



**Finance and Capital Committee  
Board Information Item IV - B  
October 08, 2026**

**Rail Modernization Quarterly Update**



## Board Document

| OVERVIEW                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |            |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------|
| PRESENTATION NAME                  | Rail Modernization Quarterly Update                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | DOCUMENT NO.   | 300162     |
| ACTION OR INFORMATION              | Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |            |
| STRATEGIC TRANSFORMATION PLAN GOAL | Service Excellence, Talented Teams, Financial & Organizational Efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |            |
| RESOLUTION                         | No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                |            |
| EXECUTIVE OWNER                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |            |
| EXECUTIVE TEAM OWNER               | Off, Andy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |            |
| DEPARTMENT                         | Deputy General Manager                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |            |
| DOCUMENT INITIATOR                 | Cesari, Jill                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |            |
| OTHER INFORMATION                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |            |
| COMMITTEE                          | Finance & Capital                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | COMMITTEE DATE | 10/08/2026 |
| PURPOSE/KEY HIGHLIGHTS             | <p>To update the Board on the Rail Modernization Program, including:</p> <ul style="list-style-type: none"><li>▪ Metro’s current work relating to the federal Capital Investment Grants (CIG) program, including procurement and resourcing updates</li><li>▪ Metro’s workforce planning and readiness approach, including a timeline for the workforce transition plan and union and staff engagement</li></ul> <p>Metro provided the Board with a quarterly update in June and additional update in July with APTA Peer Review findings and an introduction to the baseline concept design for the platform door element of the Rail Modernization Program.</p> |                |            |

# Board Document

## DISCUSSION

### Capital Investment Grants Program

The Federal Transit Administration (FTA) has accepted Metro's Red Line Modernization Project into the Capital Investment Grants (CIG) program. Metro has until July 2028 to complete the Project Development phase and advance into Engineering.

Multiple procurements are in progress to provide specialized expertise. Key procurements include:

- Program Management Consultant (PMC): to provide additional program management and technical capacity
- Independent Safety Assessor (ISA): to provide third-party oversight to ensure objective safety evaluation throughout the program lifecycle (validated through APTA peer review findings)

Metro has engaged industry stakeholders and briefed the Washington Metrorail Safety Commission (WMSC) on program activities.

Additional programmatic work includes:

- Refinement of the platform door concept design
- Stakeholder engagement regarding workforce transition
- Environmental review and agency coordination

### Workforce Planning and Readiness Approach

APTA's peer review findings recommended that Metro engage with employees to address the implications of higher grades of automation on workforce roles, staffing models, and organizational design. Those recommendations included:

- Creation of a training program for impacted positions
- Ongoing labor union and staff engagement
- Development of a plan for reliability improvement for items outside of the Rail Modernization Program

The DMVMoves plan affirmed the regional vision to modernize the Metro Rail system, including updating the signal system, adding platform doors, and pursuing automation. As the first phase of that regional plan, the Red Line Modernization Project will provide the

## Board Document

opportunity to engage with labor unions and stakeholders to develop a workforce transition plan. Recent legislation requires the Board of Directors to adopt a workforce transition plan before July 1, 2028.

Implementing the Red Line Modernization Project will require Metro to maintain current operations during the implementation phase, while concurrently ramping up staff for a new, automated operating model. Transition to full automation (GoA 4) is expected to occur gradually over time once the implementation phase is complete.

Metro's current operating model will also remain in place for the majority of the system. The current project scope is limited to the Red Line; the rest of the system (Orange, Blue, Silver, Yellow, and Green lines) will continue to operate under Metro's current semi-automated operating model. Modernization of the remainder of the system depends on future funding from the DMVMoves efforts and other sources.

Benchmarking research of other fully automated systems (including both greenfield lines and retrofit projects) shows how automation changes the requirements for staff. Because the automated systems are responsible for many of the regular tasks and are able to perform reliably, human staff are required to be able to respond to a wide range of potential issues, such as troubleshooting minor technical issues, communicating with customers, or manually operating a train during a disruption. As a result, automated lines require staff capable of performing multiple functions, and that can move around the system to promptly respond to any issues that may arise.

In addition to the general requirements for automation, successful modernization programs generally shift

- Shift focus on staffing models toward performance-based criteria, such as response time in case of an issue
- Use automation to remove repetitive monitoring and operational tasks
- Retain human oversight for complex decision-making and incident response activities
- Create new career pathways and advancement opportunities.
- Engage employees early and continuously throughout the transition



## Board Document

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>INTERESTED PARTIES</b>        | <p>Current interested parties include:</p> <p>Deutsche Bahn E.C.O. NA, Hitachi, Kawasaki, Alstom, Knorr-Bremse, Parsons Transportation, HNTB, Mott McDonald, TY Lin, RK&amp;K, Systra</p> <p>Prospective interested parties include (not exhaustive):<br/>Alstom, Hitachi, Mitsubishi Electric Power Products, Siemens Mobility, Stadler, Cisco Systems, Mass Electric Construction (MEC), AtkinsRealis, Burns Engineering, Egis, Mott MacDonald, MW Consultants, Network Rail Consulting, Radix, RL Controls, WSP, Doorspec, ITNova, Knorr, ST Engineering, Stanley Access, WooJin IS America Inc., QEI Automation Solutions, M.C. Dean, STraffic, Aldridge Electric, C3M Power Systems, Halmar International, Kiewit, Gilgen Door Systems, Horton Automatics, Wabtec, TUV Rheinland, TUV SUD, WSP Assurance, CERTIFER, K&amp;J Safety, HATCH, VitalAssurance</p> |
| <b>RECOMMENDATION/NEXT STEPS</b> | <p><b>Next Steps:</b><br/>Metro will be engaging with labor partners to develop the workforce transition plan. The workforce transition plan will require approval by the Board of Directors before July 1, 2028.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>FUNDING IMPACT</b>            | <p>No funding impact – informational updates only.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

# Rail Modernization Quarterly Update



**Finance & Capital Committee**

Washington Metropolitan Area Transit Authority

October 08, 2026

# ***Delivering Your Metro, the Way Forward***



## **Service Excellence**

Deliver safe, reliable, convenient, accessible, and world-class service that customers can trust across all modes.

### *Objectives of Service Excellence Goal*

- **Safety and Security**
- **Reliability**
- **Convenience**

Focus  
Today



## **Talented Teams**

Attract, develop, and retain world-class talent where individuals feel valued, supported, and proud of their contribution.

### *Objectives of Talented Teams Goal*

- **Recruitment and Retention**
- **Learning and Development**
- **Customer Service Mindset**



## **Financial & Organizational Efficiency**

Steward public resources and efficiently allocate resources where they drive the most value, to ensure service delivery.

### *Objectives of Financial & Organizational Efficiency Goal*

- **Financial Responsibility**
- **Organizational Efficiency**
- **Energy Management**

# Rail Modernization Quarterly Update

Update the Board federal grants, procurement, and workforce planning

**Quarterly Updates Purpose:** Provide regular, quarterly updates on the status and progress of the Red Line Modernization Project, including:

- Program design
- Implementation milestones
- **Procurement activities**
- Budget
- **Organization and resourcing**
- **Federal grant application activities**

Focus  
Today



*Board Resolution 2026-10: Endorsement of the Rail Modernization Program Vision and Red Line Modernization Project*

# Metro accepted into the federal Capital Investment Grants program

## The Red Line Modernization Project is seeking a Core Capacity grant

Metro officially entered the Capital Investment Grants program on July 28, 2026

The Red Line Modernization Project’s profile is available on the Federal Transit Administration’s online dashboard

By statute, Metro has two years (until July 28, 2028) to complete the Project Development phase, before moving to the Engineering phase

United States Department of Transportation

Federal Transit Administration



[Home](#) / [Funding](#) / [Grants](#) / [Grant Programs](#) / [Capital Investment Program](#)

### Current Capital Investment Grants Program and Expedited Project Delivery Pilot Program Projects

The [CIG Dashboard](#) is posted consistent with the requirements of 49 U.S.C. § 5309(r).

The table below lists projects currently receiving construction grant payouts or those seeking CIG funding that may receive a construction grant in the future. The project profiles provide a description of each project and other available information. Project profiles on this webpage are updated only when a project reaches a milestone, or when a project has received a project rating (as outlined in the [2024 CIG Policy Guidance](#)), therefore, information shown in the corresponding project profile may not match the information contained in the CIG Dashboard.

| State | City        | Project Name                      | Stage of Development* | Project Profile     |
|-------|-------------|-----------------------------------|-----------------------|---------------------|
| AZ    | Tucson      | Stone Avenue BRT                  | SSPD                  | <a href="#">PDF</a> |
| CA    | Los Angeles | Eastside Transit Corridor Phase 2 | NSPD                  | <a href="#">PDF</a> |
| DC    | Washington  | Red Line Modernization Project    | CCPD                  | <a href="#">PDF</a> |
| CA    | Los Angeles | Vermont Avenue BRT                | SSPD                  | <a href="#">PDF</a> |



# Procurement & Resourcing Updates

**Metro is making progress to bring resources on board to deliver the program**

## **Procurement updates:**

Multiple procurements underway

**Program Management Consultant:** Will support Metro with additional resources and technical expertise

- Contract procurement is underway

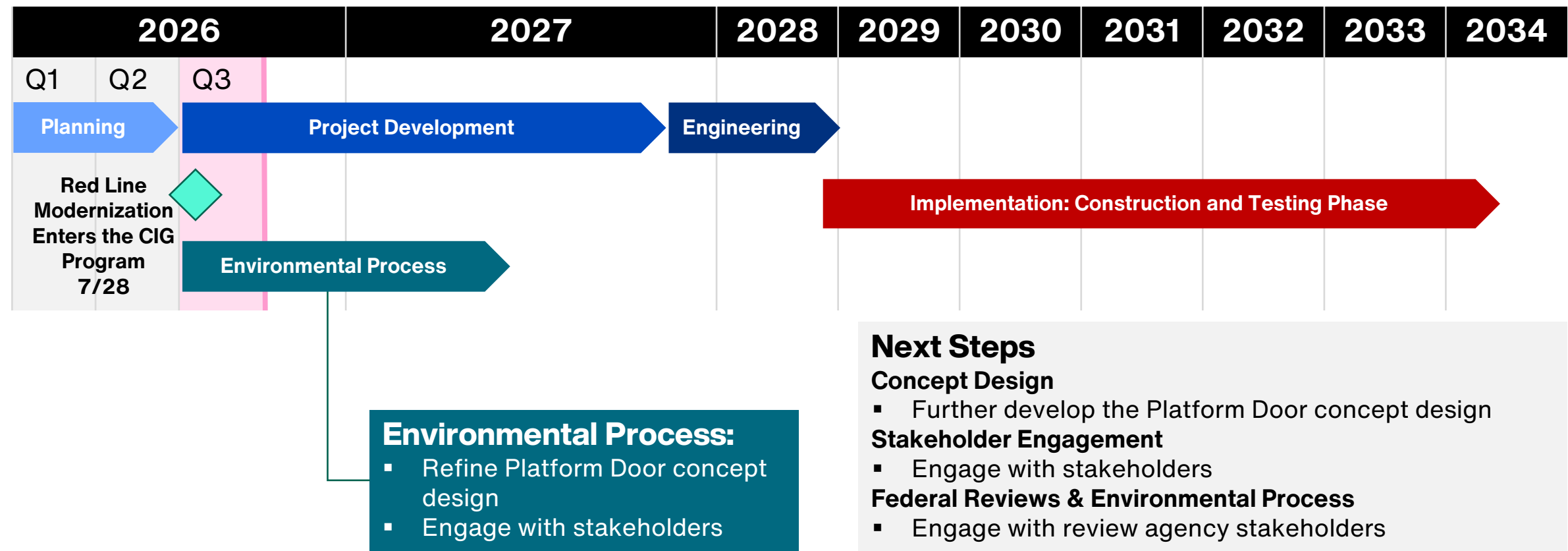
**Independent Safety Assessor (ISA):** Will provide an objective, third party evaluation of the program

- APTA Peer Review panel affirmed the use of an ISA
- Held an Industry Day for potential independent safety assessors on September 15
- Briefed Washington Metro Safety Commission (WMSC) on September 28



# Metro has entered CI G’s Project Development Phase

Concurrently engaging with stakeholders regarding workforce transition and environmental processes



# Metro's Workforce Planning

**APTA Peer Review panel recommended Metro engage with employees to plan for Modernization**

The APTA Peer Review panel presented recommendations to the Board in July 2026.

## **Workforce Planning Recommendation:**

Assess new roles and skill sets to support GoA4 operations and maintenance, plan for new training, and continuous engagement with workforce

- Create training program for impacted positions
- Labor union & staff engagement and consultation
- Develop a plan for reliability improvement for items outside of the rail modernization program

**HART**  
**(Honolulu Authority for**  
**Rapid Transportation)**



**Metroselskabet**  
**(Copenhagen Metro)**



**London**  
**Underground**

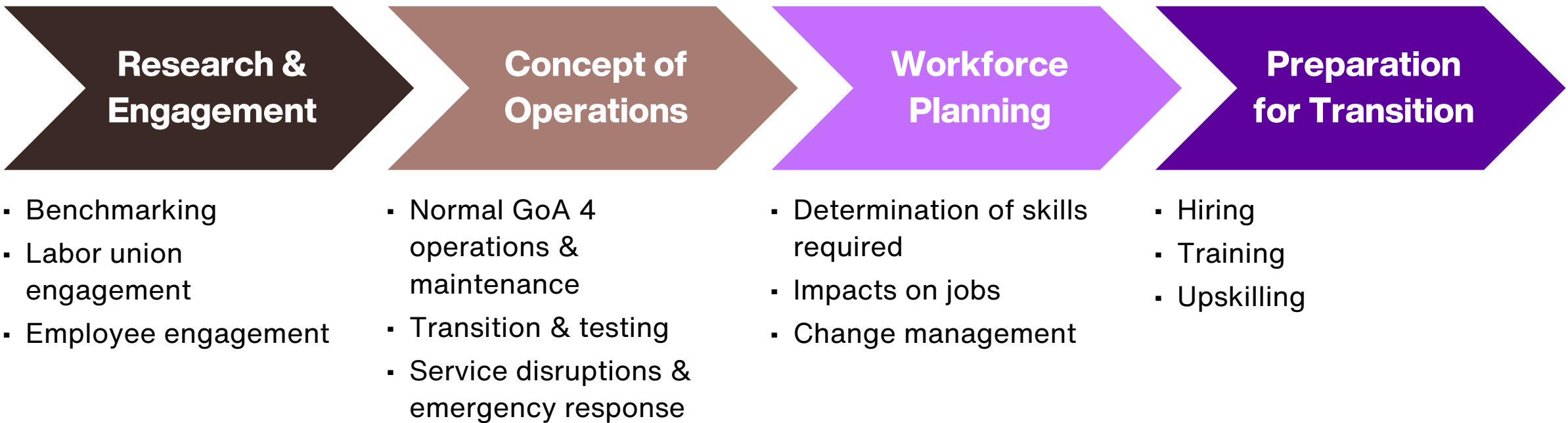


**Metro de Madrid**



# Workforce Planning Approach

Treat workforce readiness as a system requirement equal to technology, safety certification, and migration



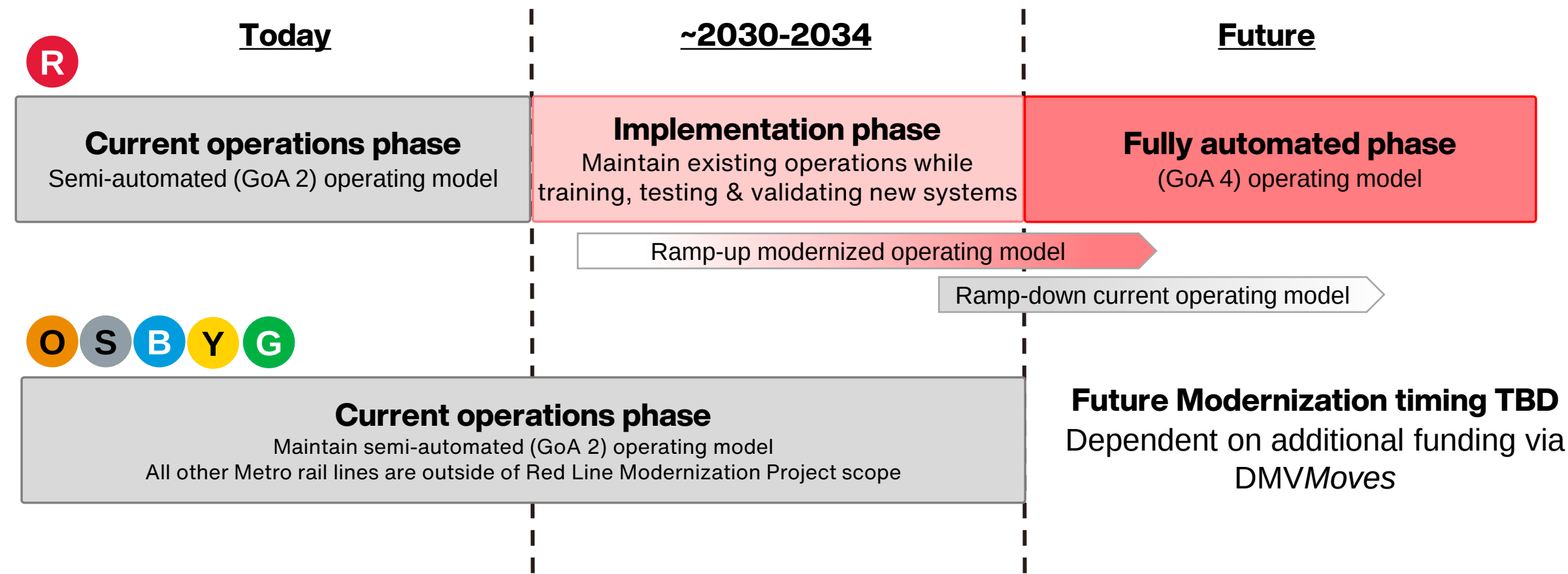
**Planning principle:**

Treat workforce readiness as a system requirement equal to technology, safety certification, and migration.

GoA = Grade of Automation

# A workforce transition prioritizing safe, reliable, and modernized rail operations

A future-state workforce shifts from semi-automated train operation toward fully automated operation, with integrated control, response, maintenance and customer communication.



# Labor Commitments from DMV *Moves* Funding Efforts

Metro will be developing a workforce transition plan as a part of the Modernization program



The DMV *Moves* Plan calls for modernizing and automating the Metro Rail system, including a new signal system, updated railcars, and platform doors

The region (Metropolitan Washington Council of Governments & WMATA Board) **jointly endorsed the DMV *Moves* Plan in Nov. 2025**

Virginia is the first jurisdiction to implement the DMV *Moves* plan recommendations

- Develop a workforce transition plan by July 1, 2028
- Metro anticipates similar language in DC and Maryland

*Code of Virginia: § 33.2-1526.1. Use of the Commonwealth Mass Transit Fund.*

*N. 1. For fiscal year 2029, the Board shall withhold 35 percent of the appropriation of funds available pursuant to subdivision D 4 if the Board of Directors of the Washington Metropolitan Area Transit Authority has not approved a rail signaling and automation workforce transition plan, developed in consultation with affected collective bargaining units, on or before July 1, 2028.*

*2. Starting July 1, 2028, if a rail or bus operator employed by the Washington Metropolitan Area Transit Authority is terminated due to a reduction in force caused by the automation of the rail system, the Board shall withhold 35 percent of the appropriation of funds available pursuant to subdivision D 4 in the subsequent fiscal year.*

# Automated systems around the world use roaming multi-functional staff for rail operations

A new Concept of Operations requires a different, more flexible staffing model

|                 |                                | EXAMPLE TRANSIT AGENCIES         |                                             |                                                        |                                                        |
|-----------------|--------------------------------|----------------------------------|---------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|
|                 |                                | Metro<br>(Current)               | Docklands Light<br>Railway (London)         | Paris Metro;<br>Metro de Madrid                        | Copenhagen<br>Metro; Vancouver<br>SkyTrain             |
| STAFF LOCATIONS |                                | GoA 2                            | GoA 3                                       | GoA 4                                                  | GoA 4                                                  |
|                 | On-board Trains                | 1 operator on each train, in cab | 1 train attendant on each train, not in cab | 0 required;<br>Roaming staff on board trains as needed | 0 required;<br>Roaming staff on board trains as needed |
|                 | In Stations                    | Station Managers & Ambassadors   | Most stations are unstaffed                 | Stations are staffed                                   | Roaming staff in stations as needed                    |
|                 | Roaming Multi-functional Staff | Rail Operations Supervisors      | n/a                                         | Roaming staff can respond across the system            | Roaming staff can respond across the system            |

GoA = Grade of Automation



# Metro's current rail staffing model

Metro relies on a range of staff in specialized positions doing repeated tasks

## Current Staff Roles:

Defined positions with specific skills and training

### On Trains & In Stations:

- Train Operators
- Station Managers
- Supervisors
- Ambassadors
- Special Police
- Transit Police

### Doing Maintenance:

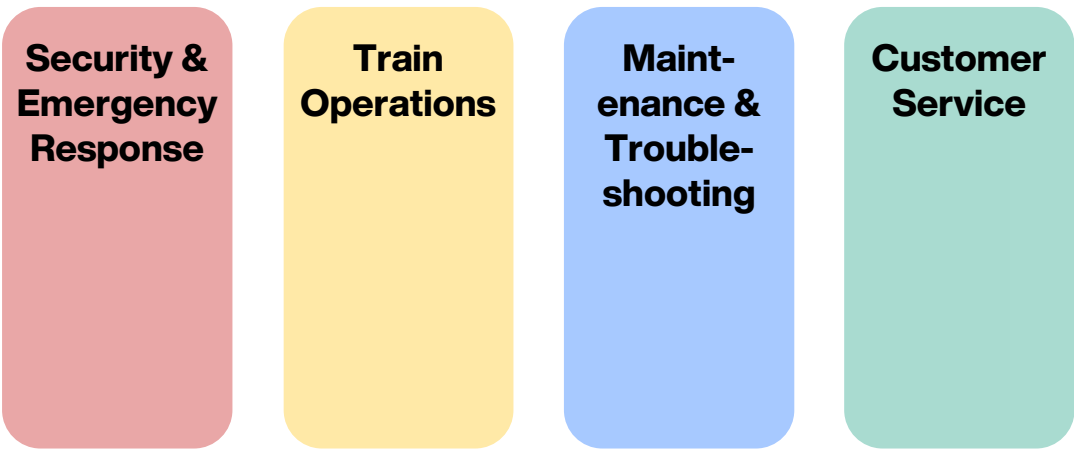
- Road Mechanics
- Signals Maintenance
- Facilities Maintenance

### In the Control Center:

- Controllers
- Supervisors

## Current Tasks:

Many siloed tasks with limited overlap between staff



Illustrative selection of roles, locations and tasks; not a comprehensive list

# What future jobs might look like

Automation performs routine monitoring and operational functions, enabling the creation of new staff roles to focus on customer service, safety, accessibility, and rapid response across the system

**Future Tasks:**  
Automation re-shapes daily operations

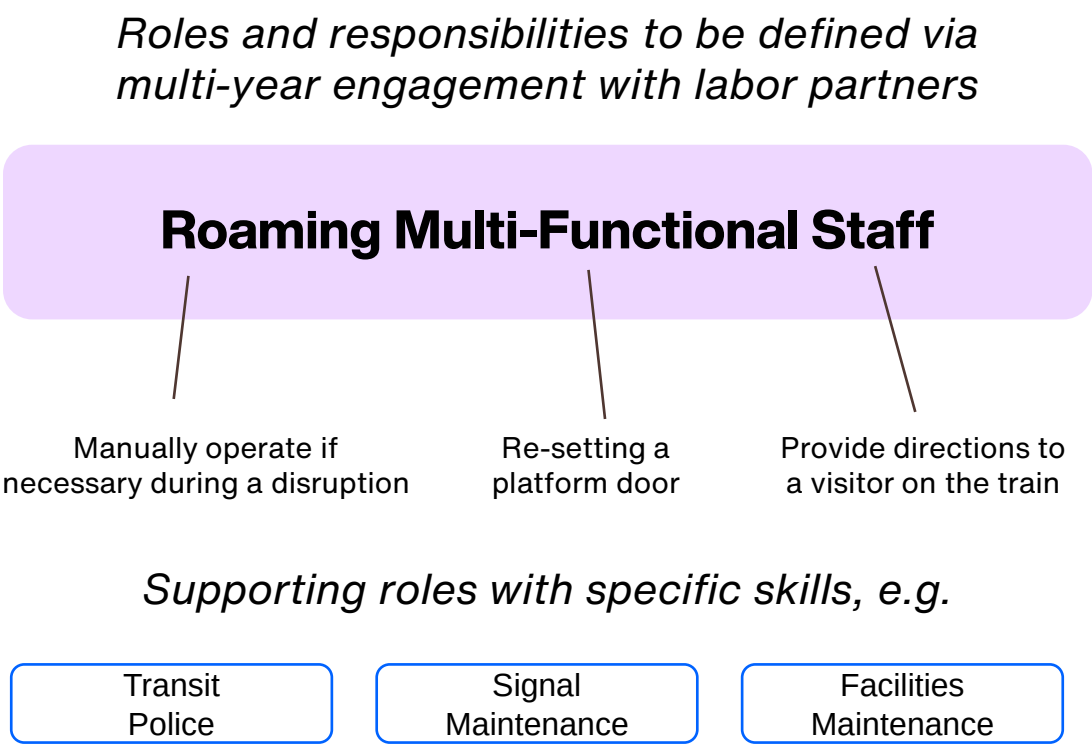
**Repetitive tasks are automated:** Computer systems and the Control Center supervise train movements.

**Automation still requires “eyes on the ground” from staff** to maintain high reliability, troubleshoot issues, and support a good customer experience, such as:

- Responding to an incident
- Troubleshooting an issue with trains or platform doors
- Manually operating a train in an emergency

**Shift to an outcome-oriented model,** focused on response time to common issues.

**Potential Future Roles:**  
Staff are fully customer-centric & multi-dimensional



# Benchmarking: Roaming Multi-Functional Staff

**SkyTrain Attendants in Vancouver, BC show what similar jobs could look like**

SkyTrain Attendants are focused on customers

Requires an all-around skill set:

- Technical expertise
- Customer service
- Decision-making

Serves as the 'eyes and ears' for the system:

- Primary communicator to the Control Center
- Perform minor mechanical and custodial tasks
- Manually operate trains if needed during disruptions



Source: [www.translink.ca](http://www.translink.ca)

# Lessons Learned from Peer Systems

**Modernization is long-term transformation of how Metro will operate, and there are a range of approaches and best practices for staffing automated systems.**

## Shift from specialty roles to multi-functional roles

- Automated systems require a broader range of duties to respond when there is an incident
- Multi-function staff **focused on response times**; Retain qualification to drive trains manually in an emergency
- Flexibility both within staffing models and staffing levels, depending on specific conditions

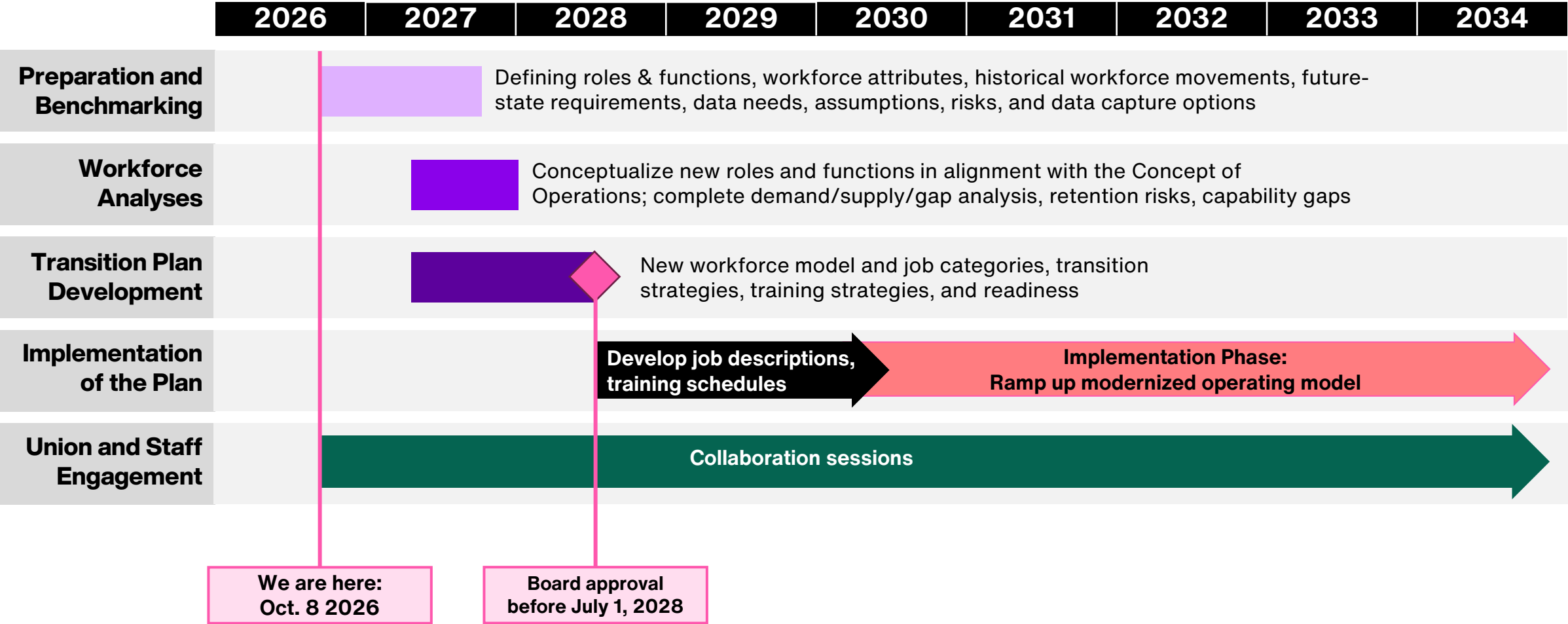
## Create active roles, empowered to handle uncertainty

- Use the Control Center for **remote monitoring and coordination of train movements**
- Reduce repetition-based safety failures (human factors)
- Emphasize decision-making and communication to respond to incidents and enhance customer service experience

## Engage with labor unions and employees early in the process

- **Determine new skills required:** decision-making, managing complexity, communications and coordination; Need for comprehensive training
- **Opportunity to increase employee satisfaction**
- Create known pathways for career advancement

# Workforce Transition Plan development



# Appendix

# Metro Rail is facing multiple challenges, with a system that is aging and increasingly outdated



## Safety



### Ongoing trespassing incidents

- Trespassers, trash, slips/trips/falls
- Human error in operation
- Challenging to mitigate with current system design



## Reliability



### Aging and unreliable infrastructure

- Inconsistent operations and signal system failures causing delays
- Growing maintenance costs; replacement parts are increasingly difficult to source



## Capacity



### Insufficient room for long-term growth

- Bottlenecks at key locations limit service
- Red Line service limited by terminal capacity
- Expensive alternatives to adding capacity



## Efficiency



### Outdated concept of operations

- Rising operating expenses and inflexible service model

# Modernization directly addresses each of Metro's key challenges

|  Safety                                                                                   |  Reliability                                                           |  Capacity                                                                                                                                                                |  Efficiency                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>▪ <b>Safer operations:</b> keep trespassers off tracks, reduce track fires</li><li>▪ Eliminate human error via automation</li></ul> | <ul style="list-style-type: none"><li>▪ <b>Increase service reliability</b> up to 99%</li><li>▪ <b>Less signal infrastructure to maintain</b></li></ul> | <ul style="list-style-type: none"><li>▪ <b>Increased capacity with more trains per hour</b></li><li>▪ Increased flexibility to quickly adjust service for demand surges</li><li>▪ Improve service <b>within the same infrastructure footprint</b></li></ul> | <ul style="list-style-type: none"><li>▪ More productive service with <b>lower operating costs</b></li><li>▪ <b>Grow ridership &amp; revenue</b> with improved service</li></ul> |

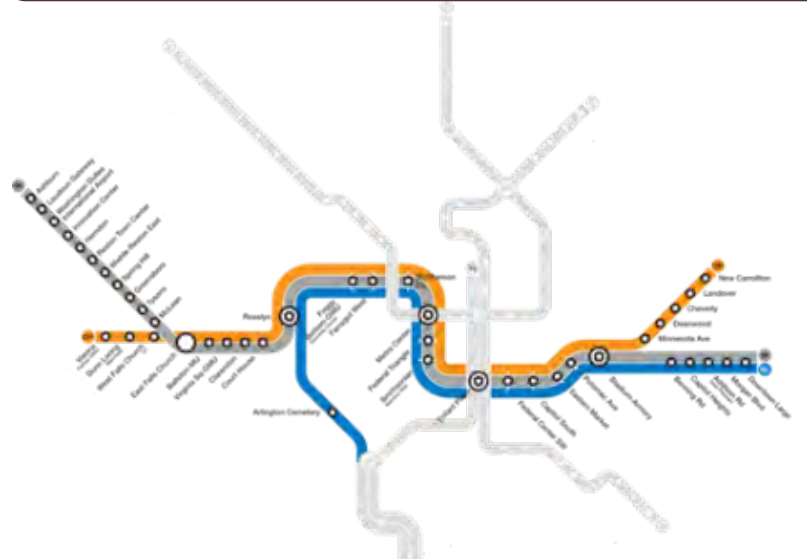
# Metro's systemwide Rail Modernization Program will begin with the Red Line Modernization Project

Included in  
FY2027-2032 CIP



**Phase 1**  
Red Line Modernization Project

Dependent on additional funding via DMV *Moves*



**Phase 2**  
Orange Line, Silver Line, and Blue Line sections



**Phase 3**  
Yellow Line, Green Line, and remaining Blue Line sections

# Components of fully automated rail transit

Fully automated rail systems rely on communications-based train control (CBTC), platform doors, and supporting systems to automate operations

## Signals



*CBTC wayside equipment*

Modern CBTC with capability to control all aspects of train operations to include detection of obstacles on the track

## Fleet



*Paris Metro: MP05 rolling stock*

Railcars must be equipped with CBTC technology resulting in more onboard equipment and less wayside infrastructure

## Stations/Platforms



*Honolulu Skyline: Hālawā station*

Reduce / prevent passengers trespassing on the tracks by creating a physical barrier with platform doors

## Operations/Systems



*WMATA's Metro Integrated Command and Communications Center (MICC)*

Service shifts to centralized control with train frequency adjusted dynamically based on demand rather than fixed schedules

# Red Line Modernization Project Scope



## Project Scope: capable of GoA Level 4 (driverless) operations

- **Communications-Based Train Control (CBTC) Installation:**
  - o Entire Red Line (32 miles, 27 stations)
  - o 3 rail yards (Shady Grove, Glenmont, Brentwood)
  - o Greenbelt test track
- **Railcar Conversions:**
  - o Mix of 7000-Series and 8000-Series cars
- **Platform Doors (PD) & Protection:**
  - o 20 of 27 stations with potential to expand to all 27 stations
- **Supporting Systems Installation:**
  - o Connect new systems to the Metro Integrated Command and Communications Center (MICC)
  - o Upgrade existing technical systems to improve monitoring and control operations