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**.
Green Line Transformation

**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**

**Transformative Outcomes**

- Improve **schedule adherence**: Remove select speed restrictions with track and signal replacement
- 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

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

- 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 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

- Safety & Resilience
  - Collision Risk
  - Signal Overruns
  - Flood Risk

- Addressing Demand
  - Capacity
  - Line Speed
  - Fleet Size

- Service Delivery
  - Passenger Wait Time
  - Headway Adherence
  - Speed Restrictions

- Access
  - Station Accessibility
  - Low Floor Vehicles
  - Pedestrian Access

- Customer Experience
  - Station Wayfinding
  - Station Amenities
  - Customer Service
The Green Line Transformation

Program Team

Angel Pena
GLT Chief

Kimberly Woollard
Senior Director

Desiree Patrice
Senior Director

Tamieka Thibodeaux
Senior Director
Green Line Transformation

Selected Near Term Improvements

Track, Power & Signals

Stations, Structures & Accessibility

Technology for Riders & Operations

Rolling Stock, Specialty Equipment & Facilities

Massachusetts Bay Transportation Authority (MBTA)
Selected Near Term Improvements

- Track, Power & Signals
- Stations, Structures & Accessibility
- Technology for Riders & Operations
- Rolling Stock, Specialty Equipment & Facilities
**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
## Green Line Transformation

### 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)**

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

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

Type 7, 8, 9
~200 MAX PASSENGERS

Supercar (Type 10)
~360 MAX PASSENGERS
Stakeholder Outreach & Engagement

2019 Outreach Activities

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

Community Information Sessions: September 2019

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<thead>
<tr>
<th>Date/Time</th>
<th>Branch</th>
<th>Location</th>
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<tbody>
<tr>
<td>Sept. 12, 2019</td>
<td>C</td>
<td>Coolidge Corner School, Multipurpose Room, Brookline, MA</td>
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<td>6:00 – 7:30 PM</td>
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<td>Sept. 17, 2019</td>
<td>B</td>
<td>Boston University, Jacob Sleeper Auditorium, Boston, MA (Fenway–Kenmore)</td>
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<td>6:00 – 7:30 PM</td>
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<td>Sept. 23, 2019</td>
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<td>Newton Free Library, Druker Auditorium, 330 Homer St, Newton, MA</td>
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<td>Sept. 26, 2019</td>
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<td>Tobin Community Center, 2nd Floor Conference Room, Boston, MA (Mission Hill)</td>
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<td>6:00 – 7:30 PM</td>
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Online and Social Media
Service Alerts
Project Updates

GLT Program Website
www.mbta.com/GLT

Contact us at:
GLT@mbta.com
Communities

Dedicated Staff

T-Passengers

Who keep the T running