



Safety and Operations Committee

Board Information Item III-A

February 10, 2022

Silver Line Phase 2

Washington Metropolitan Area Transit Authority

Board Action/Information Summary

☐ Action ☒ Information

MEAD Number:
202339

Resolution:
☐ Yes ☒ No

TITLE:

Silver Line Phase 2 Update

PRESENTATION SUMMARY:

Staff will present the Board with the status of Silver Line Phase 2 open issues, update on Operational Readiness Testing, progress on hiring and training, and status of safety certification.

PURPOSE:

To provide the Safety and Operations Committee with an update on the status of Silver Line Phase 2, activities leading up to Operational Readiness, progress on hiring and training of employees, and status of safety certification.

DESCRIPTION:

Capital Rail Constructors, a joint venture of **Clark Construction Group LLC** and **Kiewit Infrastructure South Co.**, is the design-build contractor for Package A of the Silver Line Phase 2 (mainline and stations), and **Hensel Phelps Construction Company** is the design-build contractor for Package B (Dulles Rail Yard). Major subcontractors and consultants under these entities include **Mass. Electric Construction Company**, **Parsons Corporation**, **Dewberry**, **Systra**, and **M.C. Dean**.

Major consultants and contractors supporting Metro's efforts on the project include **Mott MacDonald**, **Gannett Fleming**, **HNTB**, and **Cubic Transportation Systems**.

Key Highlights:

- As part of Metro's ongoing review of the Silver Line Phase 2 project, an issue dealing with Heat Tape Failures emerged during Operational Readiness Testing. This issue is currently unresolved and Metro staff are following up with the Metropolitan Washington Airports Authority (MWAA) on the root cause analysis and satisfactory remediation. Seven issues - UPS Fans in Yard, Rail Car Hoists, Tight Gauge at Yard Switches, Cracked Impedance Bonds, Station Platform Pavers, Non-Compliant Clearance in Elevator Machine Room, and Turntable

Deficiencies are currently being remediated ("Underway")

- On November 4, 2021, the Airports Authority announced that Substantial Completion had been achieved on Package A (Mainline and Stations) effective October 25, 2021. On December 1, 2021, the Airports Authority announced that Substantial Completion on Package B (Yard) had been achieved effective October 29, 2021. Substantial Completion is a contractual milestone between the Airports Authority and their contractors; WMATA is not involved in this determination. As noted in earlier briefings, satisfactory resolution of all issues must occur prior to Substantial Completion, Operational Readiness, or at the very latest prior to acceptance/start of revenue service. The current status of the open issues is included in the attached presentation.
- With the announcement of Substantial Completion, Metro is continuing to review punch lists and associated remediation and reviewing the reports associated with ongoing Operational Readiness testing and Systems Performance Demonstration activities towards determining the Operational Readiness Date (ORD). Once ORD has been declared, Metro will then proceed with pre-revenue activities for approximately 90 days.
- As the intended future owner and operator, Metro determines when all the conditions necessary for Metro acceptance have been satisfied, and whether Phase 2 of the project is accepted into the Adopted Regional System (ARS).
- Metro will establish a revenue service date after all identified deficiencies have been resolved to meet acceptance standards.

Background and History:

Silver Line Phase 2 will extend the Metrorail system into Loudoun County, Virginia, and provide 11.4 miles of new track from the current terminus at Wiehle-Reston East Station, through the Washington Dulles International Airport, to a terminus in Loudoun County. It includes six new Metrorail stations (Reston Town Center, Herndon, Innovation Center, Washington Dulles International Airport, Loudoun Gateway, and Ashburn), and a new Service & Inspection yard.

Metro's role and responsibilities for the design-build phase of the Silver Line Phase 2 project are as defined in the Cooperative Agreement executed between the Airports Authority and Metro on August 7, 2013.

The Board of Directors amended the Adopted Regional System (ARS) to incorporate the Dulles Metrorail Extension (Silver Line) subject to the fulfillment of certain "ARS Contingencies" adopted in Resolution 2012-24. Additional

conditions precedent for acceptance are established in Article 6 of the Cooperative Agreement.

Discussion:

Construction of the Silver Line Phase 2 is nearing completion. Facility construction is complete, and systems installations and testing are well advanced.

In addition to Dynamic Testing Readiness, the project will advance through several milestones moving towards the start of revenue service. The milestones are defined and summarized as follows:

- Dynamic Testing Readiness – determination that the contractor has completed the work in accordance with the contract documents which renders the project safe and capable of supporting dynamic testing. This determination is supported by documentation of the following: final alignment and track configuration; operational traction and third rail power; completion of prerequisite automatic train control static testing; activation of contractor start-up railroad safety procedures; and verification of train, track and structure clearances.
- Substantial Completion (SC) – the work is substantially complete. System Performance Demonstration is complete. All conditions of substantial completion have been met, and the project is ready for operational readiness testing. Conditions to substantial completion include performance of contractor inspections and tests, delivery of record documents and spare parts, completion of training and contractor safety certification, correction of all defects that materially adversely impact the operations of the Project, and provision of Operations and Maintenance (O & M) manuals and punch list completion schedule.
- Operational Readiness Date (ORD) – the date on which Metro determines that the Project is sufficiently complete for Metro to commence simulated rail service. A key condition of operational readiness is the successful completion of operational readiness testing conducted by Metro.

Between ORD and acceptance, Metro has provisional care, custody and control of the project, and performs activities in preparation for revenue service. These activities include verification that conditions precedent for acceptance have been met; simulated service; emergency drills; safety certification; mobilization of stations and yard; rekeying all facilities; providing escorts to support contractor punch list completion; control right-of-way operations; and performance of preventive maintenance inspections.

Metro's acceptance determination is supported by the completion of certain ARS Acceptance Tasks, verification that all conditions precedent for

acceptance have been met, and Metro's determination that Phase 2 is eligible and ready for Metro Acceptance.

The conditions precedent for acceptance of Phase 2 into the ARS as established in the Cooperative Agreement are summarized as follows:

- Condition 1. Punch List – all punch list work completed to Metro's satisfaction. If not completed, Metro has the right to complete punch list items at the Airports Authority's expense.
- Condition 2. Property Transfers – the Airports Authority shall have transferred to Metro the appropriate property interests as indicated in the approved Right-of-Ways plans.
- Condition 3. Spare Parts and Training – Metro shall have received all spare parts, O&M manuals, and necessary training.
- Condition 4. Record Deliverables – record deliverables have been received by Metro.
- Condition 5. Assignment of Warranties – all warranties have been assigned to Metro, and all documentation necessary to enforce the warranties has been provided to Metro.
- Condition 6. Permits – the Airports Authority shall have obtained for Metro all land use and permitting approvals necessary for Metro's operations.
- Condition 7. Payments – the Airports Authority shall have paid Metro all funds due and owing.
- Condition 8. Safety and Security – project has achieved certification by the Metro Chief Safety Officer.
- Condition 9. Insurance – Metro shall have received all certificates of insurance.
- Condition 10. Storm Water Management – the Airports Authority shall have obtained maintenance agreements as required.

The update on status of currently open issues is as follows:

Underway

- UPS Fans in Yard
- Rail Car Hoists
- Tight Gauge at Switches in Yard

- Cracked Impedance Bonds
- Station Platform Pavers
- Non-Compliant Clearance in Elevator Machine Room
- Turntable Deficiencies

Unresolved

- Heat Tape Failures (Issue identified during Operational Readiness Testing)

Hiring of staff and associated training is underway and proceeding on schedule.

Updates on the status of the project and safety certification are further detailed in the attached presentation.

FUNDING IMPACT:

There is no direct funding impact for presenting this update.	
Project Manager:	Neil Nott
Project Department/Office:	Capital Delivery/Project Implementation and Planning (CAPD/PICO)

TIMELINE:

Previous Actions	August 2013 – Metro and the Airports Authority executed the negotiated Cooperative Agreement that provides for Metro support throughout the design-build phase of the Silver Line Phase 2 project.
Anticipated actions after presentation	Board approval of Service Plan and Title VI Equity Analysis and Acceptance of Silver Line Phase 2

Silver Line Phase 2 Update

Safety and Operations Committee
February 10, 2022



Purpose

- Status of Open Issues
- Status of Operational Readiness (ORD)
- Update on Hiring and Training
- Update on Safety & Security Certification

Status of Open Issues:

Unresolved:

- Heat Tape Failures

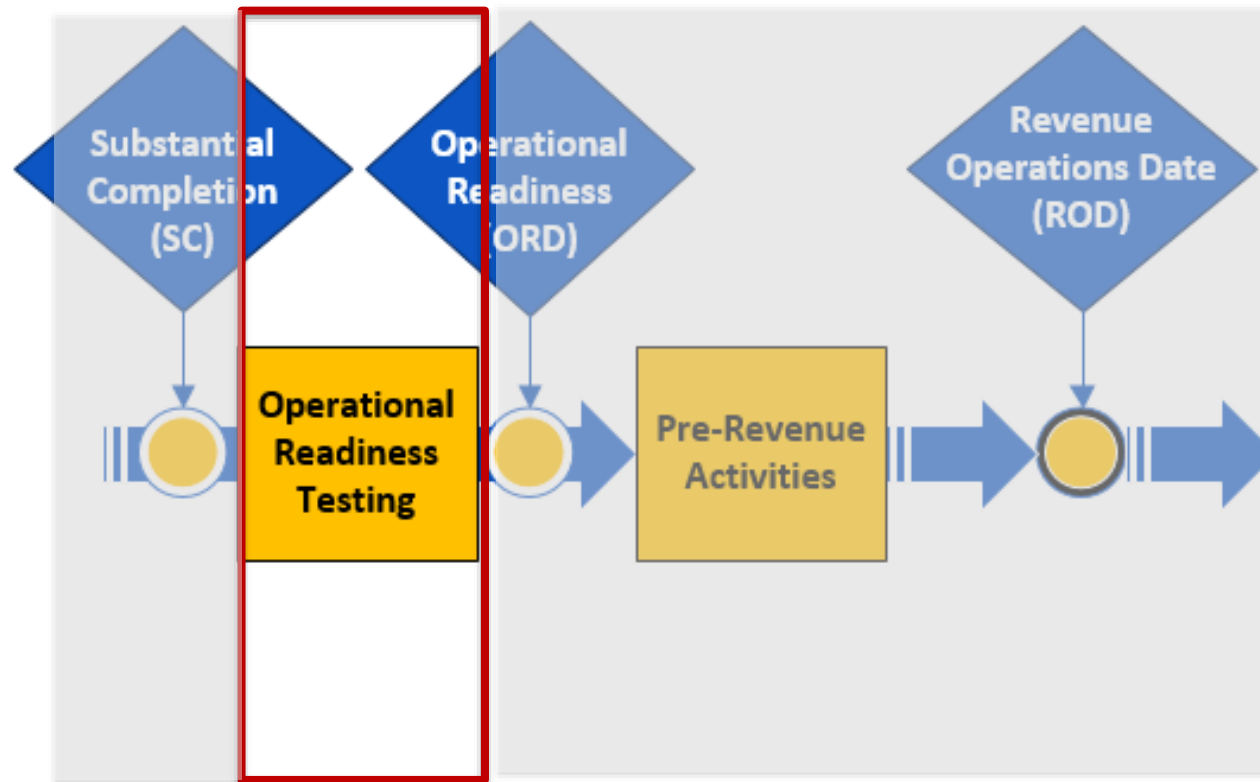
Underway:

- UPS Fans in Yard
- Rail Car Hoists
- Tight Gauge at Switches in Yard
- Cracked Impedance Bonds
- Station Platform Pavers
- Non-Compliant Clearance in Elevator Machine Room
- Turntable Deficiencies

Activities leading to Operational Readiness Date

- Airports Authority declared Substantial Completion in October 2021 of Package A (Mainline, Stations) and Package B (Yard)
- Punch List Status:
 - Package A – 42% completed
 - Package B – 60% completed
- Operational Readiness Testing/Systems Performance Demonstration :
 - Package A – 74% completed
 - Package B – 63% completed

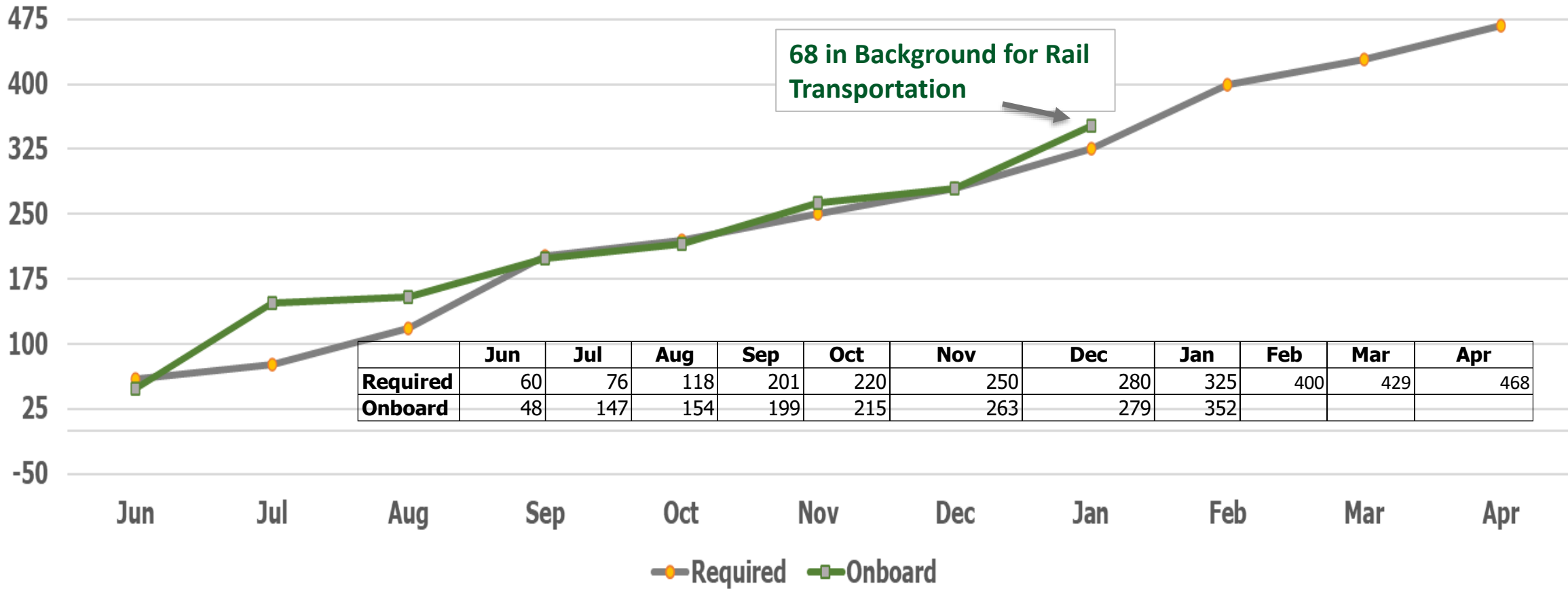
Schedule: Operational Readiness Testing



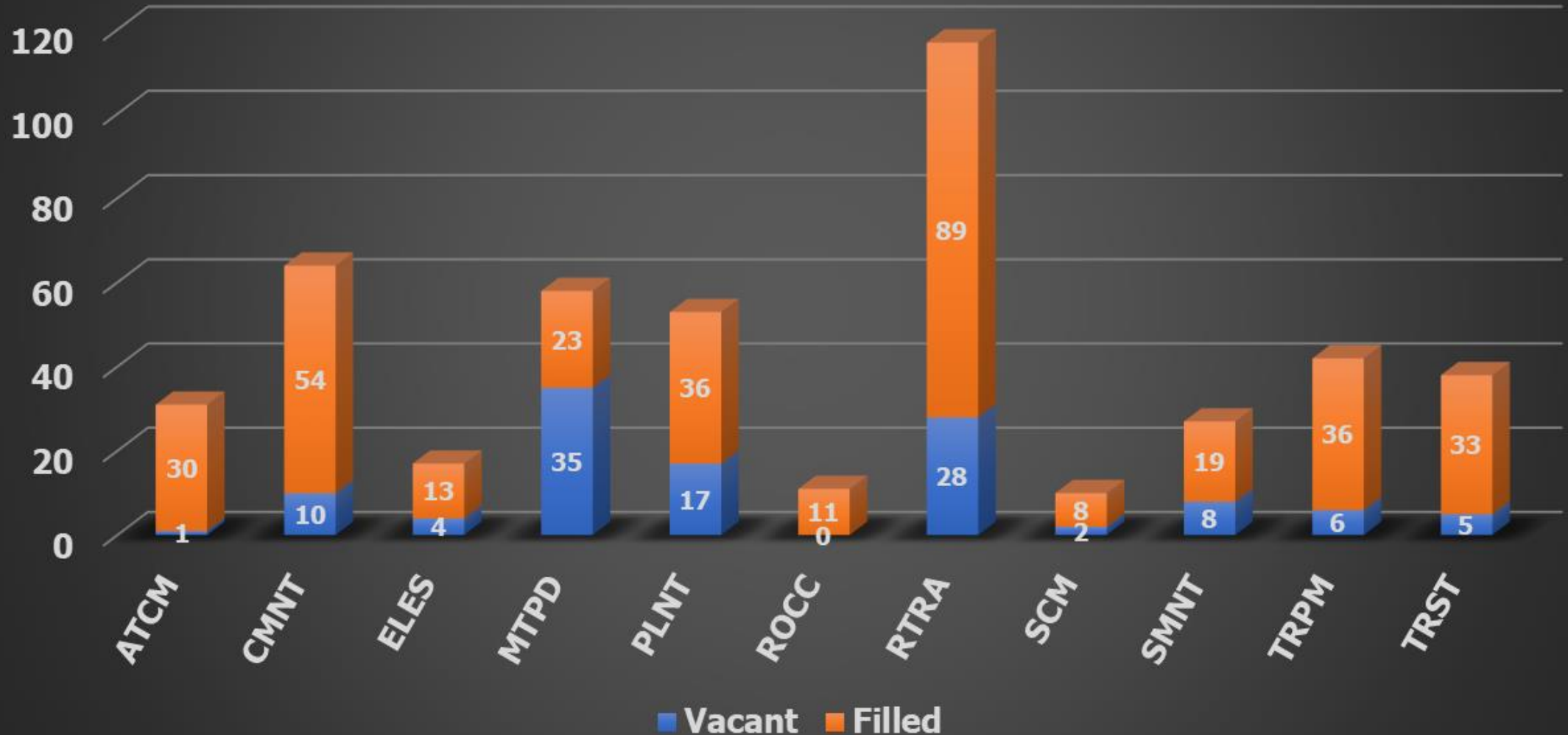
- Metro is now undertaking testing and related activities towards determining Operational Readiness
- Until Metro determines Operational Readiness Date, Airports Authority/Contractor retain project custody
- No fixed duration for ORT, as it depends on testing not completed prior to Substantial Completion

Update on Hiring and Training

Operations Silver Line Phase 2 Hiring
As of January 27, 2022



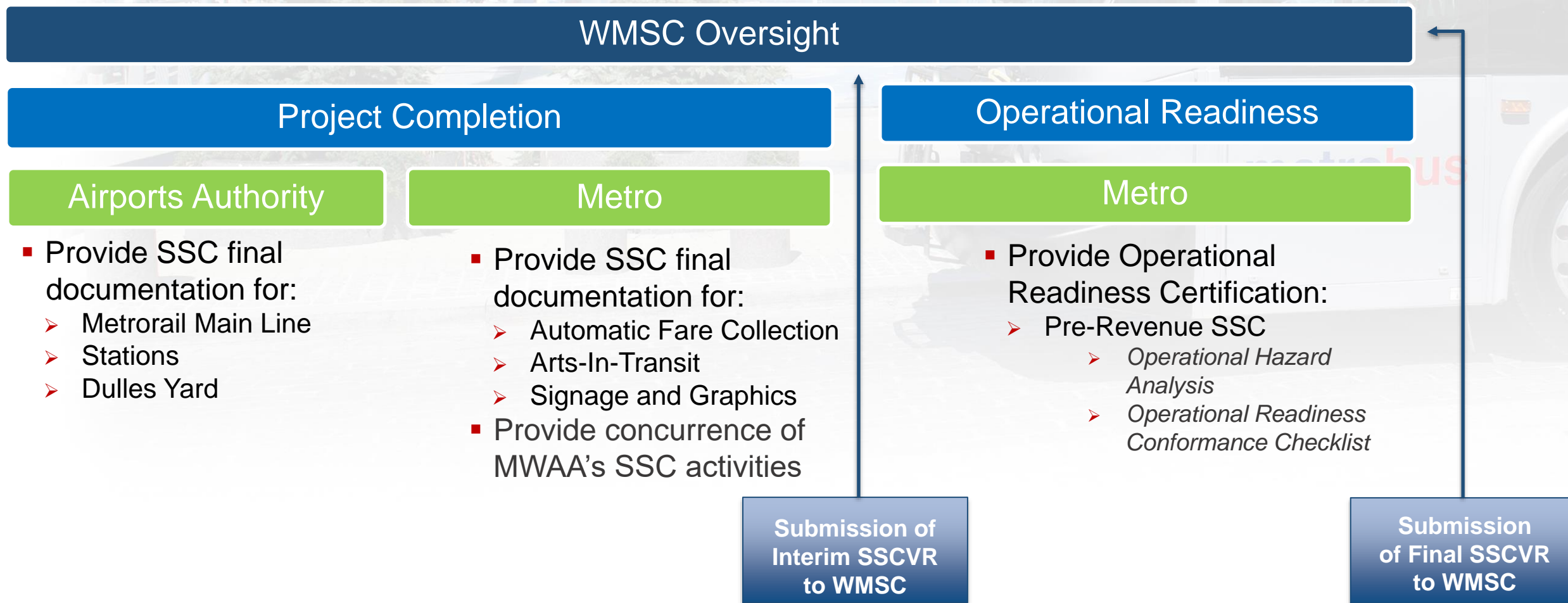
Operations Silver Line Positions Hiring Status 01/27/22



- Completed 68 classes covering new and updated mainline infrastructure:
 - Automatic Train Control
 - Communications
 - Traction Power (High/Low Voltage)
 - Elevator/Escalator
 - HVAC
 - Fire Suppression system
 - Closed Circuit TV
- Currently training rail yard equipment
 - Car Hoists
 - Train Wash
 - Wheel Boring Machine
 - Yard Process Equipment
 - Yard Mobile Radio System
 - Truck Turntables

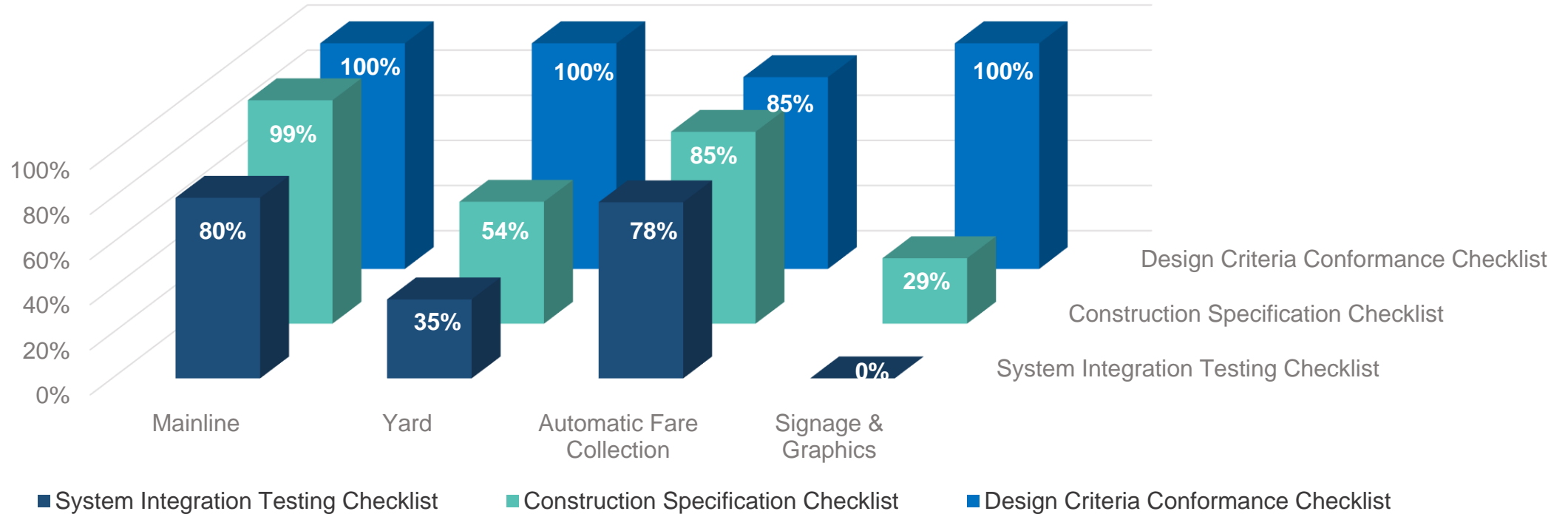
Update on Safety & Security Certification

SSC Responsibilities



Safety and Security Certification (SSC)

Completion of Certified Items Lists



Tabletop Exercises Conducted



December 10, 2020

- Silver Line Tabletop Exercise #1
- Fire Department Response
- Unified Command
- Evacuation
- Metro Familiarization



March 16, 2021

- Silver Line Tabletop Exercise #2
- Law Enforcement Response
- Active Threat
- Evacuation
- Unified Command
- Metro Familiarization



November 30, 2021

- Yard Communication and Response Tabletop Exercise
- Internal WMATA
- Incident Command
- Communications



December 7, 2021

- Yard Communication and Response Tabletop Exercise
- Regional Partners
- Unified Command
- Yard Familiarization

Planned Full-Scale and Tabletop Exercises



Dulles Airport Station Full-Scale Exercise

- Law Enforcement Response
- Active Threat
- Date: Post ORD



Mainline Station Full-Scale Exercise

- Fire Department Response
- Skill Stations
- Evacuation
- Roadway Access
- Date: Post ORD



Dulles Yard Full-Scale Exercise

- Fire Department and Law Enforcement Response
- Skill Stations
- Incident Command
- Roadway Access
- Date: Post ORD



Maintenance Tabletop Exercise

- WMATA Internal Response
- Plant/Car Maintenance/Track and Structures
- Snow Removal
- Date: Post ORD