Green Line Transformation Program: Program Overview

2018-2022 (FY19 – 23)
Green Line Transformation Program

Transformation Program

- Establish a multi-phased Green Line Transformation Program that integrates safety and reliability needs of today and modernization planning for tomorrow into a single, coordinated capital investment program

- Consistent with Focus40 and Service Delivery Policy, develop a strategic vision and KPIs for Green Line service and infrastructure, tied to multi-phased modernization around a new vehicle fleet

- Coordinate all non-GLX activities impacting Green Line vehicles, infrastructure, and service anticipated to be a significant capital program phased over the next 5, 10, 15+ years

- Hire a GLT Program Manager within a year. In the meantime, establish an internal MBTA Steering Committee to provide direction

- Engage a PM/CM Consultant to coordinate existing and proposed projects for 2018, develop a plan for 2019 and beyond, and support program management, coordination, and communication/outreach efforts.
Transition Program: Phased Implementation

Multi-phased program proposed that will transition the Authority to a modern 100% accessible high capacity car and necessary system improvements

Phase I: Near term projects currently identified in FY19-23 Draft CIP addressing urgent SGR needs and necessary system and reliability improvements

Phase II: Procurement of a new modern fleet of Green Line vehicles and completion of necessary infrastructure changes to operate them as single units

Phase III: Completion of necessary infrastructure changes to operate new vehicles as 2 car units on the D & E Lines.

Phase IV: Long term possibility, completion of infrastructure changes to operate new vehicles as 2 car units on B & C Lines.
Immediate Program Need

- All Green Line Branches have immediate infrastructure needs. Work is underway in 2018 that begins to address the immediate needs:
  - Train protection signal overlay
  - D-Branch signal upgrade
  - Track infrastructure SGR upgrades

- Infrastructure and Vehicle needs exist beyond the immediate 2018 – 2019 timeframe

- A transformative operational/service vision, investment program, and coordinated communication strategy is needed:
  - Service improvements and future vehicle options to guide infrastructure and accessibility investments
  - Clearly describe the investments
  - Guide current and future work
  - Minimize disruption
  - Integrate internal and external project/planning efforts critical to success
  - Preserve Rights of Way and future TSP options
Immediate Program Need
## Green Line Transformation Phase 1: DRAFT FY19-23 CIP

<table>
<thead>
<tr>
<th>Investment Category</th>
<th>Total Budget</th>
<th>FY19-23 CIP</th>
<th>Sample Projects</th>
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</table>
| Infrastructure (Track, Signals, Power, Bridges, Tunnels) | $389.2M      | $367.1M     | - Green Line D Branch Track and Signal Replacement  
- Green Line (Non-GLX) Grade Crossings                      |
| Stations and Customer-Facing Improvements                | $168.7M      | $133.4M     | - Green Line Real Time Tracking  
- Symphony Station                                         |
| Revenue Vehicles                                         | $233.9M      | $123.2M     | - Type 7 Midlife Overhaul  
- Type 8 Reliability Improvements  
- Type 10 Planning                                          |
| Risk Management and Mitigation                           | $171.9M      | $117.3M     | - Green Line Train Protection                                                   |
| Systemwide programs and on-call projects                 | Various      | Various     | - Facility Roof Replacements On-Call  
- Systemwide tunnel inspection and repairs  
- On-call Power                                              |
| **Total, Phase 1 Investments**                           | **$963.7M**  | **$739.9M** |                                                                                 |

*Projects that extend beyond 2023 will be funded through follow-up annual CIP programs*
Organize the Green Line Transformation Program

Organize the separate, uncoordinated Green Line (Non-GLX) projects and plans into a unified, integrated multi-phased Green Line Transformation (GLT) Program

- Establish an integrated Steering Committee:
  - Define roles and responsibilities of members to guide the deliverables in the first year of strategic implementation planning.
  - Set short, medium, and long-term goals and KPIs to drive the implementation of the GLT program

- Develop the framework for guiding the MBTA PM and PM/CM to deliver critical tasks for year one and Transformation Program life-cycle
  - Build from Green Line Capacity Study
  - Engage PM/CM
    - Coordinate and communicate with stakeholders in advance of construction activity.
    - Align Immediate work commencing this spring
    - Integrate and align Focus 40 Green Line corridor study and GLX into the GLT Program
Green Line Transformation Program

Program Team (Virtual Vertical Organization)

Steering Committee:
- Chief Engineer
- Engineering and Maintenance
- Operations
- Capital Delivery
- Other

Steering Committee:
- PM/CM Consultant
- Technical Support
- Design Development
- Contract Support
- Construction Support
- Capital Delivery
- Vehicle Engineering
- Capital Program Oversight
- Chief Engineer’s Office / E&M
- Authority-Wide Support
- Operations

MBTA Virtual Vertical Organization:
- Track Improvement Projects
- Signal Improvement Projects
- Power Improvement Projects
- GLTP DB
- Station Improvement Projects
- Car House Renovation Projects
- GLTP Procurement
- Type 10 Specification Development
- Type 10 Procurement and Commissioning
- Project Funding, Sources
- Project Controls
- Technical Engineering Direction
- Project Prioritization
- Asset Integration
- System-Wide Accessibility
- Safety
- Legislative Affairs
- Green Line Operations
- Light Rail Vehicle Maintenance
- Bus Operations

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Green Line Transformation Program

Next Steps

Under the direction of an MBTA PM and Chief Engineer, establish a GLT Program Team from MBTA departments (and others as appropriate) as the central group to review, analyze and plan Green Line improvements.

• **PM/CM selected – Obtain Board Approval for PM/CM**
  
  • Develop Task Order #1: Clearly defines scope to coordinate and develop a GLT Team and Program
  
  • Coordinate findings from current studies and guide schedules for construction activity in 2018
  
  • Develop Communications Plan that integrates all current activity within the broader plan for the Green Line across MassDOT Highway and MBTA speaking with one voice connecting with municipalities and stakeholders.
  
  • Integrate and align Focus 40, Capacity Study and GLX into the GLT Program
  
  • Continue Program development of Phase II & Phase III of GLT Program
  
• Coalesce the separate Green Line Projects into a FY19 – 23 (and beyond) Capital Program
  
  • Continue to procure design and construction contracts organized around the common transformation vision.