

**Massachusetts Bay
Transportation Authority**

Green Line Transformation

Public Meeting

September 2019



Public Meeting Agenda

September 2019

1. **Welcome – Angel Peña, Chief of the Green Line Transformation**
2. **Presentation**
3. **Question and Answer Session**
4. **One-on-One Opportunity:**
 - ***Service Delivery and Operations* – Tamieka Thibodeaux, Sr. Director GLT**
 - ***Track, Power, Signals and Stations* – Desiree Patrice, Sr. Director GLT**
 - ***Vehicles and Maintenance Facilities* – Kimberly Woollard, Sr. Director GLT**



Our Goal

Improve the Green Line **quality of service**, including **increased capacity** and **enhanced accessibility**, through fleet modernization, infrastructure/facility upgrades and **state-of-the-art technology**





Program Overview

Near-term projects in the Capital Investment Program (CIP) to **improve safety and reliability**

Acquisition of new Type 10 "Supercar" Green Line vehicles & infrastructure changes to **operate new fleet**

Infrastructure changes to operate **new vehicles as 2-Supercar trains on the D & E branches**

Long-term objective, infrastructure changes to operate **new vehicles as 2-Supercar trains on all branches**

Transformative Outcomes



- Improve **schedule adherence**:
 - Remove select speed restrictions with track and signal replacement
 - Transit Signal Prioritization
- Increase **accessible stations**
- Improve climate resiliency at **Fenway Portal**

- Increase peak core capacity of central subway by **15%**
- Recondition **Lechmere Viaduct** for operational improvements
- More robust and reliable operations with **new vehicles, updated facilities and yards**
- Improve train separation with **Green Line Train Protection (GLTP)**

- Increase peak core capacity of central subway by **50%**
- Improved **Customer Experience** with easy-to-use stations for all customers
- Improved **passenger safety** with platform-traffic separation

- Increase peak core capacity of central subway by **100%**
- Increase **accessible stations by 22**
- Improve **Customer Experience** with easy-to-use stations for all customers
- Improve **passenger safety** with platform-traffic separation









**GREEN LINE
TRANSFORMATION**
Massachusetts Bay Transportation Authority

GREEN LINE AT A GLANCE

Current

	3 VEHICLE MAINTENANCE FACILITIES	+1
	46 MILES OF TRACK	+8
	66 GREEN LINE STATIONS	+6
	200,000 PASSENGER TRIPS EVERY WEEKDAY	+50K



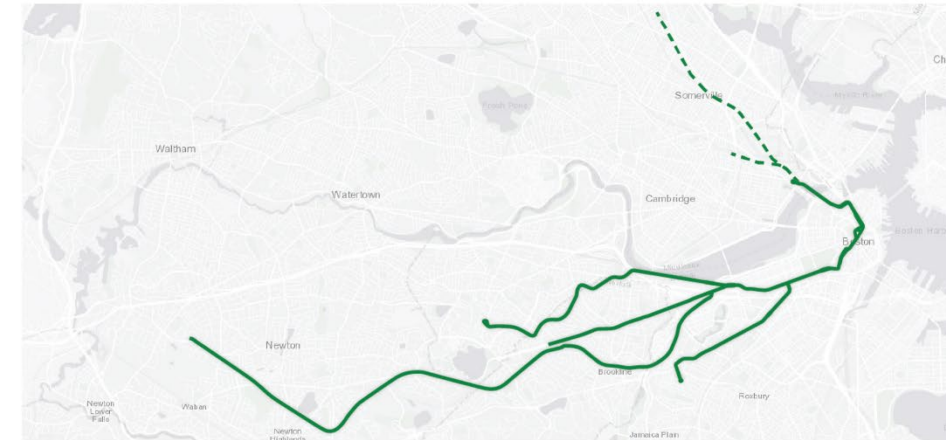
FIRST SUBWAY
IN AMERICA

HIGHEST RIDERSHIP PER MILE
FOR A USA LIGHT RAIL SYSTEM

SOURCE: APTA 2018 Public Transportation Fact Book

LONGEST NETWORK

WITHIN MBTA'S TRANSIT SYSTEM (46 MILES OF TRACK)
+ *Extension (8 miles)*



SERVES BOSTON, NEWTON, CAMBRIDGE & BROOKLINE
+ *Extension (Medford and Somerville in 2021)*

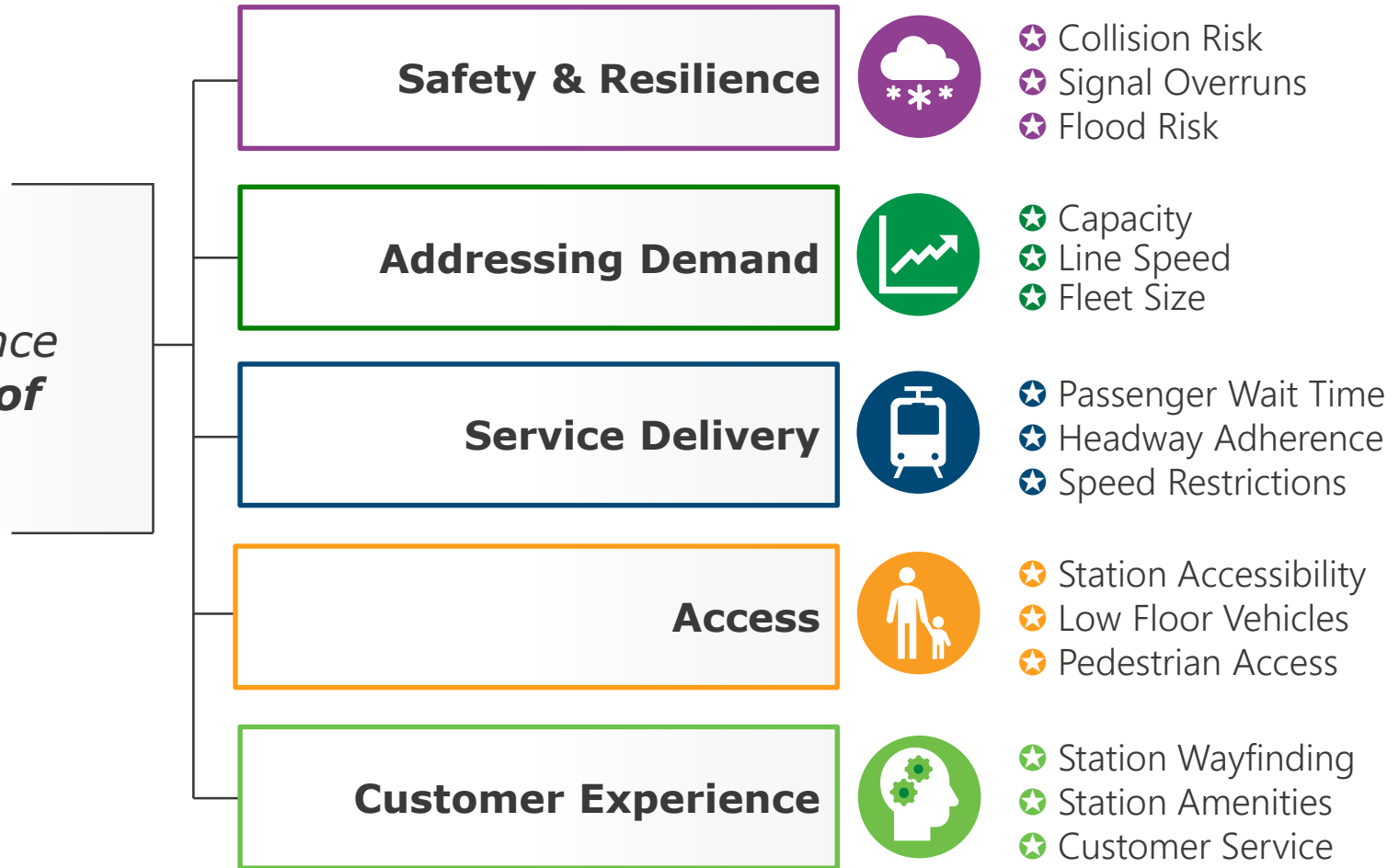




Improving Quality of Service for our Riders

Quality of Service:

*Transit service performance from **the point of view of the customer***





Program Team



Desiree Patrice
Senior Director



Angel Pena
GLT Chief



Tamieka Thibodeaux
Senior Director



Kimberly Woollard
Senior Director





Selected Near Term Improvements



Track, Power & Signals



Stations, Structures & Accessibility



Technology for Riders & Operations



Rolling Stock, Specialty Equipment & Facilities





Selected Near Term Improvements



**Track, Power
& Signals**



**Stations, Structures
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**Technology for
Riders & Operations**



**Rolling Stock,
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Infrastructure (Track, Power, Signal & Stations)

D Branch Track & Signal Replacement (Beaconsfield to Riverside)



In Construction

Benefits:




-  Reduce delays and eliminate speed restrictions
-  Improve ride quality
- ✓ Replace 25,000 feet of track
- ✓ Modernize signal system
- ✓ Install backup power supply system
- ✓ Upgrade special trackwork
- ✓ Reconstruct pedestrian crossings

Green Line Intersection Upgrades (B and C Branches)



In Construction

Benefits:

-  Mitigated risk of service interruptions through upgraded intersections at up to 30 locations
-  New pedestrian crossings at affected stations
-  Safer pedestrian, vehicle, and bicycle crossings
- ✓ Upgrade 15 intersections (B Branch) 13 intersections (C Branch) and 1 on Mattapan
- ✓ Replace 7,000 feet of additional track






Infrastructure (Track, Power, Signal & Stations)

B-Branch Station Consolidation (BU West and Babcock Street)



100% Design

Benefits:



-  Faster trips down Commonwealth Avenue
-  All-new benches, shelters, safety features at stations
-  Higher platforms for easier boarding
- ✓ Consolidate St. Paul St and BU West stations
- ✓ Consolidate Babcock St and Pleasant St stations
- ✓ Update fare collection machines
- ✓ Implement two (2) accessible exits at both stations

Newton Highlands Accessibility Improvements (Newton Highlands Station)



In Design

Benefits:

-  Higher platforms for easier boarding and improved station access points
-  New heated shelters, benches, and bicycle storage
- ✓ Install ADA/MAAB compliant ramps from Walnut St, Hyde St and Station Ave
- ✓ Replace and raise the entire length of the platform
- ✓ Install shelters and benches



Selected Near Term Improvements



**Track, Power
& Signals**



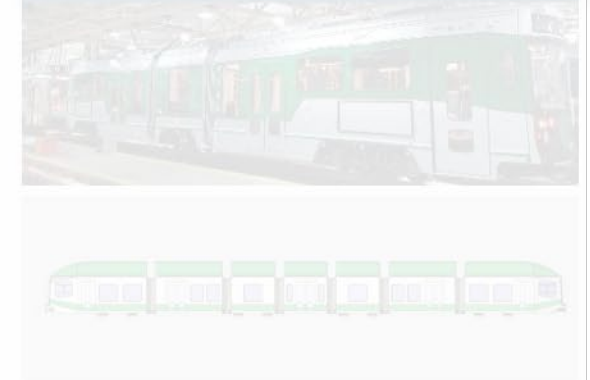
**Stations, Structures
& Accessibility**



**Technology for
Riders & Operations**



**Rolling Stock,
Specialty Equipment
& Facilities**








Tools For Operations

Green Line Intelligent Decision Execution System (GLIDES)



Pilot

Benefits:

-  Improve Headway Adherence
-  Decrease Passenger Wait Time
-  Increase Operational Readiness





- ✓ Mobile application to support Green Line Operations
- ✓ Easily view spacing, destination, driver
- ✓ Free up radio channel chatter

Transit Signal Priority (TSP)



In Progress

Benefits:

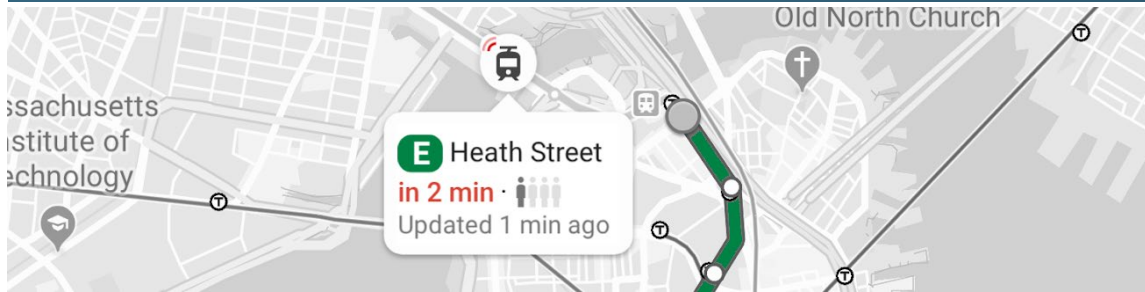
-  Improve Headway Adherence
-  Increase Line Speed
-  Decrease Dwell Time
-  Enhance Intersection Safety

- ✓ Can support more TSP intersections
- ✓ Adding intersections in collaboration with municipalities
- ✓ Rebuilding TSP software
- ✓ Will generate data on TSP efficacy



Tools For Riders

Upgrading Global Positioning System (GPS) Train Trackers



In Progress

Benefits:

- Improve Headway Adherence*
- Enhance Arrival Predication Accuracy*
- Increase Operational Readiness*

- ✓ Upgrading from 3G to 4G on all vehicles
- ✓ Restoring real-time information at affected D-branch stations for Google Maps, website, countdown clocks—and the Operations Control Center (OCC)

e-Ink Station Signs



Pilot

Benefits:

- Improve Station Amenities*
- Improve Communication of Delays*

- ✓ Provide real-time service information at stations without countdown clocks
- ✓ Display delays and service adjustments
- ✓ Uses low-power design (solar)



Selected Near Term Improvements



**Track, Power
& Signals**



**Stations, Structures
& Accessibility**



**Technology for
Riders & Operations**



**Rolling Stock,
Specialty Equipment
& Facilities**





Rolling Stock, Specialty Equipment & Facilities

Type 9 Light Rail Vehicle



Delivery Underway

Benefits:

- Increase accessibility of fleet
- Address new demand from GLX

- ✓ New low-floor vehicles with latest technology
- ✓ First Type 9 in service December 2018
- ✓ Deliver 24 vehicles by the end of the year

Supercar (Type 10) Light Rail Vehicle



In Development

Benefits:

- Significantly increase capacity
- Reduce crowding
- Improve accessibility

- ✓ Transition fleet to longer, accessible cars
- ✓ Request for Information released to the industry (April 2019)
- ✓ Upcoming: Technical Specification (end of 2019)



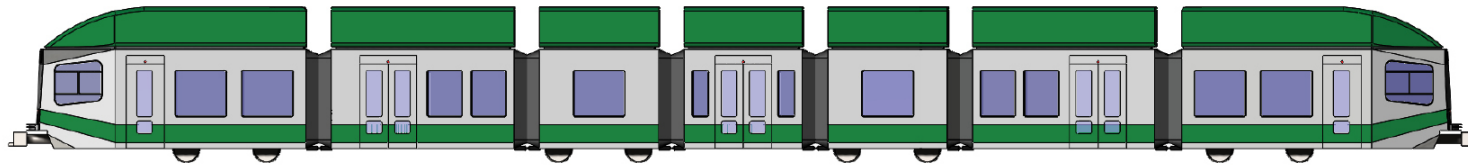
Rolling Stock, Specialty Equipment & Facilities

A Unified FLEET OF LARGER Vehicles

The Type 10 Supercar replaces two legacy cars, while requiring one fewer operator. Running two-Supercar trains would effectively **double the Green Line capacity**.



Type 7, 8, 9
~200 MAX PASSENGERS



Supercar (Type 10)
~360 MAX PASSENGERS

Unified Fleet

- ✓ Improves passenger access
- ✓ Modern technology & cameras for safety
- ✓ Reduction in maintenance costs

Double Capacity

- ✓ Exceeds 2040 projections for capacity
- ✓ Reduction in overcrowding
- ✓ Addresses demand during big events



Stakeholder Outreach & Engagement



2019 Outreach Activities

Community Information Sessions

Gather input from neighborhood organizations, businesses and stakeholders on each branch

Online and Social Media

Service Alerts
Project Updates

Community Information Sessions: September 2019

Date/Time	Branch	Location
Sept. 12, 2019 6:00 – 7:30 PM	C	Coolidge Corner School , Multipurpose Room, Brookline, MA
Sept. 17, 2019 6:00 – 7:30 PM	B	Boston University , Jacob Sleeper Auditorium, Boston, MA (Fenway–Kenmore)
Sept. 23, 2019 6:00 – 7:30 PM	D	Newton Free Library , Druker Auditorium, 330 Homer St, Newton, MA
Sept. 26, 2019 6:00 – 7:30 PM	E	Tobin Community Center , 2nd Floor Conference Room, Boston, MA (<i>Mission Hill</i>)

GLT Program Website

www.mbta.com/GLT



Contact us at:
GLT@mbta.com



Communities



T-Passengers



Dedicated Staff

Who keep the T running





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