

GLTPS

GREEN LINE TRAIN PROTECTION SYSTEM

A CAPITAL TRANSFORMATION PROJECT

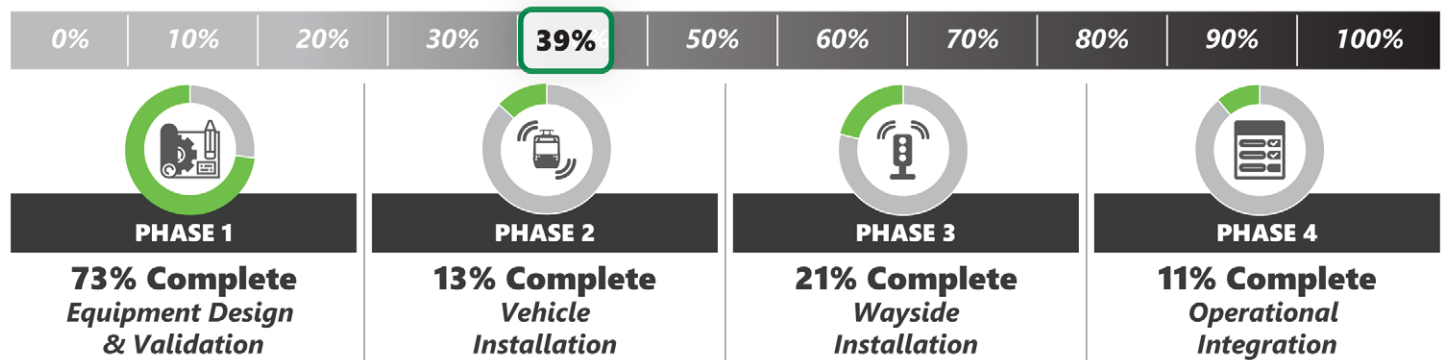
May 2023 Review and Lookahead

The **Green Line Train Protection System (GLTPS)** combines vehicle and wayside equipment that work together to avoid train-on-train collisions, enforce speed limits, and add red light signal protection. The project has four overlapping phases which are all currently underway

- **Phase 1 Equipment Design** integrates new technology into MBTA legacy systems.
- **Phase 2 Vehicle Installation** of camera, radar, and radio equipment into light rail vehicles with some activity already underway at the Innerbelt Vehicle Maintenance Facility.
- **Phase 3 Wayside Installation** is currently on hold and will resume later this year to align with the MBTA construction schedule.
- **Phase 4 Operational Integration** where MBTA personnel will receive information and training on the new GLTPS system and plans are developed for system cutover.

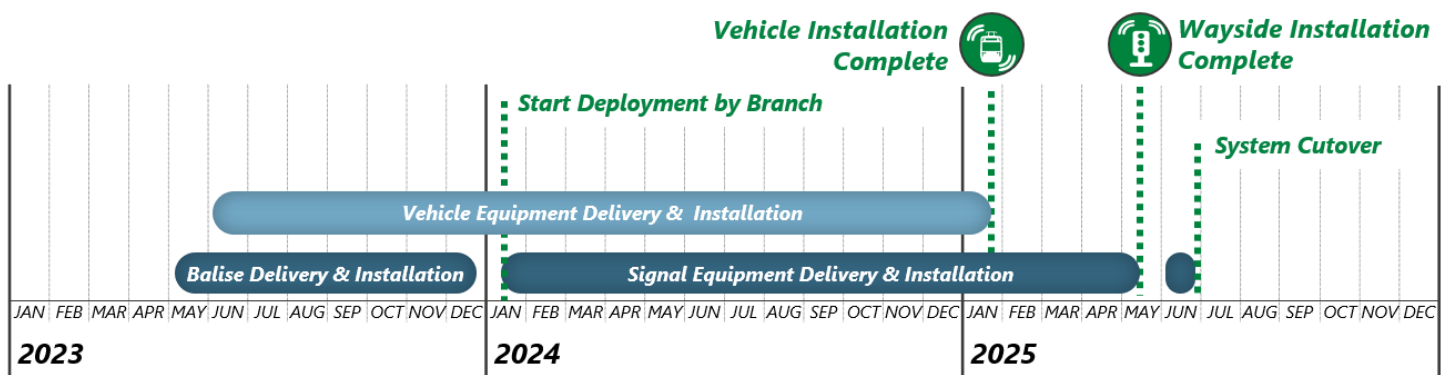


GLTPS by the Numbers



Did you know...

The Bosch Collision Avoidance System (CAS) being implemented as part of GLTPS has been installed in similar configurations in European cities including Frankfurt, Hannover, Mannheim, & Munich, Germany; Amsterdam & Den Haag, Netherlands; and Ostrava, Czech Republic.



This Past Month



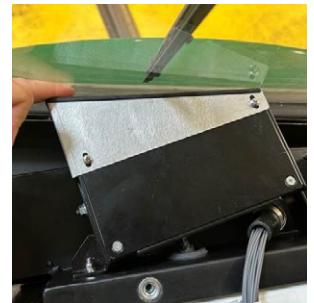
Equipment Design & Validation

- **A Type 8 conceptual installation workshop was held at Riverside on May 25** to familiarize stakeholders with the design options being explored by the System Integrator. Feedback was and is currently being analyzed for next steps in manufacturing pre-production units and finalizing placement within the Type 8 vehicles.
- **First Article Inspections (FAIs) have begun at Transitair in Hornell, NY** and will continue through June. Components, equipment assemblies, wiring harnesses, and the overall kits including installation materials will be inspected and tested to ensure design validation before production begins.



Vehicle Installation

- **The Collision Avoidance System (CAS) camera and other new components have arrived and been installed** and other new components have arrived and been installed on the Pilot 3708 at Innerbelt VMF. The camera works in parallel with the front mounted radar sensor to detect trains along the right of way (ROW). When a train is detected, the approaching train is forced into dynamic braking until completely stopped.
- **Abatement of the 3600 series vehicles is approaching completion.** The 3700 series fleet was not affected and are now being cycled through Innerbelt VMF to be set up for equipment before modification begins. Water & fireproof seals and speed sensor housings are part of the incremental installation being completed at this time.



Wayside Installation

- **200 balises have been received and are being programmed at Transitair** in Hornell, NY. These balises will be strategically installed in locations where operational speed limits change as part of the speed enforcement directive by end of year 2023.



Operational Integration

- **A kick-off meeting was held between the System Integrator and DBE** video production company on May 22. A training video will be developed in the coming months to ensure all Motorpersons are familiar with GLTPS functionality and trained before system cutover.

Lookahead For Next Month

Continue working closely with the Systems Integrator on mitigation strategies to ensure the safe and rapid implementation of safety features and operationalize them as soon as possible



Equipment Design & Validation

- Perform component, assembly, & vehicle kit first article inspections (FAIs)
- Finalize Type 8 equipment placement with MBTA Stakeholders



Wayside Installation

- Begin receiving additional balises to support speed enforcement directive
- Complete dynamic envelope testing at specified tunnel locations



Vehicle Installation

- Modify the 3700 series fleet like the 3600 series vehicles
- Continue speed sensor housing installation on all Type 7 vehicles



Operational Integration

- System Integrator to receive production company quote for training videos
- Receive and review draft Operations & Maintenance Manuals