

# Massachusetts Bay Transportation Authority

## Supporting the Transportation System of the Future: Intro to the FY25-29 Capital Investment Program

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Audit and Finance Subcommittee Meeting

January 19, 2024

# Overview | Funding Capital Work at the MBTA

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- On an annual basis the MBTA undertakes a robust exercise, through the CIP development process, to estimate the amount of available capital funds and then to program sources to eligible uses.
  - The annual CIP process also supports the annual development of the Transportation Improvement Plan (TIP), a federally required planning document.
- The MBTA's capital program is supported by four main types of funding sources (federal, state, MBTA and reimbursable), each with unique requirements that limit what types of projects they can support, and that often need to be used together to fully advance capital projects.
- The MBTA continues to sustain an unprecedented level of investment in the capital plan, despite this level of capital investment, critical on-going preventative maintenance, state of good repair activities, and several of the MBTA's major capital programs include significant future funding needs.
- Current out-year capital source projections show declining funds available to support capital investments and will produce a growing gap between the costs to maintain and modernize the MBTA system and available funding sources.



# 5-Year MBTA Capital Investment Plan

## What is the Capital Investment Plan (CIP)?

- It is a short-term, financially constrained investment program that includes all our capital expenses over the next five years. It is a rolling plan, updated annually
- It funds the planning, design, construction, maintenance, and acquisition of capital assets across the transit network
- It includes unique, asset-based capital projects to modernize, expand, and increase the reliability of the transit network to support the Authority's priorities and goals

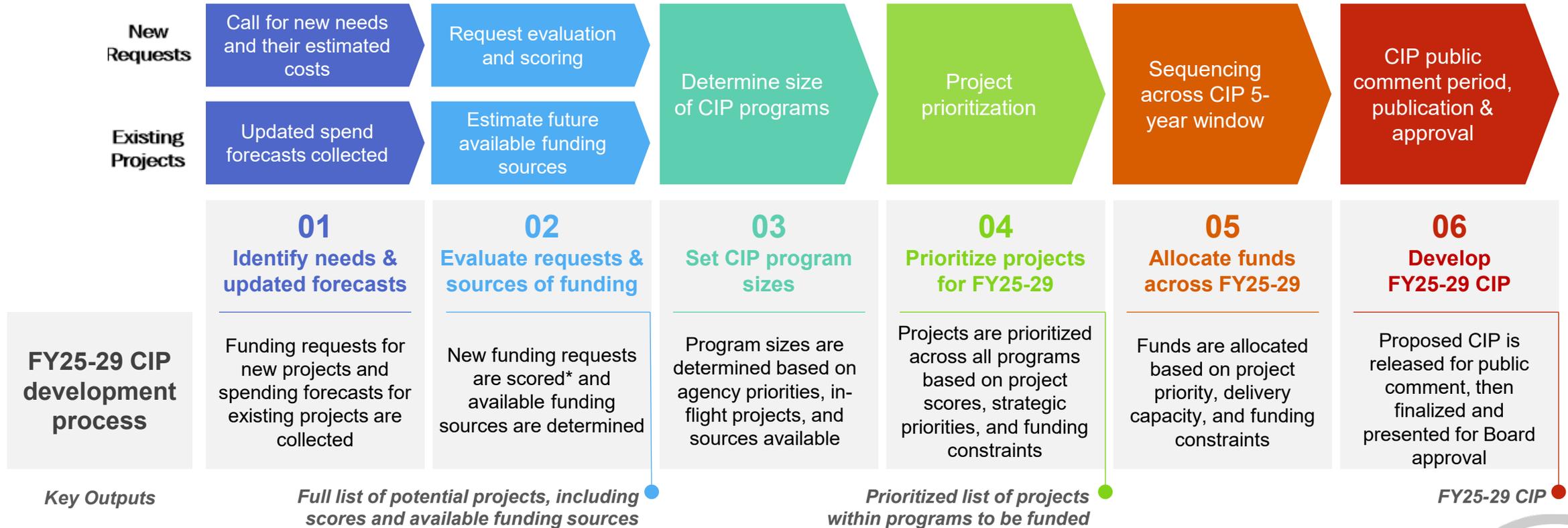
## What is a Capital Project?

- Capital projects are investments or activities related to acquiring, renewing, constructing, improving, or maintaining a capital asset, including project planning and design
- Capital assets are vehicles, facilities, units of equipment, or infrastructure elements with a useful life of more than one year and acquisition cost equal or greater than \$5,000



# CIP Development | 6 Key Steps

The key steps for developing the FY25-29 CIP



\*Requests will be evaluated and scored based on the following criteria: state of good repair, safety and security, service, sustainability and resiliency, equity, economic vitality and financial sustainability.



# FY25-29 CIP | Investment Programs

Asset class strategies are used to inform program sizing and investment priorities

## Reliability and Modernization Programs (7)

Improve the reliability of the system and modernize existing assets

*Focused on State of Good Repair and continued safety of riders and employees*



### 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, transit, and bus 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 the customer experience



### Vehicles

Rehabilitates and replaces revenue fleets and non-revenue vehicle equipment for reliable and safe operations



### Business and Operational Support

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



### Technology and Innovation

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

## Expansion Programs (3)

Target investments to increase system capacity or multimodal options



### 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



### Expansion Projects

Planning and design of targeted expansion projects identified as next priorities



# FY25-29 Scorecard

Scoring has been modified to place a holistic emphasis on Safety and Service Reliability with added emphasis on Asset Condition, Safety and Service Criticality, Operations and Maintenance functions, Climate Vulnerability, and Impact on Ridership.

			Proposed Scoring Weights
Criteria <sup>1</sup>	Description	Sub-criteria ( <b>bold</b> indicate new or updated sub-criteria)	Reliability and Modernization <sup>2</sup>
<b>State of Good Repair, Safety, and Security</b>	The extent to which the project contributes to a state of good repair; alignment with asset management goals; addressing documented or identified safety issues and hazards; and addressing security vulnerabilities and risks	<b>State of Good Repair Criteria (25%)</b> <ul style="list-style-type: none"> <li><b>Asset Condition (5 points)</b></li> <li><b>Safety Criticality (5 points)</b></li> </ul> <b>Safety and Security Criteria (15%)</b> <ul style="list-style-type: none"> <li>Impact on System Safety (7 points)</li> <li>Impact on System Security (3 points)</li> </ul>	<b>40%</b> (50% before)
<b>Service</b>	The extent to which the project contributes to improved service reliability, decreases headways, and improves customer experience and ridership as per the MBTA's Service Delivery Policy	<ul style="list-style-type: none"> <li><b>Operations and Maintenance (4 points)</b></li> <li><b>Impact on Ridership (2 points)</b></li> <li><b>Service Criticality (2 points)</b></li> <li>Impact on Service Reliability (2 points)</li> </ul>	<b>20%</b> (10% before)
<b>Sustainability and Resiliency</b>	The extent to which the project supports sustainability and climate mitigation, adaptation, and resilience, improves air quality and reduces greenhouse gases, and results in a reduction of pollution	<ul style="list-style-type: none"> <li><b>Climate Vulnerability (4 points)</b></li> <li><b>Severe Weather Resiliency (2 points)</b></li> <li>Air Quality and GHG Reduction (2 points)</li> <li><b>Reduce Pollution and/or Natural Resource Consumption (2 points)</b></li> </ul>	<b>15%</b> (10% before)
<b>Equity</b>	The extent to which the project equitably distributes economic, social, and health benefits to residents and removes barriers to accessibility through the MBTA system	<ul style="list-style-type: none"> <li><b>Benefits to Ridership Equity (4 points)</b></li> <li><b>Benefits to Justice 40 Disadvantaged Communities (2 points)</b></li> <li>Benefits to Accessibility (2 points)</li> <li>Benefits to EJ and Title VI Communities (2 points)</li> </ul>	<b>15%</b> (10% before)
<b>Economic Vitality</b>	The extent to which the project supports abundant housing and job growth in the Commonwealth	<ul style="list-style-type: none"> <li>Impact on Communities with Transit-Supportive Land Use (5 points)</li> <li>Impact on Housing Choice Communities (5 point)</li> </ul>	<b>5%</b> (5% before)
<b>Financial Sustainability</b>	The extent to which the project impacts operating costs and revenues and maximizes the return on the public's investment	<ul style="list-style-type: none"> <li>Impact on Operating Costs (5 points)</li> <li>Impact on Operating Revenues (5 points)</li> </ul>	<b>5%</b> (10% before)

<sup>1</sup>Recognizing that the proposed criteria has been aligned with the MBTA's Strategic Plan goals and values, the previous Policy Support criteria, which scored how projects were aligned with the Strategic Plan, has been removed; <sup>2</sup>The totals in parenthesis (% before) will sum up to 95%, with the remaining 5% tied to the removed Policy Support criteria. The proposed weights, highlighted in bold, allocate those 5% to Service

# CIP Funding Sources | Overview



## 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

### Bonds

- General obligation bonds (bond cap) and special obligation/revenue bonds (Rail Enhancement Program) for specific projects such as:
  - South Coast Rail Phase 1, including 16 Commuter Rail coaches
  - Green Line Extension
  - Red Line/Orange Line vehicles and infrastructure improvements
  - Procurement of 64 Bi-Level Commuter Rail Coaches

### Fare Share Funding

- State revenue designated for specific types of transit investments

### FTA Directive Response Funding

- Funding to support the MBTA's response to the FTA Safety Management Inspection



## MBTA sources

### Bonds

- 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



# Funding Source | Federal Formula Funding

	Section 5307 Urbanized Area Formula Grants	Section 5337 State of Good Repair	Section 5339 Bus and Bus Facilities
<b>Description</b>	Funds made available for transit capital and operating assistance in urbanized areas with a population of 50,000 or more.	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 TAM plans.	Funds to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities
<b>Eligible Activities</b>	<p>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.</p> <p>Because Boston is an urbanized area with a population &gt;200,000, the MBTA is not able to use 5307 funds for operating assistance.</p>	<p>SGR projects related to fixed guideway (rail) or bus systems, including rehabilitation or replacement of assets.</p> <p>Does not fund modernization or expansion activities, although some projects which fall under our “modernization” category are eligible for 5337 funds.</p> <p>Section 5307 and 5337 Federal Formula funds can be applied to eligible preventative maintenance expenses on the operating budget.</p>	<p>Capital projects to replace, rehabilitate, and purchase buses, vans, and related equipment, and to construct bus-related facilities.</p> <p>Includes technological changes or innovations to modify low or no emission vehicles or facilities.</p>
<b>Projects currently programmed on the FY24-28 TIP</b>	<ul style="list-style-type: none"> <li>Elevator Program Multiple Location Design (P0075)</li> <li>North Cambridge Bus Facility Retrofit (P0671c)</li> <li>Green Line Type 10 Light Rail Fleet Replacement (P0369)</li> <li>Procurement of Enhanced Electric Hybrid Buses (P0618)</li> <li>Quincy Bus Facility Modernization (P0671a)</li> </ul>	<ul style="list-style-type: none"> <li>Bridges – Design (P0009)</li> <li>Green Line Central Tunnel Track and Signal (P0591)</li> <li>Newton Highlands Green Line Station Accessibility Project (P0129)</li> <li>Power Systems Resiliency Program (P0705)</li> <li>SCADA Equipment Update (P1213)</li> </ul>	<ul style="list-style-type: none"> <li>Hybrid and CNG Bus Overhaul (P0911)</li> </ul>
<b>Annual Apportionment (FFY24 Estimates)</b>	<p>\$193.6M in FFY24</p> <p>The entire Boston region receives more than this annually as funds are split between the MBTA and other RTA’s within the Boston UZA.</p>	<p>\$232.5M in FFY24</p> <p>Funds are allocated based on revenue miles and route miles reported to NTD.</p>	<p>\$6.1M in FFY24</p>



# Funding Sources | Federal Discretionary Grants

- Since the passage of BIL, the MBTA has been successful in 16 grant applications, winning \$252.7 million in discretionary grant funding.
- The MBTA continues to aggressively pursue eligible discretionary funding opportunities in the Bipartisan Infrastructure Law (BIL) by (1) proactively identify grant opportunities, (2) identify a pipeline of competitive projects, and (3) develop and submit strong applications.
- The MBTA strives to pursue funding for projects that align with the MBTA’s stated goals, strategic mission, and the 5-year CIP which is the MBTA’s statement of priorities for capital investments.

## Notable Grant Awards

### Bus Electrification

- \$116M awarded for the purchase of battery-electric buses
- \$5M awarded to support charging infrastructure at the new Quincy Bus Facility
- \$127k awarded for On-Route BEB Charging (Ashmont)

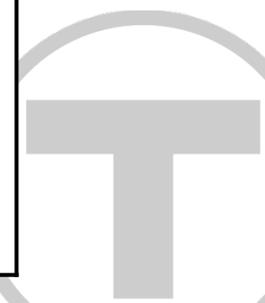
### System Accessibility and Passenger Facilities

- \$66.6M awarded for the Symphony Station Accessibility Improvements Project
- \$6.6M awarded for the Hingham Ferry Dock Modifications project

### System Safety

- \$6.9M through the DHS/FEMA Transit Security Grant Program
- \$100K awarded for the MBTA’s Suicide Trespass Prevention Project
- \$20K awarded for the South Coast Rail Transit Safety Education Project through Operation Lifesaver, Inc.

Summary of Federal Grant Applications Submitted SFY22-24		Amount Awarded	Awards Received	Unsuccessful Applications	Submitted Applications <i>(pending results)</i>	Total Applications Submitted:  41
	SFY22	\$175.6 M	9	9	-	
	SFY23	\$76.8 M	6	10	2	
	SFY24	\$327,370	1	1	3	
	<b>TOTAL</b>	<b>\$252.7 M</b>	<b>16</b>	<b>20</b>	<b>5</b>	



# Funding Sources | State Funding

- Historically, the Commonwealth has provided the MBTA funding tied to specific uses, which in most cases are large infrastructure projects like Green Line Extension or South Coast Rail, or to significant agency initiatives such as FTA special directive response.
- The FY25-29 CIP will reflect the following Commonwealth sources:

## Bond Cap/REP/Other Agreements

### Funding Source Description

- State Bond Cap** refers to general obligation bonds backed by the Commonwealth's revenues, which currently provide a small amount of funding to the MBTA
- The **Rail Enhancement Program (REP)** provides for the issuance of special obligation bonds to fund MBTA capital expenditures and for other rail improvements in the Commonwealth.
- Both sources are appropriated through a Transportation Bond Bill, and allocated to specific projects through the State's Capital Budget process, which is managed by A&F
- Other Inter-Agency Service Agreement (ISA's) have been established with the Commonwealth to provide funds to support other projects, including projects resulting from state earmarks

### Current Uses

- REP funds support major initiatives such as Red Line/Orange Line Infrastructure Improvements at Cabot and Wellington Yards, Red/Orange Line Vehicle Procurements, South Coast Rail, and GLX, as well as other smaller projects.

## FTA Directive Response Funding

### Funding Source Description

- The Commonwealth has committed to providing the MBTA a total of \$378M to support the Authority's response to the FTA Safety Management Inspection and subsequent special directives:
  - \$266 million from the State's FY23 budget
  - \$112 million from the FY22 Closeout Supplemental Budget/Economic Development Bill
- This funding is meant to support both operating and capital expenses related to FTA directive response

### Current Uses

- Funding is currently tied to specifically identified scopes of work developed to enact Corrective Action Plans (CAPs)

## Fair Share Funding

### Funding Source Description

- The "Fair Share Amendment" was approved in November 2022 and applies a new 4% surtax on income above \$1M, with revenue specifically dedicated to education and transportation
- In FY24, the MBTA received a portion of this revenue designated for specific types of infrastructure improvements

### Current Uses

- Per the FY24 Commonwealth budget, the MBTA's portion of Fair Share funding is required to be spent on the following areas:
  - Bridge Repair, Rehabilitation and Replacement
  - Station Improvements and Accessibility
  - Red-Blue Connector: Advancing to 30% design
  - Commuter Rail System Infrastructure Improvements
  - Track and Signal Improvements on the Rapid Transit Network



# Funding Sources | MBTA Funding

- MBTA-generated sources account for almost half of the five-year CIP, based on FY24-28 CIP programmed amounts and come from a variety of sources, including:

## MBTA Bonds/Loans

### MBTA Revenue Bonds

- The MBTA issues its own bonds, secured against guaranteed sales tax revenue, to fund almost half of the five-year CIP
- MBTA bond funding can be used on any *capital* project at the authority's discretion, and can also be used to provide matching funds for federal grants (discretionary or formula funds)
- The FY25-29 CIP is expected to assume an annual issuance of \$650M in MBTA bonds per year, reflecting an increase from the FY24-28 CIP.
- Debt service on revenue bonds is paid out of the operating budget – therefore the higher the level of bond issuance, the greater the impact on the operating budget

### Loans

- The MBTA is eligible to seek and has received loans from the Build America Bureau (through the Railroad Rehabilitation & Improvement Financing (RRIF) and Transportation Infrastructure Finance and Innovation Act (TIFIA) programs) which can have more favorable terms than loans available through the private market
- Loans currently support PTC, ATC, and Fiber Optic Resiliency projects, and may be used to support additional projects in the future

## Operating Budget Transfer

- Current FY25-29 CIP source assumptions are no longer expected to include \$60M/year transferred from the operating budget to the capital budget, due to operating budget needs and constraints.
  - The MBTA anticipates increasing its bonding by \$60M to maintain CIP funding levels.
- These funds had previously been used in lieu of MBTA revenue bonds, either to fund capital projects or as local match for federally funded projects

## Capital Maintenance Fund (CMF)

- This is a limited fund held by the authority to be used at the discretion of the CFO
- This fund is generally used only for urgent/emergency needs that arise during the fiscal year
- CMF funding is not allocated during the annual CIP development process but is rather distributed via in-year CIP changes to address urgent needs

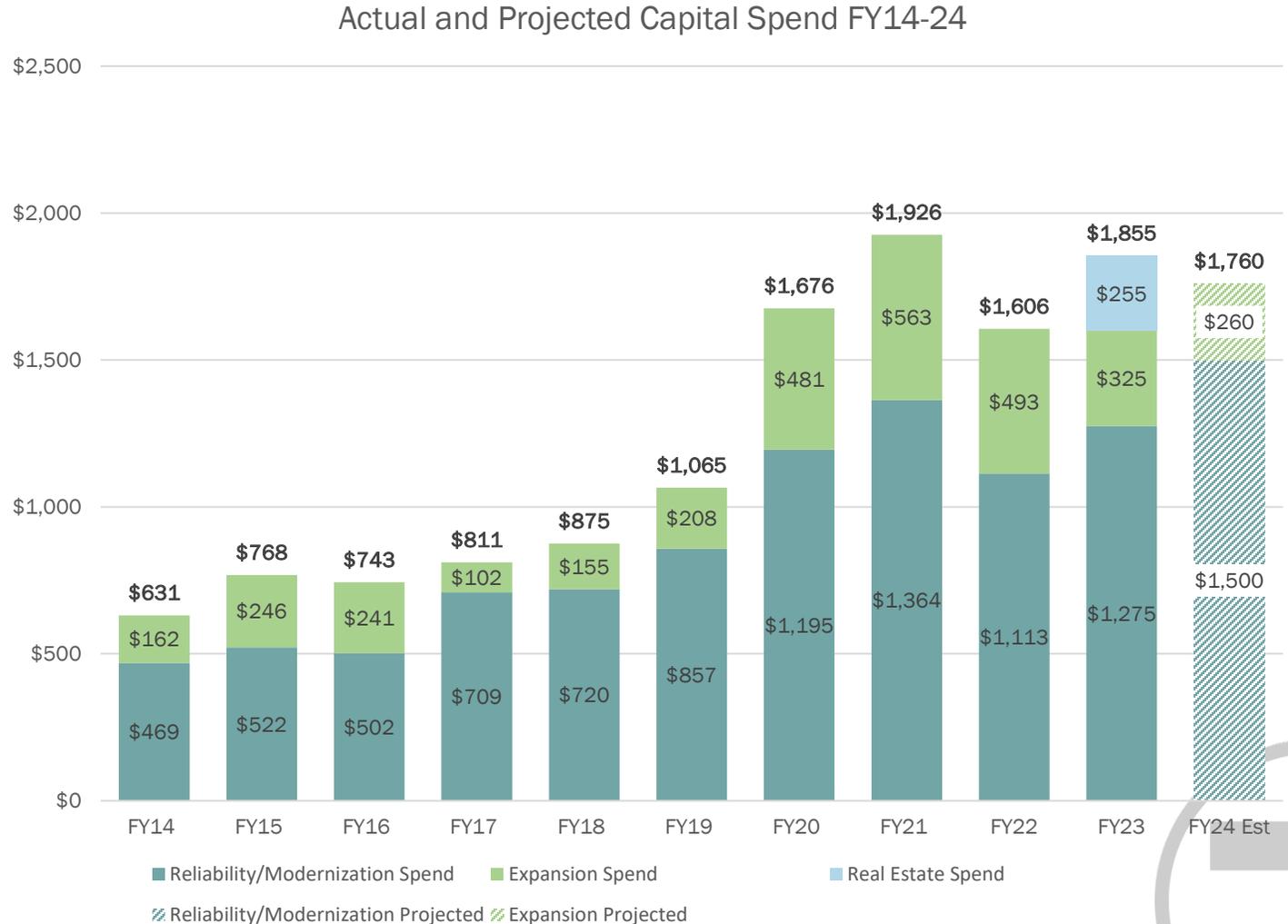


# Capital Sources | Characteristics

Funding Type	Funding Source	Limited to Specific Projects	Assumptions that Drive Available Amount Per Year	Funding Source Behavior: Available versus Programmed
Federal	Formula	Yes, once obligated	Established in Federal legislation	Available in the Federal Fiscal Year they are appropriated to the MBTA, then programmed and expended over subsequent years
	Discretionary	Yes	Aligns with awarded competitive funding grants	After award, programmed to align with project cashflows
State	REP and Bond Cap	Yes	Aligns with specific project cashflows	Programmed to align with project cashflows
	FTA Directive	Yes	Aligns with cashflows for spending related to FTA special directive response	Programmed to align with project cashflows
	Fair Share	Yes	Allocated to specific project types as identified through annual state budget process	Programmed to align with project cashflows
MBTA	Bonds	No	Aligned with the MBTA's bonding capacity and coverage ratio. Currently set at \$650 million per year through the five-year window	Funds are programmed in the year they are made available, but roll over if not spent
	Loans (TIFIA and RRIF)	Yes		Aligned with project cashflows
	Operating Transfer	No	Based on committed operating budget transfers (FY25-29 is no longer expected to assume \$60M/year, instead the MBTA's bonding capacity has been increased)	Funds are programmed in the year they are made available, but roll over if not spent
Reimbursable	Various	Yes	Based on agreements with outside entities	Programmed based on agreements and aligned with project cashflows

# Historical Capital Spend

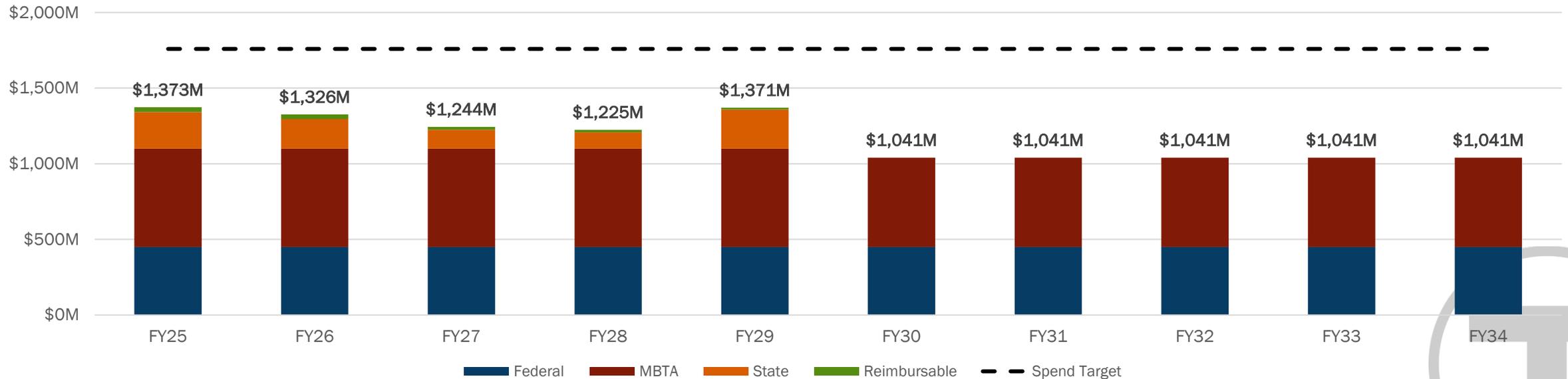
- The MBTA continues to sustain an unprecedented level of investment focused on the safety and reliability of our system, the modernization of our assets and the strategic expansion of our network.
- Total capital spend between FY20 and FY23 was more than double the spend in the preceding four-year period (FY16 to 19)
- FY23 capital spending came in a \$1,855M, which includes \$255M in Real Estate spending related to the acquisition of Widett Circle
- In FY24 the MBTA has once set a \$1.76B spend target:
  - \$1,500M in Reliability/Modernization
  - \$260M in Expansion



# Declining Capital Sources for SGR | 10 Year Outlook

- Current out-year source assumptions reflect a downward trend driven by an absence of state funds (as existing sources, which are tied to specific projects, continue to be drawn down), and a relatively flat level of MBTA revenue bond issuance (assumes \$650M annually from FY25-FY29, and \$590M beyond FY29, which accounts for the removal of the annual \$60M annual operating budget transfer in the FY25-29 CIP).
- The FY24-28 CIP included \$9.7B in programmed spending; given current projections of out-year funding availability, future capital plans may be roughly half that size (\$5.2M over 5-years). This level would be far below what is necessary to support an annual spend target of roughly \$1.76B - \$2B (which is roughly the spend levels the MBTA has achieved in recent years).
- The chart below represents the year in which sources become available to support reliability and modernization efforts, not necessarily the year in which funding will be spent

MBTA Sources When Available - FY25-34



# Key Milestones for CIP Development

*\*\*As details are refined, the following key milestones will be updated to incorporate scheduled MBTA Subcommittee and Board Meetings*

September

- CIP kick-off and call for projects, CIP information sessions held with MBTA departments

October

- Project proposals due via CIP intake process

November

- Review of CIP requests and scoring of all CIP requests by multidisciplinary evaluation teams
- Develop initial estimate of capital funding sources using the outcome of the Q2 cashflow exercise

December

- Program sizing with leadership, asset condition incorporated to help set agency investment priorities

January

- **Prioritization of project proposals, based on scoring and evaluation**
- Refine CIP public engagement approach with MBTA Community Outreach

February

- Development of initial project list, including new projects for funding
- Refine sources and sequencing for draft project list

March

- **Present proposed FY25-29 CIP to the MBTA Board and release for public comment**
- Hold public comment period, host public meetings to collect feedback on the proposed plan

April

- Incorporate any CIP changes in response to public comments; submit draft plan to MassDOT
- Release 5-year TIP to the Boston Metropolitan Planning Organization (MPO)

May

- **Present final FY25-29 CIP to MBTA Board of Directors for approval**
- MassDOT-wide CIP presented to MassDOT Board and vote to release for public comment

June

- MassDOT Board vote to approve final MassDOT-wide CIP

