

Finance and Capital Committee

Information Item IV-A

October 13, 2022

Capital Budget Capital Program Update

Washington Metropolitan Area Transit Authority

Board Action/Information Summary

TITLE:

Capital Improvement Program Update

PRESENTATION SUMMARY:

Staff will provide an overview of the capital improvement program featuring highlights from FY2022, an overview of FY2023, and a review of on-going FY2023 and upcoming FY2024 projects.

PURPOSE:

To communicate progress and achievements of the Capital Improvement Program and to provide insight on how these investments are improving the customer experience and enhancing the system's state of good repair and efficiency.

DESCRIPTION:

Please see the attachment for a list of major vendors associated with the Metro Capital Improvement Program.

With the help of Dedicated Funding backed debt, Federal Passenger Rail Infrastructure Improvement Act (PRIIA) Funding, Infrastructure Investment and Jobs Act (IIJA) Funding, and local government contributions, Metro has embarked on an aggressive rehabilitation program to improve the customer experience, state of good repair, and efficiency across all modes of service. Progress is being made, and there is both more to do and on-going effort required to maintain a safe, reliable, and efficient system.

Key Highlights:

- FY2022 capital programs and projects invested over \$2.05 billion in safety, state of good repair, and resiliency projects.
- FY2023 capital programs and projects are on-pace to invest approximately \$2.4 billion across all components of the Metro System.
- Fiscal 2024 through 2029 Capital Improvement Program is anticipated to continue on-going programs while integrating additional needs as they are identified.

Background and History:

Metro's Capital Improvement Program (CIP) invests in capital projects and programs necessary to the safe and efficient operations of the Metrorail, Metrobus, and MetroAccess services. The CIP includes six investment categories and plans work over six years – the budget year and five planning years. Funding for the CIP is provided by

the Compact Signatories – the State of Maryland, the District of Columbia, and the Commonwealth of Virginia – through Dedicated Funding and match to the Passenger Rail Infrastructure Investment Act. The FY2024 to FY2029 CIP will assume continued increases in Federal funding associated with the Infrastructure Investment and Jobs Act, beginning with an approximately \$125 million increase in formula grants in FY2024. Another significant source of funding is Federal Formula and Discretionary grants. Funding to match Federal grants is provided by the contributing local jurisdictions. Finally, Metro issues debt, backed by Dedicated Funding to address any shortfall in funding needs after the other funding sources are applied.

In the Fall, staff will present the Board with a FY2024 Capital Budget and a Six-Year CIP that anticipates continued Jurisdictional funding, including up to 3% increases in Jurisdictional Capital Contributions, and continuation of state and Federal PRIIA funding through the planning period. In addition to these baseline assumptions, Metro anticipates leveraging Dedicated-Funding backed debt to address additional funding needs in the CIP in the near term.

Discussion:

The programs and projects funded in FY2023 focus on safety and state of good repair anticipated to enhance system safety, reliability, and convenience for customers. In preparation of the FY2024 to FY2029 CIP for consideration by the Board this fall, the focus remains the provision of reliable transit that meets our customers' needs. The CIP invests in safety, state of good repair, and resiliency projects across all Metro operations and departments: Rail; Bus/Paratransit; and Operations and Business Support.

CIP investments promote reliability, improve asset performance, and increase the overall safety of WMATA's infrastructure. Examples include, but are not limited to, maintaining average fleet age in bus, paratransit, and rail fleets; improving reliability of elevators and escalators; modernizing bus garages, rail maintenance facilities, and administrative offices; and providing a more comfortable, safer ride to customers. Some capital investments reduce future operating costs by updating equipment to more efficient models, reducing energy consumption, or changing to a less impactful fuel.

Since Fiscal Year 2019, Dedicated-Funding backed debt each year has provided funding to address a portion of planned CIP investments. Of the \$500M of dedicated funding provided each year, approximately \$470M is available for use as debt service due to restrictions placed on the use of the remaining funds. While the FY2022 funding plan anticipated the issue of significant debt, that funding was not needed, and the debt was not issued. The FY2024 to FY2029 CIP will reevaluate the continuing availability of dedicated funding as a source for debt service. Factors impacting these projections include anticipated need for funding and anticipated market forces at the time of debt issuance.

Staff will continue to work collaboratively and cooperatively with internal and external stakeholders in developing the FY2024 to 2029 CIP in an effort to balance the availability

of funding, the need to address previously unfunded needs, and the ability to deliver quality, on-time projects and programs.

Metro's CIP is developed for budgeting purposes with one execution year and six- and ten-year plans. To support the budget and need requirements, staff will provide more frequent lookahead communications regarding upcoming projects and any special service needs that result in major service disruptions. Efforts will also be made to coordinate project delivery with regional partners. As with planned budgets, plans for project delivery are less certain the further out one looks, and come into sharper focus as projects are packaged, contracted, and prepared for execution.

Capital Projects Updates

- Recent Highlights
 - Platform Rehabilitation Phase 3 In 2021, Arlington Cemetery, Addison Road, West Hyattsville, Prince George's Plaza, College Park, and Greenbelt Metrorail stations were rehabilitated as Phase 3 of the Platforms Improvement Program.
 - Platform Rehabilitation Phase 4 For the final phase of the Platform Improvement Program, Minnesota Avenue, Deanwood, Cheverly, Landover, and New Carrollton Metrorail Stations were rehabilitated over Summer 2022. This work was performed under the last station shutdowns for the program, which executed planned improvements at 20 outdoor stations.
 - Metro Bus Accessibility Pilot Using innovative LiDAR imagery 712 bus stops along nine routes in DC, MD, and VA were assessed. The work provides staff with data about bus stop condition and ADA compliance.
 - Bus Maintenance Equipment Replacement for Cinder Bed Road Bus Garage – This project replaced maintenance and support equipment for bus servicing and maintenance at the Cinder Bed Road Bus Garage.
 - Intrusion Detection Wayside (IDW) New technology was installed and is operational between Union Station and Rhode Island Ave to enhance safety following a train incident.
 - Office Consolidation: Headquarters Opening -- New headquarters at L'Enfant Plaza, District of Columbia opened. The state of the art, LEED Gold certified workplace, includes a paratransit center and commercial amenities to benefit the surrounding community.
- FY2023 Projects Underway
 - Yellow Line Tunnel & Bridge Rehabilitation -- Located between the Pentagon and L'Enfant Plaza Metrorail stations on the Yellow Line and crossing the Potomac River the project scope includes tunnel steel liner and crack repairs; dry standpipe replacement on the bridge; and bridge repair. Developed as a Construction Manager at Risk contract, which is a first for Metro, the construction started in Spring 2022. Anticipated improvements

- include addressing excessive corrosion and section loss from stray current impacts and water penetration.
- Potomac Yard Station This reimbursable capital project funded by the City of Alexandria, will open a new Metrorail station on the Blue and Yellow Lines between National Airport and Braddock Road stations. The new station is anticipated to open in 2023 and the construction is currently supported by a service shutdown while the connections to the main line and signal integration is in progress. Frequent free shuttle bus service is available for customers throughout the duration of service impact.
- Aerial Structure Rehabilitation A Anticipated to address 10 aerial structures and one station canopy, the project includes demolition and a new canopy construction at Rockville Metrorail station. Beyond a new canopy, the installation includes new communication systems, new skylights, and weatherproof structural panels. The structures and bridges portion of the project will rehabilitate aerial structures and segmental bridges including girders and drainage repairs. Congratulations to the Metro communications team for being nominated as a finalist in the Community Relations Category for the 2022 PRNEWS Platinum Awards for the public outreach supporting this project.
- Train Control Rooms Rehabilitation This program renews various equipment associated with train control, including 14 Remote Terminal Units; 81 communication server-box redesigned and replaced across 24 train control rooms.
- Northern Bus Garage Replacement The project reconstructs the current building into a modern bus facility while preserving the historic 14th Street façade. The new garage will house 150 buses and include infrastructure needed to support a future electric bus fleet, as envisioned under Metro's zero-emission bus plan. To lessen impacts on the community, Art-in-Transit fencing will remain in place through construction.
- Bladensburg Bus Garage Replacement The garage reconstruction will modernize the facility and is anticipated to improve bus fleet operations and maintenance. Creating 200 40-foot-long bus spaces, 100 articulated bus spaces, and employee parking, and allocating space for future electric bus infrastructure, the project is consistent with Metro's zero-emission bus plan. To lessen impacts on the community, Art-in-Transit fencing will remain in place through construction.

FUNDING IMPACT:

No funding impact from presenting this information item.

TIMELINE:

Previous Actions	None
Anticipated actions after presentation	December 2022 – Present General Manager Proposed Capital Budget and Six-Year Capital Improvement Program and Request Authorization for Public Hearing

RECOMMENDATION:

No recommendation is associated with this information item.

The following parties may have an interest in the decisions made by the Board with regard to these topics:

22nd Century Technologies Inc A & K Railroad Materials Inc Academy Express, LLC Accelera Solutions, Inc.

Accenture LLP A-Connection, Inc. Adaptaspace Inc

Admiral Elevator Co., Inc. ADP Consultants, Inc.

Advanced Digital Systems, Inc. AECOM Technical Services Inc.

AECOM, USA, INC. AECOM-STV JV

Alan Tye & Associates L.C.

Aldridge Electric Inc Alstom Signaling Inc Alstom Transportation Inc

Amaram Technology Corporation

American Truck & Bus, Inc.
Ampcus Incorporated
ANC Sports Enterprises LLC
Anixter Wire And Cable
Annuk Incorporated

Apex Consulting Services Group, Inc.

ARINC Incorporated Arora Engineers Inc

AROW Global Corporation

Artbridge LLC

Atlantic Graphic Systems Inc Atlantic Hardware Supply

Atlantic Refinishing & Restoration Inc

Atlantic Tactical, Inc.

Atlantic Track & Turnout Co

Avaya Inc

B&C Transit Consultants Inc.
Badger Mill Supply Corp
Benning Power Electronics Inc
Benons LLC dba Falcon Transport

Better Engineering Mfg Inc Beveridge & Diamond PC Birlasoft Consulting Inc.

Biswas Information Technology Solutions

Brian Hoskins Ford

Bullock Construction Inc Business Marketers Group Inc

C C Johnson & Malhotra PC
C N Robinson Lighting Supply
C3M Power Systems, LLC
Cambridge Systematics, Inc.
Canon Solutions America Inc
Carahsoft Technology Corp

CAS Severn Inc

CDW Direct LLC CDW Direct

Center for Transportation & Environment

CH2M HILL Inc CHK America Inc CHYP USA, Inc.

Clark Construction Group, LLC

CLAVIS LLC Clearing Inc

Clever Devices Ltd Clever Devices Ltd. Compass Solutions LLC

Comtech LLC

Concrete Protection & Restoration, Inc. Consolidated Construction & Engineering Copper River Information Technology

CRADLE SYSTEMS, LLC

Criswell Chevrolet

Crowe LLP

CSI Engineering P C

Cubic Transporation Systems Inc.
Cubic Transportation Systems Inc.

Cummins Inc.
Cummins, Inc.

CW Professional Services LLC

Dartco Transmission Sales & Service, Inc.

Dell Marketing LP

Delta Railroad Construction DHA/RK&K Joint Venture Digging & Rigging, Inc.

Digital Mobile Innovation LLC

Dillons Bus Service Inc

Dimension Data North America, Inc. Diversified Property Services Inc

DJB Contracting Inc

DK Consulting LLC DLT Solutions, LLC

EastBanc Technologies, LLC Eastern Lift Truck Company Inc

ECS Corporation

Edward Kocharian & Co Inc

Elegant Enterprise Wide Solutions, Inc.

Emagine IT, Inc. ENSCO Rail, Inc.

Ernst & Young U.S. LLP

ERP Analysts Inc.

ETAP Automation - USA

Everbridge Inc

Evergreen Specialty Services

eVigilant Security

F.H. Paschen, S.N. Nielsen & Assoc., LLC Five Points Infrastructure Services, LLC

Four LLC

Four Nines Technologies

Freyssinet LLC

Fundacion Fomento Innovacion Industrial Gannett Fleming Engineers and Architects Gannett Fleming-Parsons Joint Venture II

GENFARE

Gensco American Inc.

Gillig LLC Giro Inc

Glebe Electronics Inc Global Networks, Inc.

GRAINGER

Graybar Electric Co Inc

Hands On, LLC

Happy Valley Intermediate Holdco Inc Harbor Roofing and Contracting, Inc.

HARSCO Metro Rail LLC

Helix Electric Inc

Hensel Phelps Construction Co

Herc Rentals Inc.

HITACHI Rail STS USA, Inc. Hitachi Rail Washington LLC

HNTB Corporation
Hogan Lovells US LLP
HR&A Advisors Inc

IBI Group Professional Services USA Inc

Ideal Electrical Supply Corp

Ideal ERP, LLC

immixTechnology Inc InfraStrategies LLC Insight Public Sector, Inc.

International Process

Jacobs Engineering Group, Inc.

Jesco, Inc

Johnson & Towers

Johnson & Towers Baltimore Inc Johnson, Mirmiran & Thompson Inc. Jones Lang LaSalle Americas Inc Jones Lang Lasalle Brokerage Inc K Neal International Trucks Inc K&J Consulting Services Inc

Kambrian Corporation
Kawasaki Rail Car Inc
KCI Technologies Inc
KGP Design Studio LLC.
KGP Design Studio, LLC
Kiewit Infrastructure Company
Kimley-Horn and Associates, Inc.

Kone Inc KORBATO KPMG LLP

Kupper Engineering, Inc.

LanceSoft Inc

LATA Test Engineering Advisory

Lawson Concrete LLC

Laz Parking Mid-Atlantic, LLC

Limbic Systems Inc Lindsay Ford LLC Linear Systems Inc

Los Alamos Technical Associates Inc Louis Berger (DC), PLLC/Urban Engineers

LTK Engineering Services

Luminator Technology Group, Inc.

Lytx, Inc.

M & M Welding & Fabricators Inc

M.C. Dean, Inc. Mac Products Inc

Maintenance Solutions, Inc.

Massachusetts Institute of Technology

Mb Staffing Services LLC

Mead and Hunt Inc Merak North America Metro Paving Corporation Mobilight International, Inc. Modine Manufacturing Company

Motorola Solutions Inc.
Mott MacDonald I&E. LLC

Mott MacDonald-WSP Joint Venture

MVS, Inc. Mythics, Inc. Needles Eye

Net Consulting Group Inc

Networking for Future, Inc. (NFF, Inc.)

New Flyer of America Inc North Carolina Granite Co

North Eastern Bus Rebuilders Inc.

Novacoast Federal Inc NuAxis Innovations, LLC

Optiv Security Inc. Origami Risk LLC Orion Management LLC

OTAS Inc

Outfront Media Group LLC Paramount Mechanical Corp

Parkmobile LLC

Parsons Transportation Group Inc Patuxent Roofing and Contracting, Inc.

Phillips Corporation

Piping and Corrosion Specialties, Inc.

Potomac Construction Co Inc Potomac Yard Constructors

Powersolv Inc

Precision Escalator Products

Price Modern LLC

Procore Technologies, Inc.

Professional Management Consulting Progress Rail Services Corporation Protran Technology a Division of Harsco Prysmian Group Specialty Cables LLC

R&M USA Inc.

Racine Railroad Products Inc.

RailComm Railquip rdg, Inc.

RemacUSA, Inc.

Rescue One Training for Life

RK Chevrolet, Inc.

RK&K

RPS Corporation Safeware Inc

Saft America Inc Samsara Inc

Schneider Electric Critical Systems, Inc.

Sharp And Company Sierra-Cedar, Inc.

Signature Renovations LLC
Signature Technologies, Inc.
Simmons Machine Tool Corp
Singleton Electric Company, Inc.
Sirius Computer Solutions

Sirius Computer Solutions

Skanska USA Civil Southeast Inc

Snap On Tools Company

Software Information Resource Corp SIRC Software Information Resource Corporation

Solar Star Track Anacostia LLC

Sonny Merryman Inc. Sortac Systems LLC

Sovereign Hydroseal East Inc SS&C Technologies, Inc. ST ONGE COMPANY Standard Steel LLC

Staples Business Advantage

Steven Goodrich/City Construction LLC

Stillwater Communications
Stillwater Construction Group

STraffic America LLC Summitville Tiles Inc Sun Management, Inc.

Susan Fitzgerald & Associates, Inc.

Swiftly, Inc.

Swingmaster Corporation

SyApps LLC TechnoGen, Inc.

The Aftermarket Parts Company LLC

The Behavioral Insights Team

The Matthews Group, Inc. T/A TMG Construction

The NEFCO Corporation
TMAKm Joint Venture
Tompkins/Mid-American JV
Transit Information Products

Transportation Management Service Inc.

Trapeze Software Group Inc Trigyn Technologies, Inc. Trumble Construction, Inc. Unitrac Railroad Materials, Inc.

Universal Interiors LLC

URS Corporation

V Group İnc

Verint Americas Inc

VHB - Vanasse Hangen Brustlin, Inc.

Via Transportation Inc

Viva USA Inc

Vivsoft Technologies LLC W M Schlosser Co Inc

Western Star Trucks of Delmarva, LLC

White Cap

Wiley Rein LLP

Willis Towers Watson Northeast Inc

WSP USA Inc.

Wycliffe Technologies, Inc.

Yankee Line Transportation Management

Capital Improvement Program Update

Finance & Capital Committee October 13, 2022

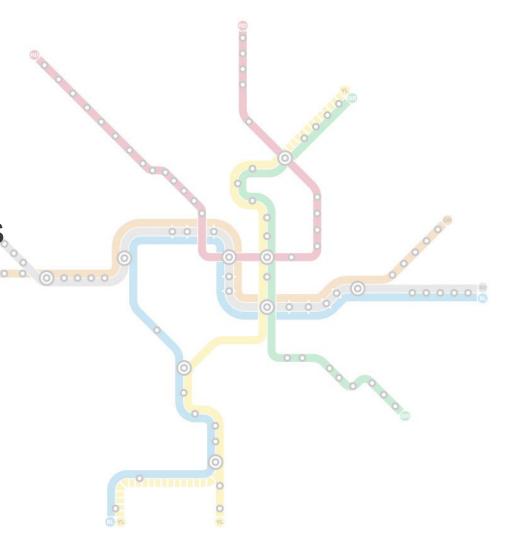


Purpose

Review Capital Program

Capital Program Summary & Highlights

Ongoing Major Capital Projects

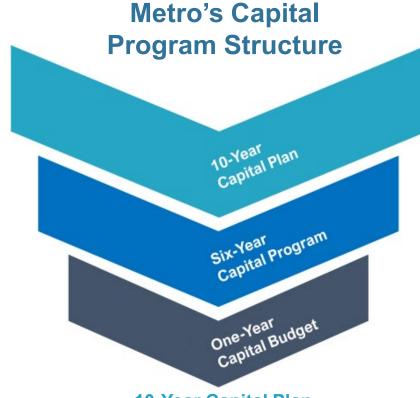




Metro's Capital Program

Replacement, Rehabilitation, Maintenance & Modernization

- Transform Metro into a world class transit agency
- Demonstrate commitment to customers
- Focus on customer experience and improving service
- Accelerate projects to rehabilitate, replace, and modernize the system
- Maintain fiscal accountability and commitments to region



10-Year Capital Plan

Identifies viable initiatives to address needs identified for next ~10 years; financially unconstrained

Six-Year Capital Improvement Program

Capital investments anticipated for, or continuing in, six-year capital program

One-Year Capital Budget

Expenditure forecast for capital projects and programs in current budget year 47



Addressing Metro's Overdue Capital Needs

Regional & Federal Investment Addressing Overdue Needs & Supporting Programs

ADDRESSING OVERDUE CAPITAL NEEDS

Substantial Progress (*Highlights*)

- Replacement of Legacy Railcars
- Track Rehabilitation
- Platform Program 20 Stations Complete

More To Do to Catch Up (Priority Needs)

- Structures Bridges, Platforms, Tunnels
- Systems Train Control, Radio and Comms, Power
- Facilities Bus Divisions, Rail Maintenance, Offices

Investing in Ongoing Programs to Sustain the System

Recurring & Cyclical Maintenance, Rehabilitation & Replacement Programs

- Buses
- Railcars
- Paratransit Vehicles
- Service Vehicles

- Track
- Parking Facilities
- Elevators & Escalators
- Mechanical Systems

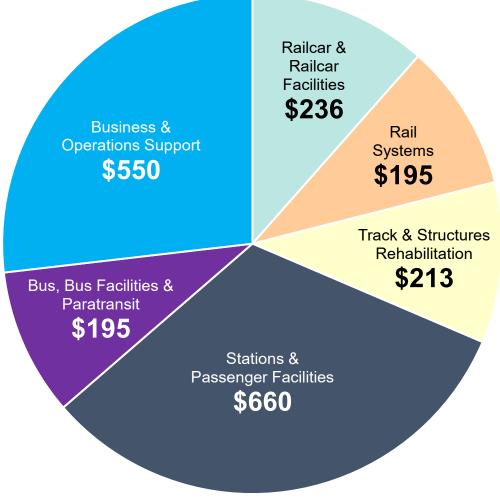
- Traction Power
- Signal Systems
- Lighting Systems
- Cooling Systems

- Bus Customer Facilities
- Bus, Rail & Admin
 Maintenance Facilities

31 of 47

\$2.05B Invested in FY2022

FY2022 by Investment Category (\$M)

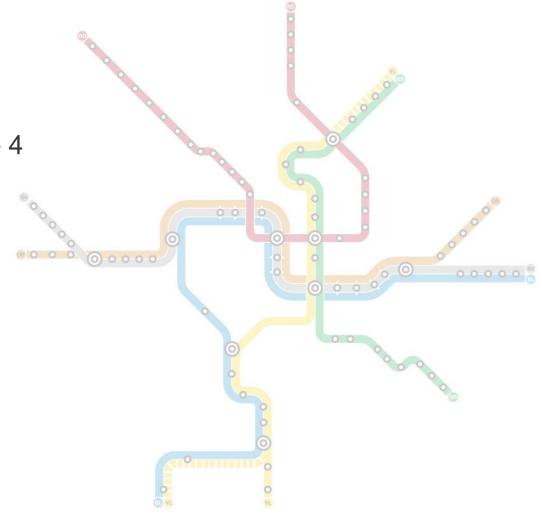




Current Capital Projects

Capital projects

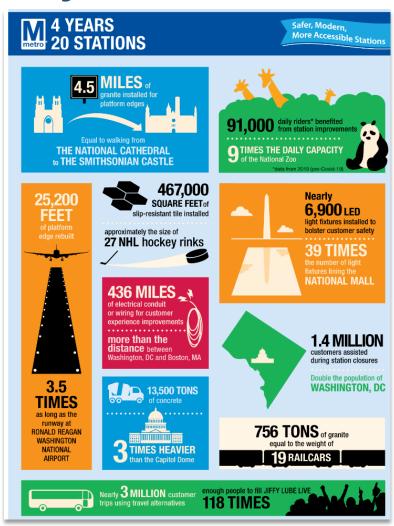
- —Station Platform Improvement Project Phase 4
- Yellow Line Tunnel & Bridge Rehabilitation
- Potomac Yard Station
- Aerial Structure Rehabilitation A
- Train Control Rooms Rehabilitation
- Northern Bus Garage Replacement
- Bladensburg Bus Garage Replacement





Station Platform Improvement Project – Phase 4

- Final phase of improvements at 20 outdoor stations
 - 17 stations completed between 2019-2021
 - Five stations rehabilitated and upgraded Summer 2022
- Scope included:
 - Station upgrades at five locations: Cheverly, Landover, Minnesota Ave., Deanwood, and New Carrollton
 - Platform rehabilitation at three locations: Cheverly, Landover, and New Carrollton
 - Work performed or on-going at five bridges & aerial structures
- Contract awarded in Summer 2021
- Awarded contract value of \$267M*
- Extensive public outreach online & in-person





Yellow Line Tunnel & Bridge Rehab

- Project located between Pentagon and L'Enfant Plaza stations on Yellow Line across the Potomac River
- Steel lined tunnel has excessive corrosion and section loss from stray current impacts and water penetration
- Scope includes:
 - Tunnel steel liner & crack repairs, dry standpipe replacement on bridge, and bridge repair
- Construction started in late Spring 2022
- Approximate contract value of \$300M*









Potomac Yard Station

- New station for customers in Alexandria, VA
- Located on Blue & Yellow Lines between National Airport and Braddock Road stations
- Connection to main line and signal integration in progress
- Frequent free shuttle bus service available for customers throughout the duration of service impact
- Anticipated Station Opening: Working to establish in 2023
- Contract awarded in September 2018
- Approximate contract value of \$273.6M*





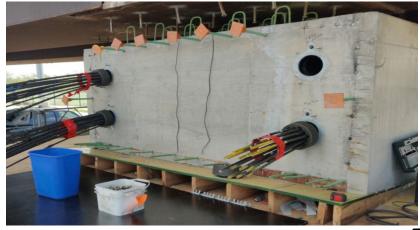


Aerial Structure Rehabilitation A

- Project addresses 10 aerial structures and one station canopy
- Scope includes:
 - Rockville: Demo and new canopy construction.
 Installation of new communication system, new skylights, weatherproof structural panels.
 - Structures & Bridges: Retrofit and rehabilitations of aerial structures and segmental bridges including girders and drainage repairs.
- Contract awarded in Spring 2021
- Approximate contract value of \$49.5M*
- Communications team nominated as finalist for 2022
 PRNEWS Platinum Awards Community Relations



Rockville Canopy

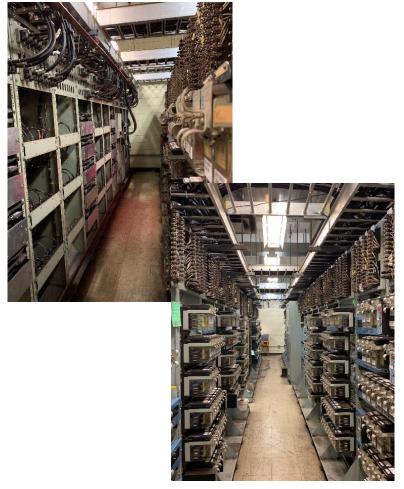


D&G Post-Tensioning



Train Control Rooms (TCR) Rehabilitation

- Program renews various equipment in TCRs with currently established Metro train control equipment
- Scope includes:
 - 24 TCR locations for rehabilitation
 - 14 Remote Terminal Unit (RTU) replacement
 - 81 communication server box redesign/replacement systemwide
- Contract awarded in August 2022
- Approximate contract value of \$149M*



Northern Bus Garage Replacement

- Project reconstructs current building into a modern bus facility while preserving the historic 14th Street façade
- New garage will house 150 buses and include infrastructure needed to support electric bus fleet, as envisioned under Metro's zero-emission bus plan
- Art in Transit fencing installed during construction for community aesthetics
- Progressive design-build delivery method
- Approximate contract value: \$478.5M*
- Anticipated opening date: Q2 2027



Proposed design for new Northern Bus Garage



AIT fencing



Bladensburg Bus Garage Replacement

- Garage reconstruction will modernize the facility and drastically improve essential bus fleet operations and maintenance
- Project will create 200 40-foot-long bus spaces, 100 articulated bus spaces, and employee parking, and allocate space for future electric bus infrastructure, consistent with Metro's zero-emission bus plan
- Art in Transit fencing installed during construction for community aesthetics
- Progressive design-build delivery method
- Approximate contract value of \$260.2M*
- Extensive community engagement since project inception
- Anticipated opening date: Q2 2027



Bladensburg Bus Garage AIT fence

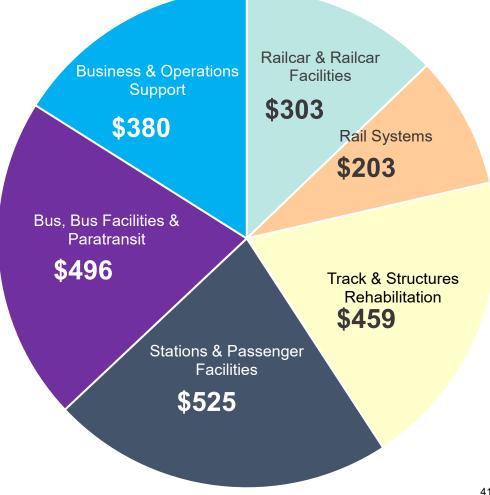


Rendering of new bus garage



\$2.4B FY2023 Investment Forecast

FY2023 by Investment Category (\$M)





Projected Funding Sources

Funding Source	FY2023	FY2024
Formula and Match	\$562	\$577
PRIIA and Match	\$297	\$297
System Performance	\$171	\$177
Dedicated Funding Pay-Go	\$383	\$303
Reimbursable Projects	\$50	\$45
Debt	TBD	TBD
Total	TBD	TBD

^{*}Estimated sources in millions of dollars; amounts subject to change. Pay-Go availability may change based on total debt issued



Long Term Capital Needs

- Metro's 10-Year Needs for State of Good Repair, Rehabilitation, Replacement, Maintenance, Modernization, and Optimization exceed \$25B and far surpass projected available funding
- Capital funding capacity available to advance capital program for next few years
- Additional funding beyond current sources will be needed in future





Long Term Capital Program Execution

- Minimize inconvenience and improve service for customers
 - Long-term planning
 - Increased coordination internally and with regional partners
- Continuous improvement in delivery
- Extend planning horizon
 - Strengthen short-term delivery
 - Improve near-term planning and outlook
 - Continue long-range planning
- Coordinate project delivery with regional partners
- Increase notice and frequency of contacts for upcoming track outages





Next Steps

Fall:

 Propose Six-Year CIP, FY2024 Capital Budget, and 10-Year Capital Plan

Winter:

Budget work sessions & public hearings

Spring:

 Board adoption of CIP & Capital Budget (March)



