
FY2020-2024 CIP update CPC presentation

February 11, 2019

Overview

The 2020-2024 CIP is the fourth rollover of the combined MassDOT/MBTA 5-year capital plan

- **CIP Milestones**
 - Schedule for revisions to CIP
- **MassDOT and MBTA Sources update**
 - Preliminary sources and assumptions
- **CIP Program Sizes**
 - Highlights of proposed program sizes
 - Comparison to 2019-2023 program sizes
 - Discussion and guidance
- **Discussion and Next Steps**

Milestones: How will the CIP be developed?

January milestones

- **Program sizes**
 - Divisions proposed program sizes/new programs
- **Project scoring**
 - Divisions score projects
- **Funding sources**
 - Develop preliminary sources
 - ANF guidance on bond cap targets
- **Stakeholder Engagement**
 - Phase 1 public outreach continues

Proposed Board engagement:

- CPC meeting
- **Presentation on CIP milestones overview**

February milestones

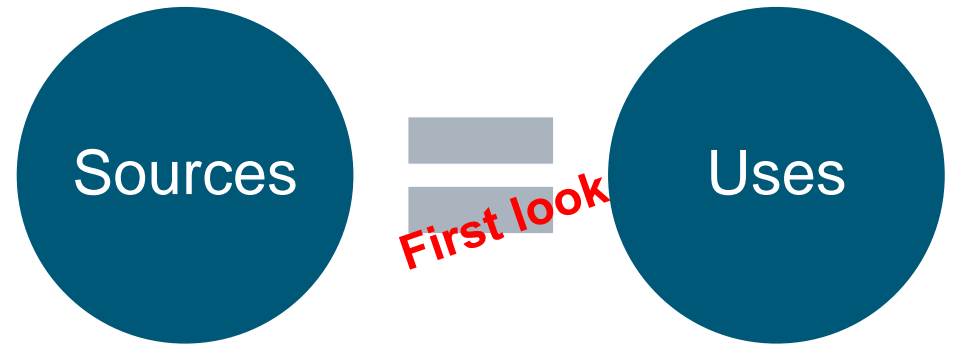
- **Project selection**
 - Divisions fill programs with proposed projects
- **Project readiness**
 - Divisions hold “Readiness Days” to help identify appropriate year(s) for project funding
- **Refine preliminary sources**
- **Stakeholder engagement continues**

Proposed Board engagement:

- CPC and Joint Boards meetings
- **Presentation on draft preliminary Sources and preliminary CIP Program sizes**

March milestones

- **Obligations / Cash Flows**
 - Assess proposed programs and projects within context of fiscal constraints and cash flows
- **Finalize program sizes**
- **Initial drafting**
- **Stakeholder engagement continues**



April milestones

- **Quality controls**
 - QA/QC alignment of proposed projects / eligible funding to CIP programs
 - Draft CIP document
- **Obligations / Cash Flows**
 - Run final fiscal constraint check before draft CIP is sent to Board(s) in May
 - A&F and MassDOT staff coordinate on bond cap and other cash equivalents
- **Draft TIPs released by MPOs**
 - 21 day public comment period

Proposed Board engagement:

- **CPC meeting**
 - Sources & uses
 - Engagement update
 - Readiness update



May milestones

- Draft CIP targeted for release
 - Joint Boards consider the release of the CIP for public comment
 - Public meetings across state (Phase 2 public engagement)
- Draft STIP released
 - 21 day public comment period

June milestone

- TIPs and STIP are endorsed after public comment period
 - Final STIP sent to FHWA and FTA
- Final CIP consideration
 - Following public comment and revisions, Joint Boards consider CIP for approval

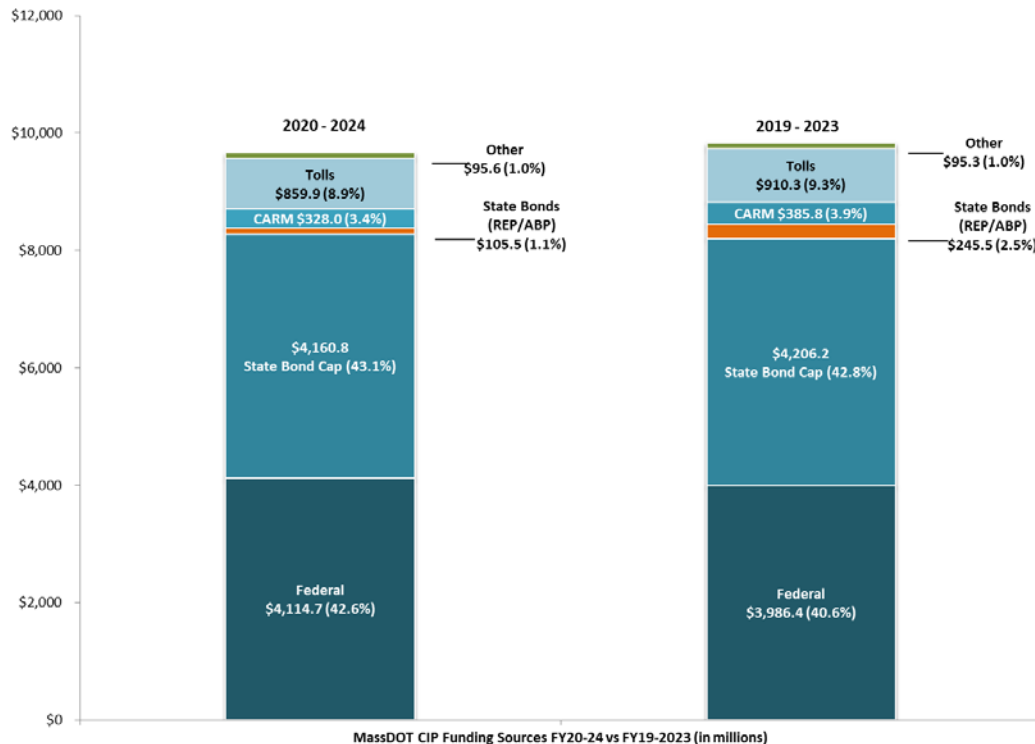
Proposed 2020-2024 CIP Preliminary Sources

MassDOT

MBTA

2020-2024 CIP Estimated Funding Sources for MassDOT

FY20-24 CIP Funding Sources: Estimated ~\$9.7B available for the next five year plan, compared to \$9.8B in FY19-23 plan



- **Sources highlights:**
- **Federal funds** continue to be the largest funding source for MassDOT capital
 - Assumes Fast Act funding levels continue for 2023 and 2024 and reflects anticipated federal reimbursements
- **State Bond Cap** is the second largest funding source and estimates are based on preliminary guidance from ANF
 - Bond cap funds for Harbor Dredging (same as last plan)
 - Funding available for SCR pending finance plan development
- **Accelerated Bridge Program (ABP)** funds trailing off reflecting completion of program
- **Rail Enhancement Program (REP)** funds tied to legacy projects nearing completion
- **Toll** pay-go capital funds based on post AET performance, projected revenues/expenses (tied to operating budget) and available reserves
- **Other** funding sources include local and private (railroads) contributions, and third party reimbursements

2020-2024 CIP Funding Sources for MassDOT: Risks

- **Federal Funds**

- Current surface transportation authorization (“FAST Act”) expires on September 30, 2020
- CIP sources assume FAST Act funding levels continue and incorporates an increase of 2.2% for FFY 2023 and FFY 2024 for FHWA funds
- CIP sources assume Congress will reauthorize funding for FHWA and FTA

- **Pay-Go Capital Funds**

- Preliminary estimates on funds available after operating expenses and may be adjusted during the development of the final operating budget for FY 2020
- Toll revenues based on projections provided by traffic revenue consultant with projected adjustment for accounts receivable collections

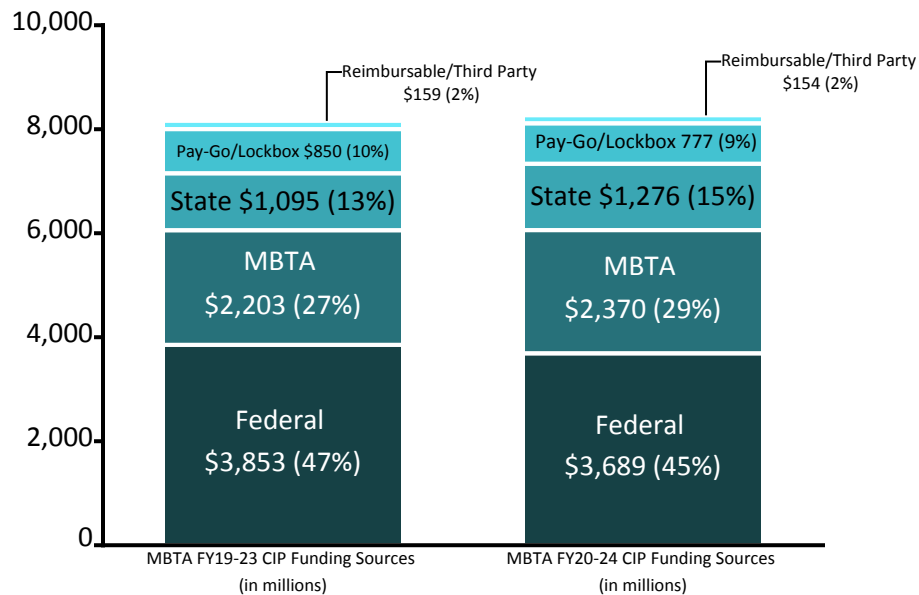
- **Bond Cap Funds**

- Bond cap sources based on preliminary estimates provided by the Executive Office of Administration and Finance and are subject to change pending finalization of the Commonwealth’s capital plan for 2020-2024

2020-2024 CIP Estimated Funding Sources for MBTA

FY20-24 CIP Funding Sources: Estimated ~\$8.3B available for the next five year plan, compared to \$8.2B in FY19-23 plan

(NOTE: not all available funds expended in 5-year plan because of project contingency and other post-FY24 costs)



Sources highlights:

- **Federal** funds continue to be the single largest source of capital for the MBTA
 - GLX Full Funding Grant Agreement: \$996M overall; \$872M in FY20-24
 - FTA Funds: \$2.7B in FY20-24 assumes annual increases in formula allotment
- **MBTA Bonds**, including Sustainability Bonds, support the 20% match for Federal projects, as well as MBTA-only funded projects
- **State** funds include Rail Enhancement Program special obligation bonds for GLX, Red Line/Orange Line improvements, and other projects
- **Pay-Go/Lockbox** reflects an assumption of \$150M/year, plus prior year carryover. Includes state assistance via bond cap and MBTA funds
- **Other** funding sources include municipal contributions and other reimbursements

2020-2024 CIP Funding Sources for MBTA: Risks

- **Federal Funds**

- Current surface transportation authorization (“FAST Act”) expires on September 30, 2020
- Recent Congressional Budget Office report estimates that the transit account within the Highway Trust Fund (HTF) will be exhausted by 2021
- CIP sources assume Congress will take action to reauthorize and replenish HTF

- **MBTA Bonds**

- Assumes substantial revenue bond issuance to support the capital program
- Contingent on operating budget ability to support debt service
- Market variables (interest rates, credit spreads, etc.) will impact the cost of new debt

- **Pay-Go/Lockbox**

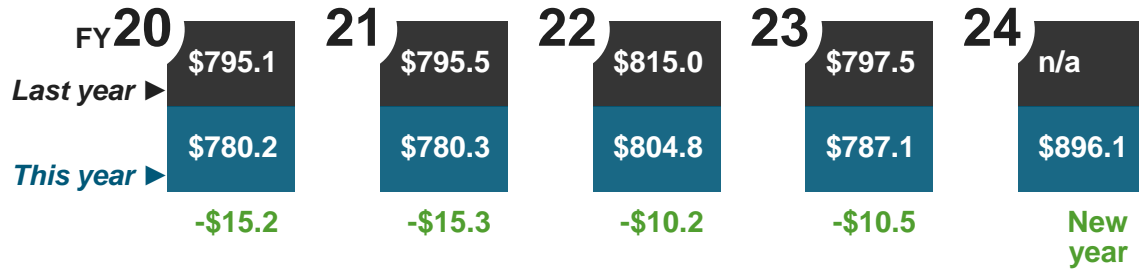
- Assumes continued operating budget discipline to reinvest savings in capital
- Assumes continued State support via \$60 million in bond cap (in lieu of operating assistance)

Bond Cap Comparison (2020-2024 vs 2019-2023)

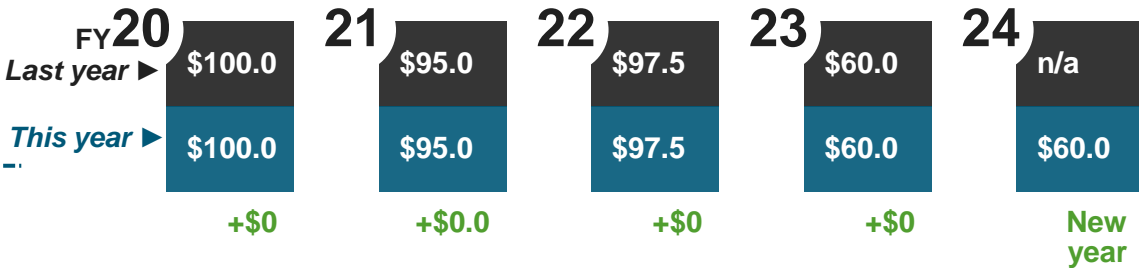
Changes from year to year

- MassDOT Bond Cap
 - ANF has provided preliminary numbers but Commonwealth capital planning is still in early stages
 - Program sizes and available bond cap by fiscal year are under review for fiscal constraint
 - Adjustments likely needed to manage to annual ANF bond cap targets
 - Requests for funding to support existing programs (Aeronautics, Highway, & Transit) subject to further review and discussion and fiscal constraint analysis

Year to year comparison – MassDOT Preliminary Bond Cap



Year to year comparison – MBTA + Commonwealth



FY2020 impacts on source

- Preliminary funding for MassDOT for 2020 less than last CIP
 - No additional funds available to allocate to requests to increase program sizes in 2020
 - Discuss program sizes and budgets by FY within context of funds available (i.e. bond cap targets provided by ANF)
- Funding for Commonwealth Projects reflects no change in FY20-FY24 funding levels from last plan
 - \$112.5 million allocated to Harbor Dredging
- MBTA funding remains at \$60 million/year
 - \$300 million total over 2020-2024

Overall impacts on 2020-2024 update

- An additional \$68.6 million in bond cap allocated to MassDOT over the five years
 - Amounts in 2020–2023 are less than last year's bond cap targets which is offset by an increase in 2024
- Funding for SCR under discussion with ANF and will be carried separately from MassDOT target
- \$200 million/year included for Chapter 90

2020-2024 CIP Proposed Program Sizes

MassDOT

MBTA

Comparison of Program Sizes 2019-2023 vs 2020-2024 (\$millions)

Division	2019-2023*	2020-2024*	Increase / (Decrease)*
Aeronautics	\$294.3M	\$294.3M	\$ -
Highway**	\$6,602.6M	\$6,998.0M	\$395.5M
Information Technology	\$103.2M	\$102.0M	(\$1.2M)
MBTA	\$8,000.4M	\$8,085.0M	\$84.6M
Rail***	\$450.7M	\$452.2M	\$1.5M
Registry of Motor Vehicles	\$68.6M	\$47.2M	(\$21.4M)
Transit	\$212.6M	\$215.1M	\$2.6M
Chapter 90	\$1,000.0M	\$1,000.0M	\$ -
Commonwealth Projects	\$147.5M	\$112.5M	(\$35.0M)
TOTAL	\$16,879.9M	\$17,306.3M	\$426.4M

* Totals may not add due to rounding

** Highway program sizes include an allocation of 18% for program development/program management costs related to delivery of the capital program. Includes \$100 million for two regranting programs (Municipal Bridge and Complete Streets); includes Allston early action design only since finance plan is under development

*** Does not include SCR costs or funding; finance plan is under development.

Draft program size highlights

Aeronautics - no change

- **Reliability** – \$78.3 million additional for Airport Pavement & \$5.4 million additional for Airport Capital Improvement Programs (**additional requests to be discussed further**)
- **Modernization** - \$5.3 million additional for Airport Administration Buildings plus \$28.5 million proposed for new programs (two Drone programs & a weather technology program) (**additional requests to be discussed further**)

2019-2023 = \$294.3 million

2020-2024 = \$294.3 million

IT - \$1.2M decrease

- **Reliability** –\$5.5 million increase for Cyber / Information Security and \$11.8 million decrease for Asset Management
- **Modernization** - \$5.6 million increase for Enterprise, BPR and Automation (includes Asset Management) and \$5.0 million increase for Workforce Productivity
- No significant changes to IT; resized programs to address Division needs, shifted resources among programs and EOTSS guidance on cyber/information security

2019-2023 = \$103.2 million

2020-2024 = \$102.0 million

Highway* - \$395.5M increase

- 2020-2024 Programs sizes based on 2019-2023 sizes plus an allocation of 18% to cover program management/project delivery costs (e.g. payroll, design, ROW, environmental, bridge inspection, etc.)
- Includes \$16M for Allston Multi-Modal Program early action design and permitting (finance plan under development and program size will be updated)
- Complete Streets & Municipal Bridge carried as regranting programs

2019-2023 = \$6,602.6 million

2020-2024 = \$6,998.0 million

MBTA - \$84.7M increase

- Program sizes incorporate Transit Asset Management (TAM) plan data and findings and first set of Focus40 “next priorities”
- Prior CIP program sizes realigned/reallocated to fund new Green Line Transformation program (\$954M)

2019-2023 = \$8,000.4 million

2020-2024 = \$8,085.0 million

*Chapter 90 included separately

Rail - \$1.5M increase

- **No significant changes to existing Reliability & Modernization program sizes** - \$8.1 million decrease; new bridge modernization program proposed at \$9.6 million to address NECR commitments
- Final finance plan for SCR pending completion of independent review
 - SCR program (expansion) will increase to reflect final consensus on costs and finance plan

2019-2023 = \$450.7 million

2020-2024 = \$452.2 million

Transit - \$2.0 million increase

- **Reliability** - \$9.875 million for a new Workforce Transportation Options grant program (replaces MassRides); \$10.7 million requested to support electrification of RTA fleet (**additional requests to be discussed further**)
- **Modernization** - \$10.2 million to address modernization efforts to RTA facilities to accommodate electrification of fleet** (**additional requests to be discussed further**)

2019-2023 = \$212.6 million

2020-2024 = \$215.1 million

**Program size should be informed by Electric Fleet Vehicle Study which is expected to be complete by February 2019; pursuing the availability of other state funds to support this request.

RMV - \$19.4M decrease

- **Major change is in Modernization** - \$3-\$5 million additional for Customer Service Modernization to accommodate potential new RMV facility on Cape Cod; \$26.4 million decrease for ATLAS (reflects progress towards project completion)

2019-2023 = \$68.6 million

2020-2024 = \$49.2 million

Summary

Reliability
49%

- 2019-2023 = \$8,864.8 million
- 2020-2024 = \$8,502.0

Modernization
33%

- 2019-2023 = \$4,955.8
- 2020-2024 = \$5,670.6

Expansion*
12%

- 2019-2023 = \$1,913.7
- 2020-2024 = \$2,083.3

Total**
w/ Ch. 90 6%

- 2019-2023 = \$16,941.8
- 2020-2024 = \$17,368.5

*Includes Bicycle/Pedestrian Modal Implementation

**Includes Chapter 90 and Commonwealth Projects but excludes Planning & Shared Services; totals may not add due to rounding.

Municipal Partnership / Regranting Programs

- Five programs in 2020-2024 CIP

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Description
Highway / Complete Streets	\$50.0M	\$50.0M	\$ -	This program rewards communities that demonstrate a commitment to embedding Complete Streets in their policies and practices by providing them with technical assistance and funding. This program improves the condition and accessibility of state owned sidewalks.
Highway / Municipal Bridge	\$50.0M	\$50.0M	\$ -	This program assists municipalities in repairing and replacing town owned bridges with a span length of less than 20 feet.
Rail / Industrial Rail Access Program (IRAP)	\$15.0M	\$15.0M	\$ -	This program makes investments in private sector rail lines to leverage private investment that will increase freight rail usage or will modernize an active line to increase the utility to customers.
Transit / Mobility Assistance Program (MAP)	\$50.1M	\$49.5M	(\$0.6M)	This program purchases vans & related equipment used to provide transportation for elderly people and individuals with disabilities of all ages; uses funds from Councils on Aging, RTAs and non-profits along with FTA funds.
Transit / Workforce Transportation Options	\$0.0M	\$9.875M	\$9.875M	Competitive grant program that uses federal CMAQ funds to leverage private and other non-state funds to improve options for workforce transportation. Replaces MassRides program which ends at the end of FY19.
	\$165.1M	174.375M	\$9.275M	

Aeronautics Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Reason
Aeronautics / Airport Pavement	\$123.3	\$123.3M	\$ -	Additional funding to bring current PCI (68) toward a goal of 70 over the next 15 years; funding levels include ancillary costs i.e., design, lighting, signage, pavement marking, construction monitoring as well as \$15 million for a full depth reconstruction of the terminal ramp area at New Bedford airport - \$78.3M request
Aeronautics / Airport Capital Improvement	\$146.0M	\$146.0M	\$ -	Additional funding to establish an Airport Compliance & Emergency Fund to address critical issues identified during annual inspection process and/or damage incurred after major storm or weather event. - \$5.4M request
Aeronautics / Airport Administration Buildings	\$25.0M	\$25.0M	\$ -	Reflects additional funding since the cost of materials and bid results have increased by approximately 30% in the past year due to a healthy economy and new tariffs on steel raising construction costs. - \$5.3M request
Aeronautics / Drone Information Systems Program (New)	\$0.0M	TBD	TBD	New program to collect, analyze, store and disseminate data on infrastructure, document work sites, manage assets and respond to incidents, etc. using unmanned aircraft systems (drones) - \$17M request
Aeronautics / Drone Environmental Resiliency Program (New)	\$0.0M	TBD	TBD	New program to utilize drones to assess the resiliency of our transportation infrastructure with respect to climate change. - \$10M request
Aeronautics / Advanced Weather Systems (new)	\$0.0M	TBD	TBD	New program to access new weather tracking information & forecasting via an advanced technology (cloud-based) platform in lieu of building new weather tracking stations. - \$1.5M request
Grand Total	\$294.3M	\$294.3M	\$ -	

Highway Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Discussion
Highway / Bridge	\$2,281.7M	\$2,393.3M	\$111.6M	Program Size based on FY19-FY23 program sizes with an assumed 18% allocation to cover program management/development costs. Final program size does not reflect bond bill additional funding assumptions to address TAMP and other performance metrics.
Highway / Equipment	\$75.0M	\$133.4M	\$53.4M	Program size based on identified needs in the Districts.
Highway / Facilities	\$181.7M	\$190.6M	\$8.9M	Assumes FY19-FY23 Program Size with an assumed allocation of 18% to cover program management/development costs.
Highway / Interstate Pavement	\$316.9M	\$332.4M	\$15.5M	Program Size based on FY19-FY23 program sizes with an assumed 18% allocation to cover program management/development costs. Final program size does not reflect bond bill additional funding assumptions to address TAMP and other performance metrics.
Highway / Municipal Bridge	\$50.0M	\$50.0M	\$ -	No change
Highway / Non-Interstate Pavement	\$611.9M	\$641.8M	\$29.4M	Discussion point for meeting on if the program should be sized to reflect the \$150M proposed within the TBB.
Highway / Roadway Improvements	\$168.8M	\$177.0M	\$8.3M	Program Size based on FY19-FY23 program sizes with an assumed 18% allocation to cover program management/development costs. Final program size does not reflect bond bill additional funding assumptions to address TAMP and other performance metrics.

Highway Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Discussion
Highway / Safety Improvements	\$265.3M	\$278.2M	\$13.0M	Program Size based on FY19-FY23 program sizes with an assumed 18% allocation to cover program management/development costs.
Highway / Tunnels	\$393.8M	\$413.0M	\$19.3M	Program based on current portfolio of projects. Discussion for sizing - findings of the Triennial and capacity for additional investments, including Sumner and Pru Tunnels.
Subtotal Reliability	\$4,345.0M	\$4,659.7M	\$314.7M	
Highway ADA Retrofits	\$21.8M	\$22.9M	\$1.1M	Program Size based on FY19-FY23 program sizes with an assumed 18% allocation to cover program management/development costs.
Highway / Allston Multi-modal	\$16.0M	\$16.0M	\$ -	Final program size for Allston will be determined once cost estimates and finance plan are developed for the program.
Highway / Complete Streets	\$50.0M	\$50.0M	\$ -	Discussion point on appropriate program size. Should we include the \$70M discussed in the TBB meetings (\$50M from EEA bond bill and \$20M proposed in the TBB)?
Highway / Intelligent Transportation Systems	\$81.6M	\$85.6M	\$4.0M	Program Size based on FY19-FY23 program sizes with an assumed 18% allocation to cover program management/development costs.
Highway / Intersection Improvements	\$180.8M	\$189.6M	\$8.8M	Program Size based on FY19-FY23 program sizes with an assumed 18% allocation to cover program management/development costs.
Highway / Roadway Reconstruction	\$1,418.6M	\$1,488.0M	\$69.4M	Program Size based on FY19-FY23 program sizes with an assumed 18% allocation to cover program management/development costs.
Subtotal Modernization	\$1,768.8M	\$1,852.1M	\$83.3M	



Highway Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Discussion
Highway / Bicycle and Pedestrian	\$180.6M	\$323.2M	\$15.1M	Size based on current portfolio of projects within the SFY2019 CIP and FFY2019 STIP and includes 18% allocation for program management/development costs.
Highway / Capacity	\$308.1M	\$213.1M	\$32.5M	Program size reflects the legacy projects that are winding down and includes 18% allocation for program management/development costs. No new commitments proposed at this time.
Subtotal Expansion	\$488.7M	\$536.3M	\$47.6M	
Total Highway	\$6,602.5M	\$6,998.0M	\$395.5M	

Highway Division – Program Management/Program Development

- Costs associated with developing and delivering capital projects (~ 18%) include not only construction and capital maintenance but also design, engineering, environmental, permitting, inspections, right-of-way, asset management, etc.

Program Management / Development	Description	% of \$1B Project Development Program
Asset Management	Costs associated with collecting data on every asset's location, condition and history	0.3%
Bridges and Structures	Design, engineering, and inspection costs associated with bridges and supporting structures	3.1%
Environmental Services	Includes costs associated with environmental permitting and compliance	0.7%
Highway Safety	Costs	0.3%
Project Controls	Costs associated with the implementation of schedule and cost control during the design and construction of projects	0.1%
Project Management - Design	Costs associated with project design and engineering development	7.1%
Right of Way	Relocation and ROW costs associated with individual projects prior to advertising	0.7%
Utility Agreements	Costs incurred to relocate/address various utilities	1.1%
Federal Aid Payroll / Pay-Go Capital	Costs for highway personnel that work on FHWA funded projects (80% reimbursed with federal funds) and Toll funded capital projects	4.9%



IT Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Discussion
IT / Asset Management	\$15.5M	\$3.8M	(\$11.8M)	Program previously contained Division-specific asset management projects driven by the business. The projects and funding have been moved into a more appropriate program – Enterprise, BPR, and Automation.
IT / Desktop Experience	\$9.1M	\$10.5M	\$1.4M	Program costs increase to allow for institution of best practice, state of good repair policies for end user hardware and software replacement and integration.
IT / Digital Infrastructure	\$19.9M	\$18.2M	(\$1.7M)	Slight decrease to shift focus on Cyber / Information Security investments.
IT / Cyber/Information Security	\$15.0M	\$20.5M	\$5.5M	Increase due to EOTSS mandates and directly correlates to improvement in security oriented foundational infrastructure, firewalls, web gateways and other cloud investments.
IT / Customer Digital Experience	\$10.0M	\$4.7M	(\$5.3M)	Program costs decreased to lower costs than anticipated to move to the Mas.gov platform and increased investment needs in other IT modernization programs.
IT / Enterprise/BPR/Automation	\$19.5M	\$25.1M	\$5.6M	Program reflects specific application and business process improvement needs as identified by MassDOT Divisions and needs for our critical enterprise systems.
IT / Workforce Productivity	\$14.2M	\$19.3M	\$5.0M	Program reflects specific needs related to providing better tools to shared services, e.g. HR, Finance, Legal, Planning, etc.
Grand Total	\$103.2M	\$102.0M	(\$1.2M)	

Key change: 2020 - \$21M (7.6% increase over FY 19)



Rail Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Discussion
Rail Reliability / Bridge	\$56.2M	\$55.4M	(\$0.8M)	Program sized to address identified bridge projects that require significant repair and/or replacement.
Rail Reliability / Facility	\$16.73M	\$15.7M	(\$1.0M)	Program size reflects identified.
Rail Reliability / Grade Crossings	\$36.5M	\$34.4M	(\$2.1M)	Program sized to consider available federal aid funding.
Rail Reliability / Track and ROW	\$138.3M	\$137.2M	(\$1.1M)	Program sized to address number of right of way projects that require maintenance or significant investment to maintain class of service.
Rail Reliability / Vehicle	\$4.7M	\$6.6M	\$1.9M	Program size maintains the similar funding level as last plan to address SGR issues to maintain or restore usage of the facilities.
Rail Modernization / Bridge	\$0.0M	\$9.6M	\$9.6M	Program sized to address bridge improvements to accommodate 286,000 lb freight service
Rail Modernization / IRAP	\$15.0M	\$15.0M	\$ -	Maintains existing program size.
Rail Modernization / Facility	\$13.3M	\$8.2M	(\$5.1M)	Program reflects completion of Springfield Union station MassDOT commitments.
Rail Modernization / Track and ROW	\$31.1M	\$31.1M	\$ -	Maintains existing program size as established in the FY2019-2023 plan.
Rail Expansion / South Coast Rail	\$108.0M	\$108.0M	\$ -	Program size to be updated upon completion of independent cost and schedule estimates.
Rail Expansion / Vehicle	\$31.0M	\$31.0M	\$ -	Maintains existing program size as established in the FY2019-2023 plan.
Grand Total	\$450.7M	\$452.2M	\$1.5M	

Transit Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Justification
Transit / Mobility Assistance Program	\$50.1M	\$45.5M	(\$4.6M)	Program sized to meet demand for services and reflects updated federal funding assumptions.
Transit / RTA Facility and Vehicle Maintenance*	\$17.5M	\$10.7M	(\$6.8M)	Program sized to address needs identified by the RTAs.
Transit / Technical Assistance	\$10.0M	\$11.0M	\$ 1.0	Program includes a small increase in funding to address additional demand.
Transit / RTA Vehicle Replacement*	\$92.3M	\$81.6M	(\$10.7M)	Program includes funds purchase of additional electric vehicles for RTAs fleet as well as identified needs.*
Transit / Workforce Transportation Options (New)		\$9.875M	\$9.875M	New competitive grant program that funds for workforce transportation options and leverages private sector resources; replaces MassRides program.
Transit / RTA Fleet Upgrades	\$0.0M	\$1.0M	\$1.0M	Reflects needs identified by RTAs
Transit / RTA System and Vehicle Modernization*	\$26.3M	\$25.8M	(\$0.55M)	Program includes additional funds for implementation of an Automated Fare Collection system for the RTAs and future RTA maintenance facility upgrades.
Transit / RTA Replacement Facilities**	\$16.4M	\$29.7M	\$ 13.3M	With completion of the PVTA and FRTA facilities, program sized to address routine modernization efforts for RTA replacement facilities and facility upgrades and charging infrastructure to accommodate fleet electrification.*
Grand Total	\$212.6M	\$215.1M	\$2.6M	

* Slight Program name change. Program was titled RTA Facility and System Modernization in 2019-2023 CIP.

**Program size should be informed by Electric Fleet Vehicle Study which is expected to be complete by February 2019; pursuing the availability of other state funds to support this request which may result in changes to program sizes.

RMV Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Discussion
RMV / Operations Maintenance	\$1.1M	\$1.1M	\$ -	Program maintains funding levels established under 2019-2023 CIP.
Registry / ATLAS	\$61.5M	\$35.1M	(\$26.4M)	Program reflects completion of project and includes implementation of International Registration program.
Registry / Customer Service Modernization	\$3.8M	\$8.8M	\$5.0M	Program sized to include proposed full service RMV facility in Hyannis at CCRTA facility.
Registry / Alternative Service Channels	\$2.3M	\$2.3M	\$ -	Program maintains funding levels established under 2019-2023 CIP.
Grand Total	\$68.6M	\$47.2M	(\$21.4M)	

MBTA Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Discussion
MBTA / Bridge and Tunnels	\$544.7M	\$489.0M	(\$55.7M)	Program size reflects costs reallocated to Green Line Transformation program (GLT)
MBTA / Facilities	\$355.0M	\$327.0M	(\$16.0M)	Program size reflects costs reallocated to Green Line Transformation program (GLT)
MBTA / Revenue Vehicles	\$1,267.0M	\$1,000.0M	(\$267.0M)	Program size reflects costs reallocated to Green Line Transformation program (GLT)
MBTA / Stations	\$428.0M	\$367.0M	(\$61.0M)	Program size reflects costs reallocated to Green Line Transformation program (GLT)
MBTA / System Upgrades	\$245.0M	\$245.0M	\$ -	Maintains existing program size as established in the FY2019-2023 plan.
MBTA / Track, Signals, and Power	\$938.0M	\$731.0M	(\$208.0M)	Program size reflects costs reallocated to Green Line Transformation program (GLT)
Subtotal Reliability	\$3,765.7M	\$3,159.0	(\$606.7M)	
MBTA / Accessibility	\$265.0M	\$198.0M	(\$67.0M)	Program size reflects costs reallocated to Green Line Transformation program (GLT)
MBTA / AFC 2.0	\$169.0M	\$204.0M	\$35.0M	Program size reflects updated AFC 2.0 cash flows
MBTA / Commuter Rail Safety and Resiliency	\$630.0M	\$530.0M	(\$100.0M)	Program size reflects completion of PTC
MBTA / Customer Experience and Technology	\$116.0M	\$105.0M	(\$11.0M)	Program size reflects costs reallocated to Green Line Transformation program (GLT)
MBTA / Process Improvements and Innovation	\$25.0M	\$25.0M	\$ -	Maintains existing program size as established in the FY2019-2023 plan.

MBTA Program Sizes – 2019-2023 vs 2020-2024 (\$ millions)

CIP Program	Program Size 2019-2023	Program Size 2020-2024	Increase / (Decrease)	Discussion
MBTA / Red Line/Orange Line Improvements	\$1,565.7M	\$1,535.0M	(\$30.7M)	Program size reflects updated RL/OL cash flows
MBTA / Risk Management and Mitigation	\$178.0M	\$27.0M	(\$151.0M)	Program size reflects costs reallocated to Green Line Transformation program (GLT)
MBTA / Green Line Transformation (New)		\$954.0M	\$954.0M	Program will improve the Green Line quality of service, including enhanced capacity and accessibility, through fleet modernization, infrastructure/facilities updates and state-of-the art technology
Subtotal Modernization	\$2,948.7M	\$3,578.0M	\$629.3M	
MBTA / Expansion Projects (non-GLX)	\$59.0M	\$49.0M	(\$10.0M)	Program size reflects current project cash flows
MBTA / Green Line Extension	\$1,227.0M	\$1,299.0M	\$72.0M	Program size reflects updated GLX cash flows
Subtotal Expansion	\$1,286.0M	\$1,348.0M	\$62.0M	
Grand Total	\$8,000.4M	\$8,085.0M	\$84.7M	

Allston Multi-Modal Program and South Coast Rail

- Allston Multi-Modal Program
 - Decision was made on the “Throat” section in January and key elements of the program
 - Current CIP program size only includes early action design and permitting costs
 - A cost estimate is under development for the key aspects of the program that will reflect timing of the program elements and procurement schedule
 - Draft program size for this CIP will be determined once a cost estimate is established
 - A finance plan will be developed that incorporates the program elements and eligible funding sources
- South Coast Rail
 - Independent cost and schedule evaluation is in process
 - Cost review will inform the finance plan development and discussions with ANF
 - Program size and funding will be established with development of a finance plan for 2020-2024 CIP
 - Phase 1 “Early Action” activities continue on track
 - Federal and state permitting/final design of Phase 1
 - Special trackwork procurement awarded in December 2018
 - Culvert contract – to be awarded pending Board approval on February 11, 2018
 - Early action bridges (Highway) advertised in December 2018; bids expected late March 2019
 - PM/CM procurement underway; RFP issued December 2018

Programs and sizes for Discussion

- Aeronautics

- Additional funding requested (\$78.3M) to bring pavement condition at public use airports to long term average PCI of 75
- Funding for new Drone Programs (\$27M) and Weather Observation System (\$1.5M)
- Funding for Emergency Response Program (\$4M)

- Highway

- Program size/funding to address TAMP targets for non-interstate pavement and bridges
- Program size/funding to address MHS Triennial findings and Tunnels
- 2020-2204 CIP assumes Municipal Bridge and Complete Streets programs will continue to be reauthorized

- Transit

- Additional funding requested for Transit Technical Assistance (\$5M) to address increased demand for services
- \$20.6M requested to support additional electrification of the RTAs fleet

- RMV

- Need to establish whether owning or leasing is preferable for new or renovating branch locations
- Leasing costs impact the operating budget and are subject to strong market conditions in some areas of the Commonwealth
- Building and owning a branch location impacts the capital budget
 - Should be evaluated based on the expected payback of the investment over time as compared to lease costs for the same timeframe

Discussion / Next steps

• Discussion

- Feedback on new/refined/programs
- Input on proposed program sizes
 - Recognizing that this is an update of the CIP, but also an opportunity to make some changes, are there any areas that the CIP team should focus on with regard to policy based investments?
 - *Example:* last year we created new programs that encompass multi-modal investments e.g. Green Line Extension, Red Line/Orange Investment Programs
 - How do we incorporate funding requests to achieve desired performance outcomes

• Next steps

- Submit program sizes to Administration and Finance
- Iterate based on available/confirmed sources
- Project readiness and spending analysis
- April CPC meeting
 - Discuss initial project list and fiscal constraint analysis
 - Update on stakeholder engagement



Appendix: Preliminary 2020-2024 CIP Sources

MassDOT

MassDOT sources (Preliminary Draft 2/8/19)

Projected sources (in millions)	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>FY23</u>	<u>FY24</u>	<u>Total</u>
Federal sources of funds						
Federal Highway (FHWA) reimbursements	\$720.0	\$856.1	\$852.6	\$828.9	\$686.1	\$3,943.6
Federal Transit (FTA) reimbursements**	\$4.7	\$4.8	\$4.9	\$5.1	\$5.1	\$24.5
Federal Aviation (FAA) reimbursements and grant draws	\$26.5	\$27.1	\$25.1	\$27.5	\$27.5	\$133.7
Federal Rail (FRA) reimbursements and grant draws	\$7.5	\$4.3	\$0.0	\$0.0	\$0.0	\$11.8
Subtotal federal sources*	\$758.7	\$892.3	\$882.7	\$861.5	\$718.6	\$4,113.7
Bond cap	\$820.2	\$815.2	\$842.3	\$787.1	\$896.1	\$4,160.8
Accelerated Bridge bonds	\$16.1	\$0.0	\$0.0	\$0.0	\$0.0	\$16.1
Rail enhancement bonds	\$34.5	\$34.9	\$20.0	\$0.0	\$0.0	\$89.4
CARM***						\$328.0
Metropolitan Highway system (MHS) pay-go	\$51.5	\$42.1	\$40.4	\$38.9	\$38.7	\$211.5
Tobin Bridge (Tobin) pay-go	\$28.1	\$28.4	\$28.5	\$28.7	\$28.9	\$142.6
Western Turnpike (WT) pay-go	\$79.3	\$77.9	\$75.7	\$73.9	\$72.8	\$379.6
Gaming	\$30.0	\$0.0	\$0.0	\$0.0	\$0.0	\$30.0
Municipal and local funds	\$2.8	\$2.5	\$3.2	\$3.3	\$3.4	\$15.1
Reimbursable and 3 rd parties	\$0.2	\$0.1	\$8.8	\$10.6	\$0.9	\$20.5
Public private partnerships/Other State Funds**** (TBD)						\$0.0
Subtotal of non-federal sources*	\$1,089.0	\$1,029.7	\$1,045.2	\$969.1	\$1,068.8	\$5,529.8
Total sources*	\$1,847.7	\$1,922.0	\$1,927.9	\$1,830.6	\$1,787.4	\$9,643.5

* Totals may not add due to rounding | ** FTA reimbursements for MassDOT projects only; RTA federal funds are not included | *** Available balance as of 1/1/2019. | **** Reflects additional state funds for electric bus procurements. Funds received by DEP from VW settlement of emissions lawsuit.



About MassDOT funding sources

Source	Description
Federal Highway (FHWA) reimbursements	MassDOT obligates available Federal Highway Administration funds every federal fiscal year. This funding category involves MassDOT drawing down obligated amounts to reimburse the Commonwealth for Highway and Rail Division project spending.
Federal Transit (FTA) reimbursements	MassDOT obligates available Federal Transit Administration funds every federal fiscal year. This funding category involves MassDOT drawing down obligated amounts to reimburse the Commonwealth for Rail & Transit Division project spending. The spending by source tables do not include FTA funds available to Regional Transit Authority partners.
Federal Aviation (FAA) reimbursements and grant draws	MassDOT applies for Federal Aviation Administration funds every federal fiscal year. This funding category involves MassDOT drawing down those approved grant amounts to pay for Aeronautics Division project spending.
Federal Rail (FRA) reimbursements and grant draws	MassDOT from time to time applies for Federal Railroad Administration funds. This funding category has MassDOT draw down approved grant amounts to pay for Rail & Transit Division and Office of Transportation Planning project spending.
State bond cap	Commonwealth general obligation bond proceeds allocated to specific projects; primarily for project design, management, operations and other construction support provided to the Aeronautics, Highway and Rail and Transit Divisions and the MBTA (see MBTA sources)
Accelerated Bridge bonds	Commonwealth special obligation bond proceeds allocated to specific bridge projects; primarily for bridge projects construction
Rail enhancement bonds	The Commonwealth Rail Enhancement Program; a dedicated program for reliability, modernization and expansion initiatives at the MBTA and MassDOT, including the State's share of the Green Line Extension program and South Coast Rail program.
CARM	Central Artery Remediation Monies (CARM) for eligible MHS projects; subject to FHWA approval
Metropolitan Highway System (MHS) pay-go	Projected annual revenues available for capital for the toll facilities east of I-95 plus any existing projected reserve balances
Western Turnpike (WT) pay-go	Projected annual revenues available for capital for the toll facilities west of I-95 plus any existing projected reserve balances
Tobin Bridge (Tobin) pay-go	Projected annual revenues available for capital for this toll facility plus existing projected reserve balances
Gaming funds	Annual gaming revenues generated by casinos and devoted to the Transportation Infrastructure and Development Fund
Municipal and local funds	Funds provided by municipalities to match federal-aid sources or to pay for construction bid items
Reimbursable and 3rd parties	Third party funding for specific initiatives
Public private partnerships	Project financing mechanism that includes private sector resources. MassDOT is exploring the use of this financing mechanism.
Other State Funds	Additional funds for MassDOT to be used for clean transit vehicles and transportation improvements in the Seaport District