

ACEC State Markets Conference April 2019



View from Cabot Yard, South Boston.

AGENDA

- MBTA By The Numbers
- FY 2020-2024 Capital Investment Overview and Programs
- FY 2019 Major Program Highlights
- Doing Business with the MBTA
- Upcoming Professional Services Opportunities



MBTA By The Numbers

- 3,000+ Revenue vehicles
- 128 Transit Stations/stops
- 137 Commuter rail stops
- 846 Miles of track
- 501 Bridges
- 21 Miles of tunnel
- 20 Maintenance shops



MBTA By The Numbers – HEAVY RAIL

Red Line

- 22 Stations
- 2 Branches
- 218 Cars



Orange Line

- 20 Stations
- 120 Cars



Blue Line

- 12 Stations
- 112 Cars



MBTA By The Numbers – LIGHT RAIL

Green Line

- 66 Stations & Stops
- 4 Branches
- 206 Cars



Mattapan Trolley

- 8 Stations
- 10 Cars



MBTA By The Numbers – Bus

- 8,000⁺ Bus stops
- 175 Bus routes
- 700⁺ Bus route miles
- 1,055 Vehicles
- 9 Garages



MBTA By The Numbers – Commuter Rail

- 5 North side lines
- 7 South side lines
- 137 Stations
- 90 Locomotives
- 420 Coaches
- 394 Track miles
- Operated by Keolis



MBTA By The Numbers – Commuter Boat

- 7 Terminals
- 3 Routes
- 12 Boats (3 owned by MBTA)
- Operated by
Boston Harbor Cruises

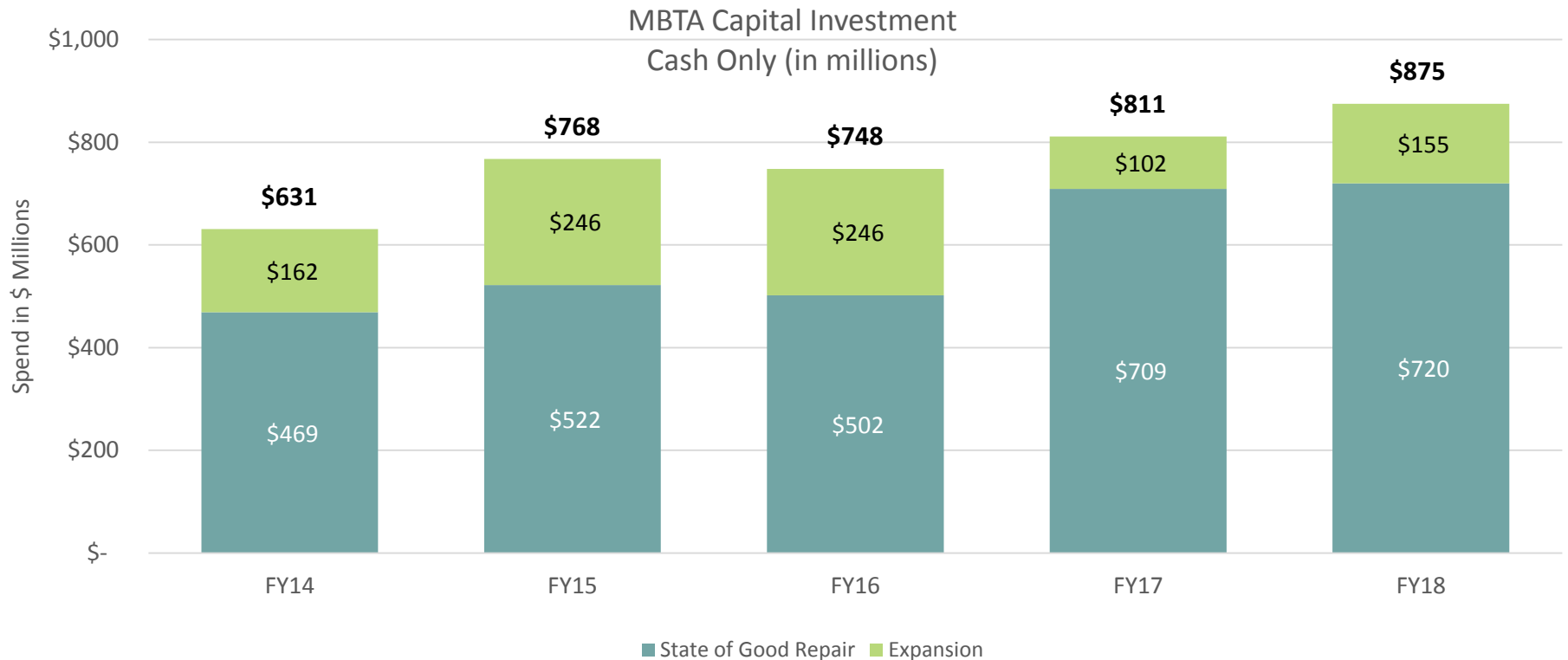




FY2020 - FY2024

**Capital Investment Plan Overview and
Programs**

In 2018, the MBTA invested \$875M in its capital program – the most ever.



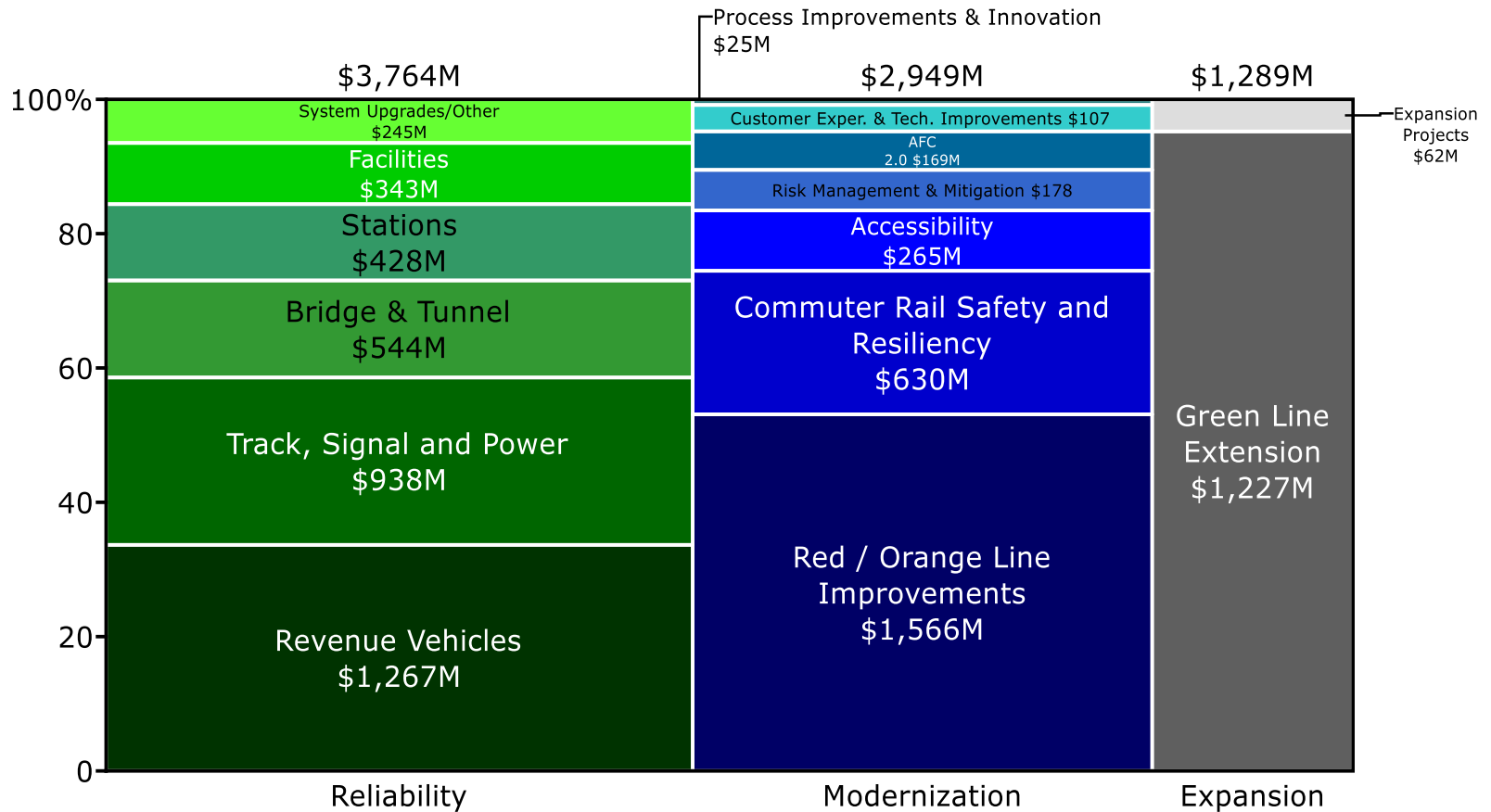
- Total MBTA capital investment FY14-18: **\$3.8 billion**
 - \$2.9 Billion for State of Good Repair
- MBTA projected capital investment FY19-23: **\$8.0 billion**
 - \$6.7 billion for State of Good Repair

The MBTA set aggressive capital Key Performance Indicators (KPIs) for FY 2019

Key Performance Indicator	FY 2018 target	FY 2018 actual	FY 2019 target
Total capital investment	\$942M	\$875M	~\$1 billion
State of Good Repair capital investment	\$790M	\$720M	\$850M
Capital construction contracts awarded	\$450M	\$639M	>\$650M
Vehicle procurement contracts awarded	New for FY19	New for FY19	~\$300M
Percentage of FY19-23 CIP projects underway/in progress	New for FY19	New for FY19	>75%
% of FY19 Capital Investment Plan Delivered	New for FY19	New for FY19	~95%

FY19-23 CIP invests \$8 billion organized by *Priority and Program*

FY19-23 CIP Spending by Priority and Program (\$M)



FY20-24 CIP Programs: Proposed structure is consistent with FY19-23 Plan with one new program - *Green Line Transformation*

1. **Reliability:** Maintain and improve the overall condition and reliability of the transportation system
2. **Modernization:** Modernize the transportation system to make it safer and more accessible and to accommodate growth
3. **Expansion:** Expand diverse transportation options for communities throughout the Commonwealth



Reliability	
•	Bridges and Tunnels
•	Facilities
•	Revenue Vehicles
•	Stations
•	System Upgrades
•	Track, Signals, and Power

Modernization	
•	Accessibility
•	AFC 2.0
•	Commuter Rail Safety and Resiliency
•	Customer Experience and Technology Improvements
•	Process Improvements and Innovation
•	Red / Orange Line Improvements
•	Risk Management and Mitigation
•	Green Line Transformation

Expansion	
•	Green Line Extension
•	Expansion Projects

FY20-24 CIP Programs: Reliability

FY20-24 CIP Programs	Purpose and Need Statement	Measure
Priority 1/Reliability		
Bridge & Tunnel	This program repairs, reconstructs and replaces MBTA commuter rail and transit bridges and tunnels system-wide	Asset condition: structural deficiency and load rating
Facilities	This program rehabilitates and upgrades maintenance and administrative facilities that support MBTA operations.	Asset condition: FTA TERM Scale (1-5)
Revenue Vehicles	This program rehabilitates and replaces the MBTA revenue fleet, which includes commuter rail, heavy rail, light rail, bus and ferry units.	Asset age: Useful life benchmark
Stations	This program rehabilitates and upgrades MBTA stations and parking facilities (e.g., commuter rail, commuter boat, subway and bus stations)	Asset condition: FTA TERM Scale (1-5)
System Upgrades	This program upgrades a wide range of MBTA systems including communications, security, computer technology, fare collection, asset management and environmental remediation systems. It also rehabilitates non-revenue vehicles and equipment.	Asset age: Useful life benchmark (for non-revenue vehicles)
Track, Signal and Power	This program rehabilitates, replaces and upgrades track, signal and power assets across the commuter rail and transit system.	Asset condition, age, and performance restrictions

FY20-24 CIP Programs: Modernization

FY20-24 CIP Programs	Purpose and Need Statement	Measure
Priority 2/Modernization		
Accessibility	This program improves accessibility at MBTA commuter rail, subway and bus stations. This program is necessary to meet the goals of the Authority’s Plan for Accessible Transit Infrastructure (“PATI”).	PATI Implementation; increased number of accessible stations
AFC 2.0	The AFC 2.0 program will implement a new reliable and convenient fare payment and collection system, integrated across all modes, to replace CharlieCards/Tickets and their supporting hardware and software.	AFC 2.0 Project Milestones
Commuter Rail Safety and Resiliency	This program includes projects that improve the safety and resiliency of the Commuter Rail network, including the implementation of Positive Train Control.	PTC/ATC Project Milestones
Customer Experience and Technology Improvements	This program includes improvement projects that modernize the system and enhance customers’ experience.	Improved customer experience; survey results
Process Improvements & Innovation	This program includes investments in innovations that enhance productivity or quality of MBTA services and capital programs.	TBD
Red / Orange Line Improvements	The Red Line and Orange Line Improvements program includes the set of vehicle and infrastructure investments needed to fully modernize the fleet and achieve the service goal of three minute headways on the Red Line and three and a half minute headways on the Orange Line.	Project milestones; Three min headways on the RL and four min headways on the OL
Risk Management & Mitigation	This program implements risk management initiatives as well as proactive efforts to improve workplace safety and system security	TBD
Green Line Transformation	This program will improve the Green Line quality of service, including enhanced capacity and accessibility, through fleet modernization, infrastructure/facilities upgrades and state-of-the-art technology	Capacity, service delivery, accessibility, customer ex, and safety metrics

FY20-24 CIP Programs: Expansion

FY20-24 CIP Programs	Purpose and Need Statement	Measure
Priority 3/Expansion		
Green Line Extension	The Green Line Extension program includes the vehicles, stations and infrastructure to extend the Green Line from a relocated Lechmere Station in East Cambridge to Union Square in Somerville and College Avenue in Medford.	GLX Project Milestones
Expansion Projects	This program makes targeted expansions in order to improve access to transit, including the Silver Line to Chelsea, Blue Hill Avenue Station on the Fairmount Line and MBTA support for early action South Coast Rail items.	TBD

FY20-24 CIP Project Selection: Projects are scored using PSAC Criteria

Legislatively-mandated Project Selection Advisory Council (PSAC) established uniform project selection criteria to be used across MassDOT divisions in preparing the CIP

System Preservation	<ul style="list-style-type: none">• Projects should contribute to a state of good repair on the transportation system.
Mobility	<ul style="list-style-type: none">• Projects should provide modal options efficiently and effectively.
Cost Effectiveness	<ul style="list-style-type: none">• Projects should result in benefits commensurate with costs and should be aimed at maximizing the return on the public's investment.
Economic Impact	<ul style="list-style-type: none">• Projects should support strategic economic growth in the Commonwealth.
Safety	<ul style="list-style-type: none">• Projects should contribute to the safety and security of people and goods in transit.
Social Equity & Fairness	<ul style="list-style-type: none">• Projects should equitably distribute both benefits and burdens of investments among all communities.
Environmental & Health Effects	<ul style="list-style-type: none">• Projects should maximize the potential positive health and environmental aspects of the transportation system.
Policy Support	<ul style="list-style-type: none">• Projects should get credit if they support local or regional policies or plans; or state policies not addressed through the other criteria.

FY20-24 MBTA CIP Project Selection Criteria (1 of 2)

Criteria	Description	Factors
System Preservation	The extent to which the project contributes to a state of good repair on the transportation system and aligns with asset management goals and strategies.	Asset Condition
		Impact to Other Assets
		Operations Criticality (Service Disruption)
		Climate Change and Severe Weather Resiliency
Mobility	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.	Impact on Reliability
		Impact on Accessibility
		Impact on Customer Experience
		Impact on Riders
Cost Effectiveness	The extent to which the project impacts operating costs and revenues and maximizes the return on the public's investment	Impact on Operating Costs
		Impact on Operating Revenues
Safety	The extent to which the project addresses safety issues and hazards and security vulnerabilities and risks.	Impact on System Safety
		Impact on System Security
Environmental and Health Effects	The extent to which the project: 1) meets State goals of improving Air Quality and reducing Greenhouse Gases and 2) results in a reduction of pollution and/or consumption of natural resources	Air Quality and GHG Reduction
		Reduce Pollution and/or Consumption of Natural Resources

FY20-24 MBTA CIP Project Selection Criteria (1 of 2)

Criteria	Description	Factors
Policy Support	The extent to which the project is aligned with the MBTA Strategic Playbook and utilizes an innovative strategy	Alignment with Focus40 Utilizes an Innovative Strategy
Economic Impact <i>(Only required for expansion/new capacity projects)</i>	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.	Impact on Connectivity to Employment Centers, Destination Districts, Priority Places identified in Focus40 Impact on Corridors at or Near Capacity Impact on Communities with Transit-Supportive Land Use Impact on Commuting Costs
Social Equity <i>(Only required for expansion/new capacity projects)</i>	The extent to which the project equitably distributes economic, social, and health benefits to residents and local businesses.	Benefits to Environmental Justice (EJ) and Title VI Communities Additional Equity Benefits to Protected Populations

MBTA leadership considers project readiness, resource impacts, and sequencing/scheduling when prioritizing projects.



FY 2019 Major Program Highlights

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Commuter Rail Positive Train Control

- PTC continues to be the MBTA's highest priority capital program.
- MBTA has achieved its goal obtaining an extension for a full PTC system deployment by 2020.
- MBTA will continue to execute PTC Program Plan in compliance with the FRA regulations, which require complete deployment by December 31, 2020.
- The PTC Program is on budget and on schedule.



FY 2019 Major Program Highlights

Red Line

Orange Line

Total \$1,982.03M

NEW VEHICLE PROCUREMENT PROGRAM

\$1,009.00M

INFRASTRUCTURE IMPROVEMENTS PROGRAM

\$470.36M

SIGNALS UPGRADE PROJECTS

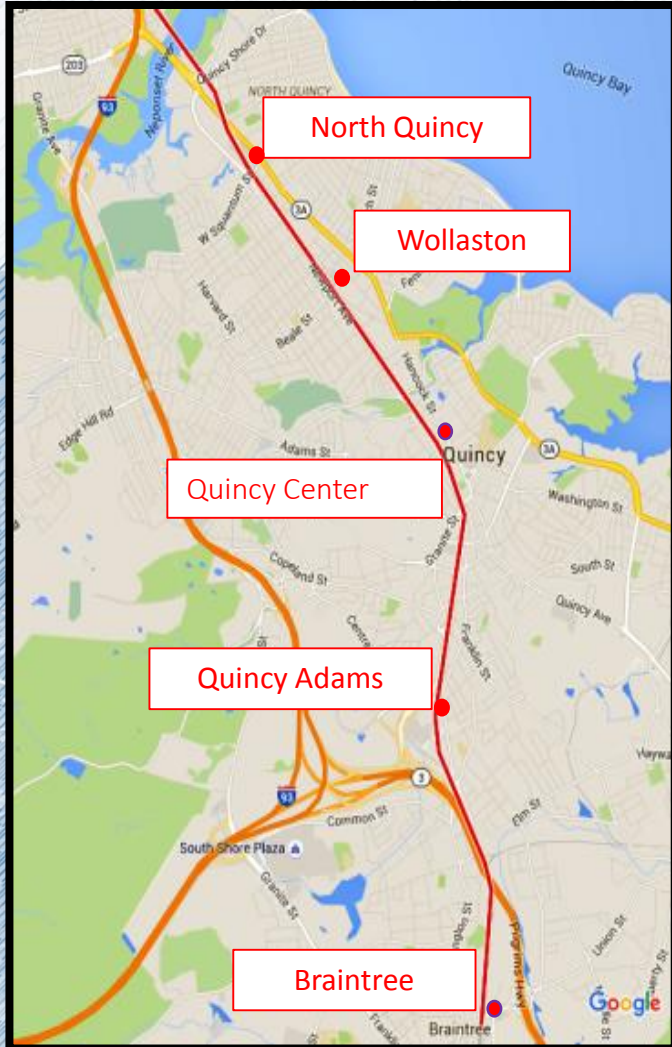
\$350.95M

STATE OF GOOD REPAIR PROJECTS

\$151.72M

FY 2019 Major Program Highlights

Red Line South Side Facilities Improvement Program



- North Quincy Station Garage (as part of Transit Oriented Development Project)
- Wollaston Station Improvements
- Quincy Center Garage Demolition
- Quincy Adams Station Garage Improvements
- Quincy Adams Station and Garage Elevator Replacement
- Braintree Station Garage Improvements

FY 2019 Major Program Highlights

Transit-Oriented Development



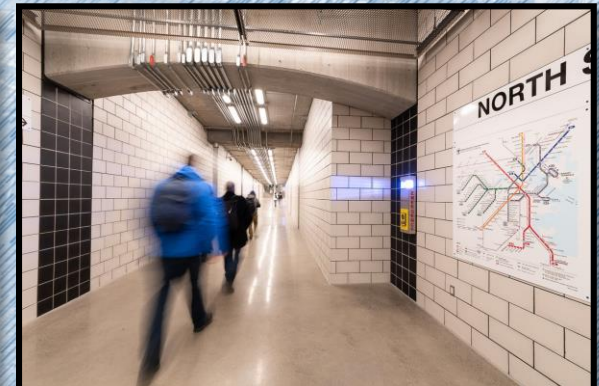
Back Bay Station – Ventilation Upgrades & Air Rights Development



South Station Bus Terminal & Tower



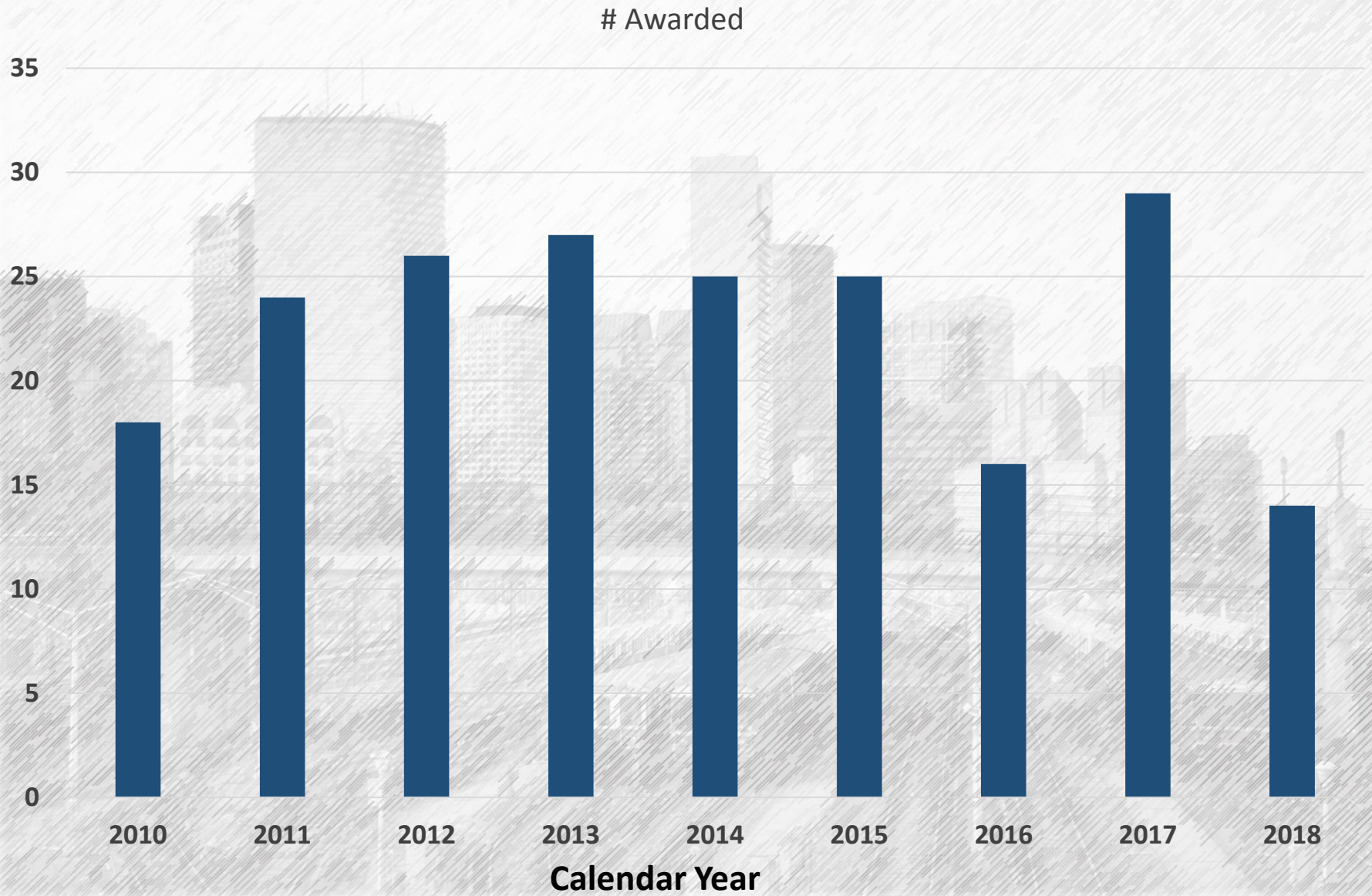
North Station Hub & Transit Connection





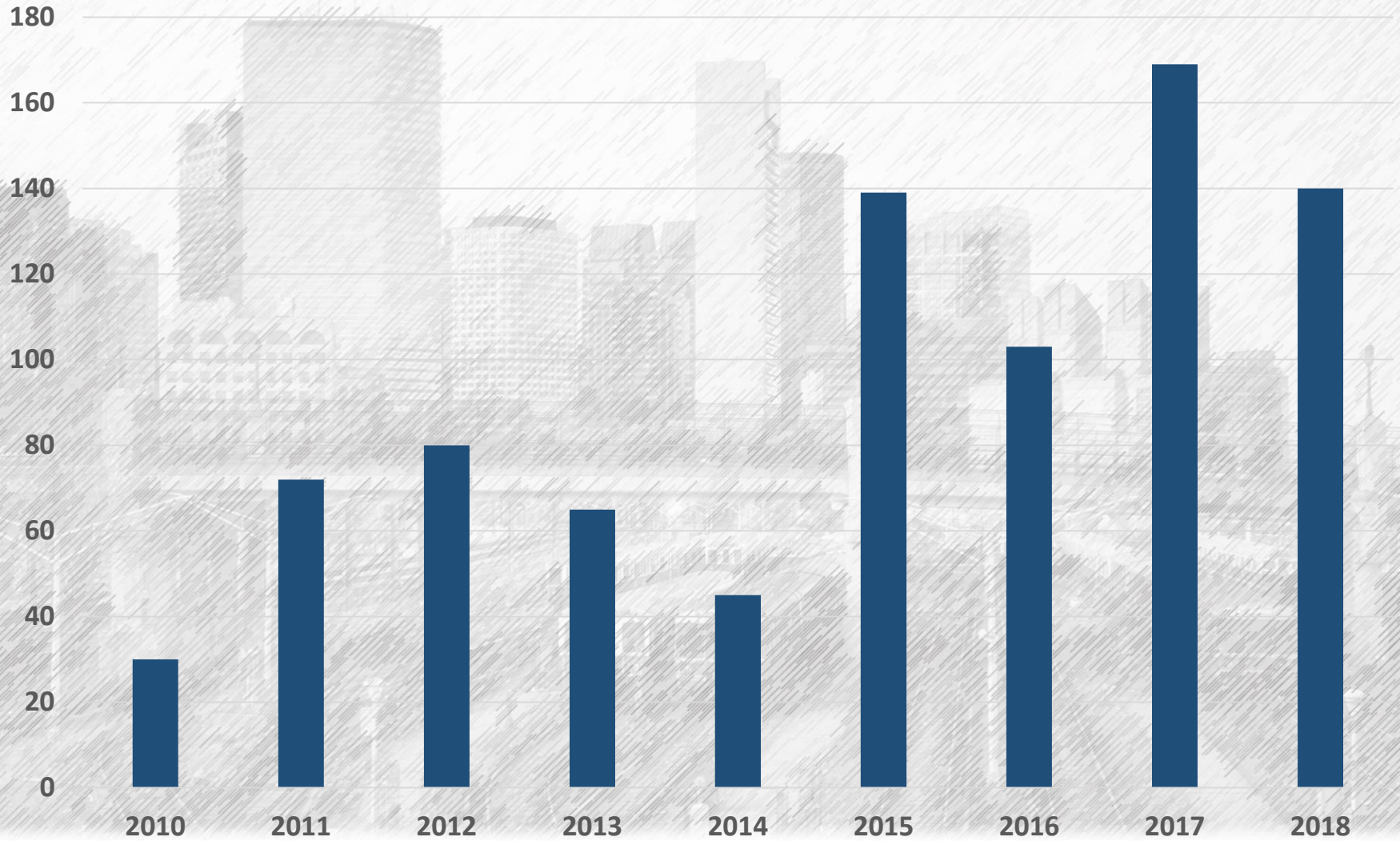
Doing Business with the MBTA

Awarded Professional Services Contracts



Value of Professional Services Contracts

\$ Millions



Streamlined Mini Procurements

- A process to engage consultant services under existing GEC contracts when the value of services is estimated to be over \$1M
- Consultants must have sufficient contract capacity to receive a Request for Letters of Interest.
- Letters of Interest generally limited to 6 pages
- May or may not include interviews

Evaluation Criteria

Weighted

Personnel Qualifications	35%
Relevant Project Experience	30%
Special Project Expertise	15%
Ability to Deliver Services	10%
Overall Evaluation	10%

• **GOAL:**

Issue a Notice to Proceed to selected consultant within three months of issuing Requests for Letter of Interest.

Extra Work Order Letter (EWOL)

- Structured for rapid engagement of consultant
- Goal is to authorize start of work within 3 business days of receipt of consultant proposal for full scope of services.
- Authorizes up to 90 days of work for emergency or time sensitive professional services while associated Task Order or Amendment is processed and approved.



Upcoming Professional Services Opportunities

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Project Description	Anticipated Advertisement Date
A & E Services for Station and Accessibility Improvements	March 18, 2019
Lynn Station and Parking Garage Improvements, Phase II	March 22, 2019
Cost Estimating, Scheduling and Value Engineering	March 29, 2019
Codman Yard Expansion and Improvements	April 2, 2019

Upcoming Professional Services Opportunities

Project Description	Actual / Anticipated Advertisement Date
GEC Services for Engineering and Maintenance	April 2019
General Engineering Consultant (GEC) Services for Capital Delivery	April 2019
Public Outreach & Agency Coordination Support Services	May 2019
Construction Management Support for Resident Engineering, Inspection, and Construction Phase Services	May 2019

Upcoming Professional Services Opportunities

Project Description	Anticipated Advertisement Date
Preliminary Design Services for New Quincy Bus System Facility	May 2019
Back Bay Station Ventilation Improvements, Tunnel Ventilation, State of Good Repair & Leasehold Improvements Project	August 2019
Alewife Garage Improvements Design and Construction Phase Services	TBD
Tunnel Inspection Services	TBD

Questions?

