



Safety and Operations Committee

Board Information Item III-A

November 18, 2021

Silver Line Phase 2 Update

Washington Metropolitan Area Transit Authority

Board Action/Information Summary

☐ Action ☒ Information

MEAD Number:
202313

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, key activities to be completed prior to Operational Readiness/Testing, Safety Certification Process, and status of hiring.

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 Testing, safety certification, and progress on hiring of employees.

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, one issue remains Unresolved (Malfunctioning UPS Fans in the Yard); six issues - 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")
- Concurrent with remediation on several issues based on an agreed upon path forward, discussions are continuing with the Airports Authority

on funding future maintenance/replacement costs on issues where accepting "as is" or remediation is not fully compliant with the approved design specifications/performance requirements.

- The Airport Authority recently announced that Substantial Completion had been achieved on Package A (Mainline and Stations) on October 25, 2021. Substantial Completion is a contractual milestone between the Airports Authority and their contractors; WMATA was not involved in this determination. Substantial Completion on Package B (Yard) is expected shortly. 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.
- 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 interim 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. An outline of these activities is included in the attached presentation.

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 Airport 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

- 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

- Malfunctioning UPS Fans in the Yard

While remediation is underway on several issues based on an agreed upon path forward, discussions with Airports Authority are continuing regarding funding of future maintenance/replacement costs on issues where accepting "as is" or remediation is not fully compliant with the approved design specifications/performance requirements.

The Safety and Security Certification Process is ongoing. This process is applied to the functional period of the project (through engineering design, construction, procurement, installation, and testing). The purpose is to ensure that all practical steps have been undertaken to integrate operational safety, security and emergency management requirements into a project and/or equipment/systems procurement.

Hiring of staff is underway and proceeding on schedule.

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

FUNDING IMPACT:

There is no direct funding impact for presenting this update. The approved WMATA FY2022 Budget includes funding for a revenue start date of January 1, 2022.	
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 & Operations Committee
November 18, 2021



Purpose

- Status of Open Issues
- Review Activities Leading to Operational Readiness Date (ORD)
- Update on Safety Certification
- Review Hiring Status

Status of Open Issues:

Unresolved:

- UPS Fans in Yard

Underway:

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

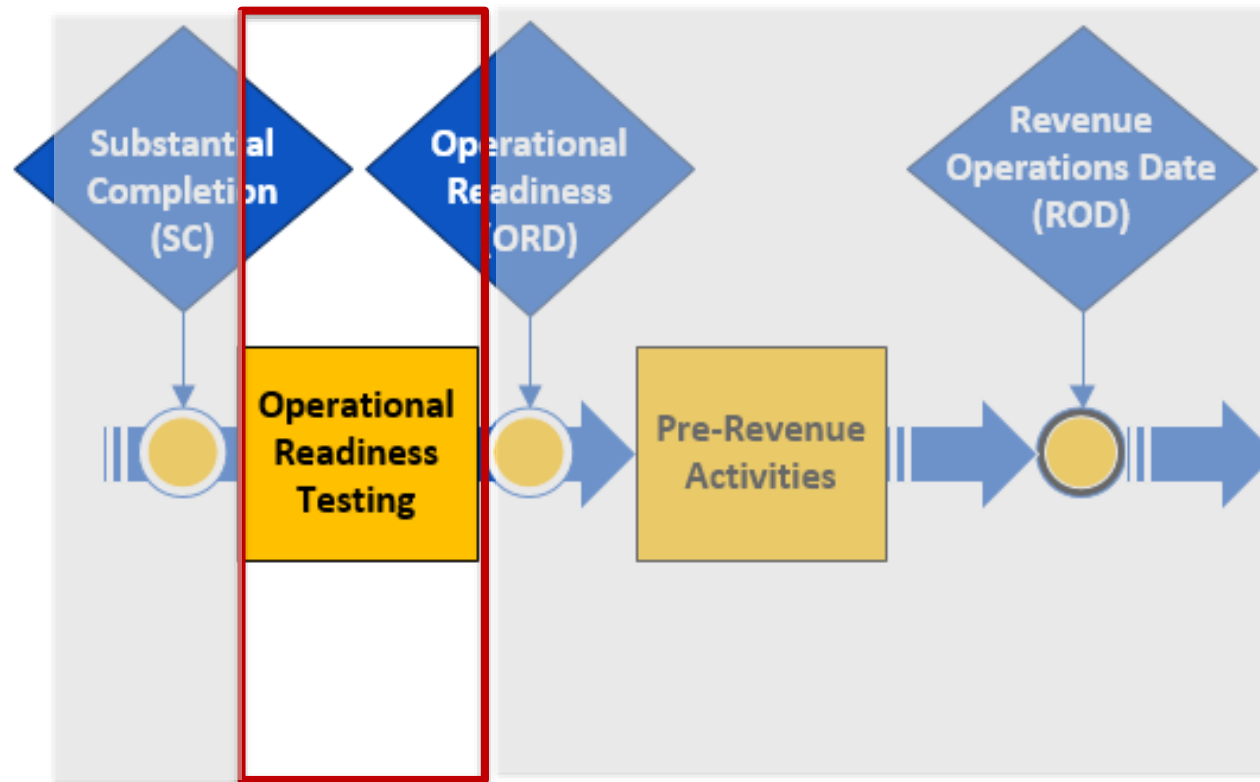
Activities leading to Operational Readiness Date (ORD)

- Airports Authority declared Substantial Completion for Package A (Line & Stations) on October 25, 2021; Substantial Completion for Package B (Yard) is expected shortly
- After date of Substantial Completion, Metro begins Operational Readiness Activities (e.g., operational tests, simulated service, etc.) to prepare for ORD
- Metro will declare ORD when it . . . “determines that [the] Project is sufficiently complete for WMATA to commence simulated rail service and prepare for revenue operations”

Activities leading to Operational Readiness Date (continued)

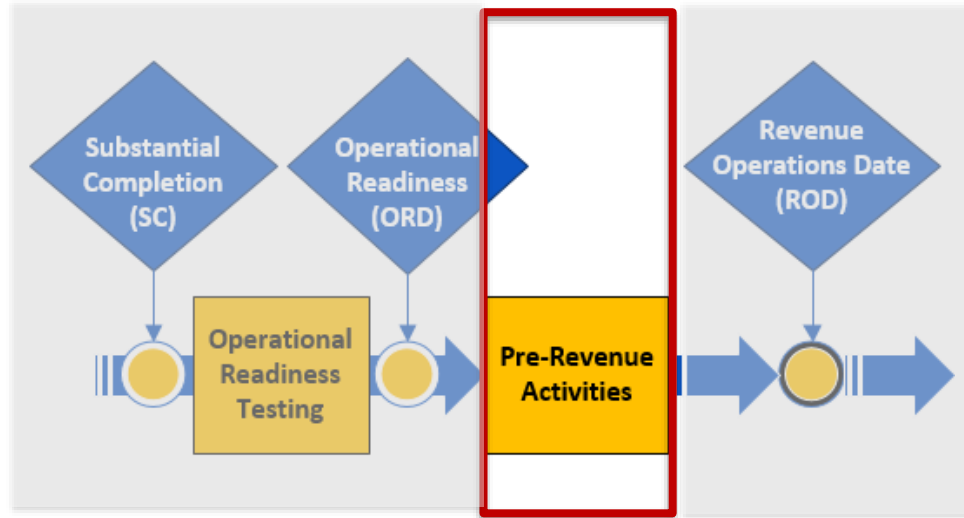
- Punch List
 - Punch List for Packages A and B are being finalized by Airports Authority and contractors
- Metro Operational Readiness Testing To be Completed:
 - Package A - 86 items; 37% completed
 - Package B - 69 items; 40% completed

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.

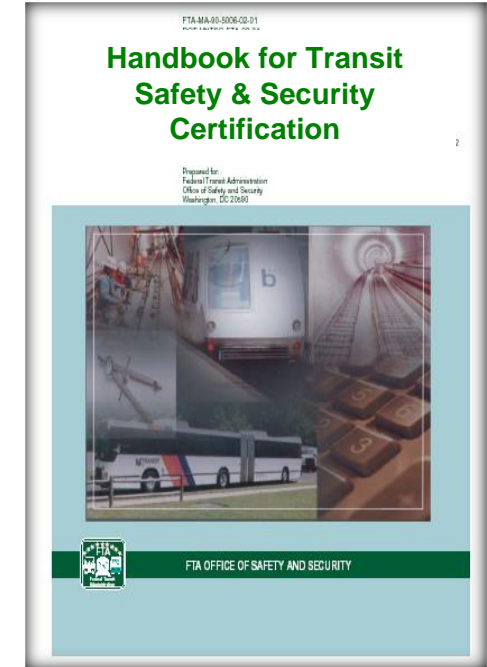
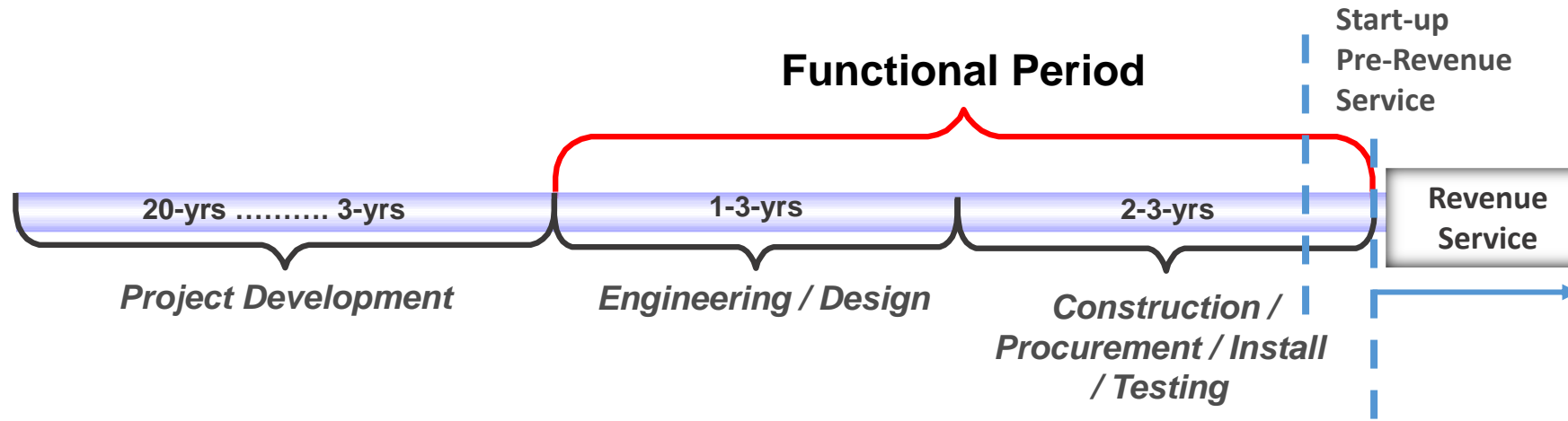
Schedule: Significant Metro Work after ORD



- On boarding Assets
- Staff & First Responder Familiarization
- Final Documents
- Policy & Procedure Updates
- Final Station Mobilization

Safety Certification

Safety and Security Certification (SSC)



SSC Responsibilities

WMSC Oversight

Project Completion

Airports Authority

- Provide SSC final documentation for:
 - Metrorail Main Line
 - Stations
 - Dulles Yard
- Develop and Implement:
 - Safety & Security Management Plan (SSMP)
 - Safety & Security Certification Plan (SSCP)
 - Certifiable Elements Lists (CELs) and Certifiable Items Lists (CILs)
 - Preliminary Hazard Analyses

Metro

- Provide SSC final documentation:
 - Automatic Fare Collection
 - Tie-In Activities
 - Arts-In-Transit
 - Signage and Graphics
 - Non-revenue Vehicles, Equipment and Furniture
- Technical oversight of Airports Authority's SSC activities

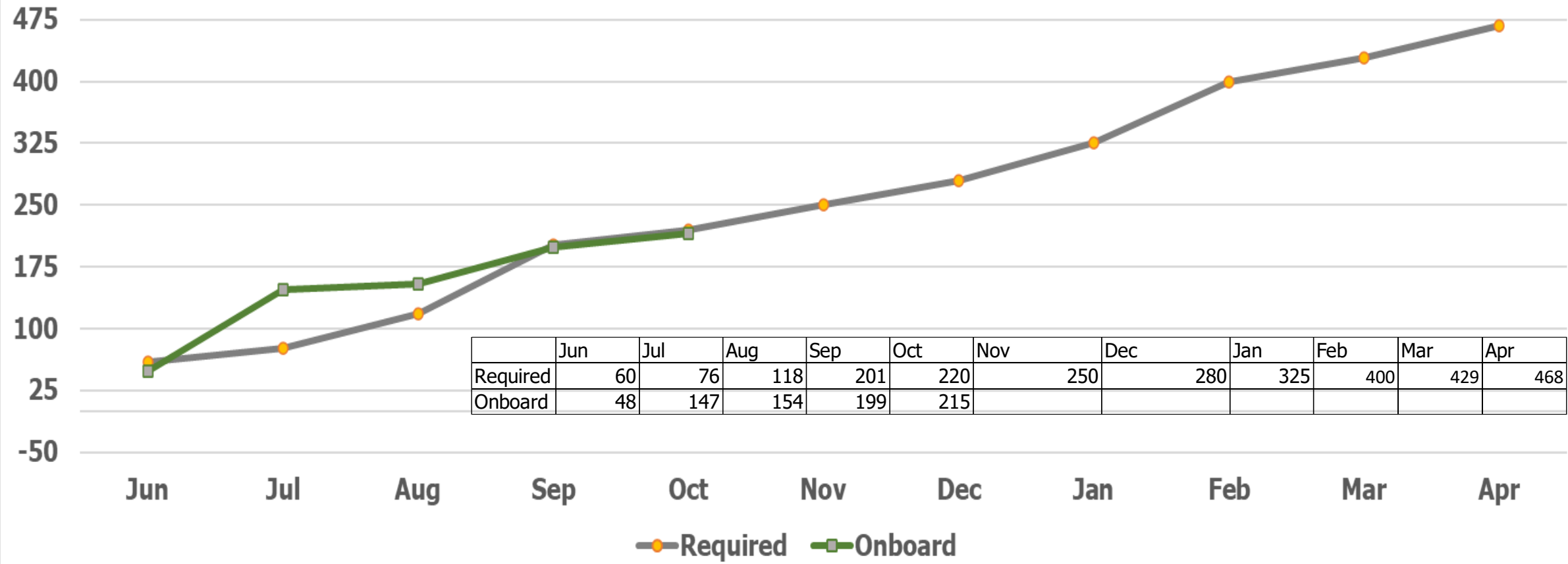
Operational Readiness

Metro

- Provide Operational Readiness verification:
 - Operational Hazard Analysis
 - Pre-Revenue SSC

Update on Hiring

Operations Silver Line Phase 2 Hiring
As of October 21, 2021



Operations Silver Line Positions Hiring Status 10/21/21

