

Joint LIRR/MNR PTC Update  
Committee Meeting Oct 23, 2023



# LIRR Project Update



## Implementation Summary

All trains are operating with full PTC functionality on entire LIRR territory and continue to be monitored daily with any issues mitigated.

## Progress

- To meet contract completion with the System Integrator Contractor (Alstom/Siemens):
  - Continue to receive software releases to correct system variances and meet system contract requirements.
  - Contractor needs to complete resolving system variances to meet system reliability requirements.
  - Continue receiving remaining system trainings emphasizing on taking over System Integrator role and system design capabilities.
- Working with MNR and LIRR Legal team on a contract closure agreement with Alstom/Siemens.
- Establishing Technical Support Agreements for the future PTC enhancements and infrastructure changes.
- Continue working with LIRR support teams for PTC design & implementation efforts to support all on-going and up-coming infrastructure projects that include design, field work and testing.
- Continue interoperability coordination with Amtrak and other Northeast Corridor railroads.
- Continue developing a system for quarterly automated FRA PTC issue reporting.
- Continue working with the Northeast Corridor railroads to address FRA mandated safety plan conditions:
  - Positive Train Stop Release (PTSR) – adds additional safety to system by incorporating code required by Dispatchers to enable the Positive Train Stop Override button prior to its use by Engineers.
  - Missed Transponder – Mitigation of issue when onboard computer misses read of transponders. FRA and NEC pursuing onboard database update.



# LIRR PTC Timeline – Look Ahead Plan



## 2023

- Anticipate finalizing contract closure agreement with Alstom/Siemens, which includes closing out a substantial number of open variances, and a schedule plan commitment to resolve remaining open variances.
  - Resolution/ closeout of all open variances will enable the contractor to meet ARDT reliability requirements.
- Anticipate receiving final on-board computer (OBC) software from Siemens after full subsystem testing.
- Anticipate commencing system integrated FAT testing of new OBC software.
- Receive Software Data Maintenance Facility (SDMF) delivery. The SDMF house all PTC software, as-built, documentation, asset information, and variance management.
- Complete all outstanding training requirements to LIRR support teams.
- Continue to support on-going and up-coming Infrastructure projects with changes that require updates to the PTC design.

## 2024

- Complete integrated factory acceptance testing and live train field testing for new on-board computer OBC software release.
- Complete fleetwide deployment of OBC software.
- Alstom/Siemens all final software changes to meet contract system requirements and to correct variances and NCRs.
- Alstom/Siemens to complete meeting the Availability Reliability Demonstration Testing requirements.
- Achieve final contract completion with Alstom/Siemens.
- Anticipate award of Technical Support Agreements for future PTC work and FRA requirements.
- Continue to support on-going Infrastructure projects with changes that require updates to the PTC design.
- Implement application software for automated quarterly FRA PTC issue reporting.
- Submit PTSR Implementation plan and schedule to FRA.
- Finalize plan for HMAAC Security Key Exchange and Management Services.



# MNR Project Update



## Implementation Summary

All trains are operating with full PTC Functionality on entire MNR territory including East and West of Hudson with continued monitoring daily and any issues mitigated.

## Progress

- To achieve contract completion with the System Integrator, close software variances across all subsystems improving operations and complete remaining contract requirements
  - Legal negotiations ongoing for contract closure agreement
  - Onboard and Office releases are required to close remaining variances
- New Canaan Station bumping post leading end enforcement was implemented using PTC system.
- This is an in-house design first on the NEC Railroads implemented with very low speed/distance limitations
- PTC Construction Zone was installed for the ongoing signal and PTC installations for new CP 243 interlocking
  - Signal cutover is scheduled for the 1<sup>st</sup> week of Nov followed by PTC Testing and commissioning by Dec 1<sup>st</sup>
- Migrated from cellular to fiber communication with the installation of new fiber on Hudson Line from CP 58 to CP 72
- As part of a separate contract, Alstom M8 OBC Software 1.5 testing was completed, FRA approval request will be filed for revenue testing and deployment in Jan 2024.
- Continue working with the Northeast Corridor railroads to address FRA-mandated conditions:
  - Positive Train Stop Release (PTSR) – adds additional safety to system by incorporating code to be provided by RTCs to enable the Positive Train Stop Override button prior to its use by Engineers.
  - Missed Transponder - Mitigation of issue when onboard computer misses read of transponders. FRA response is pending to the joint NEC Letter sent. FRA and NEC pursuing onboard database update.



# MNR PTC Timeline – Look Ahead Plan



## 2023

- Continue closeout of open variances/NCRs with lab and field testing of software releases for Office, Wayside and Onboard subsystems and subsequent deployment fleetwide and right-of-way locations.
- Assume PTC System Integrator role with Systems Engineering, Configuration Management and Safety functions performed in-house with the Software Data Maintenance Facility (SDMF) delivery
- ✓ Closeout PTC contract requirement, documentation (CDRLs, O&M Manuals and As-Builts) and Training
- Finalize Systems Integrator contract closure agreement
- ✓ Completion of the speed upgrades associated with the 35 switch replacement at CP 261
- ✓ Continue to support Infrastructure projects including Signal Upgrades for CP 230, CP 241 and new CP 243
- Anticipate resolution with the FRA and NEC railroads on an agreed plan to resolve the Safety Plan conditions

## 2024

- Complete ARDT (Availability Reliability Demonstration Test) & Warranty Program
- Achieve Final Contract Completion
- Begin deployment of M8 OBC software 1.5 on the fleet
- Anticipate award of Technical Support Agreements for future PTC work and FRA requirements.
- Continue to support Infrastructure projects including new Walk Bridge associated PTC changes
- Develop and submit plan to FRA for Positive Train Stop Release (PTSR) Safety Plan condition
- Support plans for Wayside, Onboard and Office updates required for Penn Station Access
- Finalize plan for HMAC Security Key Exchange and Management Services.
- Implement application software for automated quarterly FRA PTC issue reporting.

