investments that refer to projects that can be attributed to more than one specific mode (not including Red / Orange Line investments). Systemwide and Multimodal projects are primarily focused on Technology and Innovation (\$629.2M), Guideway, Signal, and Power (\$381.6M), Bridge and Tunnel (\$339.3M), Passenger Facilities (\$317.5M), and Business and Operational Support (\$283.3M). Additionally, \$182.8M is allocated to Maintenance and Administrative Facilities.

## Key Highlights

Systemwide and multimodal projects target inspection, repair, and upgrade of assets (e.g., facilities, bridges, tunnel, track, power) and non-revenue vehicles throughout the system. These are aimed at ensuring safety, reliability, and a state of good repair. They also include efforts related to fare technologies, as well as flood mitigation and other resiliency measures to harden the system against extreme weather events.

Key systemwide and multimodal initiatives in the CIP include the Systemwide Climate Resiliency Program (P1205), repairs to signal infrastructure to reduce hazards and increase safety in our right-of-way (P1208), Systemwide Escalator and Elevator Replacement Program (P1225), Capital Program Safety Assurance (P1164), Stations Needs Assessments (R0031), and others.

For more information on Systemwide and Multimodal projects, please visit [mbta.com/projects](http://mbta.com/projects).

## By the Numbers

**1,150K**

Average Weekday Trips  
as of October 2019

**2,600+**

Vehicles\*

**7,300+**

Stations and Stops

**10**

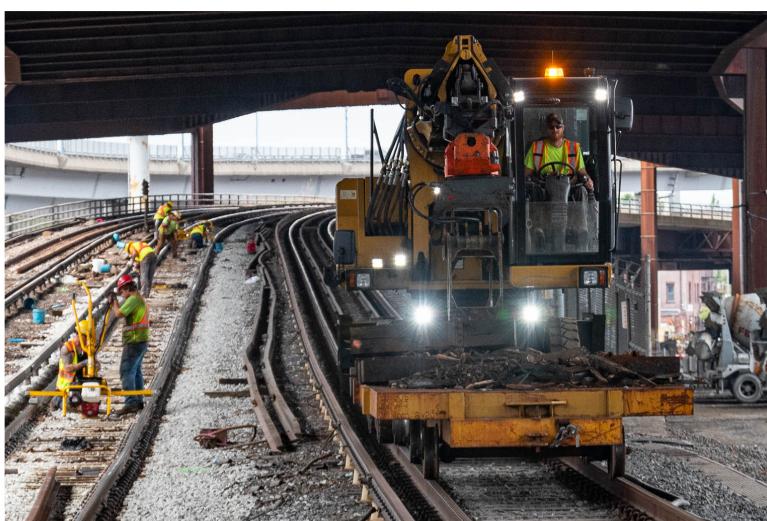
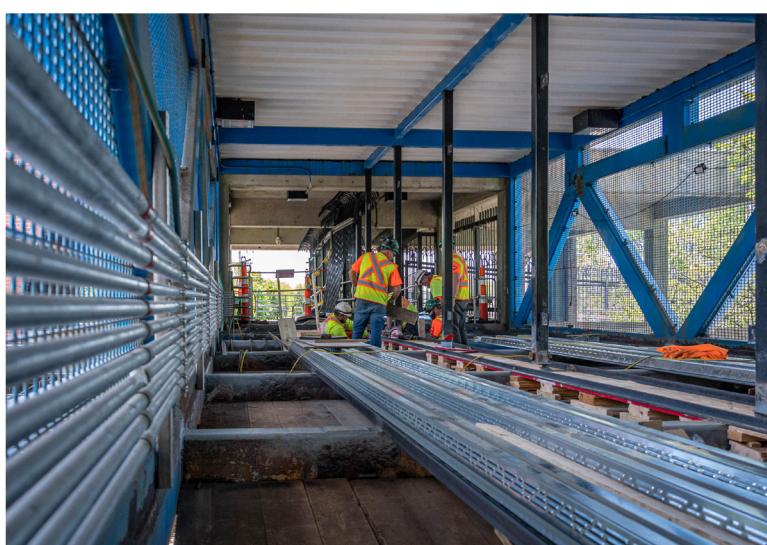
Modes and Lines

**37**

Maintenance and Storage Facilities

\*Reflects active vehicles as of June 2022





# FY24-28 Project List

## Bridge and Tunnel Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
Longfellow Approach (P0551)	Rehabilitation of Longfellow Approach viaduct, Span 1 of the Longfellow Bridge, and station platforms at Charles/MGH Station. Includes new track, power, communication and signal systems, and additional emergency egress and redundant elevators.	Red Line	Design	\$201.9M	\$210.0M
Savin Hill Underpass (P0023)	Stabilization of the Savin Hill Underpass carrying the Red Line beneath Savin Hill Avenue in Dorchester.	Red Line	Closeout	\$0.0M	\$3.6M
Blue Line Infrastructure Improvements (P0631)	Includes rebuilding of the Long Wharf Emergency Egress; track and tunnel infrastructure improvements between Bowdoin and Airport Stations; communication rooms improvements; and Suffolk Downs station reconstruction.	Blue Line	Design	\$8.8M	\$31.4M
Fenway Portal Flood Protection (P0117)	Addition of floodgates and large steel doors to the entrance of the Green Line tunnel near Fenway Station to prevent flooding. Includes updated pumping station and new cameras to monitor rising water levels.	Green Line	Closeout	\$0.0M	\$32.3M
Lechmere Viaduct Rehabilitation Project (P0850)	Rehabilitation of Lechmere viaduct to support increased train frequency and heavier loads associated with the Green Line Extension. This work includes complete reconstruction of the track, signals, and traction power on the viaduct.	Green Line	Closeout	\$0.0M	\$99.6M

\*Project received new funding or is new in the FY24-28 CIP

Note: Some CIP projects may show \$0 programmed spend in FY24-28, as they are expected to complete in FY23 but are not yet formally finalized or closed out.

<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
North Station Draw 1 Bridge Replacement (P0018)	Replacement of North Station Draw 1 bridge structure and control tower. Includes expansion of bridge capacity from 4 to 6 tracks, expansion of station platform capacity from 10 to 12	Commuter Rail	Design	\$352.1M	\$573.8M
Repairs and Rehabilitation of MBTA-Owned Dams (P0909)*	Repairs, rehabilitation and/or decommissioning of the Spillway Dam on the Providence/Stoughton Line in Canton and the Cordaville Pond Dam on the Framingham/Worcester Line in Southborough.	Commuter Rail	Pre-Design	\$25.6M	\$40.0M
South Elm Street Bridge Replacement (P1115)	Replacement of South Elm Street bridge on the Haverhill Line serving Commuter Rail, Downeaster, and Pan Am freight trains.	Commuter Rail	Construction	\$20.3M	\$20.3M
East Street Bridge Replacement (Dedham) (P0907)	Replacement of East Street bridge carrying the Franklin Line in Dedham. The new bridge will feature improved vertical and horizontal clearance, improved roadway features, and improved pedestrian and vehicle access to East Street.	Commuter Rail	Design	\$17.8M	\$18.0M
Gloucester Drawbridge Replacement (P0006)	Replacement of Gloucester Drawbridge on the Rockport Line. The new bridge will consist of a moveable bascule span with two independent barrels, two spans of precast concrete box beams, a new steel superstructure, and a new micro-pile abutment.	Commuter Rail	Construction	\$13.0M	\$100.4M

\*Project received new funding or is new in the FY24-28 CIP

Note: Some CIP projects may show \$0 programmed spend in FY24-28, as they are expected to complete in FY23 but are not yet formally finalized or closed out.

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Saugus Drawbridge Replacement (P0892)	Design of Saugus Drawbridge replacement on the Newburyport/Rockport Line. The new bridge would include a widened approach embankment, a new control house, signal upgrades, and relocation of submerged utilities.	Commuter Rail	Design	\$10.7M	\$19.7M
Norfolk Ave and East Cottage St Bridges (P0851)	Replacement and repair of Norfolk Ave. and East Cottage St. bridges on the Fairmount line. This work addresses section loss in girders, gussets, web stiffeners, rivets, lateral bracing, and cracks and spalls on abutment and wing walls.	Commuter Rail	Construction	\$10.1M	\$22.1M
Boyd Street Pedestrian Bridge Demolition (P1240)*	Demolition of the closed Boyd Street pedestrian bridge to eliminate trespassing and reduce safety risks to Commuter Rail operations on the Haverhill Line.	Commuter Rail	New Project	\$2.3M	\$2.3M
Merrimack River Bridge (P0014)	Rehabilitation, strengthening, and painting of the superstructure of the Merrimack River and Washington Street Bridges. Includes repairs to stone piers, substructure, scour countermeasures, and replacement of bearings.	Commuter Rail	Closeout	\$0.5M	\$87.8M
Beverly Drawbridge Rehabilitation (P0027)	Rehabilitation of the Beverly Drawbridge carrying the Newburyport/Rockport Line over the Danvers River. Includes upgrade of the approach spans and movable swing span, as well as repairs to concrete support piles and equipment.	Commuter Rail	Closeout	\$0.0M	\$36.7M

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East Street Bridge Replacement (P0033)	Replacement of bridge carrying Franklin Line trains over East Street in Westwood.	Commuter Rail	Closeout	\$0.0M	\$15.6M
Robert Street Bridge (P0853)	Full replacement of the Robert Street Bridge on the Needham Line in Roslindale. Includes sidewalk and roadway repairs, higher bridge clearance, and a design that can accommodate potential future addition of a second track.	Commuter Rail	Closeout	\$0.0M	\$10.8M
Rapid Transit Tunnel Lighting Upgrades (P1200)*	Assessment and design of tunnel LED lighting in 12 areas where interlockings and switches are located across the Red, Orange, and Blue Lines.	Multimodal	New Project	\$2.2M	\$2.2M
Emergency Egress Ventilation and Lighting (P1001)	Design of life-safety systems improvements (e.g., emergency egress lighting, backup generators, ventilation, fire hydrants, partitions) at Cabot, Fellsway, Lynn, Charlestown, Albany, and Southampton bus garages and Reservoir and Riverside car houses.	Multimodal	Design	\$0.7M	\$1.0M
Bridge Program Pipeline - Rehabilitation, Repair and Replacement (P1107)*	This program uses information provided through the bridge inspection and load rating program to design and construct prioritized bridge rehabilitation, repair, or replacement projects.	Systemwide	Pre-Design	\$85.3M	\$295.0M

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Systemwide Tunnel Flood Mitigation Program (P0912)	Planning, training, and infrastructure improvements to make the tunnel network more resilient to flooding exposures due to storm surge, precipitation, and sea level rise.	Systemwide	Planning	\$50.3M	\$143.1M
Bridge Bundling Contract (P0495)	Replacement of six commuter rail bridges at Intervale Rd. in Weston; Bacon St. in Wellesley; High Line Bridge in Somerville; Lynn Fells Parkway in Melrose; Parker St. in Lawrence; and Commercial St. in Lynn.	Systemwide	Construction	\$39.3M	\$132.2M
Systemwide Bridge Inspection and Rating (P0627)	Program to support in-depth inspection and load rating of MBTA-owned bridges at regular intervals. Load ratings are used to establish a systemwide priority list of bridge repairs, rehabilitation, and replacement.	Systemwide	Design	\$35.0M	\$103.9M
Dorchester Avenue Bridge (P0552)	Replacement of Dorchester Avenue Bridge and installation of a new tunnel roof beneath the bridge.	Systemwide	Construction	\$21.0M	\$37.1M
Structural Repairs Systemwide (P0852)	Funding to support systemwide structural repairs on bridges, tunnels, retaining walls, buildings, stairs, and other structures on an on-call basis.	Systemwide	Construction	\$17.5M	\$30.1M

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Tunnel Inspection Systemwide (R0074)	Ongoing inspection and rating of Red Line, Orange Line, Green Line, and Blue Line tunnels.	Systemwide	Design	\$17.5M	\$30.6M
Tunnel Emergency Ventilation Program (P0704)	Funding to support inventory, inspection, monitoring, design, and necessary construction to improve emergency ventilation in the tunnel network.	Systemwide	Pre-Design	\$13.0M	\$14.7M
Urgent Structural Design Support (P1000)*	Addresses emergency structural or safety-related deficiencies that require immediate follow-up inspection or action.	Systemwide	Design	\$10.5M	\$11.5M
Bridges - Design (P0009)	Design funding to support the repair, rehabilitation, and replacement of bridges across the system.	Systemwide	Design	\$10.1M	\$35.4M
Tunnel Repairs (On-Call) (P0466)	Construction services to perform steel and concrete tunnel repairs throughout the system on an on-call basis.	Systemwide	Construction	\$8.7M	\$28.6M
Bridge & Tunnel Structural Repair (P1123)	Funding to support non-routine structural repairs of bridges, tunnels, stairways, and platforms systemwide. This project focuses on relatively minor repairs that fall outside the scope of routine maintenance.	Systemwide	Construction	\$7.2M	\$7.5M

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352 General Engineering Services for Transit Facilities Maintenance (P1124)	Engineering support services for repair and replacement projects. This includes the design of various repairs throughout the system, as well as the production of stamped drawings and plans.	Systemwide	Construction	\$3.7M	\$3.8M
Emergency Bridge Repair (P0037)	Funding to support emergency bridge repairs on an on-call basis.	Systemwide	Construction	\$3.5M	\$27.0M
Systemwide Culvert Inspection and Load Rating (P1116)	Inventory, inspection, and load rating of the MBTA's approx. 1,300 culverts supporting in-service structures systemwide. The scope of work includes an initial inspection to establish baseline condition, followed by inspection every five years.	Systemwide	Pre-Design	\$3.5M	\$12.5M
Underground Structure Design/Repair & Geotechnical Engineering Services (P0667)	Engineering services for the repair and rehabilitation of underground structures systemwide.	Systemwide	Design	\$2.6M	\$4.0M
Systemwide Retaining Wall Inspection and Rating (P1119)	Routine inspection and repair of approximately 214 retaining walls. The MBTA's extensive network of retaining walls is an integral element of our bridges, railroad embankments, and other infrastructure, and is a critical safety element.	Systemwide	Pre-Design	\$2.5M	\$5.5M

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Systemwide Tunnel Dewatering Pump System Upgrades (P1125)	Upgrade of approximately 52 dewatering pump systems, which are required to pump out rainwater from low points in the track and tunnel systems.	Systemwide	Construction	\$2.3M	\$2.5M
Bridge Repairs Systemwide (Contracts 4 and 5) (P0611)	Construction services to perform structural repairs on bridges, retaining walls, buildings, stairs, and other structures throughout the system on an on-call basis.	Systemwide	Construction	\$1.6M	\$12.3M
Bridge Inspection and Load Rating Manual Development (P1138)	Creation of a comprehensive bridge inspection and load rating manual to standardize inspection and rating procedures for bridges serving commuter/freight rail, transit, vehicular, and pedestrian traffic.	Systemwide	Pre-Design	\$1.0M	\$1.3M
Emergency Bridge Design / Inspection & Rating (P0008)	Funding to support as-needed emergency design, inspection, and rating of bridges.	Systemwide	Design	\$0.5M	\$27.8M
Tunnel Rehabilitation (P0182)	Construction and professional services relating to tunnel repair and inspection.	Systemwide	Closeout	\$0.0M	\$12.8M

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## Guideway, Signal, and Power Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
Red Line Interlock Upgrades (P0654)	Replacement of all track and signal assets at the following Red Line Interlockings: Park Street, Harvard, Kendall, Ashmont Section 16, and Broadway. Includes tools, equipment, and a spot tamping machine to support capital improvements.	Red Line	Construction	\$11.5M	\$12.0M
Red Line Floating Slabs (Alewife-Harvard) (P0273)	Replacement of concrete slabs that "float" between the tracks and rubber disks that absorb sound and vibration from trains. This work involves demolishing old slabs, placing new rebar, and pouring new concrete.	Red Line	Construction	\$7.9M	\$42.8M
Red Line Cable Replacement (P0286)	Cable replacement to improve power infrastructure reliability on the Red Line.	Red Line	Construction	\$3.4M	\$29.0M
Ashmont Branch Track Replacement (P1132)	Design and construction for partial reconstruction of track and track support systems on the Ashmont Branch of the Red Line. This is part of a series of Red Line track replacement projects.	Red Line	Design	\$3.0M	\$5.0M
Braintree Line Track Replacement (P1133)	Design and construction for partial reconstruction of track and track support systems on the Braintree Branch of the Red Line. This is part of a series of Red Line track replacement projects.	Red Line	Pre-Design	\$1.5M	\$1.5M

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Cabot Yard Ductbanks (P1100)	Replacement of traction power and negative return ductbanks within Cabot Yard. This project will also include the replacement of two trailers at Cabot which house MBTA Electricians and Foremen.	Red Line	Design	\$0.8M	\$1.0M
Red Line Rehabilitation (P0184)	Rehabilitation of the Red Line tunnel infrastructure.	Red Line	Closeout	\$0.6M	\$11.7M
Red Line Substation, Traction Power Upgrades (P0144)	Replacement of DC electrical equipment at five traction power stations along the Red Line and improvements to control systems to add automation technology known as System Automation System (SAS).	Red Line	Closeout	\$0.0M	\$21.7M
Red Line DC Cable (P0281)	Improvements to cable infrastructure between Andrew and Kendall on the Red Line. Includes asset investigation, quantification of needs, implementation design, and replacement of approximately 27,500ft of cables, duct banks, and manholes.	Red Line	Construction	\$0.0M	\$28.5M
Orange Line Traction Power Upgrade (P0139)	Major renovation of four aging Orange Line power substations that includes total replacement of the traction power electrical systems, as well as minor structural, mechanical, plumbing, and electrical repairs.	Orange Line	Construction	\$21.5M	\$68.3M

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Orange Line Southwest Corridor Track Replacement (P0675)	Reconstruction of track and support systems on the Southwest Corridor of the Orange Line between Chinatown and Forest Hills Stations.	Orange Line	Pre-Design	\$18.5M	\$23.1M
South Boston to Forest Hills Duct Bank Replacement - Phase 2 (P1114)	Replacement of duct banks and cables which carry AC power from the South Boston power complex to Forest Hills.	Orange Line	Pre-Design	\$16.1M	\$16.2M
Orange Line DC Cable (P0279)	Improvements to cable infrastructure between Back Bay and North Station on the Orange Line. Includes asset investigation, quantification of needs, implementation design, and replacement of approx. 27,500ft of cables, duct banks, and manholes.	Orange Line	Pre-Design	\$8.3M	\$21.7M
Rapid Transit Rail Fastener Upgrades Assessment (P1207)*	Evaluation and assessment of existing rail fastener infrastructure for improved alternative fastening methods.	Orange Line	New Project	\$6.2M	\$6.2M
South Boston to Forest Hills Duct Bank Replacement - Phase 1 (P0688)	Replacement of duct banks and cables carrying AC power from the South Boston power complex to Forest Hills.	Orange Line	Design	\$0.7M	\$1.5M

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Oak Grove Utility Feeders and Wellington XFMR Cable (P0900b)	Replacement of deteriorated AC power cables that supply power to the substation with a new duct bank and cable system. Also includes replacement of cable connections at Wellington Rectifier Transformer.	Orange Line	Design	\$0.0M	\$2.1M
Orange Line Surge - Track Rehabilitation (Engineering & Maintenance scope) (P1167b)	Track reconstruction and rehabilitation to reduce the percentage of track that is deficient or under a speed restriction following the FTA's findings on the Orange Line.	Orange Line	Construction	\$0.0M	\$5.2M
Signal Program - Red/Orange Line (P0285)	Replacement and upgrade of signal equipment on the Red and Orange Lines. Includes renewal of track circuit modules using latest digital audio frequency technology and replacement of wayside equipment on the Orange Line south of Haymarket.	Red / Orange Line	Construction	\$153.3M	\$289.1M
Red Line / Orange Line Infrastructure Improvements (P0157)	Renovation and expansion of the Wellington Maintenance Facility, including inspection pit strengthening to prepare facility for new Orange and Red Line trains.	Red / Orange Line	Construction	\$80.2M	\$470.4M
Blue Line Communications Rooms Improvements (P0631b)	Rehabilitation of communications rooms along the Blue Line to bring them into a state of good repair and support the implementation of Fare Transformation.	Blue Line	Design	\$19.2M	\$20.5M

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Long Wharf Egress & Maverick Communications Room (P0631d)	Reconstruction of stairs within Long Wharf emergency egress shaft east of Aquarium Station on the Blue Line. Project also includes the relocation of the existing Maverick communications room.	Blue Line	Construction	\$19.0M	\$19.1M
Blue Line Mechanical Trip Stops - Baseline Analysis (P0558)	Analysis of mechanical trip stop systems for potential implementation on the Blue Line.	Blue Line	Design	\$0.8M	\$2.0M
Bowdoin to Aquarium Infrastructure Improvements (P0631a)	Assessment of Blue Line tunnel infrastructure between Bowdoin and Aquarium stations, resulting in a technical memoranda outlining next steps.	Blue Line	Design	\$0.6M	\$1.5M
Blue Line Master Plan (P0610)	Assessment of tunnels, drainage, structures, traction power, track, signals, vehicles, stations, resiliency, regional connectivity, accessibility, and code compliance on the Blue Line.	Blue Line	Planning	\$0.5M	\$1.4M
Blue Line PLC Replacement (R0132a)	Replacement of Programmable Logic Controllers (PLCs) at various locations on the Blue Line.	Blue Line	Construction	\$0.2M	\$0.5M

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B Branch Accessibility & Capacity Improvements (P0924)	Track realignments, accessibility improvements, potential consolidation, and station and traction power upgrades along the Green Line B branch between Blandford St. and Warren St. Stations.	Green Line	Planning	\$175.8M	\$220.9M
Green Line Train Protection (P0370)	Procurement and installation of on-board and wayside equipment for a train protection and information system on the Green Line to mitigate red signal violations, train-to-train collisions, derailments, and intrusions into work zones.	Green Line	Construction	\$146.5M	\$212.9M
Green Line Central Tunnel Track and Signal Replacement (P0591)	Rehabilitation and upgrades to signal and track infrastructure within the Green Line Central Tunnel. Includes central instrumentation houses and signal, track, and power systems at Copley, Park Street, and Government Center.	Green Line	Design	\$115.6M	\$120.0M
E Branch Accessibility & Capacity Improvements (P0923)	Improvements to surface track and stations on the E branch of the Green Line, extending from the Northeastern Station portal to Heath Street Station.	Green Line	Pre-Design	\$85.8M	\$85.9M
Green Line Transformation (P0685)	Funds to support the Green Line Transformation (GLT) program, including construction and general management of more than 60 projects that seek to improve quality of service and focus on strategic planning for the Green Line.	Green Line	Planning	\$17.1M	\$48.3M

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Green Line Overhead Catenary System State of Good Repair (P0919)	Repair and replacement of traction power and catenary system components (e.g., hangers, crossarms, yokes, insulators) throughout the Green Line.	Green Line	Pre-Design	\$13.4M	\$13.8M
Green Line (Non-GLX) Grade Crossings (On-Call) (P0468)	Reconstruction and replacement of 27 roadway grade crossings on the Green Line's B, C, and E branches and the Mattapan High-Speed Line. Includes track work, road work, pedestrian ramps, and traffic management during construction.	Green Line	Construction	\$8.9M	\$28.5M
Green Line Traction Power Upgrades for Increased Capacity (P0922)	Traction power upgrades on all Green Line branches to address DC power system requirements for the future Type 10 fleet.	Green Line	Design	\$8.7M	\$10.0M
Copley to Arlington Track Replacement (P0917)	Full-depth track reconstruction at Copley and Arlington Stations within eastbound and westbound pits to realign tracks. This work is intended to overcome delays caused by vehicles doors being jammed due to track conditions.	Green Line	Design	\$7.1M	\$8.1M
Overhead Contact System Relocation for Type 10 Vehicles (P1102)	Assessment of overhead contact system (OCS) on the Green Line to identify areas out of compliance with the conceptual Type 10 design. This project will also establish systemwide standards for the location of the OCS and realign the OCS as necessary.	Green Line	Pre-Design	\$5.0M	\$5.0M

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Green Line Central Tunnel Signal - 25 Cycle (P0283)	Replacement of 25Hz track circuits with 100Hz track circuits in the Green Line central tunnel. Includes replacement of track circuit cable, trough, messenger, cases, relays, rectifiers, and signal power equipment.	Green Line	Closeout	\$2.1M	\$17.0M
D Branch Pedestrian Crossing Speed Restriction Removal (P0926)	Evaluation and design of pedestrian crossing solutions for the Green Line's D branch between Webster and Houghton Conservation Areas. This comprises a crossing gate and a pedestrian underpass/overpass to increase pedestrian safety and vehicle speeds.	Green Line	Pre-Design	\$0.5M	\$0.6M
Green Line Microlok and Fiber Modernization (P1211)*	Implementation of Microlok II Signal System and related infrastructure between Reservoir and Fenway Stations on the Green Line.	Green Line	New Project	\$0.5M	\$0.5M
Signal Program - Green Line (P0284)	Construction of new signals room at Copley Station to support Green Line operations.	Green Line	Construction	\$0.3M	\$6.0M
Beacon Junction Special Track Work Replacement (P0271)	Replacement of track elements at Beacon Junction on the Green Line C and D Branches.	Green Line	Closeout	\$0.0M	\$6.5M
Green Line Rail Grinding (P0275)	Rail grinding on the Green Line to remove irregularities from worn track and extend the useful life of track elements.	Green Line	Closeout	\$0.0M	\$6.1M

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E&M MOW Green Line Track Rehabilitation (P0686)	Rehabilitation of track elements on the Green Line to support continued reliability of the system.	Green Line	Closeout	\$0.0M	\$7.6M
Green Line B Branch Infrastructure Improvements (P0874)	Full-depth track renewal and special trackwork on the Green Line B branch. Includes track improvements between Naples crossover and Packards Corner, special trackwork at Washington and Cardinal crossovers, and 600ft. of eastbound-only improvements.	Green Line	Construction	\$0.0M	\$6.6M
Green Line C Branch Surface Improvements (P0878)	Full-depth track renewal and special trackwork on the C branch of the Green Line. Includes replacement of ties and ballast at the St. Mary's St., Coolidge Corner, and Ayr Road crossovers.	Green Line	Construction	\$0.0M	\$27.8M
Green Line E Branch Surface Improvements (P0879)	Full-depth track replacement on Green Line's E branch. Includes replacement of Northeastern's special trackwork and storage track, Longwood to Brigham Circle main line, Heath Street loop track, and Forsyth, Parker, and Wigglesworth's crossovers.	Green Line	Construction	\$0.0M	\$30.2M
Green Line D Branch Track and Signal Replacement (R9593)	Replacement of track (Brookline Hills to Riverside) and signal system (Reservoir to Riverside) on the Green Line D branch. Includes new switches, signals, cables, cable-hanging system, power supply, crossovers, pedestrian crossings, and truck pads.	Green Line	Closeout	\$0.0M	\$107.2M

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Mattapan HSL Transformation (P0857)	State of good repair and accessibility improvements, power upgrades, and other infrastructure investments on the Mattapan Line.	Mattapan Line	Pre-Design	\$74.3M	\$114.5M
Bus Lanes and Other Bus Priority (P1005)	This program provides local match funding for potential bus lane projects.	Bus	Planning	\$15.8M	\$15.8M
Bus Priority Project Construction (P1113)	Funding to support construction of bus priority infrastructure. This may include side- or center-running bus lanes, transit signal priority, pavement markings, and stop upgrades.	Bus	Pre-Design	\$11.4M	\$11.4M
Blue Hill Ave Transit Priority Corridor (P1005b)	Local match funding for an FY21 RAISE grant awarded by USDOT to the City of Boston, supporting the addition of center-running dedicated bus lane on Blue Hill Avenue in Dorchester and Mattapan to support faster bus service.	Bus	Pre-Design	\$11.1M	\$11.2M
Columbus Ave Bus Lane Phase 2 (P1005a)	Funding for Phase 2 of the Columbus Avenue center-running bus lane in Boston. This phase of the project extends the bus lane north from Jackson Square to Ruggles Station.	Bus	Design	\$2.1M	\$3.0M
Malden/Everett Main Street Transit Signal Priority (P1006)	Local match funding for a Community Connections project funded through the Boston Region MPO. This project will install transit priority infrastructure along Main Street in Malden and Everett.	Bus	Planning	\$0.2M	\$0.2M

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Shared Streets/ Washington St Boston Washington St Somerville and Western Ave Lynn (P0953c)	Design and construction of three bus lane corridors on Washington St. (Somerville), North Washington St. (Boston), and Western Ave. (Lynn). Includes lane pavement markings, flex posts, signage, traffic signals, and transit signal priority.	Bus	Construction	\$0.2M	\$0.5M
Shared Streets/ Brookline Gateway East (P0953f)	Conversion of one parking lane in each direction to bus-only lanes at Brookline Gateway East. Includes bus lane painting, signage, and traffic signal priority equipment.	Bus	Construction	\$0.2M	\$0.4M
Massachusetts Ave (Arlington) Outbound Bus Lane (P0953h)	New dedicated bus and bike lanes on Massachusetts Ave. from Alewife Brook Parkway to opposite Lafayette St. Includes extension of existing inbound shared bus/bike lane from Boulevard Rd. to Alewife Brook Parkway in the town of Arlington.	Bus	Design	\$0.1M	\$0.1M
Shared Streets/ Chelsea-Revere (P0953d)	New painted bus lane on Broadway in the southbound direction from City Hall towards Chelsea city line.	Bus	Construction	\$0.1M	\$0.2M
Concord Ave. Transit Signal Priority (P1027)	Installation of transit signal priority technology along Concord Ave. in Cambridge from the Harvard Busway to the Cambridge-Belmont municipal boundary.	Bus	Design	\$0.1M	\$0.2M

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Shared Streets/ Malden Centre Street (P0953g)	New dedicated bus and bike lines on Centre St. between Main St. and Malden Center Station, as well as protected bike lanes on Eastern Ave. between Main St. and Franklin St in the City of Malden.	Bus	Construction	\$0.1M	\$0.5M
Davis Square Signal Improvements and TSP (P1023)	"Procurement and installation of new traffic signal equipment throughout Davis Square, including the incorporation of transit signal priority (TSP) technology to improve bus movements through the intersection.	Bus	Design	\$0.1M	\$0.2M
North Cambridge Yard Catenary Replacement (P0906)	Replacement of existing catenary components at North Cambridge Yard to increase maintenance efficiency and allow buses to easily berth in the yard, improving system performance and reliability.	Bus	Closeout	\$0.0M	\$1.4M
Shared Streets/ Washington St. Roslindale (P0953a)	Enhancements to peak-only shared bus/bike lane southbound on Washington St. and northbound around Adams Park in Roslindale Village. Includes new curb-extended bus stops, shelters, sidewalks, and curb ramps on Poplar and Corinth Streets.	Bus	Construction	\$0.0M	\$0.5M
Shared Streets/ Park Drive (P0953b)	Construction of signalized pedestrian crossing on Park Drive to provide a safe and accessible connection between bus service and Green Line. Includes curb ramps, median refuge, signage, pavement markings, and three rectangular rapid flashing beacons.	Bus	Construction	\$0.0M	\$0.2M

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Shared Streets/ Bus Shelters and Bus Boxes (P0953e)	Procurement and installation of five bus shelters at designated bus stops in Boston and Medford, as well as the installation of pavement markings that designate bus stop zones at multiple bus stops systemwide.	Bus	Planning	\$0.0M	\$0.2M
ATC Implementation - North Side Commuter Rail Lines (P0606)*	Implementation of Automatic Train Control (ATC, also known as cab signals) on the North Side Commuter Rail Lines to support full implementation of federally mandated Positive Train Control (PTC).	Commuter Rail	Construction	\$142.9M	\$466.8M
Tower 1 Interlocking Early Action Project (P0889)	Upgrade of interlocking components outside South Station to support Commuter Rail and Amtrak operations. This includes new signals, switches, track, and generators and is considered early action work for the South Station Expansion project.	Commuter Rail	Construction	\$114.9M	\$139.4M
Commuter Rail Fiber Optic Resiliency (P0612)	Installation of a buried fiber-optic cable network for railroad vital systems, including signals, communications, and Positive Train Control (PTC) on Commuter Rail tracks systemwide.	Commuter Rail	Design	\$103.1M	\$120.6M
Keolis Capitalization Initiatives and Extra Work (P0553)	Annual costs related to capital maintenance activities required per the Keolis Operating Agreement. Work generally relates to switches, ties, track, rail grinding, timbers, and fencing.	Commuter Rail	Construction	\$68.4M	\$153.9M

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PRIIA-NEC Baseline Capital Charges (P0692)*	Payments to Amtrak related to the use, dispatch, and maintenance of the Providence Line and Northeast Corridor between South Station and the Rhode Island border. Includes Attleboro Agreement payments as well as capital improvements.	Commuter Rail	Construction	\$51.5M	\$119.3M
Commuter Rail Positive Train Control (P0148)	Installation of Positive Train Control (PTC) train monitoring system to prevent unauthorized speeds and unexpected movement and reduce the risk of collision.	Commuter Rail	Construction	\$36.0M	\$444.2M
Worcester Line Track and Station Accessibility Improvements (P0261)	New third track and realignment of existing tracks on the Framingham and Worcester Commuter Rail lines between Weston and Framingham. Includes upgrades to Wellesley Farms, Wellesley Hills, Wellesley Square, and West Natick Stations.	Commuter Rail	Design	\$25.3M	\$32.4M
Commuter Rail Track State of Good Repair and Resiliency Program (P0862)	Various improvements to track infrastructure on the Commuter Rail system, including interlocking upgrades, ledge cutting, and replacement of ties and switch timbers.	Commuter Rail	Construction	\$25.2M	\$37.7M
Commuter Rail Signal State of Good Repair and Resiliency Program (P0861)	Signal improvements on the Commuter Rail system, including a north-side dispatch software system, systemwide signal and power upgrades, HLC upgrades on the Old Colony Line, and grade-crossing safety improvements.	Commuter Rail	Construction	\$24.7M	\$29.7M

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Franklin Double Track and Signal (P0214)	Extension of double track segments between Franklin and Norwood Central stations to create a continuous second track along nearly all of the Franklin Line.	Commuter Rail	Construction	\$23.9M	\$67.8M
Keolis Mechanical Parts (P1145)	Procurement of mechanical parts inventory to support Commuter Rail maintenance.	Commuter Rail	Pre-Design	\$22.0M	\$32.1M
Keolis General & Administrative Contract (P1004)	Funding for required general and administrative fees paid annually to Keolis for maintenance and operation of the Commuter Rail system.	Commuter Rail	Construction	\$19.5M	\$31.2M
Rail Transformation - Early Action Items (P0940)*	Various early-action and planning efforts to support future Rail Transformation. Includes addition of double tracks, interlockings, platforms, and turnbacks on the Newburyport/Rockport, Fitchburg, Haverhill, and Lowell Lines at key stations.	Commuter Rail	Design	\$18.9M	\$20.0M
North Station Terminal Signal (P0212)	Upgrade of signal system at North Station, including new microprocessor technology, nine new signal houses, two new crossovers, and the relocation of critical signal equipment above the 500-year floodplain.	Commuter Rail	Construction	\$16.8M	\$45.2M
On-Call Commuter Rail Track 2 (P0211)	On-call construction services to support track and rail repair, replacement, and upgrades.	Commuter Rail	Construction	\$14.6M	\$32.2M

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CSX ROW Property Acquisition (P0869)	Acquisition of Milford secondary right-of-way from CSX to ensure continued operation of the Franklin Line to Forge Park.	Commuter Rail	Planning	\$13.2M	\$13.2M
Rail Transformation Early Actions - Old Colony Double Track (P1209)*	Track improvements to support hourly, all-day, bi-directional service on the Old Colony Line and South Coast Rail. Includes design for double-tracking on portions of the Greenbush/Middleboro Lines and modifications of Middleboro Station's tracks.	Commuter Rail	New Project	\$10.0M	\$10.0M
Energy Efficiency (P0290)	Installation of a 750kW wind turbine at the Bridgewater Remote Track location in Bridgewater, MA.	Commuter Rail	Construction	\$7.5M	\$25.0M
PTC Startup After Implementation (P0913)	Costs associated with the transition of the Positive Train Control (PTC) system from the system integrator (Hitachi) to the operator (Keolis).	Commuter Rail	Planning	\$6.5M	\$9.6M
Commuter Rail Culverts, Bridges & ROW Improvements (On-Call) (P0465)	Funding to support urgent repair and reconstruction needs on the Commuter Rail system.	Commuter Rail	Construction	\$3.3M	\$14.3M
Commuter Rail - Systemwide Tree Removal (P0235)	Removal of aging trees and vegetation along the Commuter Rail right-of-way to ensure a clear line of sight for operators and reduce weather-induced safety risks.	Commuter Rail	Construction	\$3.0M	\$33.5M

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Commuter Rail Gas Switch Heater Conversions (P0827)	Procurement and installation of 65 switch heaters systemwide to prevent switch failures, reduce delays, and increase reliability and on-time performance during ice and snow conditions.	Commuter Rail	Construction	\$1.8M	\$5.0M
Commuter Rail - Replace CP3 Crossover (P0224)	Replacement of track elements at the CP3 Crossover just west of Lansdowne Station on the Framingham/Worcester Line.	Commuter Rail	Construction	\$1.6M	\$2.7M
Rail Crossing Safety Upgrades (P1146)	Assessment, procurement, and testing of non-signalized protective devices to improve safety at open pedestrian crossings on the Commuter Rail system.	Commuter Rail	Pre-Design	\$1.0M	\$1.0M
Worcester Line Rail Corridor Improvements (P0262)	Various state-of-good-repair improvements along the Framingham/Worcester Commuter Rail Line.	Commuter Rail	Design	\$1.0M	\$11.2M
Wayside Bearing Acoustic Monitoring/ Defect Detection (P0839)	Procurement and installation of wheel bearing acoustic monitoring and defect detection equipment on the Commuter Rail network.	Commuter Rail	Construction	\$0.9M	\$4.0M
Haverhill Interlocking Improvements (P0880)	Installation of a new universal crossover at Franklin Street on the Haverhill Line.	Commuter Rail	Planning	\$0.9M	\$6.0M

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Fitchburg Line Small Starts - Track / Signal / Stations (P0083)	Track, signal, and station improvements on the Fitchburg Line supported by federal Small Starts grant funding.	Commuter Rail	Closeout	\$0.5M	\$143.7M
Attleboro Agreement - NEC Capital Commitments (P0691)	Funding to support targeted maintenance of assets on the Attleboro Line between South Station and Rhode Island border, per the MBTA's agreement with Amtrak. Includes maintenance of tracks, structures, and systems.	Commuter Rail	Planning	\$0.3M	\$13.6M
PRIIA-212 Amtrak Baseline Capital Charges (P0769)	Annual capital maintenance payments required per the MBTA's agreement with Amtrak.	Commuter Rail	Construction	\$0.3M	\$11.6M
Blandin Ave Grade Crossing (P0752)	Partnership with MassDOT to perform improvements to the Blandin Avenue grade crossing on the Framingham/Worcester Line in Framingham.	Commuter Rail	Construction	\$0.1M	\$0.9M
Walpole Lewis Wye Signal Improvements (P0206)	Reconstruction of track and signal elements at Lewis Wye near Walpole station to support pilot service on the Foxboro Line.	Commuter Rail	Construction	\$0.0M	\$7.5M
CPF-CAMP Property Taking for Access Road (P0209)	Acquisition of property at CPF-CAMP on the Fitchburg Line in Ayer to establish an access road for capital maintenance.	Commuter Rail	Planning	\$0.0M	\$0.4M

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NNEPRA- Haverhill Line Improvements (P0421)	Rail replacement along the Haverhill Line in collaboration with the Northern New England Passenger Rail Authority to support Downeaster service.	Commuter Rail	Closeout	\$0.0M	\$11.4M
Commuter Rail Slippery Rail Mitigation Project (P0617)	Upgrades to Commuter Rail layover locations to add sanding capability to mitigate track's slippery conditions, improve traction and breaking, and reduce delays in revenue service during fall and winter months.	Commuter Rail	Planning	\$0.0M	\$0.6M
Lynn Station Direct Fixation Repairs Track 1 & Station Amenities (P0632)	Removal of existing tracks and concrete base for the installation of two new tracks on wooden ties at Lynn Commuter Rail Station. Includes land purchase in Lynn for project development.	Commuter Rail	Construction	\$0.0M	\$1.8M
Auburndale Fiber Optic Cable (P0821)	Installation of fiber optic connection between the Cobble Hill dispatching center in Somerville and Auburndale Station on the Framingham/Worcester Line.	Commuter Rail	Construction	\$0.0M	\$1.7M
On-Call Track III (P0516)*	Construction-related services to support urgent track repair needs on an on-call basis across the MBTA's system. Includes tie replacement, concrete work, signal bonding, and other related work.	Multimodal	Construction	\$148.1M	\$150.9M

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15kV Feeder and Duct Bank Replacement (P1212)*	Design and systemwide replacement of cables with Paper Insulated Lead Covered (PILC) feeders with new cables containing Ethylene Propylene Rubber (EPR) feeders to increase employee safety and power system resiliency.	Multimodal	New Project	\$15.0M	\$15.0M
PILC-EPR Medium Voltage Cable Replacement Program (P1210)*	Replacement of medium voltage AC cables that are beyond their useful life between traction power substations to maintain a state of good repair and reduce lead exposure risk to employees.	Multimodal	New Project	\$14.8M	\$14.8M
Traction Power Substation Upgrades (P1104)	Complete replacement of electrical systems and structural, mechanical, and plumbing improvements at nine aging traction power substations (TPSS). This scope also includes a TPSS Design Guide to standardize future improvements.	Multimodal	Pre-Design	\$7.2M	\$7.2M
Systemwide Signal Design Circuit Plans (P1141)	Development of new signal design circuit plans for all wayside cases and control point locations on all rapid transit and light rail lines. This will include both hard copy designs and digital copies maintained in an MBTA database.	Multimodal	Pre-Design	\$2.1M	\$2.5M
Unit Substation Replacement Project (P1149)	Development of a unit substation (USS) design guide and replacement of existing power and electrical equipment at USS locations, including AC feeder disconnect switches.	Multimodal	Pre-Design	\$1.6M	\$2.3M

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MOW Systemwide CWR Replacement Project (P0642)	Replacement of selective jointed and continuously welded rail (CWR) on the Commuter Rail system to reduce rail breaks, track maintenance, signal issues, noise, vibration, and impacts to the rolling stock lifespan.	Multimodal	Construction	\$1.5M	\$8.0M
Restraining Rail Fasteners Upgrade (P1126)	Upgrade of all restraining rail fasteners on the transit track system with a more resilient fastener system.	Multimodal	Planning	\$1.5M	\$1.5M
Signal Infrastructure ROW Hazards and Safety Cleanup (P1208)*	Removal of obsolete and retired signal infrastructure along tunnels and the MBTA's right-of-way to address risk of asbestos exposure and obsolete insulated joints in the tracks.	Multimodal	New Project	\$1.0M	\$1.0M
On-Call Track II (P0648)	On-call construction services to support repair and reconstruction needs on the light and heavy rail systems.	Multimodal	Construction	\$1.0M	\$54.2M
Capital Maintenance Expenses - Power (P0687)	Funding to support a variety of power-related capital maintenance expenses systemwide.	Multimodal	Construction	\$0.8M	\$4.0M
Signal Switch Heater Modernization (P1214)*	Assessment and modernization of manually operated switch heaters with switch heaters that can be remotely operated by the Operations Control Center.	Multimodal	New Project	\$0.5M	\$0.5M

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Signal CIH HVAC Rehab and Modernization (P1241)*	Rehabilitation and modernization of HVAC systems linked to signal control points and inclusion of remote-viewing capability to improve safety and reliability of signaling equipment operations.	Multimodal	New Project	\$0.3M	\$0.3M
Glides 2.0 (P0689p)	Continued improvements to the Glides light rail management app to provide light rail instructors and inspectors with improved service management tools related to real-time data and trend analysis.	Multimodal	Planning	\$0.0M	\$0.9M
Nubian Square Ductbank Replacement - Phase II (P0897)	Replacement of duct banks and manholes located in the Dudley Street and Warren Street area, to be performed concurrently with the full-depth reconstruction planned under the City of Boston's Complete Streets Program.	Multimodal	Design	\$0.0M	\$3.5M
Additional FTA Directive-Related Costs (P1238)*	Capital costs and related services to support urgent track and other assets' needs on an on-call basis systemwide.	Systemwide	New Project	\$40.0M	\$40.0M
Power Systems Capital Maintenance (P0674)	Funding to support a variety of power investments that fall outside of the scope of routine preventative maintenance. Includes replacement of AC/DC distribution cables, overhead contact systems, and others.	Systemwide	Construction	\$22.7M	\$25.0M

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Power Systems Reliability Program (P0900)	Repairs and replacement of electrical distribution infrastructure on facilities and transit systems on the Red and Orange Lines. Includes AC and DC cables, generators, transformers, traction power, unit substations, conductors, and manholes.	Systemwide	Planning	\$18.7M	\$22.2M
SCADA Equipment Update (P1213)*	Equipment and fiber optic network upgrades to the Supervisory Control and Data Acquisition (SCADA) system that controls critical power infrastructure. Upgrades incl. a new master terminal, programmable logic controllers, and remote terminal units.	Systemwide	New Project	\$15.0M	\$15.0M
Traction Power Substation Phase 3 & 4 (P0143)	Funding to support a number of upgrades to traction power substations supporting MBTA transit service.	Systemwide	Planning	\$14.4M	\$19.6M
Power Systems Resiliency Program (P0705)	Replacement of damaged power cable duct banks that energize areas of the Red, Orange, Blue, and Green Lines. Includes excavation, demolition, conduit replacement, manhole replacement, surface restoration, and power-cable installation.	Systemwide	Construction	\$13.3M	\$47.6M
Systemwide Transformer Replacement, Phase 2 (P0147)	Replacement of 15 transformers at 7 MBTA power substations: Bennett (3 units), Shawmut (2 units), Quincy Adams (2 units), Reservoir (2 units), Riverside (2 units), Braintree (2 units), and Airport (2 units).	Systemwide	Construction	\$11.0M	\$27.9M

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Ductbank Relocation Acceleration (P0705c)	Urgent repair, replacement, and relocation of collapsed AC and DC cable duct banks and manholes to ensure safe working conditions at Copley Square (Boston), Comm. Ave. and Hospital Road (Brighton), and Mount Auburn St. and Aberdeen Ave. (Cambridge).	Systemwide	Construction	\$9.9M	\$12.7M
E&M MOW Systemwide Initiatives (P0555)	Renewal of assets in addition to preventative or predictive maintenance associated with approximately 4,000ft of full depth track replacement and 3,000 tie replacements on the Blue, Red, and Orange Lines. Includes materials and support services.	Systemwide	Construction	\$8.5M	\$39.2M
E&M Directed Systemwide Track Deficiency Improvements (P1174)	Systemwide track reconstruction and rehabilitation to reduce the percentage of track that is deficient or under a speed restriction following the FTA's findings.	Systemwide	Construction	\$7.5M	\$8.0M
Power Systems Capital Maintenance Phase II (P0674d)	Replacement, rebuilding, and renewal of AC/DC distribution cables, pumping motors, air compressors, evacuation fans, transit line overhead contact systems, standby power generation equipment, and fire and CNG alarm systems.	Systemwide	Construction	\$7.3M	\$28.8M
SCADA Upgrades (P0146)	Upgrades to the Power Supervisory Control and Data Acquisition (SCADA) communication network from leased lines to the Security Wide Area Network (SWAN) to provide high-speed ethernet connection at traction power substations and unit substations.	Systemwide	Construction	\$5.0M	\$10.9M

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FTA Findings Program (P1029)	Development of replacement service plans for subway lines to respond to FTA's findings regarding increased access to the right-of-way and elimination of speed restrictions.	Systemwide	Planning	\$3.7M	\$9.6M
Forest Hills to Roxbury Cable Replacement (P0843)	Replacement of medium voltage AC cable between the Forest Hills and Roxbury traction power substations.	Systemwide	Construction	\$2.1M	\$2.8M
Systemwide Jumper Connections (P0841)	Systemwide repairs to electrical jumpers, wires, and welds across the Orange, Red, Blue, and Green Lines to minimize service delays and improve on-time performance.	Systemwide	Construction	\$2.0M	\$2.0M
Power Systems Capital Maintenance - Distribution Cable Improvements (P0674a)	Replacement of out-of-service AC/DC distribution cables and associated infrastructure, including asbestos abatement and services to locate underground utility.	Systemwide	Construction	\$1.8M	\$6.5M
115KV Electro-Mechanical to Digital Relay Replacement (P0845)	Replacement of existing electro-mechanical relays with digital delays at 50 traction power substations systemwide.	Systemwide	Construction	\$1.8M	\$2.4M
Short-Term Power Investments (P0280)	Funding to support a number of near-term priority investments in the MBTA power infrastructure.	Systemwide	Construction	\$0.7M	\$10.0M

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E&M Capital Maintenance Improvements (R0132)	Funding to support a variety of capital maintenance efforts systemwide.	Systemwide	Construction	\$0.5M	\$2.5M
Traction Power Substation FPE Circuit Breaker Replacement (P0842)	Replacement of 103 existing circuit breakers at 13 traction power substations throughout the system.	Systemwide	Construction	\$0.4M	\$2.1M
Systemwide Switch Renewal (P0840)	Procurement of switch machines, rods, headblocks, and fastening hardware to be installed on the Orange, Blue, and Green Lines with a focus on major junctions, terminus locations, emergency interlockings, and yard entrance control.	Systemwide	Construction	\$0.1M	\$2.1M
Systemwide Power Study (P0674b)	Development of a 15-year action plan for MBTA's power system (generation, transmission, and distribution) to ensure state of good repair, modernize assets and systems, improve resiliency, and enable the system's future expansion and capabilities.	Systemwide	Pre-Design	\$0.0M	\$0.8M
Traction Power Substation Control Battery Replacement (P0844)	Replacement of existing batteries at 50 traction power substations which have reached the end of their useful life.	Systemwide	Construction	\$0.0M	\$0.9M

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115KV Transformer Replacement Project (P0846)	Replacement of 3 transformers at the South Boston Power Complex which have reached the end of their useful life.	Systemwide	Construction	\$0.0M	\$5.8M
115KV Primary and Back-up Relay Replacement (P0847)	Replacement of outdated primary and backup relays at the MBTA's bulk power complex.	Systemwide	Construction	\$0.0M	\$0.8M

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# Maintenance and Administrative Facilities Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
Codman Yard Expansion and Improvements (P0679)	Improvements to Codman Yard, including in-kind replacement of existing infrastructure and the expansion of storage capacity to support the new Red Line fleet.	Red Line	Construction	\$103.1M	\$116.6M
Cabot Yard Complete Upgrade (P0512)	Full rebuild of Cabot Yard, including upgrades to track, power, signal, communications, drainage, and other yard elements.	Red Line	Construction	\$98.7M	\$142.8M
Codman Yard Storage and Office Facility (P1222)*	Establishment of a dedicated storage and office facility at the Codman Yard to store, repair, and maintain critical equipment.	Red Line	New Project	\$9.6M	\$9.6M
Cabot Signal Relay Shop Upgrades (P1134)	Improvements to the Signal Repair Facility located in Cabot Yard, including electrical HVAC and safety systems, as well as concrete walkways and stairs.	Red Line	Pre-Design	\$4.0M	\$4.1M
Cabot Facility Flood Mitigation (P0950)	Emergency repairs due to flooding at Cabot Maintenance Facility. Includes clean-up and restoration of Cabot Yard and replacement of the substation transformer, compressors, and ATS switch due to a flooded manhole.	Red Line	Construction	\$2.9M	\$4.1M
Von Hillern Yard Storage Facility (P1223)*	Design of a dedicated facility at the Von Hillern Yard to store, repair, and maintain critical rail bound work equipment in response to the FTA's findings.	Red Line	New Project	\$2.0M	\$2.0M

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Cabot Yard Complete Upgrade - Owner's Rep Services (P0512a)	Oversight, management, and construction-related services for track, signal, and traction power improvements at Cabot Yard.	Red Line	Construction	\$0.9M	\$1.1M
Braintree and Codman Yard Security Upgrades (P0390)	Implementation of security improvements at Braintree Station and Codman Yard on the Red Line.	Red Line	Closeout	\$0.0M	\$1.2M
Wellington Yard Complete Upgrade (P0514)	Full rebuild of Wellington Yard, including upgrades to track, power, signal, communications, drainage, and other yard elements.	Orange Line	Construction	\$9.7M	\$95.4M
Wellington Maintenance Facility IT/Communications Upgrade (P1106)	Rehabilitation of the communications rooms at Wellington Maintenance Facility in an effort to provide streamlined, uninterrupted service and optimize the communications network.	Orange Line	Design	\$1.2M	\$1.2M
Riverside Vehicle Maintenance Facility Modifications & Upgrades (P1010)	Upgrades to existing hoists, pits, and mezzanines at the Riverside Vehicle Maintenance Facility to accommodate the future Type 10 fleet.	Green Line	Planning	\$49.1M	\$49.4M

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Reservoir Yard and Non-Revenue Track Optimization and Reconfiguration (P1103)	Reconfiguration of various track elements at Reservoir, including the lower west yard, East/West Wye, Chestnut Hill Avenue connection, B-branch connection, and non-revenue track around Cleveland Circle.	Green Line	Pre-Design	\$30.5M	\$30.5M
Green Line Yards - Track Upgrades (P0925)	On-call services for assessment and maintenance of trackwork (demolition, repairs, and installation of new tracks and components) to ensure a state of good repair at the Green Line's Reservoir, Riverside, and Lake Street Yards.	Green Line	Pre-Design	\$15.0M	\$15.0M
Green Line Extension Vehicle Maintenance Facility Modifications & Upgrades (P1011)	Design and installation of a new hoist at the Green Line Extension (GLX) Vehicle Maintenance Facility to accommodate the future Type 10 fleet.	Green Line	Planning	\$12.0M	\$12.4M
Green Line Maintenance Facilities and Yards (P0920)	Assessment and design for improvements to Reservoir, Riverside, Lake Street, and GLX maintenance facilities and yards needed to support the future Type 10 fleet. Includes infrastructure, testing, assembly, and maintenance considerations.	Green Line	Pre-Design	\$7.6M	\$10.0M
Lake Street Complex Demolition and Reconfiguration (P1101)	Demolition of the Lake Street facility and reconfiguration into an expanded yard. The site will be designed to maximize train storage, streamline yard operations, and eliminate a sharp curve in anticipation of the larger Type 10 light rail fleet.	Green Line	Pre-Design	\$4.6M	\$29.3M

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Green Line Type 10 Dedicated High-Speed Test Track (P0921)	Assessment and design to support the creation of a dedicated high-speed test track for the future Green Line Type 10 fleet. Construction of this track would accelerate testing and limit impacts to revenue service.	Green Line	Design	\$2.1M	\$2.3M
Green Line Type 7 Flange Lubricator (P0903)	Installation of flange lubricators on the Green Line Type 7 fleet to reduce wear to vehicles' wheel flanges and the system's rails.	Green Line	Planning	\$0.7M	\$0.7M
Quincy Bus Facility Modernization (P0671a)*	Relocation and replacement of the Quincy Bus Maintenance Facility. The new, modernized facility will expand capacity and includes the infrastructure necessary to support the MBTA's first battery-electric bus (BEB) fleet and bus electrification.	Bus	Design	\$401.0M	\$476.2M
Bus Facility Interim Improvements (P0942)	Upgrades to lighting, drainage, paving, locker and break rooms, and other components at bus facilities as part of the MBTA's commitment to Local 264. Includes replacement of the overhead doors at Albany Garage to increase height clearance.	Bus	Construction	\$58.9M	\$81.5M
Bus Facility Modernization Program (P0671)	Initial planning and design for the replacement or rehabilitation of MBTA bus facilities and addition of battery electric bus (BEB) infrastructure for bus electrification.	Bus	Pre-Design	\$40.7M	\$96.4M

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North Cambridge Bus Facility Retrofit (P0671c)*	Renovation of North Cambridge facility to support conversion to battery electric bus (BEB) fleets and bus electrification.	Bus	Design	\$35.3M	\$36.0M
Arborway Bus Facility - Design Funding (P0671b)	Design funding to support the construction of a new Arborway bus facility to accommodate battery electric bus (BEB) infrastructure and bus electrification.	Bus	Pre-Design	\$34.7M	\$36.0M
Facility Circulation Safety Improvements (P1003)	Assessment of vehicular and pedestrian circulation at MBTA bus facilities and the implementation of necessary improvements to enhance employee safety.	Bus	Design	\$11.3M	\$15.5M
Charlestown Campus State of Good Repair (P1136)	Improvements to address deficiencies in code compliance, occupant safety, and state of good repair in 12 buildings at the Charlestown campus. This work is informed by campus facility assessments conducted in 2020 and 2021.	Bus	Pre-Design	\$7.6M	\$9.0M
Enterprise Fuel Management System (P0634)	Enterprise fuel management solution (FMS) for automated and controlled fuel issuances to systemwide fleet and equipment and management of central fueling infrastructure. Includes upgrades, improvements, and repairs to existing fuel sites.	Bus	Construction	\$2.4M	\$7.5M

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Rail and Bus Lift Upgrade Program (P0494)	Procurement of lifts for bus and rail cars to enable preventive maintenance work and associated repairs to revenue fleet vehicles.	Bus	Construction	\$1.8M	\$10.0M
Everett Bus - Flowfill Repairs (P0106)	Floor slab maintenance to support undermined foundations by filling crawl space with air-entrained cellular concrete and performing required environmental remediation by capping contaminated soil below floor slab.	Bus	Construction	\$1.6M	\$13.9M
Arborway Bus Operators Trailer Replacement (P1002)	Installation of permanent modular buildings at Arborway to replace existing temporary trailers that have exceeded their useful life.	Bus	Planning	\$0.5M	\$1.5M
Charlestown Bus - Seawall Rehabilitation (P0104)	Stabilization of the Mystic River shoreline and replacement of existing seawall to protect Charlestown Bus Facility from flooding. Includes a collaboration with Massachusetts DCR to build a multi-use public path along the seawall.	Bus	Construction	\$0.4M	\$43.7M
Bus Maintenance Wireless Installation (P0673d)	Systemwide bus garage WiFi installation. Includes facility heat mapping, definition of mesh network coverage mode, equipment installation, and testing, validation, and activation of WiFi systems.	Bus	Construction	\$0.0M	\$1.0M

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Charlestown Façade Investigation & Repairs (P1018)	Assessment and renovation of brick façade at the Charlestown bus garage.	Bus	Planning	\$0.0M	\$0.6M
Commuter Rail Facilities State of Good Repair (P1144)	Funding to support Commuter Rail facilities improvements, including design support contracts, roof and roof equipment replacement, WiFi and IT infrastructure, fluid systems, and maintenance of way facilities.	Commuter Rail	Pre-Design	\$43.5M	\$48.5M
Billerica MOW Repair and Storage Facility (P1171)	Funds to design and construct a new, fully accessible Commuter Rail maintenance facility, storage yards, and tracks in Billerica, with eight service bays, wash bay, overhead bridge crane, office space, and employee amenities.	Commuter Rail	Design	\$30.0M	\$30.0M
Widett Layover and Maintenance Facility (P0952)*	Real estate acquisition and preliminary design for a Commuter Rail layover facility at Widett Circle in South Boston.	Commuter Rail	Design	\$13.2M	\$268.4M
Haverhill Layover Facility Relocation (P0865)	Relocation of the Bradford Layover facility on the Haverhill Line.	Commuter Rail	Design	\$3.9M	\$5.2M

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Iron Horse Operations Control Center (P0472)	Construction of new operations control center in Billerica to support up to 38 dispatchers for north-side Commuter Rail and Pan Am freight operations.	Commuter Rail	Construction	\$3.1M	\$44.4M
South-Side Commuter Rail Maintenance Facility (P0863)	Assessment and design for a new Commuter Rail maintenance and layover facility at Readville. Includes design for future construction of multiple maintenance bays within Yard 1 and Upper Yard 2.	Commuter Rail	Design	\$3.0M	\$9.6M
CRMF Wastewater Treatment Plant Compliance Program (P0955)	Funding to support wastewater treatment at the MBTA Commuter Rail Maintenance Facility in Somerville.	Commuter Rail	Planning	\$2.0M	\$4.7M
Fluid Dispensing System Upgrades (P0622)	Replacement and upgrade of fluid, fuel filling, and dispensing equipment at Boston Engine Terminal in Somerville and Widett S&I Facility in Boston to increase maintenance efficiency at locations where locomotives are serviced and fueled.	Commuter Rail	Construction	\$1.5M	\$4.0M
Rochester Facility Vehicle Acceptance Support (P1163)	Infrastructure improvements to the Rochester Commuter Rail facility in Wareham to enable the testing and commissioning of new South Coast Rail coaches.	Commuter Rail	Construction	\$0.8M	\$14.0M

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Billerica MOW Repair Facility (P0609)	Design and construction of a new maintenance-of-way equipment facility, storage yards, and tracks to provide yard access in Billerica to support Green Line extension project and maintenance needs of the new fleet.	Commuter Rail	Design	\$0.8M	\$5.0M
Southside Service & Inspection Facility Train Wash System (P0640)	Upgrade of Commuter Rail washing systems at Widett Service and Inspection (S&I) Facility in Boston to improve filter wash system and water drainage disposal.	Commuter Rail	Design	\$0.2M	\$1.7M
South Station Office Space Restoration (P0838)	Restoration of administrative office space at South Station.	Commuter Rail	Construction	\$0.1M	\$0.2M
Wheel Truing Machine Replacement Project (P0407)	Procurement of wheel truing machine to support Commuter Rail operations and maintenance.	Commuter Rail	Construction	\$0.1M	\$4.2M
Pawtucket Layover Improvements (P0515)	Improvements to the Pawtucket Layover Facility, including additional roof clearance for catenary installation, an additional track pit on Track 5, sanitary facilities, and welding equipment for repairs.	Commuter Rail	Design	\$0.1M	\$10.9M
Retrofit Building for HVAC Shop at BET (P0231)	Installation of roof, siding, roll-up doors for storage shed, and interior and exterior shelving to supplement existing work performed at the HVAC shop at Boston Engine Terminal, the MBTA's main Commuter Rail facility.	Commuter Rail	Construction	\$0.0M	\$4.4M

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Neponset Midday Layover Electric Plug-ins (P0258)	Installation of electric plug-ins to supply power to Commuter Rail fleets during midday layover periods at Readville.	Commuter Rail	Design	\$0.0M	\$3.9M
Rochester Improvements (P0657)	Wheel truing machine, track and layover modifications, inspection pit, lighting upgrades, fire suppression systems, and HVAC improvements at the Rochester Commuter Rail Facility in Wareham, MA.	Commuter Rail	Construction	\$0.0M	\$6.0M
Upgrade HVAC & Exhaust Systems at Widett Circle (P0668)	Upgrades and replacement of HVAC and exhaust systems at Boston Engine Terminal (BET) in Somerville and the Widett Service and Inspection (S&I) Facility in Boston.	Commuter Rail	Construction	\$0.0M	\$2.5M
Everett Building 2 Floor Repairs (P1216)*	Repairs to the heavily deteriorated structure on the first floor of Everett's Building 2 facility that supports heavy rail service.	Multimodal	New Project	\$18.8M	\$18.8M
E&M Facilities Standpipe Capital Expenses (P1127)	Upgrade of fire suppression systems through the replacement of existing hydrants and installation of a dry fire standpipe system at Cabot Yard, Wellington Carhouse, and Orient Heights Carhouse.	Multimodal	Planning	\$2.2M	\$2.2M

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Orient Heights Storage and Office Facility (P1221)*	Design of a dedicated storage and office facility at the Orient Heights Yard to store, repair, and maintain critical signal equipment.	Multimodal	New Project	\$2.0M	\$2.0M
Green Line and Blue Line Wheel Scanners (P0624)	Assessment of specifications and locations to install a Wheel Scanner System on the Green and Blue Lines to verify accuracy of wheel profiles and streamline maintenance efforts. Includes system procurement, installation, and testing.	Multimodal	Construction	\$0.9M	\$2.1M
Facility Roof Replacement (P0126)*	Replacement and repair of roofs at MBTA facilities and on-call contract to support systemwide roof repairs. This project also includes verification of structural capacity and code review to provide modifications if needed.	Systemwide	Construction	\$41.3M	\$72.5M
Employee Breakroom and Bathroom Upgrades Program (P1220)*	Systemwide improvements and renovations to MBTA's employee breakrooms and bathrooms.	Systemwide	New Project	\$15.0M	\$15.0M
Capital Spares Warehouse (P1135)	Lease of a warehouse to serve as a central repository for capital spares.	Systemwide	Design	\$12.3M	\$15.0M
Systemwide Fire Suppression Systems Repairs (P1117)	Replacement and upgrade of fire-suppression systems, including hydrants, standpipes, and sprinkler systems systemwide.	Systemwide	Design	\$10.4M	\$11.0M

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Systemwide Trailer Replacement Program (P1224)*	Systemwide identification of employee-occupied trailers and development of a replacement plan with permanent structures aligned with safety, fire and life safety systems, accessibility, and compliance regulations.	Systemwide	New Project	\$10.4M	\$10.4M
Systemwide Replacement of Lifts and Cranes (P1215)*	Systemwide renewal, replacement, and overhaul of vehicle lifts and cranes. This effort supports bus and train maintenance and help ensure maximum uptime for passenger service.	Systemwide	New Project	\$10.0M	\$10.0M
Sprinkler & Fire Life Safety Systems - Transit Facilities (P0564)	Professional and construction services for the assessment of fire sprinkler systems, identification and design of replacements, and demolition and construction activities necessary to implement improvements.	Systemwide	Design	\$8.8M	\$18.4M
45 High Street Master Plan and Systems Resiliency (P0603)	Design of master plan to increase systems resiliency at the 45 High Street facility, which houses the Operation Control Center and Data Center. Includes resiliency plans for future power and communications systems located on site.	Systemwide	Pre-Design	\$7.4M	\$8.3M
Facilities - Future of Work Fit-Out/Construction (P1110)	Retrofitting of existing MBTA office space to align with the future of work/hybrid work environment. Anticipated locations are 10 Park Plaza, 45 High Street, and Charlestown Buildings 2 and 3.	Systemwide	Construction	\$6.9M	\$10.0M

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Facilities Improvements On-Call (P1111)	Small- to medium-sized facility repairs and improvements on an on-call basis. Work takes place at facilities across the system and is prioritized based on safety and operation needs.	Systemwide	Construction	\$5.7M	\$7.0M
Rail Wi-Fi (P1156)	Addition of wireless access points to rail maintenance facilities and storage yards to support better tracking of maintenance issues and activities and allow maintenance staff to use tablets for tracking and inspection.	Systemwide	Pre-Design	\$5.6M	\$5.6M
Systemwide Pavement Repairs (P1118)	Asphalt and concrete repairs to sidewalks and roadways at busways, rail yard, and various other smaller locations. Locations are prioritized based on safety and operational needs and will include both Mattapan and the Charlestown Bus Facility.	Systemwide	Construction	\$4.5M	\$5.0M
Facility Safety Improvements (P1219)*	Funds to ensure that facilities and buildings are compliant with safety regulations. This includes, but is not limited to, fall-hazard elimination, upgrades to bus entry doorways, maintenance of exhaust fans, and other safety related initiatives.	Systemwide	New Project	\$4.0M	\$4.0M
Storage Building at South Boston Power Facility (P1217)*	Establishment of new, at-grade dedicated storage facility at the South Boston Power Facility to decrease fire risk and increase on-site safety.	Systemwide	New Project	\$2.5M	\$2.5M

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Transit Facilities Maintenance Capital Expenses (P1218)*	Renewal and extension of the useful life of assets across transit facilities. These assets include, but are not limited to, heating, ventilation, air-conditioning systems, pump systems, compressed air systems, and exhaust systems.	Systemwide	New Project	\$2.5M	\$2.5M
Job Order Contracting (P1112)	On-call repair work at stations and facilities to be performed by several small contractors as needed. Specific scope is unknown at this time but projects will consist of minor repairs that do not require design and engineering approvals.	Systemwide	Construction	\$2.2M	\$2.3M
Systemwide Storage Tank Compliance Program (P0663)	Upgrade of systemwide storage tanks, pumps, fueling and tracking systems, as well as other elements of the MBTA's overall tank infrastructure.	Systemwide	Construction	\$1.8M	\$3.0M
Wastewater Discharge Infrastructure (P0670)	Systemwide program to inventory, assess, and plan for the rehabilitation of the MBTA's underground pump infrastructure.	Systemwide	Construction	\$1.6M	\$3.4M
E&M Facilities Safety and Reliability Capital Expenses (P1128)	Funding to support a variety of improvements to facilities to be carried out by Transit Facilities Maintenance. Includes replacement of compressed air systems, pump systems, crane and hoist systems, HVAC, exhaust systems, and others.	Systemwide	Planning	\$1.5M	\$1.6M

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Charlestown Campus Study and Early Action Items (P0616)	Assessment of existing conditions and future requirements to develop a master plan for the Charlestown campus. Includes replacements and upgrades to rail shop boiler, steam pipes, sprinkler system, fencing, and environmental cleanup procedures.	Systemwide	Pre-Design	\$1.0M	\$3.0M
Transit Facilities Capital Maintenance (P0914)	Systemwide replacement or improvement of bus lifts, cranes, boilers, HVAC components, leaks, cracks, and air, sewer, and exhaust systems, as well as other facility elements that support revenue service and vehicle maintenance.	Systemwide	Construction	\$1.0M	\$2.5M
Traction Power Substation Epoxy Floor Replacement (P0905)	Replacement of 30 epoxy floors designed to isolate high currents used to provide power to DC traction service to minimize risks and ensure personnel safety.	Systemwide	Construction	\$0.8M	\$1.0M
Future of Work - 10 Park Plaza Leasehold Improvements (P1015)	Funding to support leasehold improvements at 10 Park Plaza administrative offices.	Systemwide	Construction	\$0.7M	\$9.0M

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Systemwide Facility Needs and Programming Study (P0661)	Comprehensive analysis of MBTA facilities to prioritize improvements. This project is part of a broader systemwide facility improvement program to achieve a state of good repair at the maintenance and operations facilities.	Systemwide	Planning	\$0.7M	\$1.0M
45 High Street - Data Center Upgrades (P0097)	Data server upgrades, additional workspace, renovations to Fire Command Center and Security Desk, infill of basement holes carrying train power cables, replacement of actuators and fire dampeners, and installation of HVAC and transformer.	Systemwide	Construction	\$0.2M	\$13.7M
Everett Carpentry Shop Relocation (P0673u)	Relocation of the existing carpentry shop at the MBTA's Everett facility to a new building at the same facility. Shop machinery will also be upgraded.	Systemwide		\$0.0M	\$0.4M
10 Park Plaza - Data Center Upgrades (P0096)	Upgrades to data center at 10 Park Plaza administrative offices.	Systemwide	Closeout	\$0.0M	\$1.0M
Facility On-Call (P0112)	Facilities improvements related to asphalt repairs, general engineering services, and the reconstruction of the Reservoir Station Busway with new sidewalks, pedestrian ramps, and crosswalks.	Systemwide	Construction	\$0.0M	\$27.2M

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Various Remediation Projects (P0297)	Funding to support remediation efforts at various maintenance and operational facilities.	Systemwide	Planning	\$0.0M	\$0.6M
Transit Facility Maintenance Program (P0763)	Funding to support various ad hoc improvements to MBTA transit facilities.	Systemwide	Construction	\$0.0M	\$2.0M
Warehouse & Garage Stockroom Security (P0764)	Security improvements to warehouse and garage stockroom facilities.	Systemwide	Closeout	\$0.0M	\$0.8M
Office/Facility Renovations - 10 Park Plaza Accessible Bathroom (P1015a)	Construction of an accessible bathroom at 10 Park Plaza administrative offices.	Systemwide	Construction	\$0.0M	\$1.0M
HVAC Inspection and Evaluation (P1022)	Systemwide inspection and evaluation of HVAC systems.	Systemwide	Planning	\$0.0M	\$0.9M

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# Passenger Facilities Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
Alewife Garage Rehabilitation (P0605)	Near-term maintenance needs for Alewife parking garage. Includes repairs to structural elements; mechanical, fire, and electrical systems improvements; plumbing repairs to storm and sanitary sewer systems; and accessibility upgrades.	Red Line	Construction	\$23.0M	\$76.0M
Braintree and Quincy Adams Garage Rehabilitation (P0087)*	Full rehabilitation of the Red Line's Braintree Station and Quincy Adams Station parking garages to extend the operable service life of each facility by forty years, including new elevators at Braintree and upgrades to life and fire safety systems.	Red Line	Construction	\$12.9M	\$126.7M
Alewife Crossover Improvements (R0117)	Replacement and upsizing of track crossover near Alewife Station on the Red Line.	Red Line	Construction	\$8.7M	\$12.6M
Wollaston Station / Quincy Center Garage Demolition (P0169)	Complete modernization of Wollaston Station, demolition of the top 3 levels of the Quincy Center parking garage, replacement of one elevator at Quincy Center, and construction of an accessible walkway to Quincy Center.	Red Line	Closeout	\$7.3M	\$102.9M
Alewife Site Conceptual Design (P0605a)	Conceptual planning activities and feasibility study to investigate scenarios for the future state of the Alewife Garage.	Red Line	Planning	\$2.9M	\$3.0M

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Central Square Station Accessibility Improvements (P0929)	Design for enlargement of outbound elevator and addition of two new elevators at Central Square Station to ensure redundancy. Includes power and wayfinding upgrades, areas of refuge, station brightening, and state of good repair improvements.	Red Line	Design	\$2.0M	\$4.8M
Elevator Program (P0066)	Design and construction funding for elevator improvements on the rapid transit system. Individual elevator projects are separated into unique projects once construction stage is reached.	Red Line	Closeout	\$1.5M	\$49.5M
Harvard/Central Elevator (P0066e)*	Replacement of existing station elevator No. 821 at Harvard Square and No. 861 at Central Square on the Red Line, per ADA/BCIL requirements. Also includes replacement of central escalator No. 360.	Red Line	Construction	\$1.3M	\$19.5M
Quincy Adams Accessibility Improvements (P0066a)	Replacement of three existing elevators and addition of new elevator at Quincy Adams, according to ADA/BCIL requirements. Also includes upgrades to mechanical, communication, and safety systems, as well as wayfinding signage.	Red Line	Construction	\$0.8M	\$13.6M
Alewife Station Vertical Transportation Improvements (P0066d)	Replacement of three existing station elevators at Alewife to meet ADA/BCIL requirements. Includes cab replacement; upgrades to mechanical, communication, and safety systems; and wayfinding signage.	Red Line	Closeout	\$0.1M	\$6.6M

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Harvard Station Brightening and Improvements (P0895)	Station brightening and related customer-facing improvements at Harvard Station.	Red Line	Closeout	\$0.0M	\$3.5M
Forest Hills Improvement Project (P0163)	Accessibility and state of good repair improvements at Forest Hills Station. Includes elevator replacement, new elevator/stair tower to connect upper and lower busway, accessibility upgrades, station brightening, wayfinding, and platform repairs.	Orange Line	Design	\$33.9M	\$39.0M
Oak Grove Station Vertical Transportation Improvements (P0076)*	Accessibility upgrades at Oak Grove station, including three elevators, replacement of one existing elevator, sidewalk repairs, and wayfinding and station-brightening improvements.	Orange Line	Construction	\$2.1M	\$40.7M
Sullivan Square Station Rehabilitation (P0402)	Repairs and waterproofing of concrete platforms, canopies, and drainage at Sullivan Square Station. Includes new or repaired platform rub rails, tactile warning panels, and an on-call roofing contract to install new protective roofing system.	Orange Line	Closeout	\$0.0M	\$7.3M
Oak Grove Elevator 800 Outage - Emergency Shuttle (P1026)	Emergency shuttle to support accessible service at Oak Grove Station due to elevator outage.	Orange Line	Construction	\$0.0M	\$0.3M

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Downtown Crossing Vertical Transportation Improvements Phase 2 (P0074)	Design and construction of 3 new elevators to provide vertical transfers from the Red Line northbound to the Orange Line southbound platform, and from the Orange Line northbound to the Red Line southbound platform at Downtown Crossing.	Red / Orange Line	Design	\$71.9M	\$77.8M
Downtown Crossing Elevator Phase 1 (P0066g)	Installation of two new elevators at Downtown Crossing to meet ADA and BCIL requirements. Includes exit gate improvements, creation of 'points of safety' with fire/smoke	Red / Orange Line	Closeout	\$1.0M	\$19.7M
Blue Line Studies and Improvements (P0901)	Funding to support initial planning for station improvements on the Blue Line.	Blue Line	Planning	\$19.6M	\$20.0M
Orient Heights Station (P0167)	Demolition and reconstruction of Orient Heights station, including two above-grade platforms with canopies, all wayside and building systems, overhead catenary relocation, and vertical transportation improvements.	Blue Line	Closeout	\$2.4M	\$32.9M
Suffolk Downs Station Reconstruction (P0631c)	Development of zero to 15 percent design for a new Suffolk Downs station.	Blue Line	Planning	\$1.0M	\$1.2M
Wonderland Garage PVC Conduit Replacement (P1121)	Replacement of PVC conduit with Rigid Galvanized Steel (RGS) conduit in designated areas at Wonderland, per State Electrical and Building Inspector guidance.	Blue Line	Construction	\$0.9M	\$5.1M

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Aquarium Station Flood Barrier Protection (P0825)	Installation of floodproofing barriers around four entrances to Aquarium Station on the Blue Line.	Blue Line	Closeout	\$0.3M	\$2.4M
Wonderland Parking Facility (P0093)	Replacement of PVC conduit at Wonderland garage elevators and lobbies, transit station, plaza elevators, and egress paths.	Blue Line	Closeout	\$0.1M	\$11.3M
Blue Line Flood Protection (P0582)	Development and implementation of measures to prevent flooding on the Blue Line.	Blue Line	Closeout	\$0.0M	\$0.4M
Symphony Station Improvements (P0168)	Upgrade Symphony Station to a modern and fully accessible passenger facility. Includes construction of four new elevators, raised platforms, accessible restrooms, installation of egress stairs, and upgraded fire alarm systems.	Green Line	Construction	\$83.7M	\$91.4M
Short Term Accessibility Improvements - FTA Compliance Actions (P1009)	Addresses ADA compliance at up to 14 street level stations on the Green Line B and C branches.	Green Line	Design	\$55.3M	\$57.5M

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Newton Highlands Green Line Station Accessibility Project (P0129)*	Accessibility improvements at Newton Highlands on the Green Line D Branch, including three ramps covered with canopies, raised platforms, one at-grade pedestrian crossing, site lighting, new platform shelters, and covered bike racks.	Green Line	Design	\$42.1M	\$48.0M
Hynes Convention Center Station (P0626)	Improvements to Hynes Convention Center Station, including upgraded fare gates, egress, wayfinding, and signage; raised platforms; redundant elevators; and electrical, fire, communications, HVAC, plumbing, lighting, and security systems.	Green Line	Design	\$41.1M	\$45.7M
Green Line Surface Station Accessibility I (P0890)	Funds to rebuild Green Line surface stations and related infrastructure on the B, C, D, and E lines to promote ADA compliance and infrastructure improvements aligned with the Green Line's capacity and accessibility studies and analyses.	Green Line	Design	\$12.4M	\$19.5M
Green Line D Branch Enhanced Accessibility Improvements (P1232)*	Accessibility improvements on the Green Line D Branch to improve existing station entrances and increase accessibility.	Green Line	New Project	\$8.0M	\$8.0M
Green Line E Ink Sign Deployment (P0910)	Installation of solar-powered, electronic ink (E Ink) screens at up to 32 surface-level Green Line stations to provide riders with in-station real-time arrival information.	Green Line	Pre-Design	\$3.0M	\$3.4M

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Green Line B Branch Consolidation (P0003)	Consolidation of four Green Line B-Branch stops into two new, fully accessible stations: Babcock Street and Amory Street. Features include accessible boarding and exits, security and lighting upgrades, and longer platforms to accommodate Type 10s.	Green Line	Closeout	\$0.0M	\$31.5M
Bus Priority and Accessibility Improvements (P0613)	Accessibility improvements at 200 bus stops as part of the PATI program, including design and construction of dedicated bus lanes in Boston, Chelsea, Somerville, Cambridge, Revere, and Everett.	Bus	Construction	\$9.6M	\$48.2M
Bus Stop Accessibility Improvements (PATI Phase 3) (P1109)	The Plan for Accessible Infrastructure (PATI) project addresses bus stops that are unsafe or have significant barriers to accessibility. This phase will address safety and accessibility at 275 remaining critical bus stops.	Bus	Pre-Design	\$2.9M	\$3.0M
Bus Route Safety and Service Improvements (P0044)	Design and construction of accessibility improvements at 95 bus stops across 20 municipalities. Improvements may include new sidewalks, curbing, accessible landing pads, crosswalks, pavement markings, curb ramps, and pedestrian traffic signals.	Bus	Construction	\$2.1M	\$9.5M

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Nubian Square Station Accessibility and Operational Improvements (P0915)	Design of accessible passenger platforms at Nubian Station to reverse direction of MBTA buses and leverage City of Boston's street network improvements for increased service efficiency. Includes signals, striping, and curb modifications.	Bus	Planning	\$1.0M	\$1.0M
Bus Stop Customer Satisfaction (P0689c)	Placement of digital displays with real-time bus information and bus stops, near bus stops, and on buses on different lines to test and determine information delivery approaches that increase customer satisfaction and ridership.	Bus	Construction	\$0.3M	\$1.3M
Harvard Square Busway Repairs (P0165)	Rehabilitation of roadway, lighting, signage, drainage, and catenary systems in the Harvard busway and accessibility upgrades to ensure near level boarding for the 71 and 73 buses.	Bus	Closeout	\$0.1M	\$30.8M
Courthouse NE Headhouse (P0858)	Construction of two headhouses at Silver Line's Courthouse Station. One headhouse will include an accessible elevator and the other an escalator and grand open stairwell. Both headhouses will be equipped with demountable flood control barriers.	Silver Line	Construction	\$13.0M	\$21.1M
Courthouse Station Leaks (P0404)*	Repairs to address sources of water intrusion at Courthouse Station on the Silver Line to achieve a dry, safe, fully functional station interior space.	Silver Line	Construction	\$8.8M	\$37.1M

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Worcester Union Station Accessibility and Infrastructure Improvements (P0395)	Includes high-level center platform with elevators, ramps, and stairs; replacement and realignment of station tracks; and construction of a new rail crossover to improve accessibility, operations, and service capacity at Worcester Union Station.	Commuter Rail	Construction	\$38.6M	\$74.6M
Winchester Center Station (P0179)*	Reconstruction and modernization of Winchester Center Station including new fully accessible high-level side platforms, elevators, ramps, stairs, lighting, signage and wayfinding, streetscape improvements, and upgraded track infrastructure.	Commuter Rail	Construction	\$37.0M	\$61.8M
Back Bay Station Ventilation (P0108)	Improvements and upgrades to ventilation, air quality, and electrical power systems on the Commuter Rail and Orange Line platforms at Back Bay station as part of the station concourse's renovations.	Commuter Rail	Design	\$31.1M	\$43.1M
Natick Center Station Accessibility Project (P0174)*	Reconstruction and modernization of Natick Center Station, including new fully accessible high-level side platforms, elevators, ramps, stairs, lighting, wayfinding, streetscape, upgraded tracks, and connection to the Cochituate Rail Trail.	Commuter Rail	Construction	\$26.3M	\$57.0M

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Lynn Station Parking Garage Deconstruction (P1025)	Decommissioning of the closed Lynn Station parking garage.	Commuter Rail	Design	\$22.1M	\$22.9M
Lynn Station and Parking Garage Improvements Phase II (R0071)	Design funding for new elevators, stairs, platform, canopy, and architectural improvements to the station and the intent to acquire and demolish structures under station's viaduct. Existing parking garage will also be replaced by surface parking.	Commuter Rail	Design	\$7.3M	\$51.3M
Newton Commuter Rail Stations Design (P0170)	Design of double-side, high-level, fully accessible platforms at Auburndale, West Newton, and Newtonville stations. Additional improvements include bike shelters, pick-up/drop-off locations, accessible parking, and connection to The Ride.	Commuter Rail	Design	\$5.9M	\$13.7M
Commuter Rail Mini-High Platform Repairs (P0256)	Replacement of two mini-high platforms with Fiber Reinforced Polymer (FRP) deck panels and related canopies in Beverly and North Beverly Stations.	Commuter Rail	Design	\$2.3M	\$2.5M
On-Call Commuter Rail Mini-Highs and Detectable Edge Repair (P0491c)	On-call design- and construction-related services to support urgent repair/reconstruction of mini-high platforms and detectable warning edges at Commuter Rail stations systemwide to maintain and improve safety.	Commuter Rail	Design	\$2.3M	\$3.0M

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Route 128/University Park Garage Improvements (P0951)	Restoration of Route 128/University Park Station parking garage in Westwood. Includes new head house, stair handrails and doors, exterior stair tower, and repairs/waterproofing of cracks, shear connectors, joint sealants, and beams.	Commuter Rail	Construction	\$1.6M	\$17.0M
Attleboro Station Improvements (GATRA) (P0970)	Platform reconstruction, repair of stairs and ramps, and path-of-travel improvements at Attleboro Station on the Providence Line. Includes collaboration with GATRA to support improvements to the station area.	Commuter Rail	Design	\$1.4M	\$1.7M
South Attleboro Station Improvements (P0178)	Design for the construction of a new South Attleboro station, to include 800-ft. high-level platforms, three elevators, platform access ramps, a bus bay, egress to Newport Ave., additional parking, improved vehicular circulation, updated lighting.	Commuter Rail	Design	\$0.9M	\$7.0M
Floating Barge / Gangway Systems Overhauls Reconditioning (P0621)	Reconstruction of the Charlestown Ferry's Pier 4 landing. Includes two new steel barges, new aluminum gangways, ramps, platforms, and all removal and installation charges.	Commuter Rail	Construction	\$0.1M	\$0.8M

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Commuter Rail Station Transformation and Revitalization (P0832)	Parking expansion at critical lots and funding for a program to add cameras and connect communications devices at stations using PTC fiber.	Commuter Rail	Construction	\$0.1M	\$20.0M
Lynn Parking Garage Phase 1 (P0090)	Elevator, waterproofing, HVAC, electrical, plumbing, and fire protection system improvements at Lynn Station and parking garage.	Commuter Rail	Closeout	\$0.0M	\$6.6M
Mansfield Station Accessibility (P0173)	Improvement of ramps, stairways, mini-high platforms, sidewalk pavement, tactile strips, lighting, guard rails, bollards, signage, VMS systems, curb cuts, benches, trash bins, landscaping, and parking lot accessibility. Includes emergency generator.	Commuter Rail	Closeout	\$0.0M	\$11.3M
Hingham Ferry Dock Modification (P0078)	Replacement of existing floating dock, access gangway, canopy, and walkways; extension of canopy structure to the Hingham Intermodal Center; and upgraded lighting, safety, and security systems.	Ferry	Design	\$21.7M	\$24.9M
Ferry System Improvements (P0077)	Funding to support a number of improvements to Pemberton Pier ferry terminal in Hull.	Ferry	Construction	\$0.0M	\$0.6M

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Ferry System Improvements - Lovejoy Wharf/BRA (P0815)	Funding to support improvements to Lovejoy Wharf near North Station.	Ferry	Closeout	\$0.0M	\$0.8M
Ruggles Station Improvements Phase 2 (P0856)*	Continuation of Ruggles Station Improvements to address accessibility, code-compliance, and state-of-good repair issues. Includes repair, reconstruction, and improvements to platforms, entrances, stairs, elevators, ramps, restrooms, and wayfinding.	Multimodal	Design	\$119.6M	\$124.5M
Emergency Power and Lighting (P1137)*	Improvements to power and lighting systems at stations with identified deficiencies.	Multimodal	Pre-Design	\$7.5M	\$8.0M
Stations Needs Assessments (R0031)*	State of good repair assessment of stations on the rapid transit system (Blue, Green, Orange, and Red Lines) and minor repairs as needed.	Multimodal	Planning	\$4.1M	\$5.8M
JFK Station and Busway Safety and Accessibility Reconstruction (P1231)*	Planning of a new JFK/UMass station and busway to increase safety, accessibility, and climate resiliency through station redesign, new stairs and elevators, and busway alterations.	Multimodal	New Project	\$2.3M	\$2.3M

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Back Bay Groundwater Remediation (P0181)	Development and implementation of solutions to address groundwater recharge systems at Back Bay.	Multimodal	Construction	\$1.4M	\$5.0M
Park Street Station Wayfinding Improvements (R0069)	Various improvements to lighting, CCTV placement, wayfinding and illuminated exit signage, Braille signage, floor finishes, benches, and 24 staircases at Park Street. Includes artwork restoration and reopening of Tremont Street's Temple Place stairs.	Multimodal	Construction	\$1.4M	\$23.9M
Park Street Station Wayfinding Improvements (Design) (P0400)	Design of improvements to lighting, CCTV placement, wayfinding and illuminated exit signage, Braille signage, floor finishes, benches, and 24 staircases at Park Street. Includes artwork restoration and reopening of Temple Place stairs.	Multimodal	Closeout	\$0.0M	\$1.5M
Tufts/Andrew Elevators (P0066b)	Replacement of three existing station elevators at Tufts Medical Center on the Orange Line and Andrew Station on the Red Line, per ADA/BCIL requirements.	Multimodal	Closeout	\$0.0M	\$11.5M
Park Street Elevator (P0066h)	Replacement of existing station elevator at Park Street to meet ADA and BCIL requirements.	Multimodal	Closeout	\$0.0M	\$5.3M

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Ruggles Station Upgrade (P0175)	Addition of a new, 800-ft. Commuter Rail platform to service Track 2 at Ruggles Station. Includes replacement of existing elevators for ease of access, as well as interior and exterior repairs and improvements to station facilities.	Multimodal	Construction	\$0.0M	\$38.9M
State Street Elevator Replacement (P0491b)	Replacement of elevator at State Street Station to improve accessibility on the rapid transit system.	Multimodal	Construction	\$0.0M	\$0.5M
Transit Station Economic Development Improvements - Norfolk County (P1165)	Funding to support economic development improvements to transit stations in Norfolk County.	Systemwide	Planning	\$35.5M	\$50.0M
Elevator Program Multiple Location Design (P0075)	Design and some construction work for the replacement of elevators and/or addition of new, redundant elevators and related wayfinding amenities at transit stations.	Systemwide	Design	\$32.0M	\$54.7M
High Priority Stations Accessibility Improvements Program (P1150)*	Advancing designs and implementing short-term solutions at inaccessible stations on the Commuter Rail and systemwide. This includes, but is not limited to accessible platforms, grade crossing upgrades, stairs, ramps, wayfinding, and/or elevators.	Systemwide	Design	\$18.0M	\$19.0M

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Systemwide Escalator and Elevator Replacement Program (P1225)*	Replacement of escalators and elevators systemwide that are in poor condition, have limited parts available, and require replacement as identified in the MBTA's 20-Year Vertical Transportation Capital Plan.	Systemwide	New Project	\$15.0M	\$15.0M
Systemwide Facility Needs (P1024)	Funding to support a variety of facility improvements to address identified needs.	Systemwide	Pre-Design	\$9.2M	\$9.9M
Systemwide Stair Repairs (R0029)	Inspection, design development, and construction for the repair and replacement of stairs and escalators throughout the MBTA system. Stairs and escalators are inspected and then prioritized for improvement according to condition.	Systemwide	Design	\$8.1M	\$10.0M
Accessibility Improvements (P0491)	Supports a variety of miscellaneous accessibility-related improvements across the system.	Systemwide	Design	\$7.6M	\$9.6M
Minor to Moderate Ad Hoc Station Accessibility Improvements (P0639)	Improvements at approximately 178 stations to overcome barriers to accessibility. Addresses deteriorating and non-compliant curb ramps, paths of travel, handrails, broken or missing warning panels, inaccessible restrooms, and the lack of benches.	Systemwide	Construction	\$7.2M	\$10.7M

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Expedited Wayfinding Delivery Strategy (P0831)	Design, fabrication, and installation of vinyl overlay signage to replace existing wayfinding signage at 109 MBTA rapid transit stations to meet accessibility obligations of the settlement with the Boston Center for Independent Living (BCIL).	Systemwide	Construction	\$7.0M	\$10.5M
Connectivity and Customer Convenience Program (P0761)	Improvements to bus shelters in poor condition and addition of new bus shelters and amenities for customers and bus operations across the 8,000 bus stops in the MBTA service network.	Systemwide	Design	\$6.0M	\$9.5M
Systemwide Door Replacement Program (P1228)*	Systemwide identification and improvement of doors and frames at facilities that require corrective actions to address fire protection and life safety systems, accessibility, and compliance, as well as state of good repair.	Systemwide	New Project	\$5.3M	\$5.3M
Vertical Transportation Safety Modernization (P1226)*	Modernization of safety and control components of escalators and elevators systemwide that are not scheduled for replacement.	Systemwide	New Project	\$5.0M	\$5.0M
Systemwide Drainage Mapping and Repairs Program (P1227)*	Systemwide identification of drainage components at stations and maintenance facilities that require corrective actions to maintain a state of good repair and improve flood resiliency.	Systemwide	New Project	\$5.0M	\$5.0M
Parking Technology Upgrade Program (P0881a)	Improvements to MBTA's parking access and revenue control equipment at parking and surface lots.	Systemwide	Construction	\$3.6M	\$5.2M

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Wayfinding Improvements - Downtown Crossing, State, Haymarket, and North Station (P0677)	Replacement, repairs, and update of wayfinding signage, tactile edges, lighting, stair treads, and back-house system code, as well as cleaning and painting at Downtown Crossing, State, Haymarket, and North Stations.	Systemwide	Closeout	\$3.6M	\$83.1M
Parking and Paving II (P0881)*	On-call construction services to maintain and repair systemwide parking lots, bus stop maintenance areas, ancillary facilities, paving of existing/proposed access roads; install LED lighting fixtures; and improve parking lot accessibility.	Systemwide	Construction	\$3.6M	\$9.3M
Systemwide Fire Alarm Upgrades (P1140)	This project will provide major renovations to aging fire alarm systems at Alewife, Beachmont, Davis, Harvard, Porter, North Quincy, Wellington Tower, and Charlestown Bus Wash and Repair.	Systemwide	Pre-Design	\$3.0M	\$3.5M
Parking Lot Paving - On-Call (P0456)	On-call construction services to support urgent repair/reconstruction needs related to parking lot maintenance and repair work, paving of existing and proposed access roads, bus maintenance areas, bus stops, and ancillary facilities.	Systemwide	Construction	\$2.5M	\$31.0M

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Systemwide Tactile Paving and Platform Edge Repairs (P1229)*	Systemwide inspection, assessment, design, and repairs of tactile paving, platform pavers, and platform edges to ensure station platforms are in sound structural shape and adhering to accessibility guidelines..	Systemwide	New Project	\$2.0M	\$2.0M
Urgent Response On-Call - Stations and Facilities (P1120)	On-call contract to respond to immediate and urgent safety sensitive issues systemwide. This includes facility deterioration posing immediate danger of passenger or employee injury.	Systemwide	Design	\$1.2M	\$1.5M
Commercial Tenant Billing System (P1230)*	Installation of remotely readable electricity meters and procurement of a software for automatic billing of 75 commercial billing tenants across the MBTA system.	Systemwide	New Project	\$0.5M	\$0.5M
Systemwide Platform Edge Inspections (P0546)	Inspection of rail platform edges throughout the system.	Systemwide	Construction	\$0.2M	\$1.0M
Station Brightening and Map Upgrades (R0132b)	Funds to support station brightening, map upgrades, and other general improvements systemwide. Includes paving of the busway at Kenmore Station and the Town Field busway in Dorchester.	Systemwide	Construction	\$0.1M	\$6.3M

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Systemwide Bike Racks (P1007)	State of good repair improvements to bike parking locations across the system, as well as upgrades to access technology and Pedal and Park features.	Systemwide	Design	\$0.1M	\$0.3M
Station Management (P0473)	Funding to support management of transit stations across the system.	Systemwide	Closeout	\$0.0M	\$18.8M
MBTA Vertical Transportation Capital 20 Year Plan (P0636)	Assessment of MBTA's nearly 400 elevators and escalators to develop a 20-year capital investment and state of good repair maintenance plan for these assets. The plan will be amended based on work progression and stakeholder feedback.	Systemwide	Planning	\$0.0M	\$1.3M

\*Projects that received new funding in the FY24-28

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# Vehicles Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
Red Line Type 3 Vehicle Selective Systems Upgrade (P1239)*	Selective system improvements and upgrades to the Red Line's #3 heavy rail vehicles to ensure safe and reliable operations. Includes design, testing, inspections, and administrative support funds.	Red Line	New Project	\$38.8M	\$38.8M
Red Line Type 2 Vehicle Suspension Evaluation and Upgrade (P1242)*	Evaluation and upgrade of Red Line #2 heavy rail vehicles' primary suspension. Includes design, testing, inspections, and administrative support funds.	Red Line	New Project	\$13.4M	\$13.4M
Red Line #3 Car - Targeted Reliability Improvements (P0460)	Overhaul of selective systems on the Red Line No. 3 heavy rail cars. Includes improvements to HVAC, doors, trucks, adaptive power systems, and other elements.	Red Line	Construction	\$10.9M	\$44.0M
Red Line #2 Car - Draft Gear and Coupler Replacement (P0673v)	Replacement of draft gear and coupler on Red Line #2 cars.	Red Line	Construction	\$0.2M	\$0.7M
Orange Line Rail Vehicle Component Upgrades (P0673c)	Overhaul of Orange Line's 100 rail vehicle A1 traction motors, 83 rail vehicle traction motor armatures, and 80 rail vehicle auxiliary motor armatures.	Orange Line	Construction	\$2.0M	\$5.9M

\*Project received new funding or is new in the FY24-28 CIP

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Red / Orange Line Vehicles (P0362)	Procurement of 252 new Red Line vehicles and 152 new Orange Line vehicles to support heavy rail service. The new vehicles include capacity and accessibility enhancements as well as improved onboard diagnostics for operators and maintenance staff.	Red / Orange Line	Construction	\$389.5M	\$1073.5M
Evaluation of Orange Line & Red Line Wheel Profile for Flange Angle (P0673n)	Engineering review of Red and Orange Line wheel profiles and recommendation of a new profile with a steeper flange angle. Also includes a review of the wheel periodic inspection and defect identification criteria currently used by Subway Operations.	Red / Orange Line	Construction	\$0.3M	\$0.6M
RFP Development for Red / Orange Line Car Reliability Centered Maintenance (P0765)	Procurement of subject matter expertise on maintenance, procurement, and logistics to improve reliability and availability of new Red and Orange Line heavy rail vehicles through a Reliability Centered Maintenance Program (RCM).	Red / Orange Line	Closeout	\$0.0M	\$0.9M
Blue Line Coupler Overhaul (P0673q)	Overhaul of Blue Line couplers to support service reliability.	Blue Line	Construction	\$3.0M	\$3.3M
Blue Line Reliability Centered Maintenance (P0682)	Implementation of Reliability Centered Maintenance (RCM) approach for four years at rail shops located in the Orient Heights Car House and Everett Main Repair Facility to support long-term reliability and state of good repair of the Blue Line fleet.	Blue Line	Construction	\$1.5M	\$9.7M

\*Projects that received new funding in the FY24-28

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Heavy Rail Vehicle Conditional and Reliability Assessment (P1151)	Planning of the midlife overhaul of 94 Blue Line heavy-rail vehicles built by Siemens. The project will address systems at or nearing the end of their intended service lives, obsolete components, and functional improvements.	Blue Line	Pre-Design	\$1.3M	\$3.0M
Green Line Type 10 Vehicle Replacement Program (P0369)	Procurement of 102 new fully-accessible light rail vehicle (LRV) fleet and related infrastructure improvements to replace the existing Type 7 and Type 8 fleets and support increased system capacity.	Green Line	Design	\$426.7M	\$1000.0M
Green Line Type 8 Reliability Improvements (P0349)	Selective System Replacement Program of Green Line Type 8 light-rail vehicle components to ensure continued reliability of the fleet. This includes truck, brake system, auxiliary power system, coupler overhaul, and air compressor upgrade.	Green Line	Construction	\$21.1M	\$66.5M
Green Line Type 8 Printed Circuit Boards Replacement (P0930)	Re-engineering and replacement of the propulsion and brake control logic circuit boards for the Green Line Type 8 fleet.	Green Line	Pre-Design	\$3.9M	\$3.9M
Green Line Type 8 Car Repairs (P1017)	Frame/body repair and rehabilitation of two Green Line Type 8 vehicles involved in an August 2021 collision.	Green Line	Construction	\$2.5M	\$2.5M
Green Line Vehicle Support (P0673m)	Replacement of car wash at Reservoir Maintenance Facility and creation of transom bearing replacement program for the Green Line Type 8 fleet.	Green Line	Construction	\$1.3M	\$1.4M

\*Projects that received new funding in the FY24-28

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Green Line Type 7 Selective Systems Overhaul Option (P0448)	Overhaul of selective systems on the Green Line Type 7 light rail fleet. Includes upgrades to circuit breakers, public address systems, and other elements.	Green Line	Closeout	\$1.1M	\$34.9M
Green Line Type 7 APS Diagnostics and Test Bench Upgrade (P1153)	Replacement of Type 7 Adaptive Power System (APS) test bench and equipment control logic circuit boards. Also includes a feasibility study for additional interface components to allow for real-time monitoring and transmission of emergency conditions.	Green Line	Pre-Design	\$0.8M	\$1.3M
Green Line Type 7 Midlife Overhaul (P0368)	Selective System Overhaul of the Green Line Type 7 fleet to ensure their continued reliable operation.	Green Line	Closeout	\$0.7M	\$127.1M
Green Line Type 7 LED Destination Signs (P0673p)	Replacement of obsolete LED signs on Green Line Type 7 light rail vehicles to match the signs currently used on the Type 8 and Type 9 fleets.	Green Line	Construction	\$0.4M	\$1.1M
Green Line Fleet Flooring Upgrades (P0673g)	Replacement of ply metal, inspection of floor beam support, and repair of sheet metal drip pan, threshold adjustment, and vinyl flooring on the Green Line fleet.	Green Line	Construction	\$0.0M	\$1.7M

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Type 8 APS Overhaul (P0673t)	Overhaul and testing of Type 8 Adaptive Power System (APS) to support service reliability.	Green Line	Implementation	\$0.0M	\$0.2M
Mattapan Trolley Select System Upgrade (P1016)	Overhaul of the 75+-year-old PCC cars operating on the Mattapan Line to improve fleet reliability. Includes work on the propulsion system, trucks, auxiliary electrical power system, wiring, lighting, doors, car bodies, and paint.	Mattapan Line	Construction	\$3.8M	\$6.2M
PCC Mattapan High Speed Line (Due Diligence and Initial Study) (P0379)	Assessment of existing conditions on the Mattapan Line and study of future needs beyond the useful life of the existing assets.	Mattapan Line	Closeout	\$0.0M	\$1.2M
Procurement of 40ft Enhanced Electric Hybrid Buses (P0618)	Procurement of 460 40ft Enhanced Electric Hybrid (EEH) buses to replace 310 40ft diesel buses purchased in 2006-2008 and support more reliable, efficient, and sustainable operations. Includes vehicle testing, warranty, and inspection.	Bus	Design	\$258.8M	\$348.9M
Hybrid and CNG Bus Overhaul (P0911)*	Midlife overhaul of major systems and components of 156 40ft hybrid buses to ensure reliable and safe operations that meet FTA requirements. Also includes condition assessment activities for 175 40ft CNG buses, and 45 60ft hybrid buses.	Bus	Planning	\$120.9M	\$120.9M

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Procurement of 40ft Battery Electric Buses and Related Infrastructure (P0653)	Purchase of 80 40ft battery electric buses (BEBs) to support bus electrification and replace fleets currently running diesel bus service out of Quincy and trolleybus service out of North Cambridge.	Bus	Planning	\$97.1M	\$101.2M
Hybrid Bus Overhaul (New Flyer XDE40 - SR 1881) (P0860)	Midlife overhaul of major systems and components (e.g., engine, drive unit, cooling systems, axles, brakes) of 60 40-ft. BAE hybrid buses to ensure reliable and safe operations and to meet FTA service life requirements.	Bus	Design	\$25.1M	\$41.7M
Option Order Procurement of New Flyer Hybrid 40ft Buses (P0649)	Procurement of 194 40ft buses with hybrid propulsion to replace an aging fleet and improve fuel economy.	Bus	Closeout	\$14.2M	\$166.2M
Virginia DOT 40ft Hybrid Bus Procurement (P0620)	Procurement of 60 40ft buses through a Virginia Department of Transportation bus procurement.	Bus	Closeout	\$5.4M	\$57.3M
CM2150 Engine Replacements (P1237)*	Engine replacement of approximately 90 New Flyer SR122 buses that have been in service since 2015/2016 to support another 5-7 years of safe and reliable service.	Bus	New Project	\$2.4M	\$2.4M

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Midlife Overhaul of New Flyer Allison Hybrid 60ft Articulated Buses (P0638)	Overhaul of 25 60-ft. buses purchased in 2009. Includes major systems and components (e.g., engine, transmission, axles, brakes, suspension, HVAC, flooring).	Bus	Construction	\$1.6M	\$22.9M
Bus Wi-Fi (P0673r)	Addition of wireless access points to bus maintenance facilities and storage yards to support better tracking of maintenance issues and activities and allow maintenance staff to use tablets for tracking and inspection.	Bus	Construction	\$0.7M	\$1.0M
Pilot Procurement of 60ft Battery Electric Buses (P0373)	Deployment of five new battery-electric, four-wheel-drive, New Flyer Excelsior XE60 heavy-duty, low-floor, 60-ft. articulated buses and five 150kW ABB depot chargers on the MBTA's BRT Silver Line to support bus electrification.	Bus	Closeout	\$0.6M	\$12.9M
CNG Bus Overhaul (New Flyer XN40 - SR 1982) (P1154)	Planning for the midlife overhaul of 175 40-foot New Flyer CNG buses delivered 2016 to 2017. These buses require overhaul of major systems and components to ensure continued reliable and safe operations and to meet FTA service life requirements.	Bus	Design	\$0.5M	\$0.8M
Hybrid Bus Overhaul (New Flyer XDE40 - SR 2011) (P1155)	Planning for the midlife overhaul of 44 60-foot New Flyer hybrid buses delivered 2016 to 2017. These buses require overhaul of major systems and components to ensure continued reliable and safe operations and to meet FTA service life requirements.	Bus	Pre-Design	\$0.5M	\$1.0M

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ETB & DMA Propulsion Board Replacement (P0673j)	Replacement of propulsion boards in 32 dual mode articulated (DMA) buses and 28 electric trolleybus (ETB) buses.	Bus	Construction	\$0.2M	\$0.5M
Power-Ex Air Compressor Replacement (P0673k)	Replacement of Power-Ex inline air compressors in 219 New Flyer buses.	Bus	Construction	\$0.2M	\$1.0M
Bus Fuel Injector Upgrade (P0673a)	Replacement, upgrade, overhaul, and procurement of vehicles' capital equipment and components related to engines, brake and electrical components, command fuel control, monitoring systems, and diesel particulate filters.	Bus	Closeout	\$0.1M	\$1.5M
New Flyer Battery Replacement (P0673i)	Replacement of batteries in 265 New Flyer buses running service out of Charlestown, Arborway, Cabot, and Southampton.	Bus	Construction	\$0.0M	\$0.5M
Bus Operator Barrier Door/Extended Glass (P0954)	Addition of glass barrier doors between passenger areas and bus operators to reduce the spread of COVID-19.	Bus	Closeout	\$0.0M	\$1.3M
ConnDOT 40ft Hybrid Bus Procurement (P0365)	Procurement of 60 buses through a Connecticut Department of Transportation procurement option.	Bus	Closeout	\$0.0M	\$4.8M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
New Flyer 40ft Bus Procurement (P0374)	Procurement of 156 Diesel and 175 Compressed Natural Gas (CNG) New Flyer buses to replace existing CNG fleet.	Bus	Closeout	\$0.0M	\$232.3M
New Flyer 60ft Hybrid Bus Procurement (P0375)	Procurement of 44 new 60ft hybrid buses to update MBTA's fleet. Includes capital spare parts to support the fleet, mechanical and operator training, and full documentation package for maintenance and materials.	Bus	Closeout	\$0.0M	\$58.8M
Bus Component Replacement and Overhaul (P0673b)	Equipment upgrades at Everett and Charlestown bus facilities linked to fueling equipment and tanks, device monitoring, piping, fire suppression systems, upholstery and lumber machinery, autonomous 54-inch printers, and sign shop upgrades.	Bus	Closeout	\$0.0M	\$1.3M
New Flyer SR1222 & SR1105 A/C Condenser Replacement (P1158)	Replacement of the HVAC condensers on New Flyer SR1105 and SR122 buses to accommodate new EPA regulations and make the vehicles more resilient to extreme heat.	Bus	Pre-Design	\$0.0M	\$3.0M
Procurement of 60ft Enhanced Electric Hybrid Buses (P0619)	Procurement of 45 60ft Enhanced Electric Hybrid (EEH) buses to replace aging bus fleet and support Silver Line service on the zero-emissions tunnel, Chelsea gateway expansion, airport operations, and other high-density routes.	Silver Line	Construction	\$6.0M	\$89.4M

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Procurement of Hyundai Rotem Bi-Level Coaches - Option (P1152)	Procurement of bi-level coaches to replace the 30+-year-old single-level Commuter Rail coaches currently in use.	Commuter Rail	Pre-Design	\$153.1M	\$160.9M
Procurement of 67 Bi-Level Commuter Rail Coaches (P0893)	Procurement of 67 bi-level coaches from Hyundai Rotem to replace existing vehicles due for retirement.	Commuter Rail	Design	\$127.4M	\$276.1M
HSP46 Locomotive Overhaul (P1173)	Midlife overhaul of 40 HSP46 Locomotives to improve reliability and reduce risk of unplanned maintenance.	Commuter Rail	Planning	\$92.5M	\$120.0M
Future Rolling Stock Fleet (P0918)	Planning funds to support future procurement of 25 electrified or decarbonized Commuter Rail rolling stock to replace the oldest vehicles in the fleet and support rail electrification.	Commuter Rail	Planning	\$49.8M	\$50.0M
Rolling Stock - Locomotive and Coach State of Good Repair and Resiliency (P0927)	Upgrades to improve system reliability, correct deficiencies, standardize procedures, and increase equipment availability for Commuter Rail rolling stock. Includes vehicle procurement, testing support, service life enhancement, and overhauls.	Commuter Rail	Construction	\$44.2M	\$54.1M
Procurement of 100 Bi-Level Commuter Rail Coaches (P0652)	Procurement of 100 Bi-Level Commuter Rail coaches to replace aging single-level coaches, expand capacity from 120 to 180 passengers per coach, reduce number of coaches required, and mitigate operational bottlenecks.	Commuter Rail	Planning	\$42.2M	\$43.8M

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F40 Commuter Rail Locomotive Overhaul (P0239)	Overhaul of 37 F40 Commuter Rail locomotives to improve reliability and reduce risk of unplanned maintenance.	Commuter Rail	Construction	\$34.1M	\$126.2M
Procurement of Commuter Rail Locomotives (P0380)	Base procurement of 40 Commuter Rail locomotives to replace aging vehicles in the fleet.	Commuter Rail	Construction	\$16.1M	\$237.6M
Coach Refurbishment (P0882)	Provision of qualified maintenance personnel and staff, as well as the tools, supplies, and diagnostic equipment to perform maintenance, repair, inspection, cleaning, and other services on the MBTA's Commuter Rail passenger fleet.	Commuter Rail	Construction	\$4.6M	\$33.0M
Kawasaki Bi-Level Coaches - Overhaul Option (P0371)	Midlife overhaul of 34 blind trailer coaches (BTCs) produced by Kawasaki. This work addresses brake systems, trucks, cab signals, doors, coupler and draft gear, wheels, axles, batteries, and other elements.	Commuter Rail	Closeout	\$2.8M	\$37.6M
Kawasaki Bi-Level Coaches Overhaul (P0372)	Midlife overhaul of 24 control trailer coaches (CTCs) and 50 blind trailer coaches (BTCs) produced by Kawasaki. This work addresses brake systems, trucks, cab signals, doors, coupler and draft gear, wheels, axles, batteries, and other elements.	Commuter Rail	Closeout	\$2.2M	\$130.3M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Locomotive Reliability Improvements (P0799)	Overhaul of 16 locomotives, including all mechanical, pneumatic, electrical, and metal work.	Commuter Rail	Construction	\$2.0M	\$15.3M
Remote Monitoring of Rolling Stock Subsystems (P0655)	Procurement and installation of video and monitoring systems on Commuter Rail locomotives and control coaches to improve remote monitoring, provision of critical alerts, vehicle diagnosis, and preventive maintenance.	Commuter Rail	Construction	\$1.7M	\$6.1M
Commuter Rail Locomotive Main Engine Procurement (P0595)	Procurement of spare engines for locomotives to support Commuter Rail service, in partnership with the Rhode Island Department of Transportation	Commuter Rail	Construction	\$0.8M	\$4.0M
Locomotives and Coach Mini-Rehabilitation (P0213)	Overhaul activities to ensure the continued reliability of the MBTA's Commuter Rail locomotive and coach fleets.	Commuter Rail	Construction	\$0.0M	\$10.3M
Commuter Rail Misc. Equipment (Winter Resiliency) (P0263)	Funding to support purchase of equipment to manage severe winter weather events.	Commuter Rail	Construction	\$0.0M	\$33.7M
Hyundai Rotem Coach Procurement (P0363)	Procurement of 75 Hyundai Rotem passenger coaches to support Commuter Rail service.	Commuter Rail	Closeout	\$0.0M	\$181.7M

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Commuter Rail Legacy Fleet Investment (P0528)	Mechanically focused investments to legacy locomotive and coach fleet to normalize fleet condition; improve reliability, longevity, and asset value; accommodate future ridership growth; and increase performance and customer satisfaction.	Commuter Rail	Construction	\$0.0M	\$18.4M
Commuter Rail Wheel Defect Detection Services (P0529)	Installation of the Wheel Impact Load Detector (WILD) system to detect wheel impacts for targeted replacement on the Fitchburg Main Line in Leominster. Includes power supply extension, cases, wood tie spacing adjustments, and hot box reinstallation.	Commuter Rail	Construction	\$0.0M	\$2.3M
NRE Genset Switcher Locomotive Overhaul (P0644)	Overhaul of two switcher locomotives and seven engine/generator modules to support train yard transportation and maintenance of passenger locomotives and coaches. Includes services to perform yearly preventive maintenance on overhauled locomotives.	Commuter Rail	Construction	\$0.0M	\$1.4M
Oil Analytics Initiative (P0647)	Procurement of oil analytics software services and technical support to identify locomotives susceptible to engine failures to avoid impacts to transit service and engine replacement.	Commuter Rail	Construction	\$0.0M	\$1.9M
Commuter Rail Rolling Stock Damage Emergency Repairs (P0658)	Funds to procure services and subject matter expertise to assess damages to locomotives and coaches, prepare solicitation packages, and finance required repairs to ensure fleet is repaired in a timely manner for continued and reliable service.	Commuter Rail	Construction	\$0.0M	\$1.5M

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MBTA Catamaran Overhauls (P0633)	Overhaul of two 149-passenger subchapter "T" ferries. Includes end products as well as capital spare parts, manuals, diagnostic test equipment, tools, training, training aids, warranty, and associated materials, equipment, and services.	Ferry	Design	\$15.6M	\$17.0M
Ferry Enhancements (Vessel, Docks & Infrastructure) (P0928)*	Improvements to ferryboats and related dock infrastructure, including any necessary emergency repairs and development and low/no emissions ferry study.	Ferry	Construction	\$0.3M	\$0.6M
Ferry Engine Overhaul & Upgrades (P0360)	Replacement of engine components on the MBTA ferry fleet.	Ferry	Construction	\$0.0M	\$3.2M
Quincy High Speed Catamaran (P0381)	Procurement and construction of two 150-passenger, high-speed catamarans from Gladding Hearn Shipbuilding to support ferry service. The Champion and Glory catamarans entered service in 2017 and 2018, respectively.	Ferry	Closeout	\$0.0M	\$13.6M
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.	Paratransit	Construction	\$27.1M	\$77.2M

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Reliability Centered Maintenance - Blue, Orange and Red Line (P1162)	Improvements to trucks, brakes, motors, current collectors, propulsion, and auxiliary fuses on the Blue Line and improvements to propulsion, brakes, HVAC, and doors on the Red and Orange Lines.	Multimodal	Pre-Design	\$35.4M	\$35.4M
Everett Test Equipment Upgrades (P1159)	Addition of two AC traction motor test cells, two tread brake unit test benches, one air compressor test unit, and a thermal chamber at the Everett Main Repair Facility.	Multimodal	Pre-Design	\$3.0M	\$3.0M
Impactor Detector (P1160)	Addition of impact detectors to the heavy rail lines. The impactor detector is used to monitor the wheels for flat spots and other failures that impact the service of the heavy rail fleet.	Multimodal	Pre-Design	\$2.5M	\$2.5M
Hot Box Detector (P1161)	Addition of hot box detectors to the heavy rail lines. The hot box detector is used to monitor the journal bearings of the heavy rail fleet axles.	Multimodal	Pre-Design	\$2.1M	\$2.1M
Systemwide Non-Revenue Vehicles Program - Phase 1 (P0662)	Systemwide replacement of non-revenue and support fleet, including first-response vehicles, service cars and trucks, trade vans, spreaders, spot tampers, cranes, and inserters, among other key vehicles for safety, emergency response, and maintenance.	Multimodal	Construction	\$1.3M	\$16.0M

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Bus and RIDE Air Filtration System (P0973)	Installation of in-vehicle air treatment solutions to capture or inactivate airborne viruses on buses and RIDE vehicles.	Multimodal	Construction	\$1.0M	\$5.0M
Revenue Vehicle Cap Maintenance Audit (P0673h)	Professional services to perform audits of the preventative maintenance inspection process for all subway vehicle types to ensure that the MBTA's processes are performed correctly and vehicle performance is safe.	Multimodal	Pre-Design	\$0.1M	\$0.6M
Third Rail Jumper (P0673s)	Assessment of third rail jumpers by a third party and recommendation of improvements to safe operating practices.	Multimodal	Planning	\$0.1M	\$0.1M
Work Car Procurement (P0547)	Procurement of three crane car consists, two overhead catenary inspection and repair car consists, and vacuum cars to remove trash, debris, and leaves from right-of-way to support transit operations.	Systemwide	Construction	\$61.5M	\$71.2M
Systemwide Non-Revenue Vehicles Program - Phase 2 (P1157)*	Replacement of non-revenue vehicles in the authority's fleet. Non-revenue vehicles include first response vehicles, service cars and trucks, and many other types of vehicles that support operations and maintenance of the system.	Systemwide	Pre-Design	\$18.0M	\$18.0M
Revenue Vehicle Capital Maintenance (P0673)	Funding to support revenue vehicle maintenance projects beyond routine preventative maintenance. Previously funded efforts include bus fuel injector, Green Line fleet flooring, and Orange Line rail vehicle component upgrades.	Systemwide	Construction	\$7.4M	\$8.2M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Hydraulic Wheel Press for Subway Main Repair Facility (P0673o)	Purchase and installation of a new wheel press for the Subway Main Repair Facility. The new state-of-the-art wheel press will improve work efficiency and allow real-time data collection on each wheel installed.	Systemwide	Construction	\$1.0M	\$1.8M
Transit Police Fleet Replacement Program (P0666)	Replacement of police vehicles and equipment to ensure that the Transit Police Department can maintain a safe and reliable fleet of emergency response vehicles.	Systemwide	Construction	\$0.7M	\$4.0M
Emergency Response Vehicle Procurement (P0673x)	Procurement of heavy duty vehicles to support emergency response at rail maintenance facilities.	Systemwide	Design	\$0.4M	\$0.4M
Non-Revenue Vehicle Repair (P0673w)	Repairs to non-revenue vehicle used to remove and install track ties and ballast on all rail lines.	Systemwide	Design	\$0.1M	\$0.1M
Equipment Lease - Power Department Support (P0673L)	Lease of 17 pieces of non-revenue vehicle equipment to support power-related capital maintenance efforts systemwide.	Systemwide	Construction	\$0.0M	\$1.2M
RFID Rail Vehicle Fleet and Components (P0796)	Development, implementation and installation of a Radio Frequency Identification Detection (RFID) system and best-practice model for heavy rail and light rail vehicle maintenance. This system tracks component locations and vehicles.	Systemwide	Construction	\$0.0M	\$0.6M

\*Projects that received new funding in the FY24-28

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# Business and Operational Support Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
Red Line PM/CM and Owners Rep Professional Services (P1012r)	PM/CM services to support MBTA staff in managing the various infrastructure upgrades necessary to accommodate the new Red Line vehicle fleet.	Red Line	Design	\$22.6M	\$31.4M
Orange Line Surge - Track Rehabilitation (Capital Transformation scope) (P1167a)	Track reconstruction and rehabilitation to reduce the percentage of track that is deficient or under a speed restriction following the FTA's findings on the Orange Line.	Orange Line	Construction	\$17.7M	\$32.8M
Orange Line PM/ CM and Owners Rep Professional Services (P1012o)	PM/CM services to support MBTA staff in managing the various infrastructure upgrades necessary to accommodate the new Orange Line vehicle fleet.	Orange Line	Design	\$11.5M	\$22.3M
Orange Line Surge - Support Costs (P1167c)	Shuttle costs, construction of a bus lane on Huntington Ave. between Francis St. and Gainsborough St., and other related costs to support service provision during the Orange Line Surge.	Orange Line	Construction	\$0.0M	\$44.3M
Type 10 Operator Simulator Installation (P1105)	Construction of physical space and infrastructure necessary to accommodate a Type 10 operator training simulator, to be provided by the carbuilder.	Green Line	Pre-Design	\$1.0M	\$1.0M

\*Project received new funding or is new in the FY24-28 CIP

Note: Some CIP projects may show \$0 programmed spend in FY24-28, as they are expected to complete in FY23 but are not yet formally finalized or closed out.

<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Bus Network Redesign Implementation (P0916)	Design and construction of bus priority infrastructure, including bus lanes, queue jumps, transit signal priority, and other treatments along corridors identified as priorities in the Bus Network Redesign process.	Bus	Planning	\$10.7M	\$11.7M
Transit Supportive Infrastructure Program (P1168)	Program to fund dedicated bus lanes, transit signal priority, bus stops, and accessibility improvements, among other transit-supportive infrastructure. Funds provided through MassDOT's Transit Supportive Infrastructure Partnership.	Bus	Design	\$3.5M	\$3.5M
MVSS Camera Technology Refresh Program (P1203)*	Replacement of legacy vehicle cameras with latest generation equipment. Includes installation, configuration, and validation of new camera system on priority bus vehicles located at Arborway, Cabot, Charlestown, Quincy, and South Hampton facilities.	Bus	New Project	\$3.5M	\$3.5M
Bus Video Security System Mandatory Platform Upgrade (P1013)	Purchase and installation of new video recording systems on the bus fleet to enable transition to updated security video software. This funding supports the upgrade of 380 buses.	Bus	Design	\$2.7M	\$3.3M
Bus Service Replacement Plan (P0568)	Funding for early phases of the Better Bus Project (BBP), as well as BBP initiatives related to improving internal operations (e.g., scheduling).	Bus	Design	\$1.5M	\$4.1M

\*Projects that received new funding in the FY24-28

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Rail Transformation Contract Procurement Support (P1202)*	Funds to support legal, technical, and financial advice for the procurement of operational partners to implement the initial phases of Rail Transformation and deliver all-day, bi-directional regional rail and high-frequency urban rail service.	Commuter Rail	New Project	\$10.2M	\$10.2M
Rail Transformation Planning Studies (P0934)	Funding to support conceptual planning of Phase 1 of Regional Rail Transformation, as well as the planning, development, and procurement of the future operating contract(s).	Commuter Rail	Planning	\$5.1M	\$13.0M
Keolis Flagger Training (P0823)	Temporary funding set up for Keolis to train flaggers.	Commuter Rail	Closeout	\$0.0M	\$5.5M
New Paratransit Software Solution (P0643)	Procurement and Implementation of updated software for reserving and scheduling trips on the RIDE. This software will also manage vehicle dispatch and compile reporting data.	Paratransit	Planning	\$1.6M	\$12.6M
Systemwide Force Account (Z0008)	Funding to support force account costs for capital projects.	Multimodal	Planning	\$0.0M	\$3.0M
Systemwide Asset Management Program Phase 4 (P1139)*	Implementation of the Asset Management Program in accordance with FTA req. Includes asset inventory and condition assessments; updates to the National Transit Database (NTD) and the Transit Asset Management Plan (TAMP); and EAMS implementation.	Systemwide	Implementation	\$53.2M	\$53.7M

\*Projects that received new funding in the FY24-28

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Capital Program Support (P0886)*	Funding for capital support staff in the areas of Change and Claims Management, Field Inspection, Resident Engineering, and Project Controls.	Systemwide	Design	\$31.3M	\$34.9M
Capital Program XG/Reserve Fund (Z0010)	Reserve funding used to cover unforeseen project costs as they arise.	Systemwide	Planning	\$29.5M	\$32.5M
Bond Costs / SOMWBA (P0321)*	Funding to support the issuance of MBTA bonds, as well as support for loan financing.	Systemwide	Implementation	\$20.8M	\$60.6M
Electrical Safety - Incident Energy Analysis and System Upgrades (P0932)	Funding to assess and address systemwide electrical hazards and cover replacement, improvement, and new material or equipment costs to comply with the Electrical Safety Program and occupational safety and health requirements.	Systemwide	Planning	\$14.8M	\$16.2M
Project Connect - Financial Systems Transformation (P0683)	Upgrade of FMIS, the MBTA's core financial system, to support the streamlining of business processes for day-to-day finance, accounting, procurement, inventory, and capital project management.	Systemwide	Implementation	\$13.5M	\$28.8M
Capital Programs Safety Assurance Support (P1201)*	Funds to support the capital program safety assurance through proactive safety measures at construction worksites, as well as the development of analytical tools to capture data, draw safety insights, and implement preventive actions.	Systemwide	New Project	\$12.5M	\$12.5M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
OHS Program Development and Implementation (P0645)	Development and implementation of a systemwide Occupational Health and Safety (OHS) program.	Systemwide	Planning	\$11.5M	\$22.3M
Workforce Modernization Program - HASTUS (R0128)	Upgrades to the MBTA's workforce scheduling and pick software to support and improve operations and prepare for scheduling of future battery-electric bus (BEB) fleets.	Systemwide	Implementation	\$9.8M	\$40.5M
Safety Management System (SMS) Implementation (P0931)	Costs associated with implementing the MBTA's Safety Management System (SMS), required in accordance with 49 CFR Part 673 and 220 CMR 151.	Systemwide	Implementation	\$9.0M	\$11.3M
Design Standards and Guidelines (P0690)	Update to the MBTA's Manual of Guidelines and Standards and related documents in a user-friendly electronic format. This manual guides the preparation of plans and	Systemwide	Pre-Design	\$8.6M	\$10.9M
FTA Safety Management Inspection CAP Funding - Asset Management EAM (P1175)	Adoption of the Enterprise Asset Management System (EAM) and deployment of digital tools, software, and training to support state of good repair initiatives and comply with FTA's directives.	Systemwide	Pre-Design	\$8.5M	\$8.6M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Systemwide Security Upgrades (P0676)	Supports the addition of new cameras, access-control devices, and other security equipment and professional services that the Authority deems necessary to ensure the safety of frontline personnel and riders.	Systemwide	Construction	\$6.2M	\$20.7M
FY21 Homeland Security Funds - Project A (P1019)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Construction	\$5.8M	\$8.4M
OHS Steering Committee - PPE and Infrastructure Improvements (P0646)	Funding to support projects designed to bring MBTA facilities and infrastructure into compliance with OSHA standards to create a safer workplace. Sample projects include systemwide fire hydrant repair and fall protection harnesses.	Systemwide	Implementation	\$5.6M	\$19.3M
FY22 Homeland Security Funds - Project A (P1169)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Pre-Design	\$4.9M	\$4.9M
Capital Program Support - Capital Delivery (P0886b)	Funding for capital support staff in the areas of Change and Claims Management, Field Inspection, Resident Engineering, and Project Controls.	Systemwide	Design	\$4.7M	\$12.2M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Systemwide Asset Management Program Phase 3 (P0904)	Implementation of the Asset Management Program in accordance with FTA requirements. Includes professional services, audit, inventory, condition assessments, updates to the National Transit Database (NTD), and Transit Asset Management Plan (TAMP).	Systemwide	Implementation	\$4.6M	\$9.5M
Emergency Management Coordination and Support (P1204)*	Emergency management improvements to enhance the MBTA's ability to plan for, respond to, and recover from incidents and events. Incl. threat assessment, planning and preparedness coordination, technology integration, subject matter expert support.	Systemwide	New Project	\$3.0M	\$3.0M
Misc. Audit Services (P0128)	Auditing of professional services firms that provide design and other services associated with the delivery of capital projects.	Systemwide	Design	\$2.7M	\$8.5M
Infrastructure Asset Management Program Phase 1 (R0020)	Implementation of the Asset Management Program in accordance with FTA req. Includes professional services; audit, inventory, and condition assessments; updates to the National Transit Database (NTD); and the Transit Asset Management Plan (TAMP).	Systemwide	Implementation	\$2.6M	\$20.1M
Independent Reviews (P0127)	Professional services to support a number of capital maintenance initiatives.	Systemwide	Construction	\$2.0M	\$8.9M

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FY22 Homeland Security Funds - Project B (P1170)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Construction	\$2.0M	\$2.0M
Operations Control Center Board Upgrade (P1142)	Replacement and upgrade of key elements of the Bus and Rail Operations Control Center real-time information boards and video processing system.	Systemwide	Pre-Design	\$1.8M	\$1.8M
Environmental Compliance Management (P0435)	Remediation and removal of contaminated soils, development of permit applications or compliance plans, and installation of compliance equipment such as small treatment plants in order to address small-scale environmental matters.	Systemwide	Design	\$1.5M	\$3.0M
Systemwide Climate Resiliency Program (P1205)*	Planning funds for the development of a resiliency program with solutions for the long-term protection of the Authority's assets against climate change impacts.	Systemwide	New Project	\$1.5M	\$1.5M
Security Facility and Station Hardening (P1147)	This program funds security upgrades to various stations and facilities, including exterior cameras at Chinatown Station; replacement or repair of hydraulic gates; and security upgrades at Everett, Charlestown, Cabot, and Southampton yards.	Systemwide	Pre-Design	\$1.4M	\$1.5M
FY21 Homeland Security Funds - Project B (P1020)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Construction	\$1.4M	\$2.0M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Surplus and Contingency Funds (Z0007)	Contingency funding set aside to cover unforeseen project costs as they arise.	Systemwide	Planning	\$1.1M	\$1.1M
Security Technology End of Life Upgrades (P1148)	Replacement of security video workstation laptops that push live feeds of activity happening across the Authority and technology systems at 200 power and communications rooms across the system.	Systemwide	Pre-Design	\$1.1M	\$1.5M
Capital Program Safety Assurance (P1164)	Funding to support safety inspections and related personnel, training, reporting, and manual and procedure development.	Systemwide	Pre-Design	\$1.0M	\$1.0M
Capital Program Support - CPO (P0886a)	Funding to support Capital Program Oversight.	Systemwide	Design	\$0.8M	\$1.1M
Biometric Timeclock Replacement (P1143)	Replacement of approximately 120 handscanners used throughout the system for maintenance employees to clock in and out. Support for the current product is being discontinued, and the selection of a new system is ongoing.	Systemwide	Pre-Design	\$0.7M	\$0.9M
Capital Program Support - Capital Planning (P0886d)	Funding to support the Capital Planning program.	Systemwide	Design	\$0.7M	\$1.1M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Employee Quality of Life Initiative (P0533)	Improvements to employee workspaces, development of a new MBTA Intranet, and deployment of digital internal communication signage throughout MBTA-owned facilities.	Systemwide	Implementation	\$0.7M	\$2.9M
ROW-Commercial Assessment (P0894)	Assessment of potential addition of commercial infrastructure (conduit, fiber, access points) to the Fiber Optic Resiliency project along the Commuter Rail right-of-way.	Systemwide	Planning	\$0.5M	\$1.0M
Communications Resiliency Masterplan (P1206)*	Development of a roadmap to improve redundancy of safety critical communications systems to support service in the event of communications network failures.	Systemwide	New Project	\$0.5M	\$0.5M
Climate Change Resiliency Vulnerability Assessment (P0680)	Program to evaluate climate-change-related vulnerabilities systemwide and prioritize resiliency measures.	Systemwide	Planning	\$0.5M	\$2.5M
Systemwide TOD Advanced Support Program (P0939)	Funding to support Transit-Oriented Development staff and initiatives linked to planning, coordination, and delivery of public and private projects with funding from third parties that support the MBTA and its facilities.	Systemwide	Design	\$0.3M	\$1.5M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Asset Condition and Performance Assessments (P0459)	Condition and performance assessments of all MBTA-owned assets to support the MBTA's Asset Management program and compliance with FTA requirements.	Systemwide	Implementation	\$0.3M	\$4.0M
Canine Explosive Detect Program (P0338)	Establishment of a TSA-certified explosive detection canine teams program, providing 24/7 coverage to respond to threats which affect public safety or transportation operations.	Systemwide	Implementation	\$0.1M	\$0.6M
Inclusive Outreach Strategy - Accessibility (P1021)	Development of a strategy to improve outreach/engagement among older adults and riders with disabilities, particularly those in underrepresented communities.	Systemwide	Implementation	\$0.1M	\$0.2M
Lean Strategy Implementation (P0630)	Implementation of a Lean Strategy program to support MBTA operations.	Systemwide	Implementation	\$0.1M	\$0.3M
FY20 Homeland Security Funds (P0971)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Construction	\$0.0M	\$1.1M
FY19 Homeland Security Funds - Project A (P0875)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Construction	\$0.0M	\$0.1M

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Bid Advertising Costs (P0751)	Funding for costs associated with advertising for capital project bidding, procurement, and bid escrow services.	Systemwide	Design	\$0.0M	\$0.4M
MIT Research Agreement (P0557)	Collaboration between the MBTA and MIT to conduct research at the direction of the Authority to improve service planning, operations, and capital delivery.	Systemwide	Implementation	\$0.0M	\$3.2M
Occupational Health and Safety (OHS) Program (P0569)	Funding to support the development and implementation of the MBTA's Occupational Health and Safety (OHS) program.	Systemwide	Implementation	\$0.0M	\$0.8M
FY17 Homeland Security Funds - Project A (P0571)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$0.5M
FY17 Homeland Security Funds - Project B (P0572)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$0.2M
FY17 Homeland Security Funds - Project C (P0573)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$0.1M
FY17 Homeland Security Funds - Project D (P0574)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$2.1M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
FY17 Homeland Security Funds - Project E (P0576)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$2.4M
FY17 Homeland Security Funds - Project F (P0578)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$3.2M
FY17 Homeland Security Funds - Project G (P0579)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$0.8M
MBTA Police - Larimore Computer-Aided Dispatch System Upgrade (P0596)	Upgrades to various modules in the Larimore Public Safety Software System, including Computer-Aided Dispatch (CAD), Record Incident Management, and the addition of Automatic Vehicle Locator.	Systemwide	Closeout	\$0.0M	\$0.4M
FY18 Homeland Security Funds - Project A (P0833)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$3.0M
FY18 Homeland Security Funds - Project B (P0834)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$2.5M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
FY18 Homeland Security Funds - Project C (P0836)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$1.2M
Project Controls Staff Augmentation (P0871)	Funding to support additional staff in the MBTA Project Controls group.	Systemwide	Design	\$0.0M	\$1.2M
Capital Acceleration Support Costs (P0872)	Funding for support services and consulting to advance the deployment of technology solutions that enhance the management and reporting of capital projects.	Systemwide	Design	\$0.0M	\$2.5M
FY19 Homeland Security Funds - Project B (P0876)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$0.8M
FY19 Homeland Security Funds - Project C (P0877)	Funds provided by the Department of Homeland Security for security enhancements.	Systemwide	Closeout	\$0.0M	\$1.8M
Capital Program Support - OCE (P0886c)	Funding to support the Office of the Chief Engineer.	Systemwide	Design	\$0.0M	\$0.2M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Transit Speed & Reliability Toolkit (P0949)	Development of planning and design "toolkit" to help standardize design strategies for improving the speed and reliability of bus service.	Systemwide	Planning	\$0.0M	\$0.4M
ATTEND Application Replacement Project (P1172)	Modernization of current Employee Attendance Application (ATTEND) with a newer application possessing enhanced functionalities to help support the MBTA's operator attendance and leave policies.	Systemwide	Implementation	\$0.0M	\$0.3M

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## Technology and Innovation Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
Green Line - Real Time Tracking (P0266)	Creation of a Green Line Tracking System (GLTS) to provide real-time information to MBTA dispatchers, field inspectors, and riders.	Green Line	Design	\$0.4M	\$15.7M
Green Line Real Time Crowding (P0706)	Design and engineering of a system to extract real-time train crowding information and share it with riders and MBTA staff to allow boarding of less-crowded cars on Green Line Type 9 cars.	Green Line	Pre-Design	\$0.2M	\$0.2M
Ghost Bus Busting (P0689g)	Improvements to various bus tracking systems and processes to reduce the number of buses not presented in real-time arrival predictions and proactively inform riders about cancelled buses in predictions.	Bus	Closeout	\$0.0M	\$0.4M
Bus Location Instant Tracking Solution (BLITS) (P0694)	New hardware and software to improve resiliency of MBTA bus tracking, including more accurate real-time locations and predictions.	Bus	Closeout	\$0.0M	\$1.1M
Automated Passenger Counters (P0693)	Procurement and installation of automated passenger counters (APC) for the MBTA Commuter Rail coach fleet.	Commuter Rail	Construction	\$2.3M	\$15.0M
Durante Wetland Mitigation - Greenbush Expansion Remediation (P1129)	Mitigation of PCB contamination at the Durante Property and transfer to the Town of Weymouth. This project is part of the Order of Conditions for the Greenbush Commuter Rail Rehabilitation project.	Commuter Rail	Pre-Design	\$2.0M	\$2.2M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Onboard Passenger Train Information Systems (PTIS) Modernization (P0829)	Modernization of back-office and on-board components of the Commuter Rail's Passenger Train Information System (PTIS+). Includes replacement of back-end systems and on-board controls on 91 coaches.	Commuter Rail	Construction	\$0.9M	\$2.6M
Systemwide Radio and Security Cameras Equipment Replacement (P0848)	Upgrades to existing radio infrastructure used by train operators, dispatchers, and other front-line employees on the Commuter Rail system.	Commuter Rail	Construction	\$0.7M	\$3.2M
TRAC Technology Improvements (P0643a)	One-time technology-related costs to support The RIDE's move to a new call center (TRAC) in 2023.	Paratransit	Implementation	\$0.8M	\$1.1M
The RIDE Vehicle Radio Upgrade (P0699)	Replacement of in-vehicle radios with Push-to-Talk software and installation of backup cell phones.	Paratransit	Closeout	\$0.0M	\$0.8M
Communications Rooms Remediation (P0908)*	Upgrades to mechanical, electrical, and fire protection systems and other related infrastructure to support Fare Transformation at various communications rooms at 20 Orange Line stations, 22 Red Line stations, and the Green Line's Riverside Station.	Multimodal	Design	\$11.3M	\$12.8M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Dispatching Technology for Safety and Bus Modernization (P0689d)	Improvements to TransitMaster bus dispatch system, Skate bus dispatch app, and Glides light rail management app to provide MBTA officials with improved service management tools and give more accurate arrival predictions to riders.	Multimodal	Design	\$8.8M	\$11.3M
Light Rail Safety Dispatch and Tracking Improvements (P1028)*	Assessment of various technologies used to track light rail vehicles to recommend future enhancements that contribute to service safety and reliability.	Multimodal	Design	\$3.5M	\$3.9M
Transit Signal Priority Implementation (P0562)	Development, standardization, and implementation of transit signal priority technology along bus routes and light rail throughout the MBTA service area.	Multimodal	Design	\$0.3M	\$1.2M
Software Tools for Subway Service Management (P0689b)	Development of custom software with the collaboration of heavy rail dispatchers to improve subway service management by streamlining communications about service challenges and providing dispatchers with response tools such as hold light controls.	Multimodal	Closeout	\$0.0M	\$0.3M
Fare Transformation (P0265)	Replacement of outdated and overly complex fare system with new fare technologies to ensure equal access and improve operations.	Systemwide	Construction	\$411.2M	\$792.4M

\*Projects that received new funding in the FY24-28

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Systemwide Radio (P0301)	Upgrade of the MBTA's existing two-way radio system used by MBTA Transit Police and operations personnel. This project includes mobile radios for heavy rail, light rail, and bus vehicles.	Systemwide	Design	\$127.3M	\$145.5M
ACE Network (P0946)	Upgrade a Synchronous Optical Network (SONET) into one Agile Carrier Ethernet-based (ACE) network to streamline technology-related operations.	Systemwide	Construction	\$12.9M	\$15.0M
PA/ESS Critical Upgrades (P0972)*	Major overhaul of the hardware and software that makes up the in-station countdown clocks and PA system.	Systemwide	Planning	\$11.8M	\$14.2M
IT Disaster Recovery Plan (P0945)	Establishment of a disaster recovery initiative to enable business continuity and redundancy of our existing Data Centers. This initiative aligns with the TSA Cyber Initiative announced last September.	Systemwide	Implementation	\$5.3M	\$7.9M
PMIS Implementation (P0451)*	Implementation and maintenance of a project management information software (PMIS) across the Authority to assist with the management of capital projects and the delivery of digital advancements and strategy.	Systemwide	Implementation	\$5.0M	\$15.7M
IT Security Modernization (P0635)	Funding for a variety of projects that will upgrade and improve the MBTA's current security controls to combat external threats. This may include security operations improvements, data handling and retention improvements, and technology upgrades.	Systemwide	Implementation	\$4.3M	\$17.9M

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IT Infrastructure State of Good Repair (P0944)*	Technology refresh of various IT assets, including storage, servers, data network, and telephone systems, to support lifecycle management and maintain assets in a state of good repair.	Systemwide	Implementation	\$4.1M	\$7.4M
Customer Technology Access Initiatives (P0491a)	Funds to support accessibility-related technology projects and pilots. Examples include feasibility assessments to deploy digital screens at elevator entrances and technology testing to support indoor navigation by riders with visual impairments.	Systemwide	Implementation	\$3.5M	\$4.3M
Rider Service Alerts Resiliency & Improvements (P0689o)	Technology improvements to provide riders with upgraded, real-time service alerts about delays and other disruptions.	Systemwide	Design	\$3.3M	\$3.9M
OHS System Improvements (P0542)*	Technology upgrades providing secure self-service solutions for protected health information portals to maintain HIPAA compliance, automation for data exchange, dashboard and interface development, and other safety and customer service solutions.	Systemwide	Implementation	\$3.1M	\$5.6M
Data Center Relocation (P1234)*	Relocation of the MBTA's datacenter and equipment from 10 Park Plaza to a vendor-hosted facility to achieve a higher degree of fault tolerance and redundancy per the recommendation of a disaster recovery assessment.	Systemwide	New Project	\$2.8M	\$2.8M

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Energy Management System (P0434)	Procurement of an Energy Management System to track, manage, and analyze utility billing, energy consumption, and environmental impact.	Systemwide	Implementation	\$2.5M	\$3.5M
Performance Data Modernization (P0948)	Replacement and upgrade of back-end performance systems to improve tracking and information on vehicles, operations, service performance, quality of transit service, and customer communication while reducing operational and maintenance costs.	Systemwide	Planning	\$1.4M	\$2.3M
Customer Technology Capital Program (P0689)	Funding to support technology projects and pilots reviewed and approved by the MBTA's IT Governance Committee. Past projects included the Skate mobile bus dispatching app, E Ink real time arrival signs, and light rail speed monitoring and reporting.	Systemwide	Pre-Design	\$1.0M	\$1.0M
The Digital Ride (P0689M)	Creation of a unified back-end content management system for all rider-facing digital screens.	Systemwide	Implementation	\$1.0M	\$1.6M
Digital Transformation Capital Program (P1236)*	Funds set aside for safety-focused technology pilot efforts and strategic implementation of high-impact process and improvements across the MBTA, including digitized forms and training, software development, systems integration, and other elements.	Systemwide	New Project	\$1.0M	\$1.0M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
MCRS2 v17 and Business Process Update (P0637)	Review and development of standardized business processes, reporting tools, and vehicle live monitoring to establish an enterprise CMMS (MCRS) system that consolidates maintenance databases and improves accountability, transparency, and compliance.	Systemwide	Implementation	\$0.9M	\$5.2M
SWAN Power Hardening and Resiliency Program (P1233)*	Replacement of legacy uninterruptable power source equipment with latest generation devices and cables across all rapid transit communication rooms to allow core devices to remain online and operational during momentary power outages.	Systemwide	New Project	\$0.8M	\$0.8M
T Digital Service (P0544)	Funds to support core customer technology functions and operations, including the MBTA.com website, transit data for Google maps and internal applications, and subway real-time application.	Systemwide	Design	\$0.5M	\$9.5M
Project Resolve (P1131)	Migration of Authority's central data warehouse to a cloud-based environment, and mitigation of near-term risks to the authority's data analytics platform.	Systemwide	Design	\$0.5M	\$0.6M
SourceOne Replacement (P1235)*	Migration of the Authority's email archive platform to a new email archiving solution compliant with the Freedom of Information Act.	Systemwide	New Project	\$0.4M	\$0.4M
IDCS Readiness (P1130)	Replacement of up to 100 bar code scanners and 35 printers used in warehouses and stockrooms.	Systemwide	Design	\$0.4M	\$0.6M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Operations Control System Integration (P0859)	Source code additions/modifications for the MBTA Operations Control System (OCS) to support integration of ongoing MBTA capital projects and procurements.	Systemwide	Construction	\$0.2M	\$1.5M
Intranet Modernization (P0701)	Replacement of the intranet used by MBTA employees for sharing information and storing reference materials. Includes implementation of TSTOP employee intranet site and the installation of digital signage in MBTA work areas to replace bulletin boards.	Systemwide	Implementation	\$0.1M	\$0.2M
Enterprise HR Automation (P0947)	Streamlining and automation of various HR systems. Includes the buildup of employee-facing self-service functions and internal HR business processes.	Systemwide	Planning	\$0.1M	\$0.1M
TransitMaster Server Upgrade (P0330)	Replacing the servers that manage the MBTA bus dispatching system, which enables automated stop announcement, management tools for dispatchers, and real-time data for riders, among other essential features.	Systemwide	Closeout	\$0.0M	\$0.5M
AFC 1.0 (P0264)	Ongoing maintenance and support for existing fare collection system in anticipation of future upgrades.	Systemwide	Closeout	\$0.0M	\$8.7M
E&M CAD Plans Digitization (P0457)	Digitization of infrastructure physical prints and drawings in support of moving to a document management system.	Systemwide	Implementation	\$0.0M	\$1.5M

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<b>Project</b>	<b>Description</b>	<b>Primary Mode/Line</b>	<b>Current Phase</b>	<b>FY24-28 Programmed Spend</b>	<b>Total Authorized Budget</b>
Customer Technology Improvements (P0541)	Various improvements to technology assets designed to improve the customer experience.	Systemwide	Closeout	\$0.0M	\$2.4M
Digital Fares - Pass Program Revitalization (P0587)	Improvements to the front-end and back-end technologies that support MBTA Pass Programs.	Systemwide	Closeout	\$0.0M	\$0.7M
Document Management and Retrieval D2 (P0588)	Archiving and storage of documents to a cloud-based repository.	Systemwide	Implementation	\$0.0M	\$4.4M
Everbridge - Piloting New Use Cases (P0689e)	Piloting Everbridge software to support field staff and bus operation control center to communicate more efficiently regarding daily tasks, work orders, and shuttle diversion notifications.	Systemwide	Closeout	\$0.0M	\$0.1M
Improving the Shuttle Experience (P0689L)	Implementation of tools and processes to deliver real-time bus shuttle information to riders and MBTA staff, as well as expedited communication regarding service disruptions, shuttle service, and addition of rider-facing features to shuttles.	Systemwide	Closeout	\$0.0M	\$0.2M
ON PRESS Digital Flag Stop (P0689N)	Pilot to deploy new hardware and software for a "digital flag stop." This would allow passengers to request a bus to stop in advance and bus operators to bypass empty stops even when the stop is not visible to the operator.	Systemwide	Closeout	\$0.0M	\$0.0M

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Document Scanning and Retrieval (P0695)	Scanning of existing paper-based documentation to store in an electronic format.	Systemwide	Implementation	\$0.0M	\$0.4M
Digital Screens User Interface (P0707)	Creation of functionality and design standards for MBTA's on-system/customer-facing screens to enhance customer experience, ensure consistent information delivery across modes and locations, and create digital advertising opportunities.	Systemwide	Implementation	\$0.0M	\$0.3M
Countdown Signs Installation (P0824)	Installation of up to 30 countdown signs in strategic locations systemwide, subject to engineering viability, to improve service countdown information on platforms, add bus connection information, and add visibility outside of fare control.	Systemwide	Construction	\$0.0M	\$0.6M
PA & Countdown Signs Tactical Upgrade (P0824a)	Assessment of replacement and upgrade strategies for the public announcement and electronic signage systems (PA/ESS) to overhaul end-of-life components, increase maintenance efficiency, reduce costs, and expand vendor options.	Systemwide	Design	\$0.0M	\$0.3M

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## Green Line Extension Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
Green Line Extension (P0095)	Extension of the northern end of the Green Line from Lechmere to Union Square in Somerville and College Avenue in Medford.	Green Line	Construction	\$215.9M	\$2118.6M
Green Line Extension - Vehicles (P0095a)	Procurement of 24 Type 9 light rail vehicles to support the Green Line Extension. All vehicles have been received and are in service as of July 2021.	Green Line	Construction	\$24.1M	\$170.0M

\*Project received new funding or is new in the FY24-28 CIP

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## South Coast Rail Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
South Coast Rail Expansion (P0160)	Extension of Commuter Rail service to Fall River, New Bedford, and Taunton on the South Coast of Massachusetts.	Commuter Rail	Construction	\$270.6M	\$920.8M
South Coast Rail - Coach Procurement (P0160a)	Procurement of additional coaches to support the expansion of Commuter Rail service to the South Coast.	Commuter Rail	Design	\$15.7M	\$69.0M

\*Project received new funding or is new in the FY24-28 CIP

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# Expansion Projects Program

Project	Description	Primary Mode/Line	Current Phase	FY24-28 Programmed Spend	Total Authorized Budget
Silver Line Gateway - Phase 2 (P0496)	Construction of new Chelsea Commuter Rail station with a direct connection to the Silver Line. Includes new platforms,	Silver Line	Closeout	\$0.0M	\$40.6M
Silver Line through Everett (P0868)	Assessment of the feasibility, utility, and service frequency options for a Silver Line extension from Chelsea.	Silver Line	Planning	\$0.0M	\$1.0M
Knowledge Corridor (P0100)	Collaboration with MassDOT to upgrade 50 miles of the Pan Am Southern Connecticut River Line between Springfield and East Northfield with new ties, rail, grade crossings, signal systems, bridge and culvert repairs, and station facilities.	Commuter Rail	Design	\$0.0M	\$122.6M
Fairmount Line Improvements - Blue Hill Ave. Station (P0171)	Construction of Blue Hill Avenue station on the Fairmount Line in the Mattapan neighborhood of Boston. This station opened for passenger service in early 2019.	Commuter Rail	Closeout	\$0.0M	\$26.6M
Fairmount/Indigo Commuter Rail Study (P0800)	Study of options for additional stations on the Fairmount Line. This study resulted in the opening of several new stations, the last of which opened for service in 2019.	Commuter Rail	Closeout	\$0.0M	\$0.4M

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Red-Blue Connector - Planning (P0866)	Extension of the Blue Line from its current terminus at Bowdoin Station to Charles/MGH station, in order to establish a direct connection between the Blue and Red Lines. This project is currently funded for planning and initial design only.	Multimodal	Planning	\$14.1M	\$15.0M

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