MARC

GROWTH AND TRANSFORMATION PLAN

JUNE 2025

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION


84
84
MARC
MARC


MARC
Maryland Department of Transportation

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

The MARC Growth and Transformation Plan would not be possible without the participation of the statewide community, including host railroad partners; leadership and staff from local jurisdictions; business, community, and advocacy organizations; and individual riders and members of the public. Throughout the planning process, their contributions helped to guide the development of goals and objectives, solicit ideas for new approaches to service delivery, and to facilitate a discussion around the benefits and trade-offs of various service options that will shape the future of the Maryland Area Regional Commuter (MARC) system. Collaboration and partnerships were critical in creating the plan and will be a recurring theme of its implementation.

MARC Growth and Transformation Plan Advisory Committee

- Maryland Secretary of Transportation's Office
- MDOT Office of Rail and Intermodal Freight
- MTA Deputy Administrator
- MTA Assistant Deputy Administrator for Planning and Programming
- Deputy Chief Operating Officer of Contracted Services
- MTA MARC Train Service
- MTA Office of Communications and Marketing
- MTA Office of Statewide Planning

MARC Growth and Transformation Plan Technical Committee

- MTA Office of Statewide Planning
- MTA Office of Baltimore Region Planning
- MTA Office of Engineering
- MTA Office of Government Affairs
- MTA MARC Train Service
- MTA Chief Strategy Officer – MARC

Host Railroad Partners

- Amtrak
- CSX Transportation, Inc.

Other Key Stakeholders

- Delaware Department of Transportation
- Delaware Transit Corporation
- Southeastern Pennsylvania Transportation Authority
- Virginia Passenger Rail Authority
- Virginia Railway Express
- Washington Metropolitan Area Transit Authority

Maryland's Local Jurisdictions

MTA sends a special thanks to the leadership and staff of local jurisdictions and metropolitan planning organizations for participating in the planning process and helping to inform the plan.

Consultant Team

- Kimley-Horn
- DB E.C.O.

LETTER FROM THE ADMINISTRATOR

Dear Maryland Residents and Transit Riders,

We at the Maryland Transit Administration (MTA) are pleased to share the MARC Growth and Transformation Plan with you. This plan was developed in recognition that transit is a driving force for Maryland's economy and that a refreshed vision for MARC service is needed to create a regional rail network that is frequent and runs all day and all week to better serve existing, changing, and new travel markets. This important transformation aligns with MTA's mission "to provide safe, efficient, and reliable transit across Maryland with world-class customer service."

The Maryland Legislature recently passed the Governor's proposal to raise revenues for Maryland's transportation system. Thanks to the Governor's budget, MTA can now make progress toward state of good repair projects that maintain service levels and improve reliability. The recommendations in this plan will help guide service changes and position MTA to be ready for MARC expansion after our system's infrastructure is brought to a state of good repair. The plan presents an ambitious vision for transforming the MARC system over the next 25 years, visibly demonstrating what new resources could accomplish. MTA envisions this transformation occurring in incremental phases, during which we will plan for, design, and build the infrastructure improvements necessary to deliver the improved service that our riders need and deserve. With this plan, MTA identifies opportunities to achieve this bold vision by detailing actionable strategies that are data-driven and further informed by feedback from riders and stakeholders, including partner agencies and staff, frontline transit workers, business and industry groups, advocates, and community representatives. The plan will help grow Maryland's economy, with one-time economic benefits totaling $7.3 billion and a recurring annual economic benefit of $3.8 billion due to the capital and ongoing operations investments.

The plan is the result of a team of dedicated MTA staff working closely with local, regional, statewide, and federal partners to promote regional and intercity connectivity to not just 9-to-5 office jobs, but also housing, essential services, and business opportunities throughout Maryland.

Throughout the plan, you will find reflections on the state of the MARC system today, what we heard from Maryland residents and riders on their travel experiences and needs, what we learned from our robust analysis of market conditions and infrastructure needs, and our vision for future MARC service.

We thank you for your help crafting a vision for the future of the MARC system and recognize that there is still much work to be done. As is clear from the plan, the future for transit in Maryland is very bright and we look forward to working together to build an even better system.

Sincerely,

Holly Arnold

Holly Arnold
MTA Administrator

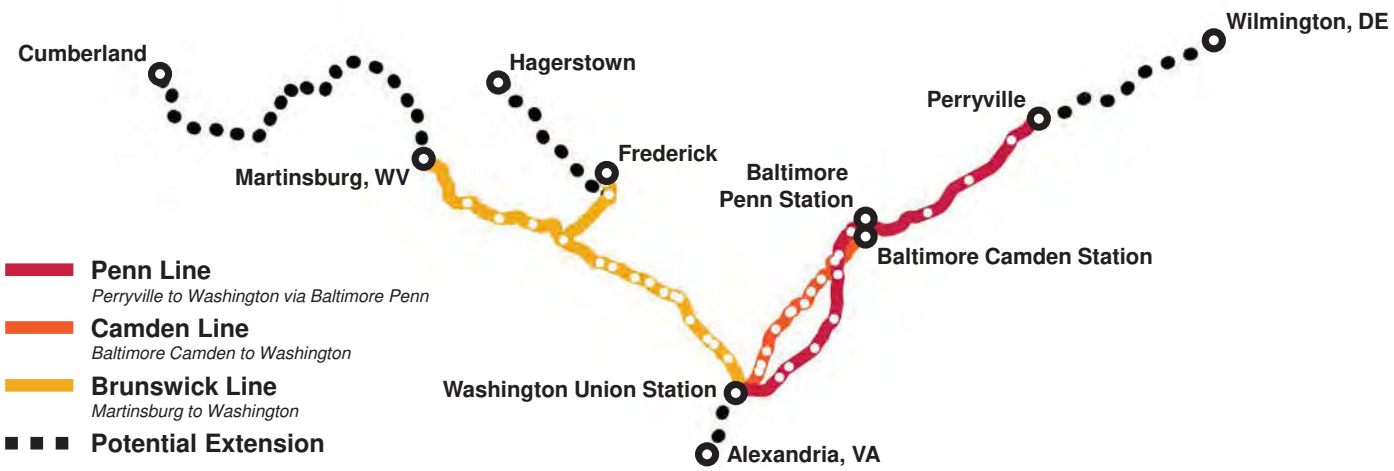
EXECUTIVE SUMMARY

The MARC Growth and Transformation Plan sets the stage for a regional rail system that offers expanded, market-oriented service that is beyond today's existing resources. The proposed service delivers for riders and recognizes the constraints of operating service in a shared-ownership environment. Fully realized, this plan will provide more frequent, all-day and all-week rail service—including on weekends—across the system to better serve existing, changing, and new travel markets. Expansions into Delaware, Northern Virginia, and Western Maryland will vastly expand the reach of the system, offering more frequent service to more people safely and efficiently.

In the current constrained environment of the Transportation Trust Fund (TTF), the Maryland Department of Transportation (MDOT) is focusing its capital expenditures on projects that assure the continued safe and efficient operation of its transportation systems, including necessary repairs, fleet overhauls, and other significant state of good repair (SGR) investments. However, the MARC Growth and Transformation Plan articulates a vision for the effective programming of future resources, to ready us to deliver the maximum benefit to the State of Maryland and its residents, workers, and visitors.

Three service phases are included in the plan (Unconstrained, 15-Year, and 5-Year) along with identified required capital improvements. The future service plan was developed with input from riders, the public, host railroad partners, and other stakeholders as well as data from a market assessment, Title VI analysis, and service planning model.

MTA conducted an online public survey in fall 2023 to collect input on a vision for future MARC service. We received nearly 4,700 responses, with the top priorities being expanded weekend service, improved frequency, and expanded service to new destinations. MTA held a public meeting in December 2024 to present the updated vision for MARC service based on input from all stakeholders. We held the meeting virtually, including the use of breakout rooms for each line and the system as a whole, and discussed plans for future MARC service and next steps. Attendees shared feedback on the proposed service plan, phasing recommendations, and thoughts on balancing peak-period travel with more frequent, all-day service and geographic expansions.



The Future MARC System – Unconstrained Phase

Marylanders will not have to wait until 2050 to begin to see the benefits of this plan. Achieving the full future service plan requires a phased approach, one that incrementally delivers service improvements, and the infrastructure improvements required to achieve them. The plan identifies a 5-Year Phase, 15-Year Phase, and Unconstrained Phase to be implemented, pending key stakeholder agreements and available funding. The phased implementation will allow MTA to proactively plan for, design, fund, and construct improvements that deliver enhanced MARC service. While all three of these phases include significant elements that are not yet funded, the Unconstrained Phase also assumes the successful implementation of future required agreements with stakeholder railroads, and other policy and legislative requirements, including those laid out in the 2022 Maryland Regional Rail Transformation Act, have been accomplished. This distinction is important because MARC expansion and improvement is dependent not only on adequate funding, but also on successful collaboration with stakeholder railroads and other partners.

5-Year Phase: *FY2026-2030*

15-Year Phase: *FY2031-2040*

Unconstrained Phase: *FY2041 and Beyond*

Future Service Snapshots

5-Year Phase
FY2026–2030

Expanded weekday peak-service hours, with trains running at consistent frequencies during longer peak periods

- Weekday peak Penn and Camden Line service every 30 minutes or better between Baltimore and Washington, DC
- Weekday peak Brunswick Line service every 60 minutes or better; limited-stop service every 30 minutes at select stations

Improved weekday off-peak and weekend service

- Off-peak and weekend Penn Line service every 60 minutes; limited-stop service every 30 minutes at select stations
- New off-peak and weekend Camden Line bus service every hour
- Brunswick Line service between Frederick and Washington, DC, twice per weekday in the off-peak period

New service to new areas

- New bus service between Hagerstown and Monocacy on the Brunswick Line

15-Year Phase
FY2031–2040

Improved weekday peak frequencies

- Peak Penn Line service every 20 minutes or better between Martin State Airport and Washington, DC

Improved weekday off-peak service

- Off-peak Penn Line service every 30 minutes or better between Martin State Airport and Washington, DC
- Weekday service extended to 12 AM Monday to Friday

Expanded weekend service

- Weekend Penn Line service every 30 minutes between Baltimore and Washington, DC
- New weekend Brunswick Line service between Frederick and Washington, DC
- Weekend service extended to 1 AM on Saturday and Sunday

New service to new areas

- Hourly Penn Line service to Baltimore Camden Station
- New stations at Bayview in Baltimore City and Elkton
- Select Penn and Brunswick Line trains extended to Alexandria, VA
- Pilot Penn Line extension to Wilmington, DE

Unconstrained Phase
FY2041 and Beyond

Improved weekday peak frequencies

- Peak Penn Line service to Wilmington, DE, every two hours
- Peak Brunswick Line service expanded to operate in both directions

Expanded weekday off-peak and weekend service

- Off-peak and weekend Camden and Brunswick and Line frequencies improved to every 60 minutes or better in both directions

New service to new areas

- Off-peak and weekend Brunswick Line service extended into Western Maryland; new stations at Hancock and Cumberland

Capital Plans and Investment Needs

The capital program for the MARC Growth and Transformation Plan features capital cost estimates for a series of projects that are required to deliver additional service, including new infrastructure, stations, rolling stock, and various expenses such as right-of-way acquisition, professional services for project development, and contingencies. **The total estimated capital cost through the Unconstrained Phase is $13.7 billion in Year of Expenditure (YOE) dollars.**

These costs include baseline costs that reflect commitments necessary to continue existing MARC operations including SGR and enhancement projects funded in MTA's Consolidated Transportation Program (CTP), SGR needs identified in MTA's Capital Needs Inventory (CNI) forecasted out to FY2050, recapitalization of the existing MARC fleet, and ongoing payments in support of maintaining the existing infrastructure on which MARC operates.

Plan Phase	Estimated MTA Capital Cost
Baseline	$7,119,300,300
5-Year	409,068,000
15-Year	1,765,195,400
Unconstrained	4,409,710,600
TOTAL	**$13,703,274,300**

Current federal and state funding projections reflect an approximately $2.5 billion gap for MARC's baseline services (between FY2026 and FY2050). In addition to the baseline gap, transforming and growing MARC service will require an investment that is approximately double the cost of the baseline. With this investment, Marylanders would see significant improvement in access, frequency, service hours, and performance.

Objectives, Priorities, and Outcomes

MTA established strategic objectives that set the course for developing an actionable future service plan:

Offer Competitive Travel Times

Attract a Wide Range of Trip Purposes

Offer a Seamless Network

Balance Service Levels with Market Demand

Spur Economic Growth and Transit-Oriented Development

The objectives support the 2050 Maryland Transportation Plan's guiding principles and goals by driving the development of service plans that improve the experience for all users and better serve Maryland's communities to strengthen the state's economy.

EXECUTIVE SUMMARY

Investing in this plan will allow MARC to provide more frequent, all-day, and all-week rail service (including on weekends) across the system to better serve existing, changing, and new travel markets. Expansions into Virginia, Delaware, and Western Maryland will vastly expand the reach of the system, offering more frequent service to more people. Among other benefits, a fully implemented plan will provide:

 **Offer Competitive Travel Times**	 **Attract a Wide Range of Trip Purposes**	 **Offer a Seamless Network**	 **Balance Service Levels with Market Demand**	 **Spur Economic Growth and Transit-Oriented Development**
A **19% reduction in MARC trip time** between Washington, DC, and Baltimore **and an overall travel time that is more than 50 minutes faster than by car** (one-way, weekday peak periods)	– A **175% increase in daily station stops** across all lines (on weekdays) – A **161% increase in daily station stops on the Penn Line** (on weekdays) – A **172% increase in daily station stops on the Camden Line** (on weekdays) – A **191% increase in daily station stops on the Brunswick Line** (on weekdays)	– **More than 90 new daily opportunities to transfer to other local transit services**, including local bus, subway, and light rail – **More than 20 new daily opportunities to transfer to other commuter rail service**, including Virginia Railway Express (VRE) and Southeastern Pennsylvania Transportation Authority (SEPTA) Regional Rail	**Better-used service** that better meets where and when people want to travel, **increasing the number of seats filled by 16% on the Penn Line**, **33% on the Camden Line**, and **27% on the Brunswick Line**	Extensions of service to Northern Virginia, Delaware, and Western Maryland, **increasing the number of people and jobs with access to MARC service by 78% on the Penn Line** and **52% on the Brunswick Line**

Achieving the vision of the MARC Growth and Transformation Plan will require continual investment and commitment from state leaders as well as support from local, regional, and federal partners. For riders, the return on the state's investment will be a regional rail system offering bidirectional service more consistently throughout the day, seven days a week. This system will provide the ability to access essential locations regardless of time of day or day of week; the ability to travel across Maryland using transit in an amount of time comparable to automobile travel; the ability to travel using reliable, effective rail service; and the ability to access jobs and opportunities throughout Maryland by rail.

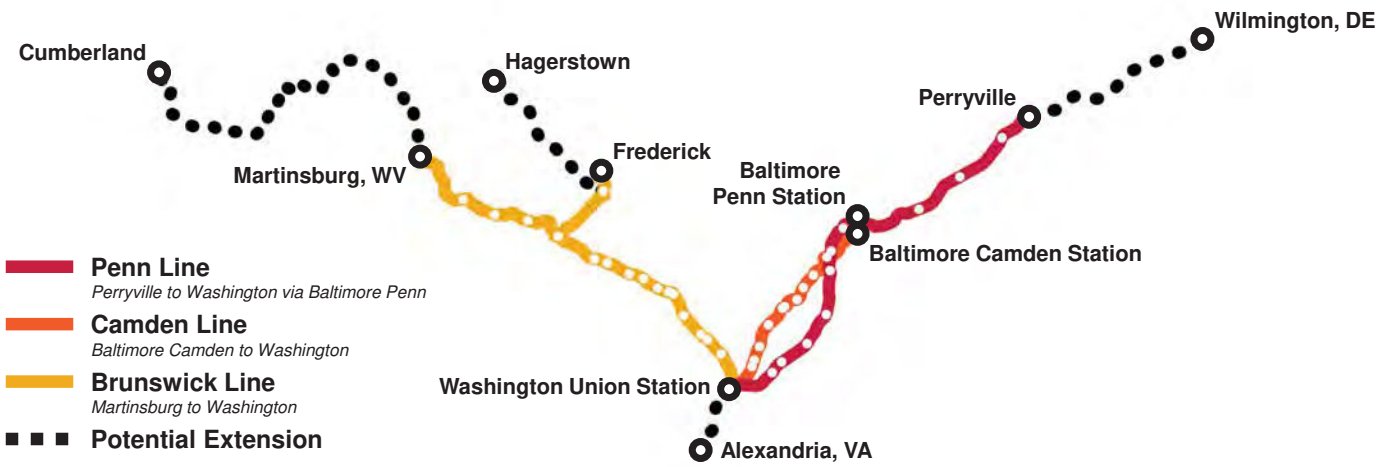

85
85
MARC
85
MARC

INTRODUCTION

The MARC Growth and Transformation Plan is a major update and expansion of the 2019 MARC Cornerstone Plan, which outlined pre-COVID-19 pandemic strategic priorities for the system and capital investments needed to achieve them. This long-range plan synthesizes MTA plans and policies with performance data, updated market analysis, and stakeholder and public input. MTA has comprehensively analyzed this information to create a bold new vision for transforming and growing MARC service using a phased approach that can deliver incremental benefits with investment through FY2050.

The MARC Growth and Transformation Plan identifies strategies for MARC that reflect:

- Current travel patterns (post-pandemic)
- MARC's critical infrastructure needs
- MARC's long-term service objectives based on a market assessment and public and stakeholder input
- Improvements needed for safe, frequent, and reliable service that meets the needs of all Marylanders
- Available federal funding opportunities



The MARC Growth and Transformation Plan responds to legislative requirements outlined in the Maryland Regional Rail Transformation Act (SB514/HB778), identifying the needs for transforming MARC service on the three existing commuter rail lines and for extensions to Western Maryland, Delaware, and Northern Virginia.

The MARC Growth and Transformation Plan was developed between fall 2023 and fall/winter 2024 through a four-phased process. Key activities conducted are listed below under each phase.

PHASE 1: Vision and Goals	PHASE 2: Market Analysis/ Service Objectives	PHASE 3: Capital Planning Service Planning	PHASE 4: Implementation Strategies
Fall 2023	*Winter 2023/Spring 2024*	*Summer/Fall 2023-2024*	*Fall/Winter 2024*
– Study webpage – Public survey – Existing conditions – System history – Goals and priorities	– Stakeholder engagement – Market assesment – Title VI analysis – Service and operations analysis – Capacity analyis	– Scenario development and refinement – Capital programming – Stakeholder engagement	– Virtual public meeting – Plan development – Implementation strategies

About MARC

MARC is a commuter rail system serving the Baltimore, MD, and Washington, DC, metropolitan areas. Comprised of the Penn Line, Camden Line, and Brunswick Line, MARC operates weekday service on the Camden and Brunswick Lines and service seven days a week on the Penn Line. MARC provides direct access to Washington, DC, along with connections to BWI Airport, intercity bus services via Penn Station in Baltimore, and several direct connections to Amtrak's intercity train services. MARC also provides connections to local and regional transit services, including:

- Ride On – Montgomery County
- Flash Bus Rapid Transit (BRT) – Montgomery County (Howard County extension to Columbia under development)
- TheBus – Prince George's County
- Anne Arundel County Transit
- Harford County Transit Link
- Transit Services of Frederick County
- Cecil Transit – Cecil County
- Regional Transportation Agency of Central Maryland (RTA) – Howard, Anne Arundel, and Prince George's Counties
- Virginia Railway Express (VRE)
- Washington Metropolitan Area Transit Authority (WMATA)
- MTA Local Bus and Commuter Bus
- MTA Light Rail
- MTA Purple Line (under construction)
- MTA Red Line (planned)

About MTA

MARYLAND DEPARTMENT OF TRANSPORTATION
MARYLAND TRANSIT ADMINISTRATION

MTA is a division of the Maryland Department of Transportation (MDOT) and one of the largest multimodal transit systems in the United States. MTA operates local buses (CityLink and LocalLink), commuter buses, Light Rail, Metro Subway, MARC Train service, and a comprehensive Paratransit (Mobility) system. MTA also manages the Taxi Access system and directs funding and statewide assistance to Locally Operated Transit Systems (LOTS) in each of Maryland's 23 counties and the cities of Baltimore, Annapolis, and Ocean City.

PROCESS AND APPROACH

The MARC Growth and Transformation Plan is the result of a year-long process focused on understanding the constraints and opportunities with Maryland's transportation system, developing clear objectives for the future of MARC's role in the system, and creating an actionable plan to achieve these objectives.

The planning process included:

- **Establishing objectives, priorities, and outcomes** to develop a long-term service vision for MARC that aligns with MTA and MDOT's priorities and customer needs
- **Understanding MARC's history and existing conditions** through reviewing and summarizing historical information and existing data on service, ridership, operations, fleet inventory, and station plans
- **Engaging stakeholders and the public** to provide information and solicit feedback on service planning and capital programming and to inform the plan's objectives and priorities
- **Conducting a market viability assessment** to examine and understand the current and future travel market in the MARC service area
- **Conducting a Title VI analysis** to demonstrate that recommended improvements enhance the social and economic quality of life for all citizens and comply with federal financial assistance requirements
- **Developing and evaluating options for future service** that address the plan's objectives and priorities and contemplate the future of MARC service, such as frequency, weekend and off-peak service, improved travel times, connectivity to new markets and transit systems, infrastructure improvements and fleet requirements, and transit-oriented development
- **Understanding the capacity of the network** and the ability to add more MARC service in recognition of MARC service operating on infrastructure owned by other railroads
- **Developing a long-term service plan** based on the plan's objectives and priorities, market analysis, and public and stakeholder input
- **Developing a capital programming and infrastructure improvement plan** that can provide the necessary capacity to operate the long-term service plan
- **Developing an implementation strategy** that brings together the service and capital planning needs through a phased approach to deliver short-, medium-, and long-term service benefits as infrastructure improvements increase capacity

STAKEHOLDER AND PUBLIC ENGAGEMENT

MTA worked with stakeholders representing a range of interests across Maryland and beyond, including current and potential future riders, to gather feedback throughout the study. The intent of collecting stakeholder feedback, which spanned the entirety of the planning process, was to guide the development of goals and objectives, solicit ideas for new approaches to service delivery, and to facilitate a discussion around the benefits and trade-offs of various service options. At the onset of the planning process, MTA identified a broad group of internal and external stakeholders with an interest in the MARC Growth and Transformation Plan effort. These stakeholder groups are described in more detail in the following sections.

Advisory Committee

MTA invited key stakeholders to serve on the MARC Growth and Transformation Plan Advisory Committee. The role of the Advisory Committee was to provide policy-level direction to MTA leadership and the study team. The members represented diverse policy perspectives and included senior-level representatives from the Maryland Secretary of Transportation's Office, various MTA departments, and MARC staff. The Advisory Committee met throughout the study process and provided guidance and direction to the MTA study team at key milestones.

Technical Committee

Like the Advisory Committee, MTA invited key stakeholders to serve on the MARC Growth and Transformation Plan Technical Committee. The role of the Technical Committee was to provide informed technical advice to the Advisory Committee and the study team. Members included technical experts from various MTA departments (Planning and Programming, Engineering, Government Affairs) and MARC staff. The Technical Committee also met throughout the study process at key milestones to provide guidance on technical analysis and findings.

Host Railroads and Other Key Stakeholders

MTA held a series of meetings with the railroads that host MARC services (Amtrak and CSXT) and other key stakeholders to discuss MTA's service objectives. The meetings focused on understanding capacity constraints on the existing network as well as exchanging information on how service planning and capital programming can be advanced to optimize services for all rail operators and provide opportunities for growth and increased reliability. The host railroads and other key stakeholders engaged throughout the development of the plan included:

- Amtrak
- CSX Transportation, Inc. (CSXT)
- Delaware Department of Transportation (DelDOT)
- Delaware Transit Corporation (DTC)
- Southeastern Pennsylvania Transportation Authority (SEPTA)
- Virginia Passenger Rail Authority (VPRA)
- Virginia Railway Express (VRE)
- Washington Metropolitan Area Transit Authority (WMATA)

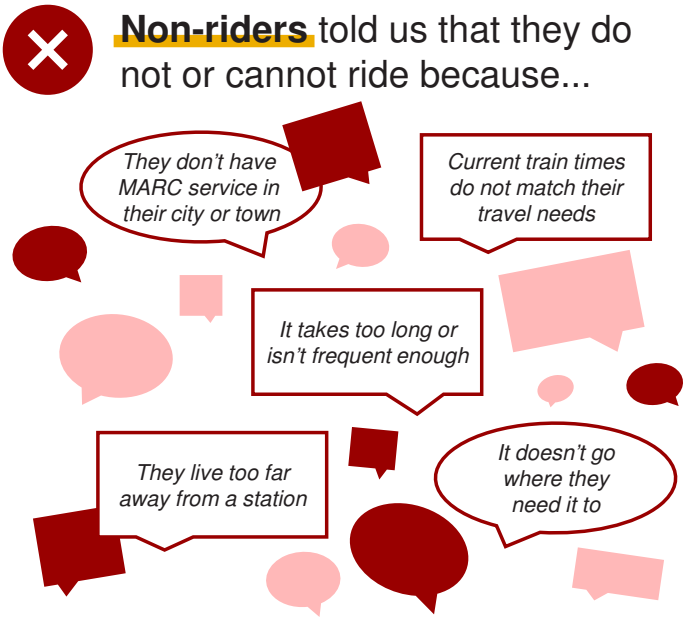
Local Jurisdictions

MTA reached out to each of the Maryland counties and municipalities served by MARC to gather relevant land use development plans in areas surrounding MARC stations and any updates on their locally operated transit services beyond what is provided in their Transit Development Plans. MTA also reached out to the metropolitan planning organizations whose boundaries include the MARC service area, which included the Baltimore Regional Transportation Board and the National Capital Region Transportation Planning Board. MTA also provided several briefings to local jurisdictions on the MARC Growth and Transformation Plan effort, including to the Montgomery County Council Transportation and Environment Committee, Howard County Multimodal Transportation Board, and City of Brunswick.

Public Engagement

In addition to engagement with internal and external stakeholders, MTA offered several different opportunities for members of the public to share ideas and provide feedback. These opportunities and events included:

- An online public survey conducted in fall 2023 to collect input on a vision for future MARC service, that **nearly 4,700 people** responded to:
  - The top priorities for improvements were **expanded weekend service, improved frequency**, and **expanded service to new destinations**
  - Current MARC riders (70 percent of survey respondents) identified **reduced stress, environmental benefits**, and **time savings** as their top reasons for riding
  - Non-riders (30 percent of respondents) stated that they do not or cannot ride MARC because of **inconvenient train times, lack of frequency, long travel times**, and **lack of destinations served** by MARC
  - When presented with different types of service improvement options, respondents…
    - **Preferred the idea of consistent service frequencies spread evenly throughout the day**, rather than more frequent service concentrated during morning and evening rush hour
    - **Preferred the idea of more express trains with fewer stops to get between major stations faster**, rather than more local trains that stop at all stations
    - **Preferred the idea of equal levels of service on weekends (Saturday and Sunday)** compared to weekdays, rather than more service on weekdays (Monday to Friday)
- A virtual public meeting on December 12, 2024, to present plans for future service, which **164 people** attended
- An official study email address (MARCPlanning@mta.maryland.gov) for members of the public to send comments, questions, and inquiries. We received **more than 200 emails** to this email address over the course of the study



TITLE VI CONSIDERATIONS

MTA, in partnership with the MARC Growth and Transformation Plan Advisory and Technical Committees, used a comprehensive approach to consider socioeconomic factors throughout the development of the MARC Growth and Transformation Plan to ensure Title VI requirements were met for federal financial assistance.

MTA established a service framework in 2022 that committed MTA to addressing long-standing systemic issues by providing better access to transportation choices for all Marylanders.

Addressing access is expanded upon by identifying gaps that result in disparate impacts of disproportionate burdens.

- Disparate impact refers to a policy or practice that may be neutral in intent, but disproportionately affects members of a minority group identified by race, color, or national origin
- Disproportionate burden refers to a "neutral" policy or practice that disproportionately affects low-income populations

The analysis evaluates whether a Major Service Change proposal disproportionately burdens minority and low-income riders or disproportionately benefits non-minority and non-low-income riders in accordance with the policies outlined in the MTA Title VI Implementation Program. A Major Service Change is any change that exceeds the threshold defined in the Title VI Implementation Program. For MARC, a major service change includes a change in revenue miles or hours of 25 percent or more, change in service span on a line by 90 minutes or more, a change in the number of stops at a station by 25 percent or more on a line, the establishment or abandonment of a station, or a cumulative alteration of at least 15 percent of total MARC system revenue miles or hours.

A potential disparate impact or burden is identified when the proportion of the minority or low-income population affected by a service change is 10 percent or greater than the service area's average.

Under MTA's 2023–2026 Title VI Implementation Program, a MARC minority line is a line where at least one-third of all census block groups within three miles of stops are minority block groups. For MARC, a minority block group is one where 61.05 percent of the population is non-white. Using this analysis, all three MARC lines are minority routes, as shown in **Table 1**.

TITLE VI CONSIDERATIONS

Table 1: MARC Minority Route Status

Route	Minority Route	Percent Minority Block Group
Penn – Washington	Yes	55.56%
Camden – Washington	Yes	56.89%
Brunswick – Washington	Yes	35.35%

Source: Maryland Transit Administration 2023-2026 Title VI Program

Of the 42 stations in the MARC system, 14 fall within minority block groups. Four of these are on the Penn Line, six on the Camden Line, and four on the Brunswick Line. As percentages, stations in minority block groups are 31 percent of Penn Line stations, 50 percent of Camden Line stations, and 21 percent of Brunswick Line stations. The 14 stations located in minority block groups are listed in **Table 2** below.

Table 2: Minority Block Group Stations

Line	Station	Daily Weekday Departures	Daily Weekday Trains
Penn Line	**Edgewood**	13	58
	West Baltimore	42	
	Bowie State University	44	
	Seabrook	35	
Camden Line	**Dorsey**	21	21
	Laurel Racetrack	3	
	Laurel	21	
	Muirkirk	21	
	College Park	20	
	Riverdale	15	
Brunswick Line	**Germantown**	18	18
	Metropolitan Grove	18	
	Gaithersburg	18	
	Garrett Park	11	

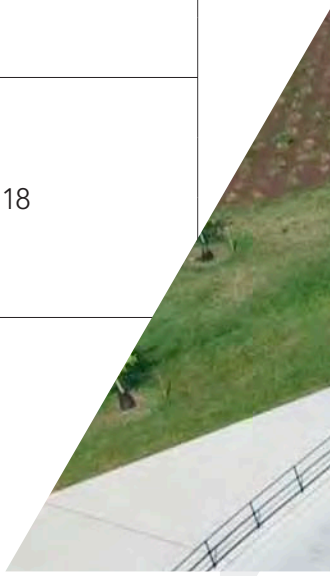


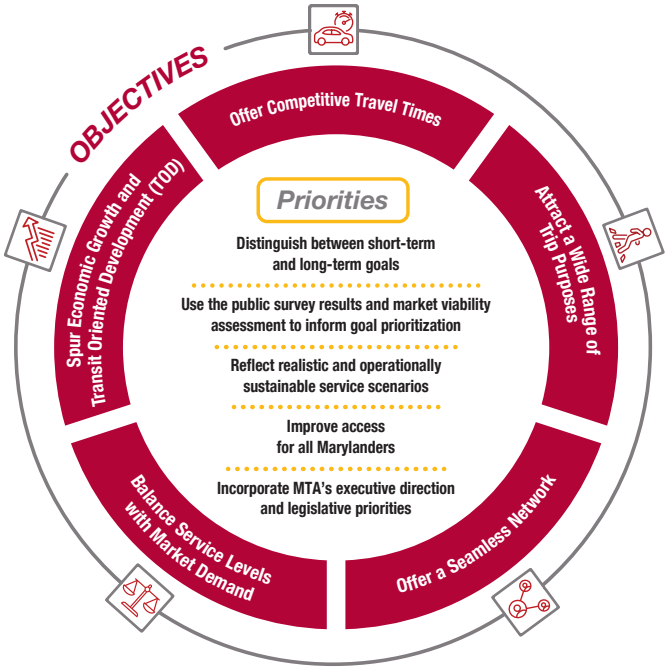
Table 2 also shows the daily weekday departures from each of the stations located in minority block groups and the total daily weekday trains on each route. It shows that most of these stations are receiving a high level of service compared to the total service being provided along the line. On the Brunswick Line, the minority block group stations receive, on average, 90 percent of the total service. On the Camden Line, the stations receive, on average, 80 percent of the total service. On the Penn Line, these stations receive an average of 58 percent of the total service. This lower value is due to the Penn Line having multiple limited-stop trains between Washington Union Station and Baltimore Penn Station that skip most, if not all, stops in between, not just the minority block group stations. As the MARC Growth and Transformation Plan is implemented, and local service options expand, access for the minority block groups will improve.

The demographics of MARC riders, however, do not align with the demographics of the residents in the service area. Minorities represent 61 percent of people living within the service area; however, only 46 percent of existing MARC riders are minorities. The income demographics of MARC also disproportionately reflects higher incomes. More than 50 percent of MARC riders earn more than $100,000 annually, while only 18 percent of riders fall into the low-income group (less than $49,000 annually) per the 2023–2026 Title VI Program. This income breakdown of predominately higher-income riders is characteristic of commuter-focused transit service nationally. Similarly, 58 percent of riders on MTA Commuter Bus earn more than $100,000.

Rebalancing MARC service to capture new riders will improve access to the system for all Marylanders. The study team and Committees carried this objective throughout the study as it evaluated future service scenarios (i.e., ensuring the future service phases include robust midday and weekend MARC service that appeals to travel needs for work and non-work-realted trips).

OBJECTIVES, PRIORITIES, AND OUTCOMES

MTA established five strategic objectives and five priorities that are equally weighted to set the course for developing an actionable future service plan. MTA applied associated metrics to service plan options to evaluate potential outcomes.



Objectives

OFFER COMPETITIVE TRAVEL TIMES

MARC trains should offer consistently reliable trip times competitive with single-occupancy automobile travel (drive times) throughout MARC's hours of operation. Since riders use other modes to access MARC, train times may need to be consistently better than drive times to accommodate first-/last-mile access. Evaluation of fleet and equipment changes, service patterns, and infrastructure enhancements should include improving network travel times for current and future users.

Metric(s):

- Average change in passenger trip time (new service trip time compared to current MARC service trip time)
- MARC travel time compared to automobile travel

ATTRACT A WIDE RANGE OF TRIP PURPOSES

The MARC system should meet the needs of multiple rider groups to ensure service accessibility and availability, including commuters, shift-workers, students, and those wishing to access recreation and entertainment opportunities. The system should help improve access for all Marylanders by providing trip and fare options that match their travel patterns, a safe and comfortable fleet, and facilities that are well maintained. Stations should be accessible to the communities they serve by multiple modes of transportation, including walking, biking, and drop-off, in addition to serving riders who drive and park.

Metric(s):

- Increase in travel frequencies to improve access for all Marylanders
- In accordance with Title VI requirements, determine whether a Major Service Change (e.g., initiating express service) disproportionately burdens minority and low-income riders or disproportionately benefits non-minority and non-low-income riders

OFFER A SEAMLESS NETWORK

While MARC exists as three separate lines, seamless integration between the lines and extensions by way of other regional commuter modes and between connecting transit services (including connectivity to Virginia and Delaware) can enhance the system to allow for an optimal increase in mode share, enable more destinations, and facilitate movement throughout the state and neighboring markets.

Metric(s):

- Number of potential transfers within 10 minutes or less between MARC lines and other MTA modes
- Number of potential transfers within 15 minutes or less between MARC lines and/or VRE/SEPTA

BALANCE SERVICE LEVELS WITH MARKET DEMAND

The MARC Growth and Transformation Plan should develop service concepts that balance the objective of expanding service in existing markets and/or accessing new markets with the market demand.

Metric(s):

- Projected average load factor based on market demand analysis

SPUR ECONOMIC GROWTH AND TRANSIT-ORIENTED DEVELOPMENT

MARC will spur economic development by improving connectivity between Maryland's communities and offering wider access to opportunities and amenities for the state's residents. Maximizing transit-oriented development (TOD) opportunities will help drive new ridership and support the State's vision of TOD as a tool for addressing the housing shortage and by leveraging state-owned land and infrastructure to bolster inclusive economic growth. It will be important to work with local jurisdictions to implement TOD with community engagement and in accordance with the land use planning of adjacent communities.

Metric(s):

- Change in number of jobs/population accessible within a half mile of each station

Priorities

Recognizing the complexity of developing goals to redefine MARC service while taking into consideration previous and current plans, programmed and in-progress projects, and policy commitments, the MARC Growth and Transformation Plan Advisory Committee and Technical Committee directed the study team to apply the following **priorities** to the plan:

- **Distinguish between short-term and long-term goals**
- **Use the public survey results and market viability assessment to inform goal prioritization**
- **Reflect realistic and operationally sustainable service scenarios** that target opportunities to better serve existing and new markets given financial constraints and that MTA is a tenant on railroads owned and operated by others
- **Improve access for all Marylanders**
- **Incorporate MTA and MDOT's executive direction, goals and guiding principles from the 2050 Maryland Transportation Plan, and legislative priorities**

HISTORY AND EXISTING CONDITIONS

Maryland began its support of commuter rail service in 1974 by subsidizing passenger trains operated by the Baltimore & Ohio Railroad. Two years later, the state began subsidizing service on the Northeast Corridor operated by Conrail and established the State Railroad Administration (SRA) to oversee its contributions and purchase equipment. Following the completion of a marketing study in 1984, Maryland rebranded its commuter rail service as the MARC system. The SRA became part of the Mass Transit Administration in 1992, now the Maryland Transit Administration (MTA), and today MTA is still responsible for administrating the MARC system.

As shown in **Table 3**, MARC service currently covers 400 directional route miles and 42 stations across three lines: Penn Line, Camden Line, and Brunswick Line. These routes connect urban, suburban, and rural communities throughout Maryland to Baltimore and Washington, DC, as well as Martinsburg, WV. Maintaining the existing rail system in a state of good repair is a top priority for MTA and a budget focus for the State of Maryland.

> Compared to adjacent rail systems, MARC is significantly larger than VRE (which has two lines, 177 directional route miles, and 19 stations) and significantly smaller than SEPTA (which has 13 lines, 452 directional route miles, and 155 stations).

Table 3: MARC Service Summary

	Brunswick Line	Camden Line	Penn Line
Host Railroad	CSXT	CSXT	Amtrak
AM Peak Service	Yes	Yes	Yes
PM Peak Service	Yes	Yes	Yes
Reverse Commute Service	No	Yes	Yes
Midday Service	Limited on Friday	No	Yes
Weekend Service	No	No	Yes
Hours of Operation (Approximate)	4:45 – 9:30 AM 3:30 – 9 PM	5 – 9:15 AM 3:30 – 9 PM	4 AM – Midnight
Outer Terminus	Brunswick/Frederick/ Martinsburg, WV	Baltimore-Camden	Baltimore-Penn/Perryville
Average Peak Frequency	20 minutes (Germantown)	30 minutes (Baltimore-Camden)	15 Minutes (Baltimore-Penn)
Directional Route Miles	152 miles (Martinsburg) 120 miles (Frederick)	76 miles	152 miles
Trains Per Weekday	18	21	58
Stations[1]	19	12	13

[1] Washington Union Station is counted once for each MARC line. The number of unique MARC stations totals 42.

Host Railroad Partners

Except for a portion of the Frederick Branch of the Brunswick Line, MTA does not own the tracks on which it provides MARC service. As shown in **Figure 1**, MARC operates on tracks owned by CSXT and Amtrak, commonly referred to as "host railroads." The host railroads own, dispatch, and maintain their rail corridors, including the rail beds, supporting structures, and associated infrastructure such as signal systems and catenary. MARC pays a fee to the host railroads to operate trains on all three lines and to store trains when not in service. MTA must coordinate service changes, such as schedule, span of service, frequency, and any new or relocated station, with and gain approval from the host railroads. Additionally, MTA contracts with other entities for the operation and maintenance of the MARC trainsets.

Both Amtrak and CSXT have plans to increase their service on the Penn Line, Camden Line, and Brunswick Line, respectively, which will lead to less capacity over the next 10 years. Any reduction in track capacity may increase the risk of delays for MARC and limit the potential to expand MARC services.

Figure 1: MARC Host Railroads

AMTRAK

- The MARC Penn Line runs along Amtrak's Northeast Corridor (NEC), which carries Amtrak's Northeast Regional, Acela, and Long-Distance services. Amtrak and MARC serve multiple shared stations including Baltimore Penn Station and New Carrollton. MARC operates service seven days a week on the line.
- Several major projects are currently underway, including the renovation and expansion of Baltimore Penn Station and Washington Union Station; construction of the Frederick Douglass Tunnel (replacement of the existing Baltimore & Potomac Tunnel); replacement of the Susquehanna River, Bush River, and Gunpowder River bridges; a new MARC station at Bayview; and a fourth track and station improvements at BWI Airport.
- Amtrak also is planning for the future of its service along the Penn Line/NEC, which includes up to two high-speed Acela trains per hour in each direction and up to four Northeast Regional or Long-Distance trains per hour in each direction.

CSX TRANSPORTATION

- MARC's Camden and Brunswick Lines both operate on CSXT-owned right-of-way.
- MARC service on both lines is focused on morning and evening weekday commuting, allowing the remaining windows of time during the day to be available for freight service.
- MTA's agreements with CSXT require any service changes be coordinated with and approved by CSXT. This type of operational model provides MARC with less control over track speeds, maintenance activities, and, in particular, scheduling service and expansions.
- CSXT is focused on continued growth of freight movement on both lines, providing critical connectivity between the Mid-Atlantic and markets along the Atlantic seaboard and in the Midwest. Anticipated growth in CSX traffic due to improvements such as the Howard Street Tunnel to allow double-stack container trains at the Port of Baltimore may further limit capacity to future passenger rail expansion, especially on the Camden Line.

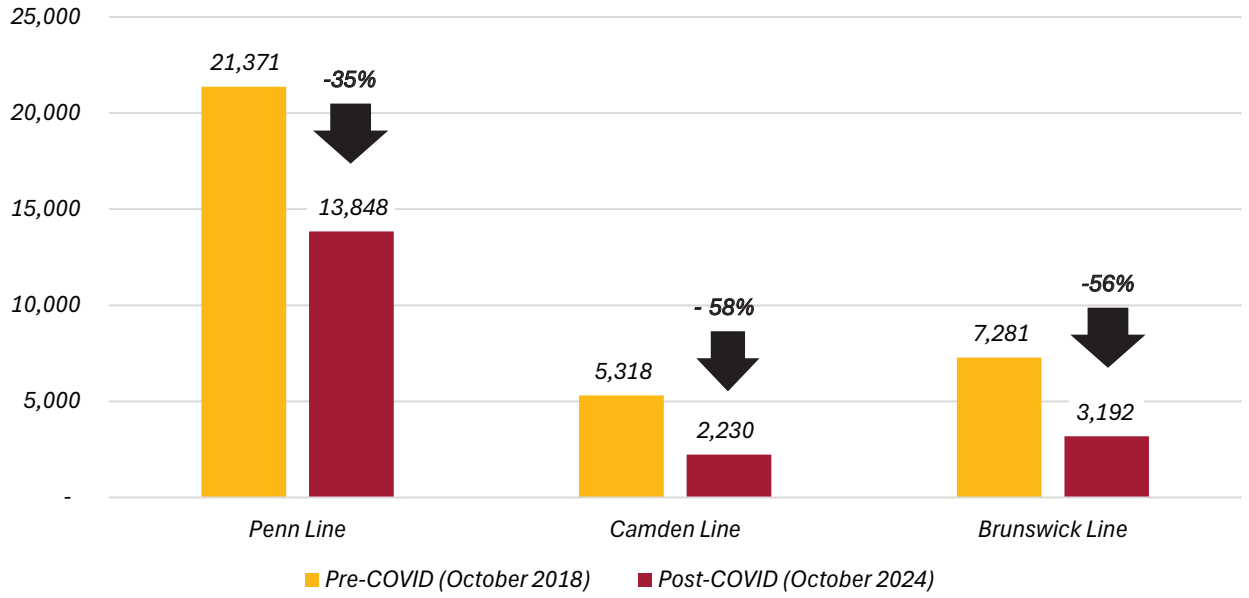
Service improvements or expansions proposed as part of the MARC Growth and Transformation Plan consider the service goals and requirements of all service providers operating in this shared environment to maximize the effectiveness of passenger and freight services in each rail corridor.

COVID-19 Pandemic Recovery

Prior to the COVID-19 pandemic, MARC's total average weekday ridership was approximately 40,000. Since then, as shown in **Figure 2**, ridership along the three MARC lines has remained significantly below 2019 ridership levels. As a result of the pandemic, travel patterns have shifted across the country and the number of daily commuters traveling into cities has declined, with hybrid and remote work becoming more prevalent. MARC ridership continues to recover toward pre-pandemic levels, with fall 2024 average weekday ridership reaching and exceeding 50 percent of pre-pandemic levels, and summer 2024 average Saturday and Sunday ridership exceeding pre-pandemic levels by as much as 68 percent. The change in the travel market has resulted in a slow recovery for MARC and other commuter rail systems in the US that have service patterns focused predominantly on serving commuters at peak hours.

The MARC Growth and Transformation Plan addresses this challenge by identifying new priorities for MARC service to align with the shift from a commuter-only market to a broader range of trip purposes, while considering current and future constraints and opportunities.

Figure 2: Pre- vs. Post-COVID-19 Pandemic Average Daily Ridership



MARKET ASSESSMENT

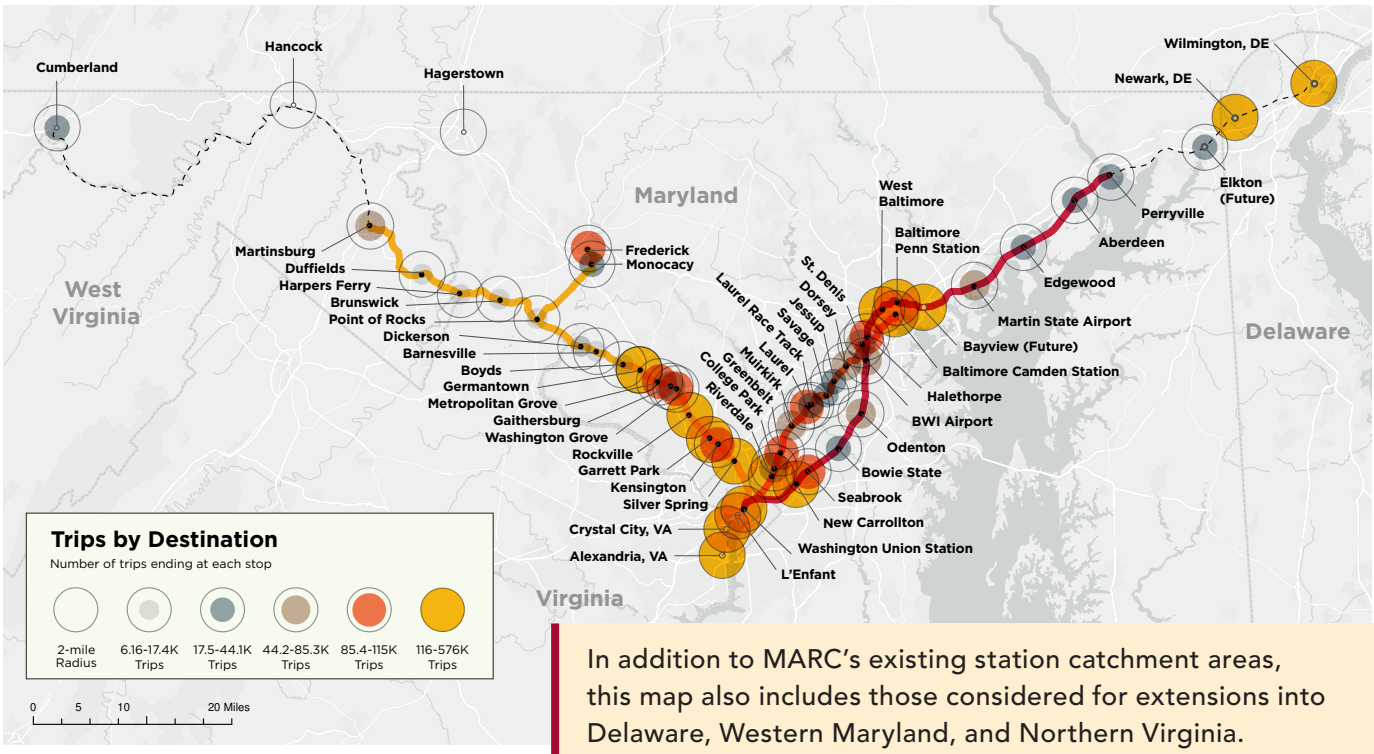
To lay the groundwork for the MARC Growth and Transformation Plan, MTA conducted an initial market assessment. The findings inform decision-making for future service phases based on the overall travel market and help determine the most effective approach to service deployment. Although the market assessment shows a snapshot of the recent travel market, it does not predict future travel patterns. Instead, the market assessment creates insights into how the travel market can be better served by current and future MARC services. The MARC system will be planned as an integrated network, but the market analysis is divided into existing corridors and potential future markets to understand how different travel segments could be served.

This analysis includes seven distinct components:

- The Penn Line market
- The Camden Line market
- The Brunswick Line market
- The market for interline (transfer) trips
- The market for extending MARC service into Virginia
- The market for extending MARC service into Western Maryland
- The market for extending MARC service into Delaware

Figure 3 and **Figure 4** show the market assessment methodology. First, the total travel market for each corridor is determined by counting all trips that have a start, end, or portion of the trip within a two-mile radius catchment area around MARC stations.

Figure 3: Existing MARC Station Catchment Areas



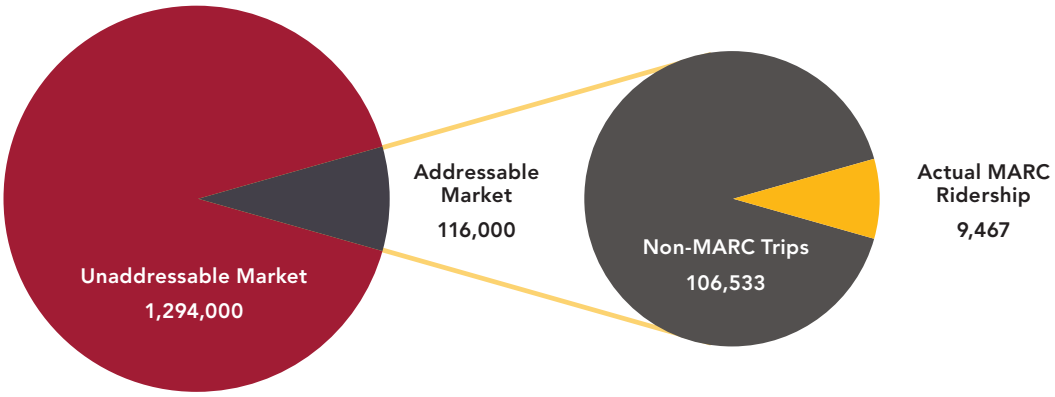
In addition to MARC's existing station catchment areas, this map also includes those considered for extensions into Delaware, Western Maryland, and Northern Virginia.

The total number of trips, or unaddressable market, is then filtered to exclude trips that cannot be served by MARC. For example, commercial trips carrying freight and cargo to be delivered to businesses are excluded. The analysis also excludes trips starting or ending between midnight and 4 AM, hours outside of the MARC system service hours. The remaining trips, after applying these filters, constitute the addressable market.

MARKET ASSESSMENT

Using the Penn Line as an example, the total travel market is shown in the pie chart on the left and the addressable market is shown as a separate pie chart on the right. While the addressable market includes all trips that could theoretically be taken on a MARC train, the actual ridership will only be a percentage of the total addressable market. This percentage is known as the market capture rate.

Figure 4: Portions of the Spring 2023 Penn Line Total and Addressable Markets



To estimate potential ridership, a reasonable market capture rate is applied to the addressable market. The actual market capture rate for a service can be calculated by dividing its actual ridership by the addressable market. Using the latest available data when the market assessment was completed (spring 2023), the Penn Line's actual market capture rate was 8.2 percent. Typically, market assessments for regional and commuter rail using the same methodology show that peak-only commuter rail to an urban core has a market capture rate of 1 to 5 percent, all-day bidirectional service ranges from 5 to 25 percent, and high-frequency, all-day service exceeds 25 percent. After determining the addressable market through data analysis, an appropriate market capture rate is applied to estimate potential ridership.

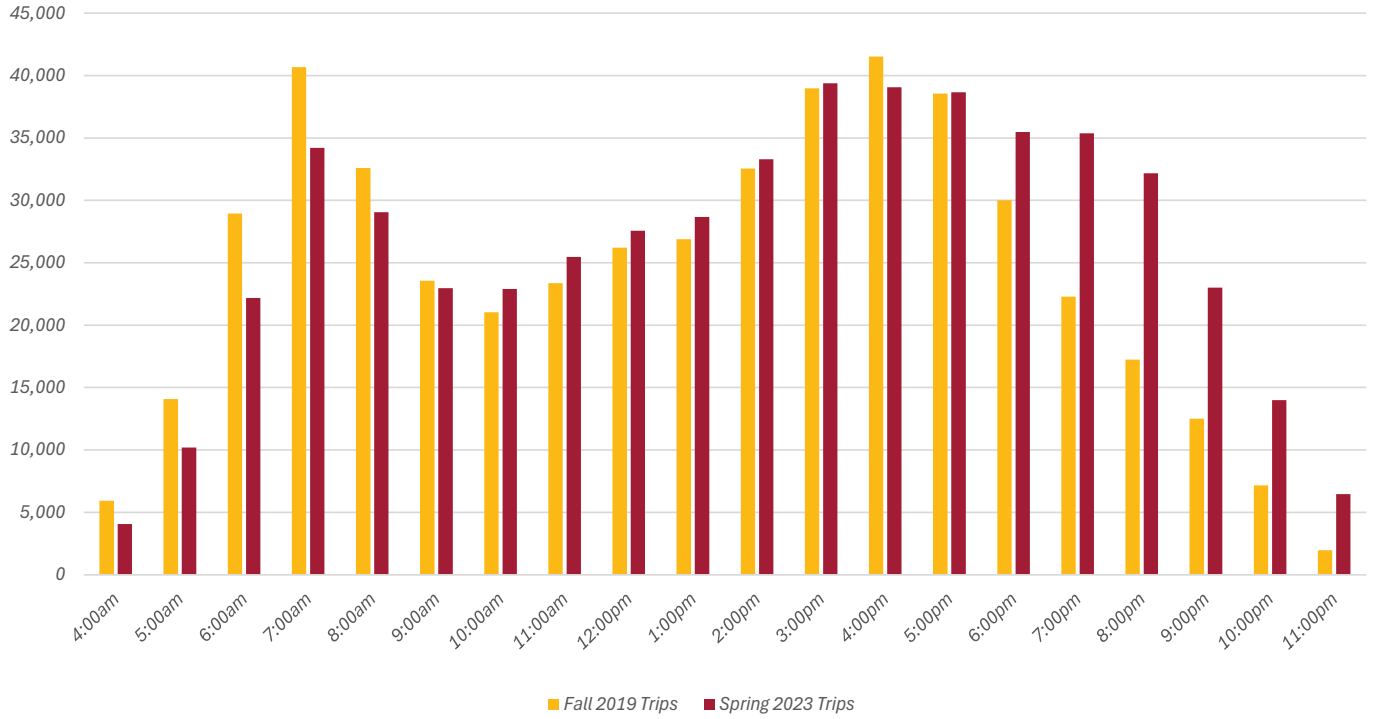
Through the market assessment, MTA analyzed travel demand and ridership for each MARC station from 2019 (pre-COVID-19 pandemic) and then compared these figures to those from 2023. It is important to recognize that the pandemic significantly altered travel patterns across the United States, disrupting the traditional commuter markets that many commuter rail systems are designed to serve. Consequently, MARC's ridership and travel markets have substantially changed since 2019.

The following are the systemwide takeaways from the assessment:

- **Although the overall market has expanded, MARC ridership has decreased.** In 2023, the total number of trips across all transportation modes in the MARC service area rose by about 25 percent compared to 2019. Despite this growth, trips on MARC dropped by approximately 65 percent during the same timeframe.
- **The timing of trips has shifted as the market has expanded.** The total number of trips across all transportation modes has increased in nearly every hour across the corridors served by MARC. Notably, the 7 PM, 8 PM, and 9 PM hours experienced the most significant growth, with the 8 PM hour seeing twice as many trips in 2023 compared to 2019. This shift in travel times may partly explain the decline in MARC ridership, as the current service schedule might not align with new travel patterns. **These findings suggest an opportunity for MARC to capture a larger share of evening and late-night trips systemwide.** This is illustrated in **Figure 5**, which shows the increase in total weekday trips across the MARC service area where there are no evening MARC trains bound for Washington, DC, and the last outbound train departs in the 7 PM hour.

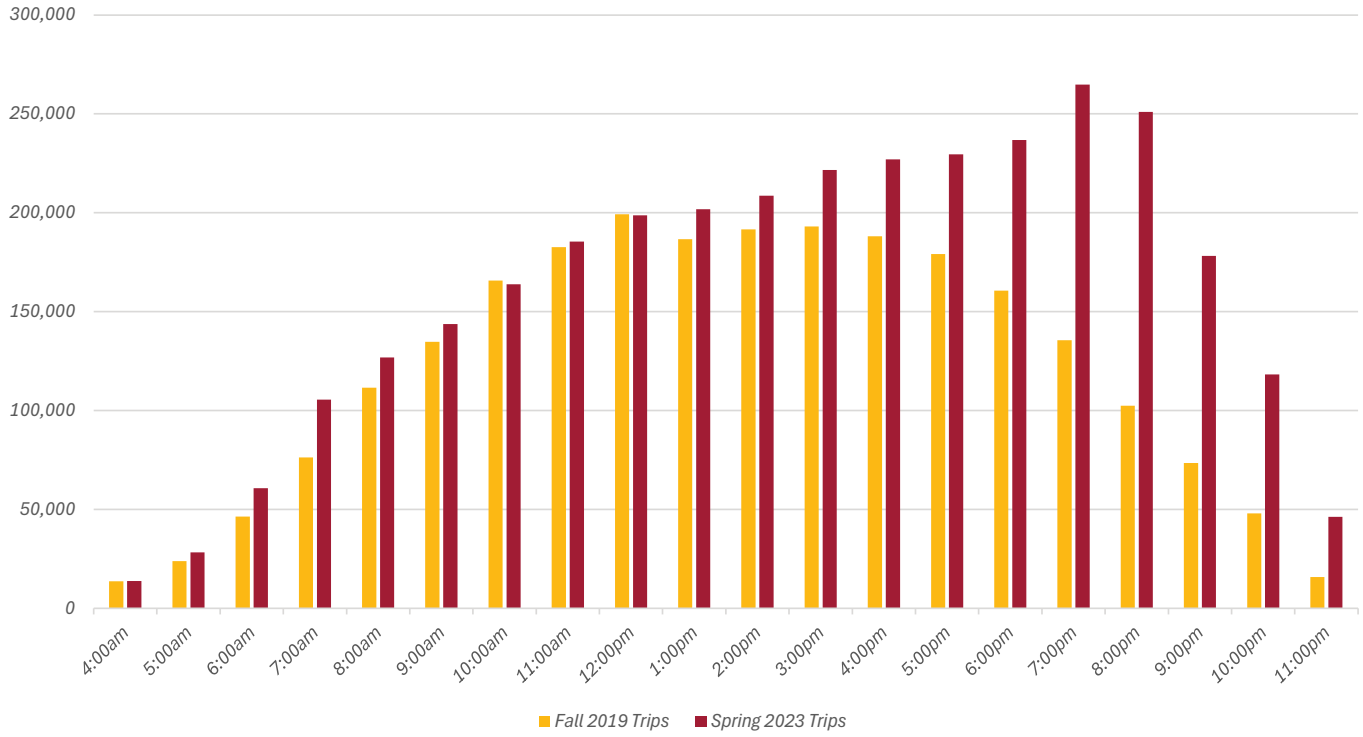
If the Camden Line had a market capture rate similar to the Penn Line, ridership would grow from 2,200 to 12,000 daily riders. Similarly, the Brunswick Line would see about 21,000 daily riders compared to today's 3,200 daily riders.

Figure 5: Total Weekday Trips in the MARC Service Area (by Start Hour), 2019 and 2023



– **The weekend travel market also has expanded alongside the weekday market.** Most of the new weekend trips, again across all transportation modes in the MARC service area, occur in the evening, peaking around 7 PM. This trend presents another potential opportunity for MARC to attract more riders, potentially by offering more late-night weekend service. **Figure 6** illustrates this growth in the travel market on the weekend, which currently lacks weekend Camden and Brunswick Line MARC service.

Figure 6: Total Weekend Trips in the MARC Service Area (by Start Hour), 2019 and 2023



Key Findings

PENN LINE

As shown in **Figure 7**, the Penn Line has both the highest ridership and the highest market capture rate of all three MARC lines; however, it has the smallest addressable market. Key findings from the assessment include:

1. The market assessment indicates the primary market for the Penn Line is between Washington, DC, and Baltimore. The station areas between Baltimore Penn Station and Washington Union Station ("Inner Penn" market) represent 72 percent of trips in the addressable market.
2. The "Outer Penn" market north of Baltimore is significantly smaller and has more than 90 percent of trips begin and end north of Baltimore rather than traveling to Inner Penn market destinations.
3. There is significant demand for travel within the Baltimore metropolitan area, particularly in the areas between BWI Airport and Martin State Airport.

Figure 7: Penn Line and Station Market Catchment Areas

The Penn Line Transit-Oriented Development (TOD) Strategy Plan presents insights and recommendations for the development of 170 acres of undeveloped State-owned land around Penn Line stations, highlighting opportunities and challenges for public and private investment at Seabrook, Bowie State, Odenton, BWI Airport, Halethorpe, and West Baltimore.

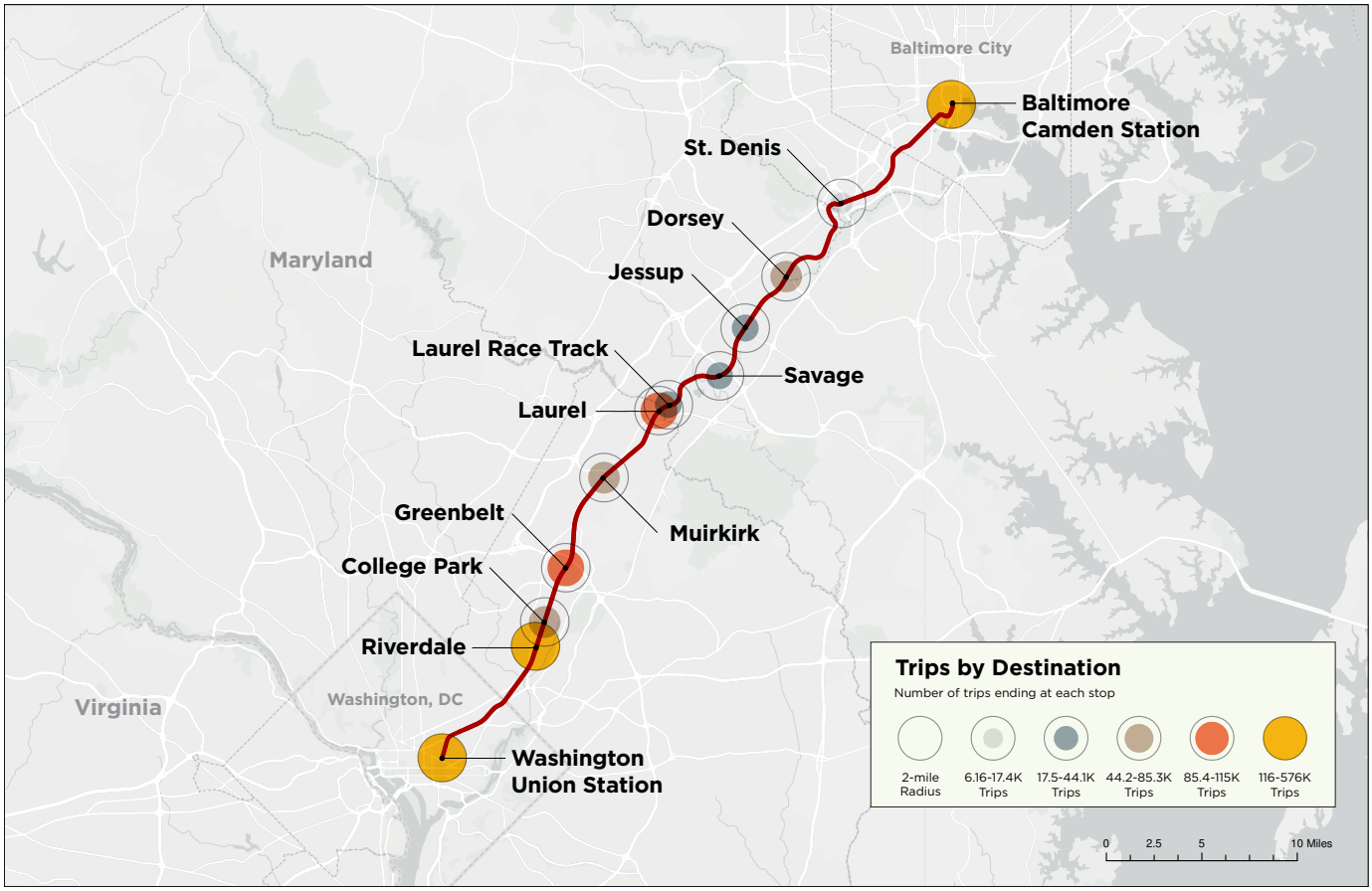
	Typical Weekday (Fall 2019)	Typical Weekday (Spring 2023)
Total Market	1,140,000	1,410,000
Addressable Market	105,000	116,000
Actual Ridership (Market Capture Rate)	22,965 (21.9 %)	9,467 (8.2 %)

CAMDEN LINE

As shown in **Figure 8**, the Camden Line connects 10 stations between Washington, DC, and Baltimore, compared to the Penn Line's six stations between these major cities. Key findings from the assessment include:

1. Despite much lower ridership than the Penn Line, the addressable market for the Camden Line is larger.
2. The Camden Line has a greater potential to serve more local trips between major cities.
3. There is a strong travel market between intermediate stations.
4. There is an untapped market for leisure activities and events travel with the Camden Line strategically located near major venues, such as Baltimore City's football stadium, baseball stadium, convention center, arena, and Inner Harbor neighborhood. Notably, there is a 27 percent increase in trips to the Baltimore Inner Harbor area on days when the Orioles have home games.

Figure 8: Camden Line and Station Market Catchment Areas



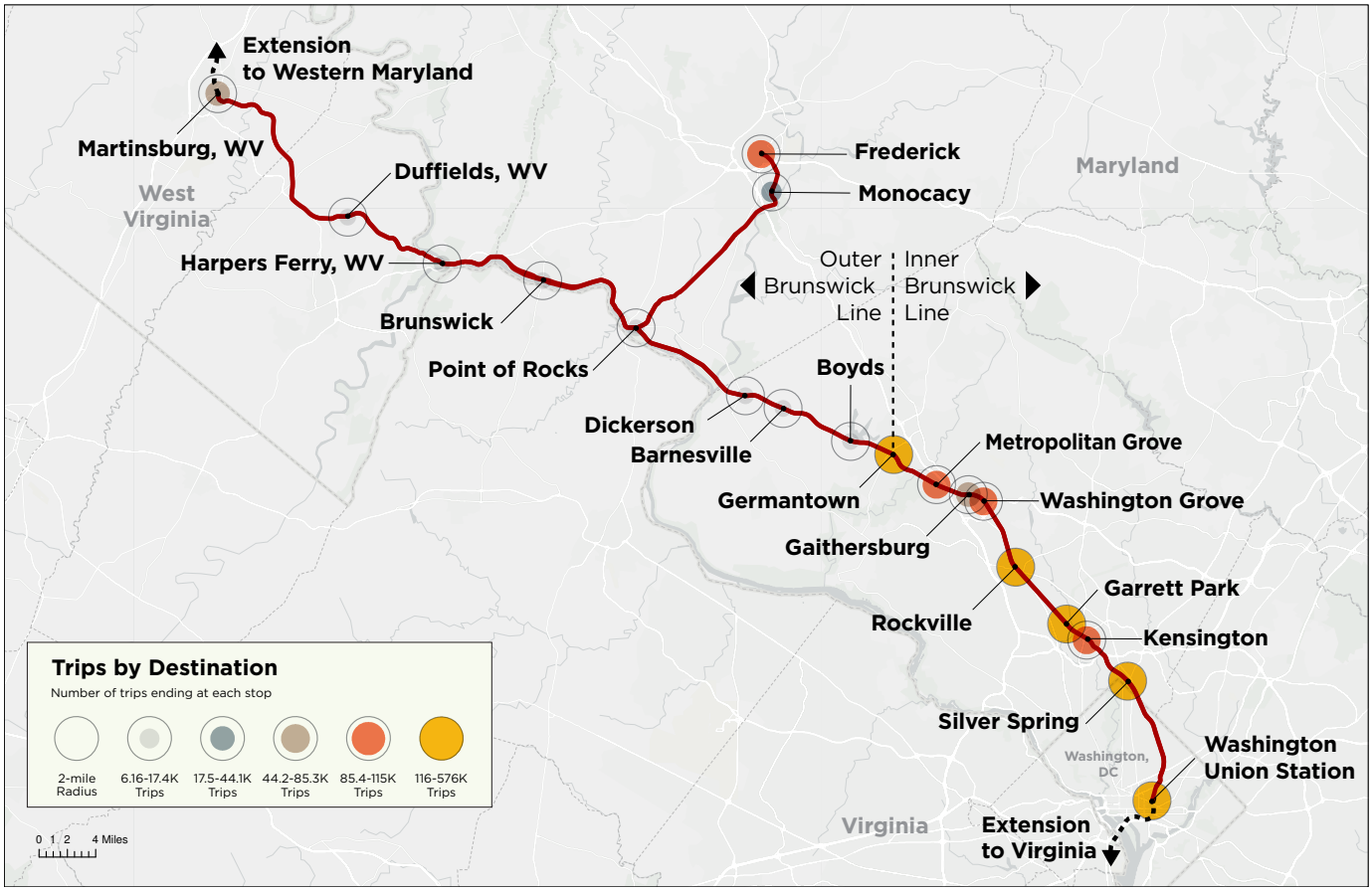
	Typical Weekday (Fall 2019)	Typical Weekday (Spring 2023)
Total Market	1,100,000	1,390,000
Addressable Market	127,000	144,000
Actual Ridership (Market Capture Rate)	4,432 (3.5 %)	1,243 (0.9 %)

BRUNSWICK LINE

As shown in **Figure 9**, the Brunswick Line covers a slightly larger geographic area than the Penn Line with 19 stations. Key findings from the assessment include:

1. Despite having much lower ridership than the Penn Line, the addressable market is larger than the Penn Line or Camden Line.
2. There is a strong market for trips between Germantown and Washington Union Station ("Inner Brunswick" market) as well as trips in between.
3. The Brunswick Line's Frederick Branch is a much stronger market than the Martinsburg Branch.

Figure 9: Brunswick Line and Station Market Catchment Areas



	Typical Weekday (Fall 2019)	Typical Weekday (Spring 2023)
Total Market	1,360,000	1,700,000
Addressable Market	257,000	264,000
Actual Ridership (Market Capture Rate)	7,095 (2.8 %)	1,781 (0.7 %)

INTERLINE TRIPS

The market for interline trips—or trips that involve a transfer between MARC lines—between the Brunswick and Camden Lines is 2.5 times larger than that between the Brunswick and Penn Lines. The highway and transit network, including the Intercounty Connector, I-95/495, Metrorail, bus, and the future Purple Line, offer direct travel routes between many areas served by MARC stations. This interline trip market presents a potential for MARC ridership growth, particularly from areas not currently served by transit. Most interline trips occur between station areas closest to Washington, DC, with the largest market being between Riverdale and Greenbelt on the Camden Line to Silver Spring on the Brunswick Line. While the Purple Line will link Silver Spring on the Brunswick Line with College Park on the Camden Line, the estimated travel times when including connecting transit to Riverdale or Greenbelt on the Camden Line will take as long or longer than an interline trip on the Brunswick and Camden Lines.

SERVICE EXTENSIONS

MTA is considering extending MARC service beyond Washington Union Station into Northern Virginia, where commuter rail service is currently provided by VRE. The largest potential for run-through trips into Virginia is primarily serving L'Enfant, Crystal City, and Alexandria. Excluding L'Enfant reduces this market significantly. The extension to Wilmington, DE, including the planned infill station at Bayview in Baltimore City, also shows promise as a strong market.

For the potential expansion of the Brunswick Line to Western Maryland, the Hagerstown market is larger than the Hancock market, which is larger than the Cumberland market. Connecting Hagerstown to the Brunswick Line at Shenandoah Junction cuts the addressable market in half. Furthermore, the assessment found that trips originating in Western Maryland largely stay in Western Maryland, with the Washington, DC-bound market being extremely limited from Western Maryland.

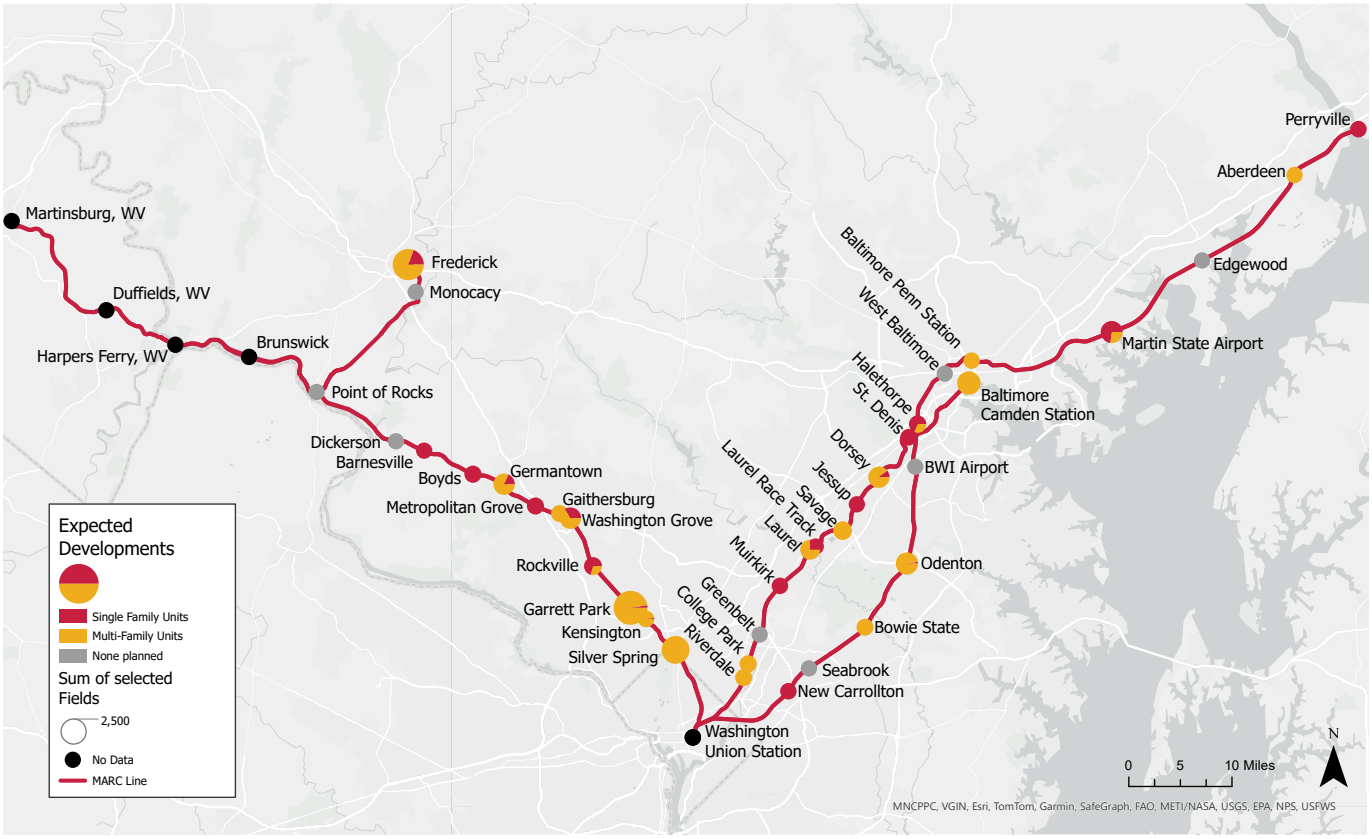
FUTURE OUTLOOK

As the market assessment is based on existing travel demand levels, MTA determined it also should review potential demand growth based on planned development within a two-mile radius of each MARC station. There are a total of more than 26,700 residential units planned along the MARC system's corridors that will provide a significant opportunity to bolster MARC ridership. **Figure 10** illustrates the number of single- and multi-family housing units that the corresponding counties, cities, and towns have in their development pipelines. Data was included for current stations along the MARC system within Maryland.

Stations along the Brunswick Line have the most planned residential developments, with a total of more than 16,700 residential units planned within two miles of a Brunswick MARC station. The three stations with the highest levels of new planned residential units are all along the Brunswick Line, with Garrett Park, Frederick, and Silver Spring having more than 5,000, 4,200, and 3,200 new residential units planned, respectively. The high levels of planned development along the Brunswick Line corridor supports a plan for increased levels of service along the corridor.

Comparatively, Camden Line stations have more than 5,800 and Penn Line stations have more than 4,100 residential units planned within two miles of a MARC station. The Penn Line has the lowest percentage of planned units that are multi-family. The Penn, Camden, and Brunswick Lines have 60 percent, 90 percent, and 85 percent of the planned developments planned as multi-family units, respectively.

Figure 10: Planned Residential Developments Near MARC Stations



More detailed information on this review by station can be found in **Appendix B: Expected Future Developments.**

In addition to future development, ridership also is influenced by the federal workforce. In January 2025, federal agencies were directed to end remote work practices as soon as practicable, and employees were instructed to return to their office. MARC has already started to see an increase in ridership as a result of agencies implementing the new requirement.

SERVICE PLAN DEVELOPMENT

The future service plan identified through the MARC Growth and Transformation planning process builds upon MTA's efforts to develop objectives and priorities, conduct a market assessment and Title VI analysis, understand existing conditions and previous studies, and collect feedback from stakeholders and the public.

MTA developed the fully implemented plan—assumed to be in place by the year 2050—using an iterative rail service planning methodology that uses a service-first approach. The resulting service plan seeks to minimize expensive and time-intensive infrastructure investments by optimizing the use of existing capacity and allowing MTA to strategically phase incremental service improvements in concert with required infrastructure projects that build toward the end goal of the plan. This approach also enables a balance between the inputs of public feedback, market assessment findings, and the needs of host railroads and other stakeholders, along with analysis of Title VI considerations, operating constraints, and infrastructure investment costs across the entire MARC system.

It is important to recognize the MARC Growth and Transformation Plan also must consider the service goals and needs of all rail service providers that MARC shares tracks with to ensure optimal integration of passenger and freight services within the rail corridors on which MARC operates.

This service planning analysis used existing infrastructure as a baseline, including current track speeds, track configuration, and schedules to identify constraints and limitations. For the plan, MTA assumed some planned infrastructure improvements on the Penn Line that are identified in existing plans such as the Northeast Corridor Commission's **Connect 2037 (C37) Plan** and the Frederick Douglass Tunnel project; however, the approach attempted to design a service outcome that minimized additional costly infrastructure investments whenever possible. The C37 Plan, MTA's CTP, and MTA's CNI (FY2050 forecast) contain other projects on the lines on which MARC operates that meet objectives outside of the MARC Growth and Transformation Plan and should continue to be funded and developed.

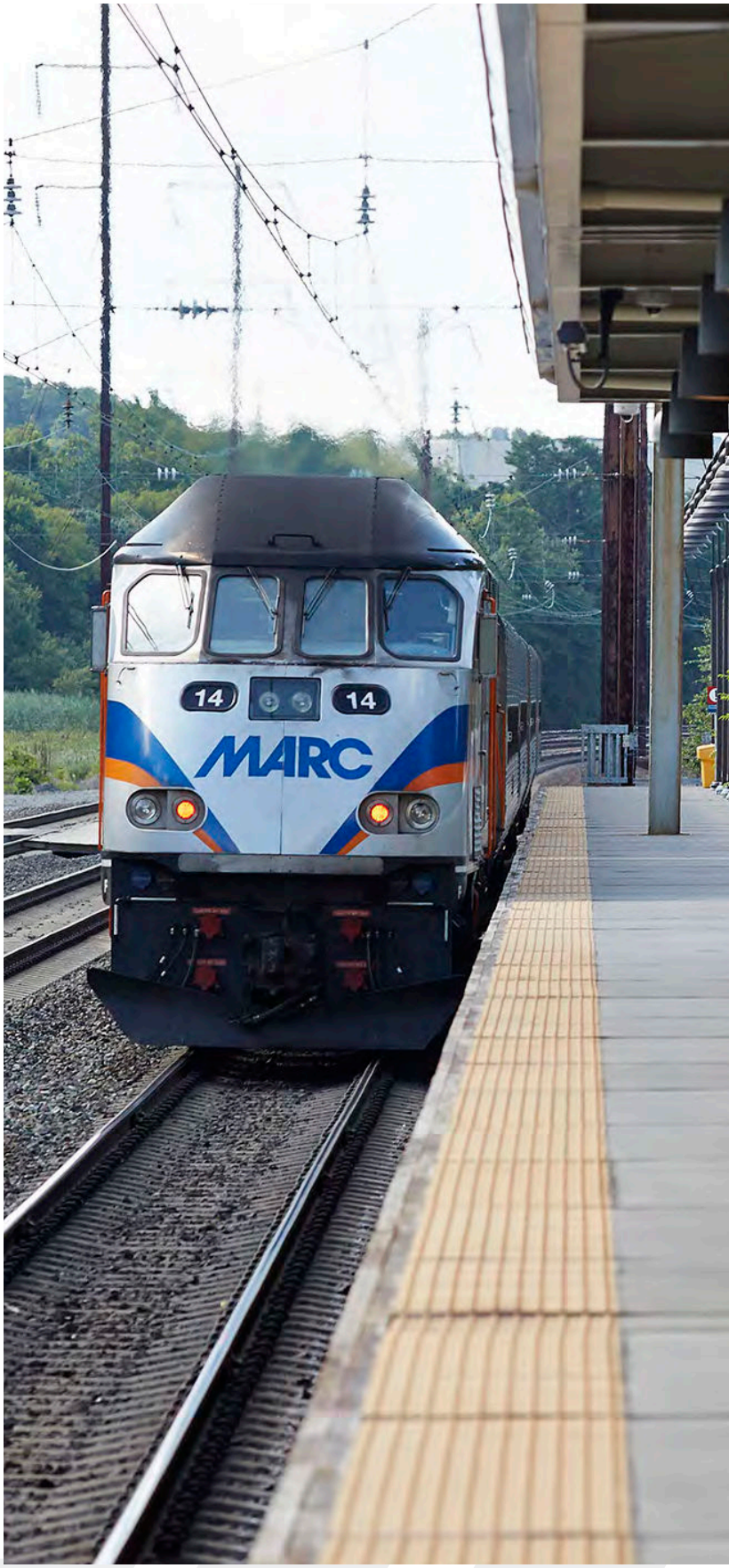
As part of this process, a capacity analysis included a review of the track capacity of each line to determine if there is enough space on the existing infrastructure to identify where additional track investments would be needed to accommodate expanded MARC service without impacting existing passenger rail and freight rail services.

With the exception of a 3.3-mile portion of the Frederick Branch of the Brunswick Line, MARC currently operates its entire service as a tenant of host railroads. Amtrak owns the right-of-way on which the Penn Line operates, and CSXT, a private freight railroad, owns the tracks on which the Camden and Brunswick Lines operate. This arrangement requires MARC to coordinate with the respective host railroads to determine the degree to which capacity improvements can be made and service levels can be increased.

SERVICE PLAN DEVELOPMENT

The primary objective of the service planning effort was to produce a plan that responds to feedback from the public, delivers service that meets the demands of the market, and ultimately represents an operable and cost-effective plan for the MARC system. Overall, the plan meets the objectives of:

- **Offering Competitive Travel Times:** Offering limited-stop service where needed to be time-competitive with automobile travel
- **Attracting a Wide Range of Trip Purposes:** Offering all-stop service and expanding operating hours throughout the day—including during the midday, late-night, and weekend timeframes—to improve accessibility to the MARC system for different trip types beyond rush-hour commuting
- **Offer a Seamless Network:** Improving connectivity between MARC lines and to other passenger rail and bus transit systems provided by MTA and its partners
- **Balancing Service Levels with Market Demand:** Right-sizing the amount of service offered to maximize market capture rates in existing and new markets
- **Spur Economic Growth and Transit-Oriented Development:** Providing service frequencies throughout the day and during the entire week to turn traditional commuter park-and-ride stations into mobility hubs

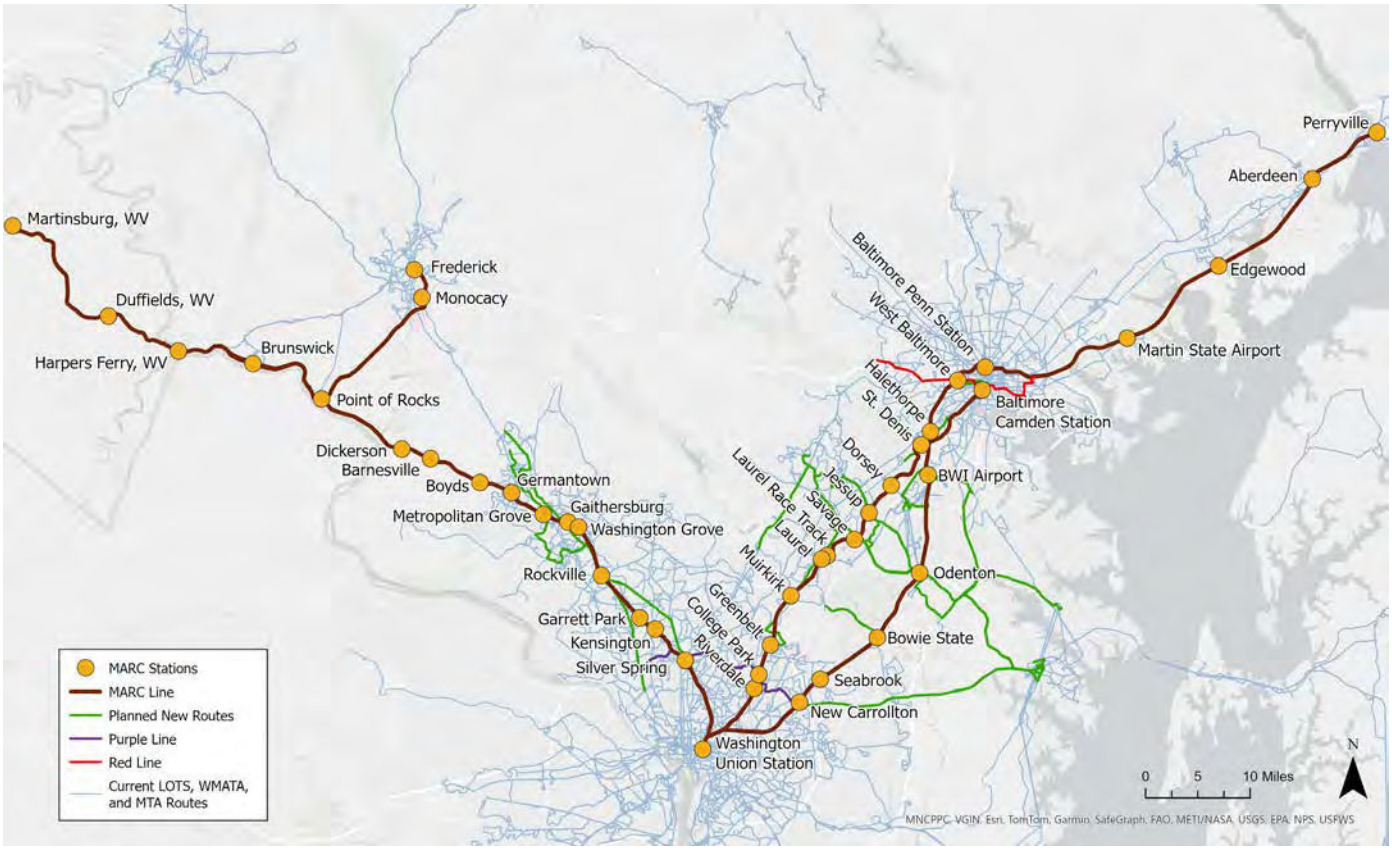


FUTURE CONNECTING SERVICES

MARC trains connect with other MTA transit services, WMATA Metrorail and Metrobus, and locally operated transit services operated by the jurisdictions MARC serves. These organizations have their own Transit Development Plans and/or long-range plans. **Figure 11** provides an illustration of future services that provide opportunities for future connections to MARC trains.

The green, red, and purple lines represent new services or route modifications and extensions that will provide additional connectivity to MARC stations. Most of these new services are bus or bus rapid transit (BRT), with two planned light rail services—the Red Line in Baltimore and the Purple Line in Montgomery and Prince George's Counties—connecting to MARC stations. The additional services will help expand the rider market for MARC by providing additional access to MARC stations and the surrounding areas. Many of the planned services are located around the middle of each line—with focus being around Dorsey, Jessup, Laurel, Savage, Greenbelt, and College Park on the Camden Line; around New Carrollton, Bowie State, Odenton, and BWI on the Penn Line; and around Silver Spring, Rockville, and Metropolitan Grove on the Brunswick Line. In addition to these new services, there also are plans to extend the hours of operation and increase frequency for a number of routes that are currently serving MARC stations.

Figure 11: Future Connecting Services



THE FUTURE MARC SYSTEM

The MARC Growth and Transformation Plan sets the stage for a regional rail system that offers transformational, market-oriented service—service that both delivers for riders and recognizes the constraints of operating service in a shared-ownership environment. Fully realized, this plan will provide more frequent, all-day and all-week rail service—including on weekends—across the system to better service existing, changing, and new travel markets. Expansions into Virginia, Delaware, and Western Maryland will vastly expand the reach of the system, offering more frequent service to more people. The full future MARC system (Unconstrained Phase) is shown in **Figure 12**.

It also will offer improved local and regional connections with enhanced connectivity between MARC lines and to WMATA and MTA's expansive bus and rail system—including Baltimore's existing Light Rail and the under-construction Purple Line and planned Red Line light rail systems. Additionally, service that is coordinated with and connects to neighboring state partner systems—including VRE services to the south and SEPTA services to the north—as well as Amtrak services will unlock statewide and interstate connections never before available to MARC riders.

Figure 12: The Future MARC System (Unconstrained Phase)

Meeting Our Goals

As described in the Objectives, Priorities, and Outcomes section, MTA evaluated service plan options against established metrics to determine potential outcomes. The performance of the Unconstrained Phase against each objective's metrics is shown in **Table 4** below. More information and resulting analysis can be found in **Appendix G.**

Table 4: Objectives and Metrics

Objective	Metric	Unit	Penn Line	Camden Line	Brunswick Line
			Unconstrained	Unconstrained	Unconstrained
Offer Competitive Travel Times	Average change in passenger trip time (new service trip time compared to current MARC service trip time)	Minutes	↑	–	↑
	MARC travel time compared to automobile travel	Minutes	↑	↑	↑
Attract a Wide Range of Trip Purposes	Improve access for all Marylanders	% Change in Station Arrivals	↑	↑	↑
	Whether a Major Service Change disproportionately burdens minority and low-income riders or disproportionately benefits non-minority and non-low-income riders	Disparate Impact Difference (%)/ Disproportion Burden Difference (%)	↑	↑	–
Offer a Seamless Network	Number of potential transfers within 10 minutes or less between MARC lines and other modes	Transfers	↑	↑	↑
	Number of potential transfers with 15 minutes or less between MARC lines and/or VRE/SEPTA	Transfers	↑	↑	↑
Balance Service Levels with Market Demand	Projected average load factor based on market demand analysis	Trains Per Day/ Riders Per Train (% of daily offered seats filled)	↑	↑	↑
Spur Economic Growth and TOD	Change in number of jobs/ population accessible within a half mile of each station	% Change from Existing Jobs/ Population	↑	–	↑

KEY: ↑ **Significant improvement** ↑ **Moderate improvement** – **No change**

Phasing Strategy

Implementing the MARC Growth and Transformation Plan requires a phased approach, one that incrementally delivers required infrastructure improvements to provide the necessary capacity for service growth. Without these capacity improvements, the service plan cannot be implemented. The plan identifies this phased approach in a series of near-, mid-, and long-term timelines that will allow MTA to proactively plan for, design, fund, and construct improvements and deliver enhanced service.

The phasing for implementation of the plan is discussed in the following horizons:

5-Year Phase: *FY2026-2030*

15-Year Phase: *FY2031-2040*

Unconstrained Phase: *FY2041 and Beyond*

In the near-term, MTA can build toward the full Unconstrained Phase by making schedule adjustments to facilitate timed transfers, expanding hours of operation, and improving connectivity between lines and with other transit modes. The 5-Year Phase is designed to be possible within the system's current infrastructure or with minor improvements.

All three phases of this plan are financially unconstrained, representing a vision that is beyond MTA's existing revenue and funding streams The final phase, the Unconstrained Phase, highlights that there are further constraints beyond funding, including the construction of major capital improvements and completion of host railroad agreements, to be addressed before the new MARC service can be offered.

The sections that follow describe each of these phases—and the service improvements to be delivered within each of their timeframes—in more detail.

5-YEAR PHASE (FY2026–2030)

The 5-Year Phase largely reflects the priority to reinvest in the existing rail system, while still making several key improvements to frequency and hours of operation—including spreading out the peak period to address changing commuting patterns—that can be advanced prior to large-scale capital improvements occurring. This near-term service phase, shown in **Figure 13**, **Figure 14**, and **Figure 15**, works to provide predictable and frequent service without major infrastructure work, helping to address a wider range of trip purposes evaluated in the market assessment.

Weekday Peak Service

PENN LINE

- During the weekday peak period, **core service is expanded to include Martin State Airport**, and **stations between Martin State Airport and Washington Union Station** will see service **twice every hour or better.**
- Stations along the outer Penn Line—**Edgewood, Aberdeen, and Perryville**—will see **hourly service**, with direct, limited-stop service to **Baltimore Penn Station, West Baltimore, BWI Airport, and Washington Union Station** to offer faster service between Baltimore and Washington, DC.

CAMDEN LINE

- Stations along the Camden Line will see **two trains per hour** during the weekday peak period.
- Select Brunswick Line trains from Frederick during the morning peak period will continue on the Camden Line after reaching Washington Union Station, providing passengers a one-seat ride.
- Select Camden Line trains from Baltimore Camden Station during the evening peak period **will continue on the Brunswick Line** after reaching Washington Union Station, **providing passengers a one-seat ride.**

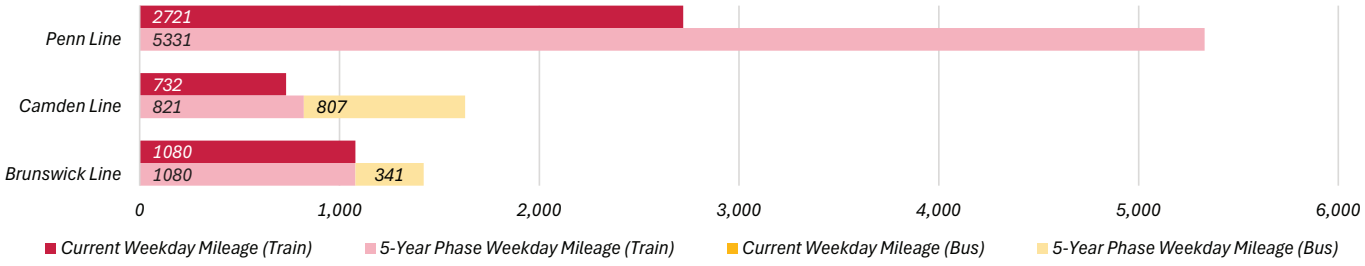
BRUNSWICK LINE

- Stations along the Brunswick Line from **Brunswick to Washington Union Station** and **Frederick to Washington Union Station** will have **hourly service**, offering trains twice an hour during peak periods to the larger markets of **Germantown, Rockville, Silver Spring, and Washington, DC**.
- The **30-minute, limited-stop service** at **Germantown, Rockville,** and **Silver Spring** will offer faster service to Washington, DC.
- Similar to today's service patterns, the West Virginia stations of **Harpers Ferry, Duffields, and Martinsburg** will see **three round-trip trains per day.**
- Select Brunswick Line trains from Frederick during the morning peak period will continue on the Camden Line after reaching Washington Union Station, providing passengers a one-seat ride.
- Select Camden Line trains from Baltimore Camden Station during the evening peak period will continue on the Brunswick Line after reaching Washington Union Station, providing passengers a one-seat ride.
- The 5-Year Phase introduces **new connecting bus service on the Brunswick Line—between Hagerstown and Monocacy station**—to expand the reach of MARC service in Western Maryland. Hagerstown will see **three buses per day to Monocacy**.

5-YEAR PHASE

Figure 13: 5-Year Phase (Weekday Peak)

5-Year Phase Weekday Daily Mileage: Peak and Off-Peak (Train/Bus)



Weekday Off-Peak Service

PENN LINE

- During the weekday off-peak period, stations along the Penn Line will see local trains **every 60 minutes,** with **30-minute local service** at **Martin State Airport** and **Baltimore Penn Station**.

CAMDEN LINE

- The 5-Year Phase introduces new **Camden Line bus service** during the off-peak period—**between Baltimore Camden Station and College Park** with connections to the WMATA Green Line and future MTA Purple Line—to provide a continuation of transit service along the corridor.

BRUNSWICK LINE

- **Two trains per day** will serve the Brunswick Line **between Frederick and Washington Union Station** during the off-peak period.

Figure 14: 5-Year Phase (Weekday Off-Peak)

Weekend Service

PENN LINE

- On the weekend, stations **between Baltimore Penn Station and Washington Union Station** will see **hourly service**.
- Stations north of Baltimore—including **Martin State Airport, Edgewood, Aberdeen, and Perryville**—will see **four trains per day on Saturday** and **three trains per day on Sunday**.

CAMDEN LINE

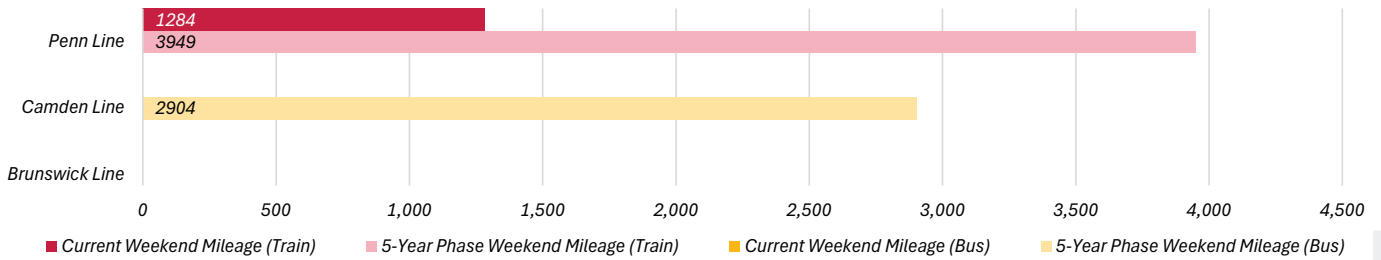
- **Camden Line bus service** will continue over the weekend **between Baltimore Camden Station and College Park** with connections to the WMATA Green Line and future MTA Purple Line.

BRUNSWICK LINE

- Similar to today's service patterns, Brunswick Line service will not run on weekends in the 5-Year Phase.

Figure 15: 5-Year Phase (Weekend)

5-Year Phase Weekend Mileage: Saturday and Sunday (Train/Bus)



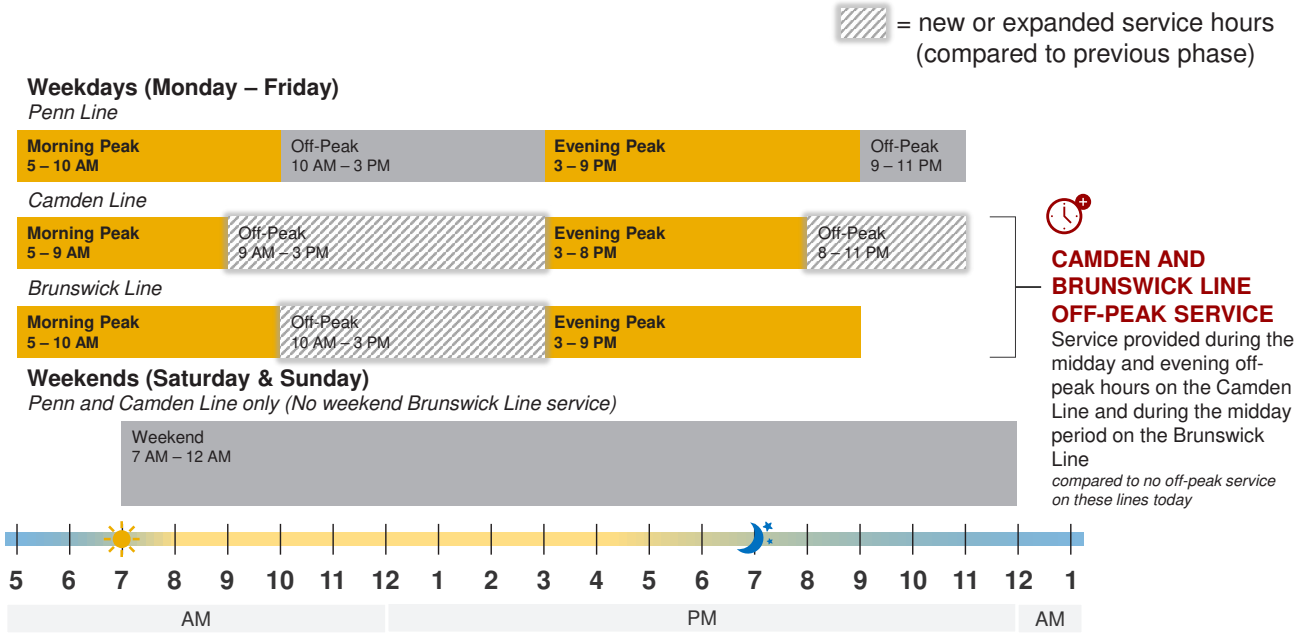
Service Hours

Service hours for the 5-Year Phase are shown in **Figure 16**. On weekdays, service will run from **5 AM to 11 PM Monday to Friday**; however, peak service hours will continue to vary by line as it does today. Expansions to the span of the weekday peak periods means that trains will run at higher peak frequencies during more hours of the day.

- On the **Penn Line**, the **weekday morning peak period will run from 5 AM to 10 AM** and the **evening peak period will run from 3 PM to 9 PM**. Less frequent off-peak service will be available from 10 AM to 3 PM and 9 PM to 11 PM.
- On the **Camden Line**, the **weekday morning peak period will run from 5 AM to 9 AM** and the **evening peak period from 3 PM to 8 PM**. Less frequent off-peak bus service will be available from 9 AM to 3 PM and 8 PM to 11 PM.
- On the **Brunswick Line**, the **weekday morning peak period will run from 5 AM to 10 AM** and the **evening peak period will run from 3 PM to 9 PM**. Less frequent off-peak service will be available from 10 AM to 3 PM.

On weekends, Penn Line service will generally run from **7 AM to 12 Midnight Saturday and Sunday** , and the Camden Line bus service will run from **7 AM to 12 Midnight Saturday and Sunday** with connections timed to local transit weekend operating schedules when possible. No weekend service will be available on the Brunswick Line in the 5-Year Phase.

Figure 16: Service Hours (5-Year Phase)



15-YEAR PHASE (FY2031–2040)

The 15-Year Phase improves service frequencies across all three MARC lines, benefitting from time for infrastructure improvements to be completed—improvements that are required to unlock higher service frequencies. This mid-term phase, shown in **Figure 17**, **Figure 18**, and **Figure 19**, also includes expanded service coverage into new markets, including Wilmington, DE, to the north and Alexandria, VA, to the south. Service also will be available at new stations at Bayview in Baltimore City and Elkton in Cecil County as well as a new Penn Line service directly to Baltimore Camden Station via the Penn-Camden Connector.

Weekday Peak Service

PENN LINE

- During the weekday peak period, **stations between Martin State Airport and Washington Union Station** will see **three trains per hour or better.**
- **Four trains per hour, including hourly limited-stop service, at Baltimore Penn Station** and **BWI Airport** will offer faster service between Baltimore and Washington, DC.
- Stations along the outer Penn Line—**Edgewood, Aberdeen, and Perryville**—will see **hourly service**, with **direct, limited-stop service to BWI Airport and Washington Union Station**.
- The completion of the **Penn-Camden Connector** will allow hourly Penn Line trains to serve **Baltimore Camden Station**—unlocking a new, direct link between Washington, DC, and Baltimore's Downtown and Inner Harbor neighborhoods.
- Penn Line trains from **Baltimore Camden Station** will continue south past Washington Union Station into Virginia, offering **hourly service to L'Enfant Plaza, Crystal City, and Alexandria, VA**.
- **Expanded service to Wilmington, DE**, will be piloted with **two trains per peak period** (two in the morning peak and two in the evening peak)—including stops at a **new Elkton station and Newark, DE** (subject to future improvements to be made by Delaware).

CAMDEN LINE

- Stations along the Camden Line will see service **twice per hour during** the weekday peak period (no change from 5-Year Phase).
- Select Brunswick Line trains from Frederick during the morning peak period will continue on the Camden Line after Washington Union Station, **providing passengers a one-seat ride**.
- Select Camden Line trains from Baltimore Camden Station during the evening peak period will continue on the Brunswick Line after Washington Union Station, providing passengers a one-seat ride.

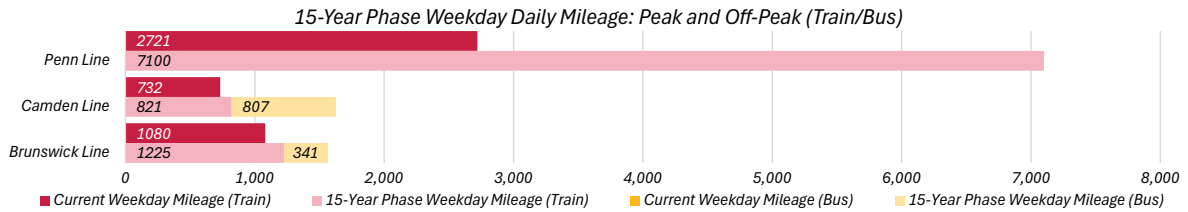
The Penn-Camden Connector

MTA is considering a rail connection in southwest Baltimore between the MARC Penn and Camden Lines. The Penn-Camden Connector would enhance rail connectivity and boost efficiency and reliability for commuter, intercity, and freight service throughout the region. The project would improve existing facilities at the Mt. Clare Yard and provide direct access for trains operating on the Penn Line for servicing at the Riverside Maintenance Facility, which was recently upgraded with a heavy maintenance building to service MARC trains. Restoring the historical connection between the Penn and Camden Lines would support several planned improvements, including the ongoing redevelopment at Baltimore Penn Station and Amtrak's planned expansions for intercity service. Additionally, the connection would reduce congestion and improve operations at existing stations, creating a foundation for future improvements.

BRUNSWICK LINE

- Stations along the Brunswick Line from **Brunswick to Washington Union Station** and **Frederick to Washington Union Station** will see hourly service, offering trains twice an hour during peak times to the larger markets of **Germantown, Rockville, Silver Spring, and Washington, DC** (no change from 5-Year Phase).
- The **30-minute, limited-stop service at Germantown, Rockville, and Silver Spring** will offer faster service to Washington, DC (no change from 5-Year Phase).
- The West Virginia stations of **Harpers Ferry, Duffields, and Martinsburg** will see **three round-trip trains per day** (no change from 5-Year Phase).
- Select Brunswick Line trains from Frederick during the morning peak period will continue on the Camden Line after Washington Union Station, **providing a one-seat ride** (no change from 5-Year Phase).
- Select Camden Line trains from Baltimore Camden Station during the evening peak period will continue on the Brunswick Line after Washington Union Station, **providing a one-seat ride** (no change from 5-Year Phase).
- **Hagerstown to Monocacy bus service** will continue to with **three buses per day**.
- The 15-Year Phase will introduce service on the Brunswick Line past Washington Union Station into Virginia, offering direct service to **L'Enfant, Crystal City, and Alexandria two times per day.**

Figure 17: 15-Year Phase (Weekday Peak)



Weekday Off-Peak Service

PENN LINE

- During the weekday off-peak, **most stations between Martin State Airport and Washington Union Station** will see trains **twice per hour**, with **hourly service at West Baltimore** and to **Baltimore Camden Station.**
- Stations along the outer Penn Line—**Edgewood, Aberdeen, and Perryville**—will see **hourly service.**
- Penn Line trains from Baltimore Penn Station will continue south past Washington Union Station into Virginia, offering **hourly service to L'Enfant, Crystal City, and Alexandria.**

CAMDEN LINE

- The 15-Year Phase continues hourly **Camden Line bus service** during the off-peak period—**between Baltimore Camden Station and College Park with connections to WMATA Green Line and future MTA Purple Line**—to provide a continuation of transit service along the corridor while MTA works with CSXT to further expand rail service on the line.

BRUNSWICK LINE

- Two trains per day will serve the Brunswick Line **between Frederick and Washington Union Station during the midday off-peak period** (no change from 5-Year Phase).

Figure 18: 15-Year Service Phase (Weekday Off-Peak)

Weekend Service

PENN LINE

- On the weekend, most stations **between Baltimore Penn Station and Washington Union Station** will see trains **twice per hour,** with **hourly service at West Baltimore**.
- **Bayview, Martin State Airport, Edgewood, Aberdeen, and Perryville** will see **four trains per day on Saturday** and **three trains per day on Sunday. Two trains per day** will continue north to **Elkton and into Delaware.**
- Penn Line trains will serve **Baltimore Camden Station every hour.**
- Penn Line trains from Baltimore Camden Station will continue south into Virginia, offering **hourly service to L'Enfant, Crystal City, and Alexandria.**

CAMDEN LINE

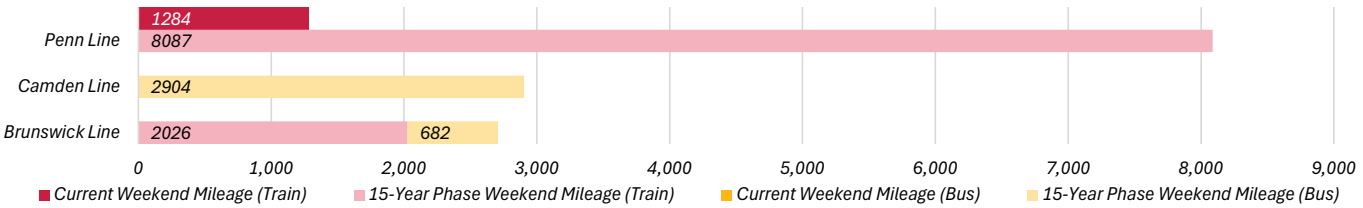
- **Camden Line bus service** will continue over the weekend as it does in the weekday off-peak period with hourly service **between Baltimore Camden Station and College Park** with connections to the WMATA Green Line and future MTA Purple Line.

BRUNSWICK LINE

- The 15-Year Phase introduces **weekend service on the Brunswick Line for the first time,** with **trains every two hours between Frederick and Washington Union Station.**
- **Hagerstown to Monocacy bus service** will remain in place on the weekend with **three buses per day.**

Figure 19: 15-Year Service Phase (Weekend)

15-Year Phase Weekend Mileage: Saturday and Sunday (Train/Bus)



Service Hours

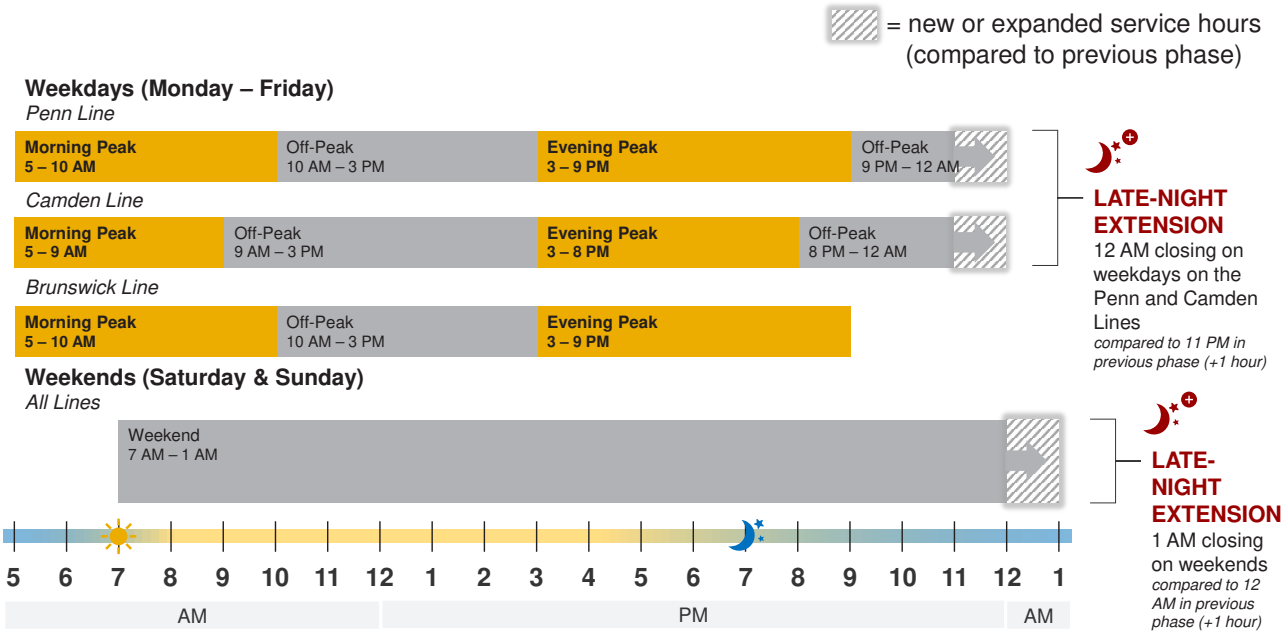
Hours of service will expand in the 15-Year Phase, shown in **Figure 20**.

On weekdays, service will run from **5 AM to 12 Midnight Monday to Friday** on the Penn and Camden Lines and until 9 PM Monday to Friday on the Brunswick Line. Peak service hours will continue to vary by line as they do today. Expansions to the span of the weekday peak periods means that trains will run at higher peak frequencies during more hours of the day and later service in the evening will provide more opportunities to serve non-work-related trips.

- On the **Penn Line**, the **weekday morning peak period will run from 5 AM to 10 AM** and the **evening peak period will run from 3 PM to 9 PM**. Less frequent off-peak service will be available from 10 AM to 3 PM and 9 PM to 12 Midnight.
- On the **Camden Line**, the **weekday morning peak period will run from 5 AM to 9 AM** and the **evening peak period from 3 PM to 8 PM**. Less frequent off-peak bus service will be available from 9 AM to 3 PM and 8 PM to 12 AM.
- On the **Brunswick Line**, the **weekday morning peak period will run from 5 AM to 10 AM** and the **evening peak period will run from 3 PM to 9 PM**. Less frequent off-peak service will be available from 10 AM to 3 PM.
- These expansions to the span of the weekday peak periods means that trains will run at higher peak frequencies during more hours of the day and later service in the evening will provide more opportunities to serve non-work-related trips.

On weekends, service will run from **7 AM to 1 AM Saturday and Sunday**.

Figure 20: Service Hours (15-Year Phase)



UNCONSTRAINED PHASE (FY2041 AND BEYOND)

The Unconstrained Phase, shown in **Figure 21** and **Figure 22**, represents the full vision of the MARC Growth and Transformation Plan, providing frequent, all-day/all-week, regional rail service across the current system and into Virginia, Delaware, and Western Maryland on a consistent basis.

Weekday Peak Service

PENN LINE

- During the weekday peak period, **stations between Martin State Airport and Washington Union Station** will see **three trains per hour or better,** with **hourly service to Baltimore Camden Station.**
- **Four trains per hour, including hourly limited-stop service** at **Baltimore Penn Station** and **BWI Airport**, will offer faster service between Baltimore and Washington, DC.
- Stations along the outer Penn Line—**Edgewood, Aberdeen, and Perryville**—will see hourly service, with direct, limited-stop service to **BWI Airport** and **Washington Union Station**.
- The completion of the **Penn-Camden Connector** will allow **hourly Penn Line trains to Baltimore Camden Station**—unlocking a new, direct link between Washington, DC, and Baltimore's Downtown and Inner Harbor neighborhoods.
- **Penn Line trains from Baltimore Camden Station will continue south past Washington Union Station into Virginia**, offering hourly service to **L'Enfant, Crystal City, and Alexandria**.
- Service to Delaware will be made more frequent, seeing service **every two hours.**

CAMDEN LINE

- Stations along the Camden Line will see **two trains per hours** during the weekday peak period (**no change from the 5-Year or 15-Year Phase**).
- **Select Brunswick Line trains from Frederick during the morning peak period will continue on the Camden Line after Washington Union Station**, providing passengers a one-seat ride (no change from 5-Year or 15-Year Phase).
- **Select Camden Line trains from Baltimore Camden Station during the evening peak period will continue on the Brunswick Line after Washington Union Station**, providing passengers a one-seat ride (no change from 5-Year or 15-Year Phase).

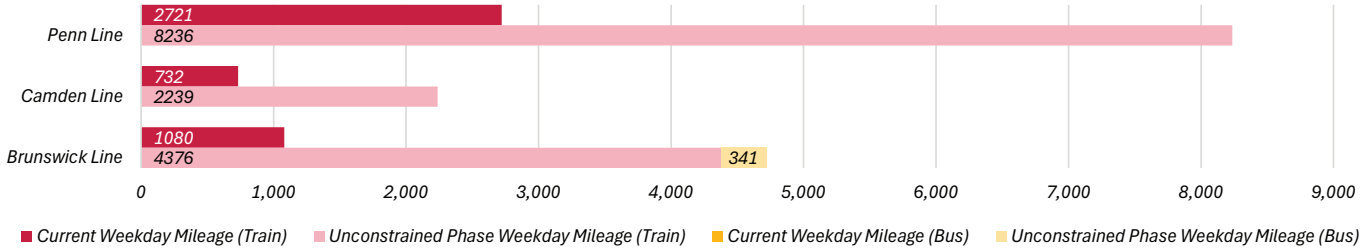
BRUNSWICK LINE

- Stations along the **Brunswick Line from Brunswick to Washington Union Station** and **Frederick to Washington Union Station** will see **hourly service in both directions**, offering trains twice an hour to the larger markets of **Germantown, Rockville, Silver Spring, and Washington, DC** (expanded from peak period-only service in the 15-Year Phase).
- The **30-minute, limited-stop service at Germantown, Rockville, and Silver Spring** will offer faster service to Washington, DC (no change from the 5-Year or 15-Year Phase).
- The West Virginia stations of **Harpers Ferry, Duffields, and Martinsburg** will have one round-trip train per day during the peak period (two additional round-trip trains during the off-peak).
- **Select Brunswick Line trains from Frederick during the morning peak period will continue on the Camden Line after Washington Union Station**, providing passengers a one-seat ride (no change from 5-Year or 15-Year Phase).
- **Select Camden Line trains from Baltimore Camden Station during the evening peak period will continue on the Brunswick Line after Washington Union Station**, providing passengers a one-seat ride (no change from 5-Year or 15-Year Phase).
- **Hagerstown to Monocacy bus service** will remain in place with **three buses per day.**
- Select Brunswick Line trains will continue south past Washington Union Station into Virginia, offering service to **L'Enfant, Crystal City, and Alexandria two times per day.**

UNCONSTRAINED PHASE

Figure 21: Unconstrained Phase (Weekday Peak)

Unconstrained Phase Weekday Daily Mileage: Peak and Off-Peak (Train/Bus)



Weekday Off-Peak Service

PENN LINE

- During the weekday off-peak, **most stations between Baltimore Penn Station and Washington Union Station** will see **three trains per hour**, with **two trains per hour at West Baltimore** and **hourly service to Baltimore Camden Station.**
- Stations along the outer Penn Line—**Edgewood, Aberdeen, and Perryville**—will see **hourly service.**
- Service to Delaware will be continued into the off-peak period **every two hours.**
- Penn Line trains from Baltimore Camden Station will continue south past Washington Union Station into Virginia, offering **hourly service to L'Enfant, Crystal City, and Alexandria.**

CAMDEN LINE

- Stations along the Camden Line will have **hourly service** during the weekday off-peak period, provided by bus between Baltimore Camden Station and College Park with connections to the WMATA Green Line and future MTA Purple Line, or by train through to Washington Union Station if an agreement with CSXT can be reached.

BRUNSWICK LINE

- During the off-peak period, the Brunswick Line will see **hourly service** on both the Brunswick branch and the Frederick branch **in both directions.** Trains from **Brunswick will run through to Washington Union Station** while trains from **Frederick will terminate at Silver Spring.**
- **Hagerstown to Monocacy bus service** will remain in place during the off-peak periods with **three buses per day.**
- Off-peak service will continue past Brunswick, with **two trains per day** to the West Virginia stations of **Harpers Ferry, Duffields, and Martinsburg,** and **further extended into Western Maryland to serve Hancock and Cumberland.**

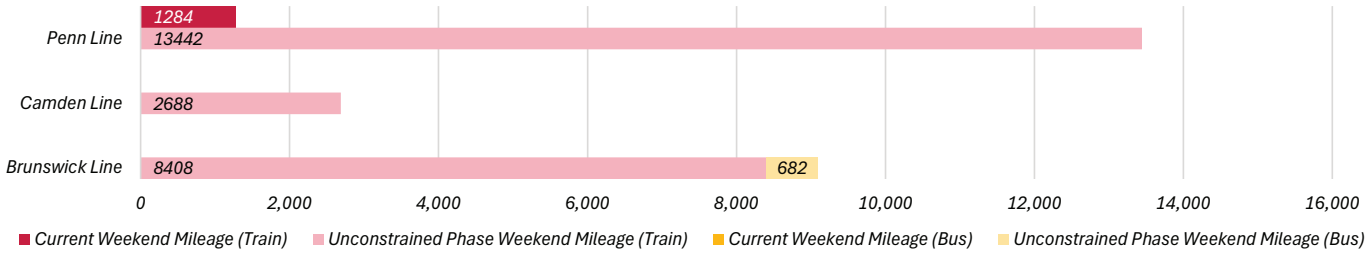
Weekend Service

In the Unconstrained Phase, weekend service levels will match those of the weekday off-peak periods described above across the system.

UNCONSTRAINED PHASE

Figure 22: Unconstrained Service Phase (Weekday Off-Peak and Weekend)

Unconstrained Phase Weekend Mileage: Saturday and Sunday (Train/Bus)



Service Hours

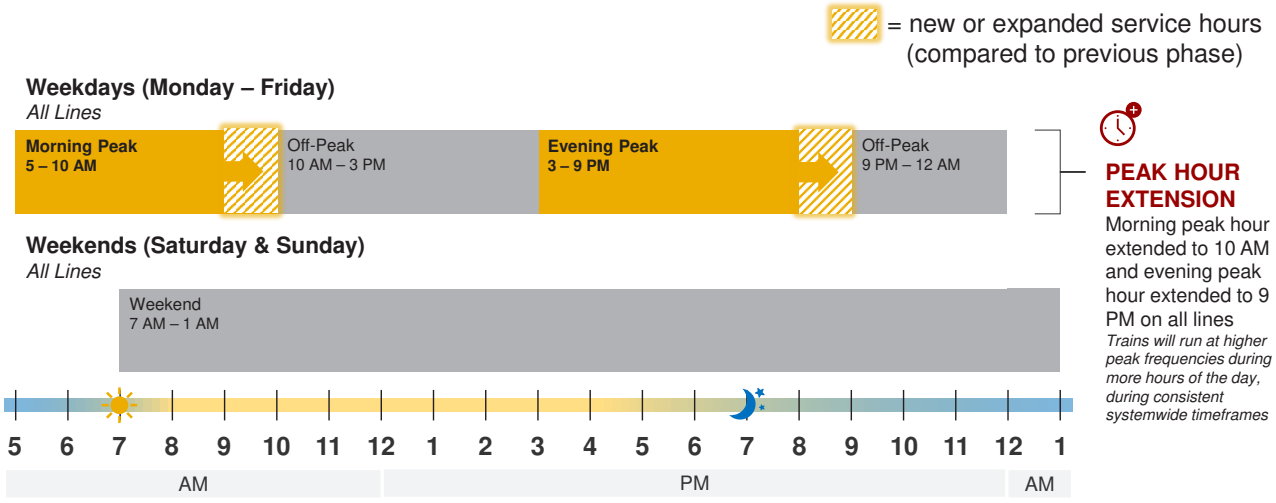
Service hours for the Unconstrained Phase are shown in **Figure 23**. Hours of service on the Camden Line will be expanded in the Unconstrained Phase to match those of the Penn and Brunswick Lines, resulting in consistent service hours across the system.

On weekdays, service will run from **5 AM to 12 Midnight Monday to Friday**.

- Weekday peak periods will be made consistent on all three lines, with the **weekday morning peak period running from 5 to 10 AM** and the **evening peak period running from 3 to 9 PM**.
- Less frequent off-peak service will be available from 10 AM to 3 PM and 9 to 12 Midnight.

On weekends, service will run from **7 AM to 1 AM Saturday and Sunday**. On weekends, service will run from **7 AM to 1 AM Saturday and Sunday**.

Figure 23: Service Hours (Unconstrained Phase)



OTHER PLANNED PASSENGER RAIL SERVICE

The MARC Growth and Transformation Plan recognizes other passenger rail service planning and implementation being undertaken by stakeholders that will require continued coordination as these efforts are advanced.

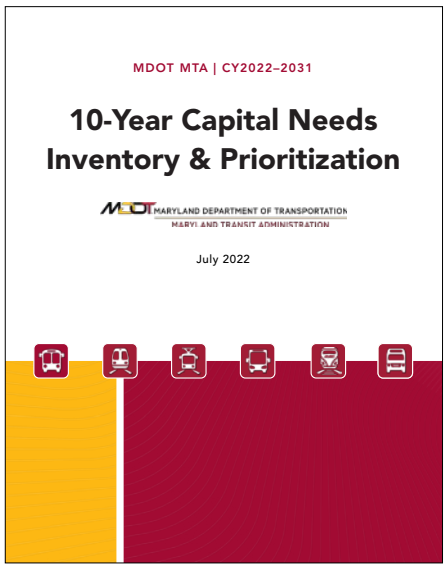
- **Diamond State Line (Delaware):** The State of Delaware received Corridor Identification and Development Program funding from the Federal Railroad Administration to study connecting at least one point on the NEC in northern Delaware (Newark or Wilmington) with a point in eastern Maryland (Salisbury or Berlin) via central Delaware, including the Delaware state capital of Dover. The new intercity passenger rail service would be on an existing rail alignment.
- **Amtrak Northeast Corridor (Washington–New York):** With the acquisition of an expanded fleet of Acela high-speed trainsets, Amtrak plans to increase Acela Express service from one to two trains per hour per direction during the peak period between Washington Union Station and New York Penn Station. In addition, Amtrak also envisions expanding its Northeast Regional train frequency between New York, NY, and Richmond, VA, via Washington Union Station.
- **Washington Union Station Expansion Project (Washington, DC):** The Union Station Redevelopment Corporation (USRC) is leading the effort to expand Union Station to support current and future growth in rail service and operational needs; achieve compliance with the Americans with Disabilities Act (ADA) requirements; facilitate intermodal travel; provide a positive customer experience; enhance integration with the adjacent neighborhoods, businesses, and planned land uses; sustain Union Station's economic viability; and support continued preservation and use of the historic station building.
- **Transforming Rail in Virginia (Washington–Virginia):** The Virginia Passenger Rail Authority (VPRA) is implementing a significant capital program, known as Transforming Rail in Virginia, to provide high-performance passenger and commuter rail service that connects communities throughout Virginia and to the NEC. Transforming Rail in Virginia will increase state-supported Amtrak service between Washington, DC, and Richmond, VA, resulting in near-hourly service along the I-95 Corridor; increased Amtrak service to Roanoke, Newport News, and Norfolk, VA; and extended Amtrak service from Roanoke to the New River Valley (Christiansburg, VA).
- **VRE System Plan 2050 (Northern Virginia):** VRE recently completed its long-range plan that includes the Transforming Rail in Virginia service plan in the near term (2030) and addresses service expansion in the long term to address the rise of telework and nontraditional work schedules as well as changing regional housing and employment demographics.

CAPITAL PLANS AND INVESTMENT NEEDS

Train service patterns and frequencies drive the need for different capital improvements, including infrastructure (e.g., track and signals, structures, stations, land acquisition, and additional services) as well as fleet and related needs (e.g., new trains, storage yards, and maintenance facilities) that all must be in place to provide the necessary capacity to run the proposed service safely and reliably.

As part of the MARC Growth and Transformation Plan, MTA conducted an infrastructure assessment and compiled a list of capital improvements required to deliver the service for each phase.

The Unconstrained Phase balances the public and market demands for more service, including increased frequency and service hours on existing lines as well as service extensions to new markets, all while balancing the challenge of limited capacity on the existing system and the cost of required capital improvements to accommodate service growth. MARC operates primarily on tracks owned by Amtrak and CSXT. Amtrak runs intercity and long-distance passenger trains through Maryland, while CSXT and Norfolk Southern (NS) are the major freight rail operators in the state. **All proposed improvements or expansions included in the MARC Growth and Transformation Plan must consider the service goals and needs of all rail service providers they share tracks with to ensure the optimal integration of passenger and freight rail services on the corridors where MARC operates**. As owners of the railroad, Amtrak and CSXT must approve any MTA requests to add capacity. The capital program for the MARC Growth and Transformation Plan also recognizes planned improvements in the Northeast Corridor Commission's C37 Plan, MTA's CTP, and MTA's CNI (FY2050 forecast). MTA's CNI includes state of good repair (SGR) projects, which MTA used to establish this plan's baseline investment needs, ensuring consistency and that the investments identified to support MARC's growth and transformation build on and complement these SGR and other baseline investments. MTA's share of the cost for improvements in these plans that are needed to support the Unconstrained Phase is included in the capital program for the MARC Growth and Transformation Plan. In addition, there are other identified improvements in the C37 Plan, CTP, CNI (FY2050 forecast), and ongoing NEC and CSXT joint benefit infrastructure payment programs that are not directly tied to the Unconstrained Phase but are considered in the baseline cost estimates. These improvements must be funded and advanced outside of the MARC Growth and Transformation Plan to meet the objectives of the C37 Plan and the CNI, while maintaining existing financial obligations to the NEC and CSXT.



Capital Projects

To grow service across the system, significant infrastructure improvements will be needed on each line. MTA has identified these improvements as part of the MARC Growth and Transformation Plan or other ongoing efforts and are included listed by line in **Table 5**, **Table 6**, and **Table 7** and mapped by plan phase in **Figure 24**, **Figure 25**, and **Figure 26**. The recommended projects will not preclude other planned capital investments from MTA and Amtrak, including those for reliability and other service and performance goals.

Table 5: Penn Line Projects

Penn Line Project		5-Year	15-Year	Unconstrained
	**Fleet Recapitalization:** This project will fund the replacement of eight locomotives with new equipment that supports electric operations through the Frederick Douglass Tunnel.	✓		
	**Martin's Yard and Shop Electrification Project:** This project will provide yard and shop improvements needed to support MTA's future commitment to operate electrified trainsets on the Penn Line after the completion of the Frederick Douglass Tunnel project.		✓	
	**Martin State Airport Station Accessibility Improvements:** Included in the CONNECT NEC 2037 Plan, this project will construct high-level platforms at Martin State Airport station for greater accessibility and ADA compliance.		✓	
	**BWI 4th Track Phase 1:** Included in the CONNECT NEC 2037 Plan, this project will enhance reliability, capacity, and scheduling flexibility by implementing a first phase of the BWI 4th Track Project. This includes expanding the station to add a third platform edge (converting the Track 1 northbound side platform into a center island platform), realigning track around the BWI Airport station to permit the center platform operations, and modifying Grove interlocking to support increased Amtrak and MARC train service.		✓	
	**Bayview Station:** Included in the CONNECT NEC 2037 Plan, this project will construct a new MARC rail station at Bayview in Baltimore City along the Penn Line between Baltimore Penn Station and Martin State Airport, north of the Johns Hopkins Bayview Medical Center and just east of I-895.		✓	
	**Elkton Station:** Included in the CONNECT NEC 2037 Plan, this project will construct a new MARC rail station in Elkton in Cecil County along on the Penn Line, about 12 miles north of Perryville station, where the Penn line currently ends.		✓	

Penn Line Project		5-Year	15-Year	Unconstrained
	Penn-Camden Connector: Identified in the CONNECT NEC 2037 Plan, the Penn-Camden Connector (PCC) will be a new rail link that enables efficiencies through the consolidation of vehicle maintenance and repair for both the MARC Penn and Camden Lines. The rail link also will leverage the capital investment in the Riverside Heavy Maintenance Building and Riverside Yard. Additionally, the new rail link will facilitate access to a new storage and maintenance facility for MARC Penn Line trains.		✓	
	Frederick Douglass Tunnel: Included in the CONNECT NEC 2037 Plan, the Frederick Douglass Tunnel project includes a new tunnel to replace the existing Baltimore and Potomac (B&P) Tunnel, track improvements, and improvement of the northern and southern approaches to the tunnel on new and existing alignments between Winans interlocking and Baltimore Penn Station. The new Frederick Douglass Tunnel will reduce trip time by permitting train speeds of up to 100 mph; minimize operational conflicts among high-speed, intercity, and commuter trains; and increase throughput capacity. The existing B&P Tunnel is near the end of its useful life and is a chokepoint on NEC operations.		✓	
	Gunpowder River Bridge: Included in the CONNECT NEC 2037 Plan, the Gunpowder River Bridge Replacement project will replace Amtrak's existing two-track Gunpowder River Bridge with a fixed bridge(s) with a total of four tracks on a new alignment that allows increased speeds for Amtrak's Acela service. This will include structures, track, systems (including, but not limited to, signals and catenary), and bridge approaches along with property acquisition and environmental clearances.		✓	
	Newark to Wilmington Fourth Track: Identified as part of the MARC Growth and Transformation Plan, this project will construct approximately seven miles of fourth track between Ruthby Interlocking and Wilmington station that also will require track shifting. The project retains the existing connection to the West Wilmington rail yard. This project will increase capacity on the corridor for MARC passenger service during off-peak hours. It will allow eight trains an hour, both Amtrak and MARC, on the corridor. This project will require funding participation by Delaware and/or Amtrak.			✓

Penn Line Project		5-Year	15-Year	Unconstrained
	**Gunpowder to Edgewood Third Track:** Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately three-mile extension of third track between Gunpowder interlocking and the Edgewood MARC station. This also will include the development of a new platform at Edgewood station. The third track is proposed to be built in conjunction with Amtrak's planned Gunpowder River Bridge reconstruction project. This project will increase capacity on the corridor for MARC service during peak hours, allowing eight trains an hour, both Amtrak and MARC, to run on the corridor.			✓

Table 6: Camden Line Projects

Camden Line Project		5-Year	15-Year	Unconstrained
	**Camden Line Bus Service:** To maintain service along the Camden Line during off-peak hours, this bus service will operate hourly in both directions during the off-peak periods and on weekends and serve Baltimore Camden Station, Dorsey, Savage, Laurel, Muirkirk, Greenbelt, and College Park. This bus service can augment Camden Line rail service and meet market demand during off-peak periods while MTA works to explore infrastructure and expanded service options with CSXT, the owner of the Camden Line.	✓	✓	✓
	**College Park Station Improvements:** The station will receive accessibility and safety upgrades including a 600-foot-long, low-level platform allowing for easier boarding and departure for passengers with disabilities, wheelchair lifts, lift shelters, and upgrades to digital signs showing arrivals and departures.		✓	
	**JD to F Tower Siding:** Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately two-mile siding between JD interlocking and F Tower (south of Riverdale station), creating a three-track section on the Camden Line that increases MARC passenger capacity during peak hours.			✓
	**Greenbelt Siding:** Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately two-mile siding at Greenbelt station, tying into an existing fourth track at Greenbelt station. This project would create a three-track section on the Camden Line that increases MARC capacity during off-peak hours.			✓

Camden Line Project		5-Year	15-Year	Unconstrained
	Savage to Laurel Race Track Siding: Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately two-mile extension of an existing siding between the Savage and Laurel Race Track stations, creating a three-track section on the Camden Line that increases MARC capacity during peak hours. The project includes a single-track bridge adjacent to the existing rail bridge over the Little Patuxent River.			✓
	Dorsey to Jessup Siding: Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately two-and-a-half-mile siding between the Dorsey and Jessup stations to reduce CSXT freight train congestion. This project would create a three-track section of the Camden Line that increases MARC capacity during peak hours.			✓
	Relay to Dorsey Siding: Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately two-mile siding between the St. Denis and Dorsey stations, creating a three-track section on the Camden Line that increases MARC capacity during off-peak hours.			✓
	Bailey to Carroll Siding: Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately one-mile siding between the Bailey interlocking and Carroll interlocking (south of Baltimore Camden Station), creating a three-track section on the Camden Line that increases MARC capacity during peak hours and retains the existing connection to the Mt. Clare rail yard.			✓

Table 7: Brunswick Line Projects

Brunswick Line Project		5-Year	15-Year	Unconstrained
	**Brunswick Yard and Station Improvements:** This project includes a pedestrian/bicycle/lightweight emergency vehicle bridge, a center island platform for the station, and a new or expanded yard and maintenance facility.		✓	
	**Germantown Station Area Improvements:** This project includes improved bicycle and pedestrian access to and from the station and connectivity with the multimodal facilities in the surrounding area, improved bus circulation within the station area, improved landscaping, and additional wayfinding and entrance signage.	✓		
	**Hagerstown-Monocacy Bus Service:** To better serve Western Maryland communities, a new Hagerstown bus connection will be established, connecting to the Brunswick Line at Monocacy. Buses will run three times a day to offer connections to trains continuing south to Washington Union Station.	✓	✓	✓
	**Washington Union Terminal Track:** Identified as part of the MARC Growth and Transformation Plan, this project will construct approximately one-half mile of additional track on the Brunswick Line north of Washington Union Station, providing additional capacity for expanded rail service.			✓
	**Silver Spring Turnback:** Included in ongoing MTA studies, this project will enable additional service along the Brunswick Line while enhancing safety and alleviating congestion by separating future MARC trains terminating at Silver Spring from CSXT freight traffic.			✓
	**Kensington Station Siding:** Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately two-mile siding near Kensington station. This new bypass track would be located between the existing tracks at Kensington station, requiring the reconstruction of the existing east station platform and a new pedestrian overpass. This project would create a three-track section on the Brunswick Line, providing additional capacity for rail service.			✓

Brunswick Line Project		5-Year	15-Year	Unconstrained
	**Rockville to Washington Grove Siding:** Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately two-mile siding between Rockville station and Washington Grove station. The project would require the reconstruction of four overhead roadway bridges while avoiding the need to construct a new rail bridge over I-495 and impacts to adjacent WMATA Metrorail stations. This project would create a three-track section on the Brunswick Line, providing additional capacity for rail service.			✓
	**Boyd to Barnesville Siding:** Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately two-mile siding between Boyd station and Barnesville station, providing additional capacity for rail service.			✓
	**Barnesville Station Siding:** Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately three-mile siding that bypasses Barnesville station, providing additional capacity for rail service.			✓
	**Doub to Monocacy Second Track:** Identified as part of the MARC Growth and Transformation Plan, this project will construct an approximately three-and-a-half-mile siding between Doub station and Monocacy station, providing additional capacity for rail service.			✓
	**Cumberland Extension Projects:** Identified as part of MTA's MARC Brunswick Line Expansion Study in 2023, this package of projects—consisting of a new station at Hancock, WV, right-of-way acquisition and parking expansion at Cumberland station (currently served only by Amtrak), and construction of third track at Hancock and Green Spring—would allow for extended Brunswick Line service to Cumberland.			✓

Figure 24: 5-Year Investment Plan

Figure 25: 15-Year Investment Plan

Figure 26: Unconstrained Investment Plan


84
84
MARC

Estimated MTA Capital Investment Costs

The capital program for the MARC Growth and Transformation Plan features capital cost estimates for the projects listed above, including new infrastructure, stations, rolling stock, and various expenses such as right-of-way acquisition, environmental analysis, and contingencies. For C37 projects on the Penn Line, the estimated capital cost reflects either previously agreed to, or the estimated share, of allocated MTA costs based on MARC's anticipated utilization of the asset. MTA developed station improvements, storage improvements, fleet recapitalization, and bus service costs using existing project development information, CNI information, or other available cost information based on similar project development experience. MTA also developed capital cost estimates for all other capital improvements based on professional cost estimating experience and knowledge of similar projects currently being planned or delivered in the Metropolitan Washington Region. The estimates are structured using standard cost categories developed and used by the Federal Transit Administration (FTA) and Federal Railroad Administration (FRA).

The total estimated capital cost through the Unconstrained Phase is $13.7 billion in Year of Expenditure (YOE) dollars, including sufficient capital investment in existing facilities and rolling stock to maintain a modern system in a state of good repair. No expansion to the MARC system can occur without funding these baseline capital costs, which are shown below in **Table 8**. These costs reflect commitments that are necessary to continue the existing MARC operations, including state of good repair projects funded in MTA's CTP and needs identified in MTA's CNI (FY2050 forecast), recapitalization of the existing MARC fleet, and ongoing payments in support of maintaining the infrastructure on which MARC operates. In addition, costs are included for MTA's share of costs for other NEC C37 projects that are needed to meet the objectives of the C37 Plan but are not tied directly to the MARC service plan.

> The total cost of the baseline commitments through the 2050 planning horizon is estimated at approximately $7.1 billion, and the full vision of this plan is beyond the funding streams available for MARC service. With the current funding levels of the Transportation Trust Fund (TTF), MDOT is focusing its capital expenditures on projects to assure the continued safe and efficient operation of its transportation systems, including necessary repairs, fleet overhauls, and other significant SGR investments.

Table 8: Estimated Baseline Capital Costs

Project	Estimated MTA Capital Cost		
	5-Year (FY2026-2030)	15-Year (FY2031-2040)	Unconstrained (FY2041 and Beyond)
State of Good Repair and Enhancement Projects	$265,824,600 *	$19,805,000	-
MTA FY2031-2050 Capital Needs Inventory Forecast (State of Good Repair Only)	-	615,628,200	$632,797,400
MTA Existing Fleet Recapitalization	-	-	4,190,571,000
NEC Payments (Through FY2050)	183,805,000 *	397,454,400	534,145,400
CSXT Joint Benefit Payments (Through FY2050)	26,671,200 *	84,594,800	113,688,300
C37 Projects (Not tied to MARC service growth)	-	54,315,000	-
TOTAL	**$476,300,800**	**$1,171,797,400**	**$5,471,202,100**
GRAND TOTAL			**$7,119,300,300**

** These costs are funded in MTA's FY2025-2030 CTP.*

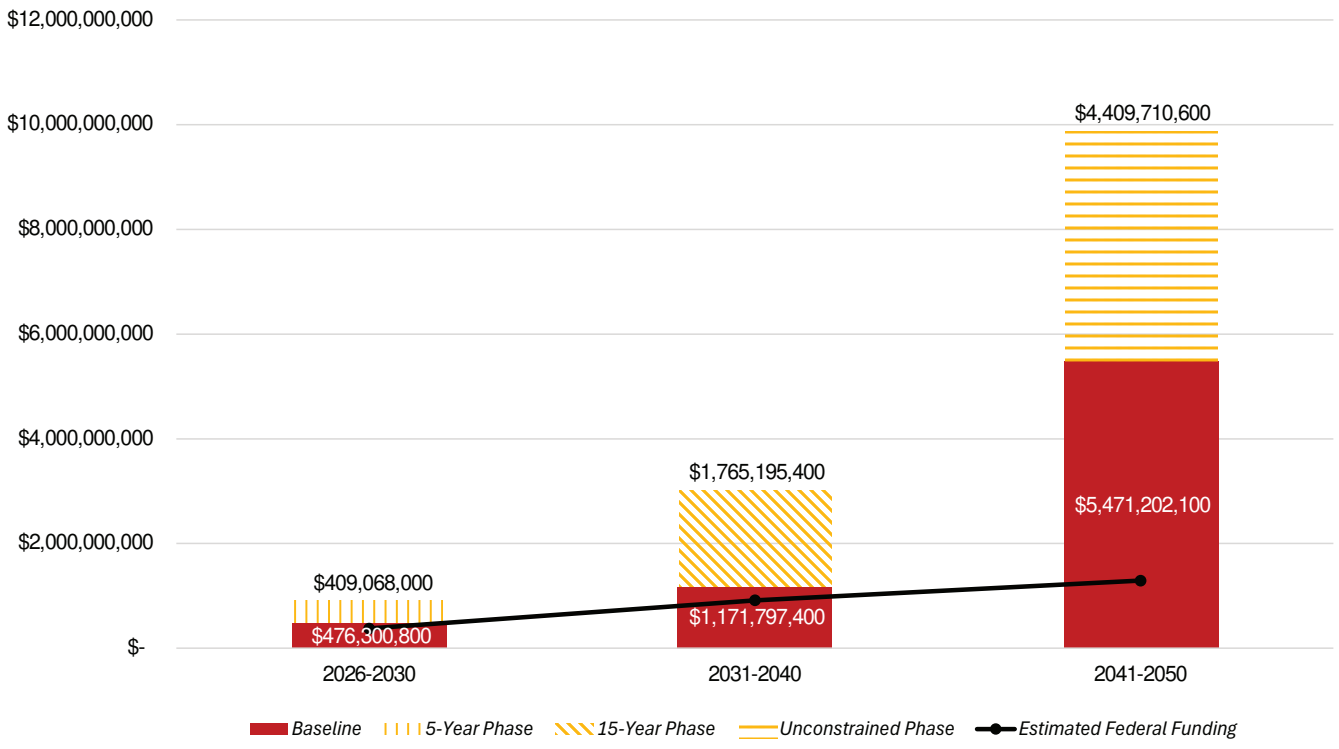
Combining the estimated capital cost to transform and grow MARC service with the baseline commitments to maintain the existing assets in a state of good repair and fund other capital commitments, such as C37 projects, results in a total estimated capital cost for the MARC Growth and Transformation Plan of $13.7 billion. **Table 9** shows the total baseline cost and breakdown of the service plan by phase. It is important to recognize that the MTA CNI is a 10-year plan and costs beyond the planning horizon have been forecasted to FY2050.

Table 9: Total Estimated MARC Growth and Transformation Plan Cost

Plan Phase	Estimated MTA Capital Cost
Baseline (Total through 2050)	$7,119,300,300
5-Year Phase	409,068,000
15-Year Phase	1,765,195,400
Unconstrained Phase	4,409,710,600
TOTAL	**$13,703,274,300**

Transforming and growing MARC service will require an investment that is approximately double the cost of the currently planned investments. As shown in **Figure 27**, this investment requires significantly more funding than the federal transit formula funds MTA uses to support MARC capital needs. The MARC Growth and Transformation Plan assumes that these federal funds, section 5307 and 5337 from FTA, will continue at their current levels and increase relative to inflation. More details on the plan's assumptions concerning these funds can be found in **Appendix J: Projected Federal Formula Funding**.

Figure 27: Estimated Plan Costs and Anticipated Federal Funding



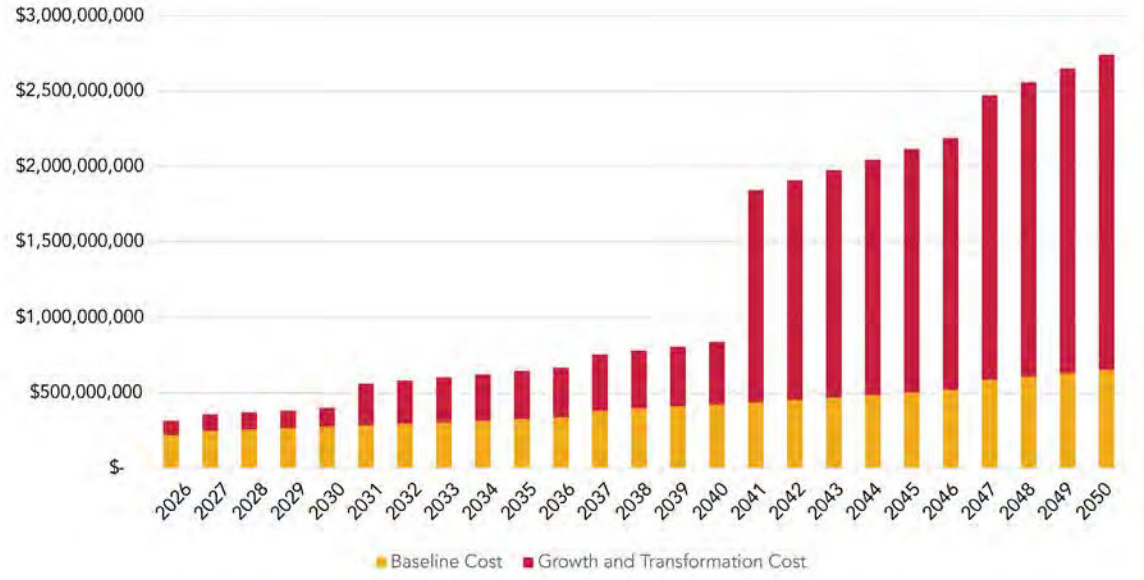
For this increased investment, Marylanders will see significant improvement in access, frequency, service hours, and performance.

ESTIMATED OPERATING COSTS

In addition to investing in capital improvements, expanded MARC service also will require new funding to cover increases in operating costs. These costs include access payments to the host railroads; train and engine crew, maintenance, and supervision wages and salaries; fuel, electric, and utilities; and other day-to-day expenses.

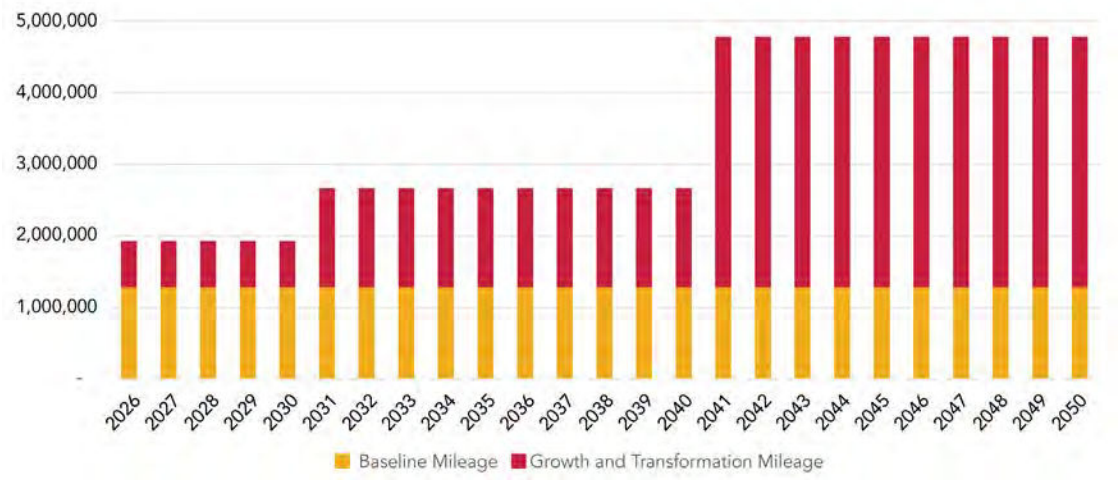
The operating cost for each year of the plan is shown in **Figure 28**. An increase in operating costs at the beginning of each phase (2031 for the 15-Year Phase and 2041 for the Unconstrained Phase) aligns with the service years shown. Additional jumps can be seen in 2027, 2037, and 2047, which aligns with contract renewal years for the MARC operating and maintenance contracts, assuming an increase in rates. The yellow bars represent operating costs expected in future years for the level of service that is operated today. The red bars represent additional operating costs beyond the baseline level that is estimated to be needed to operate the proposed service plan.

Figure 28: MARC Operating Cost By Year



Similarly, the yellow bars in **Figure 29** represent service miles expected in future years for the level of service that is operated today. The red bars represent additional service miles beyond the baseline level that is estimated to be needed to operate the proposed service plan.

Figure 29: MARC Mileage By Year



ADVANCING THE PLAN

Achieving the vision of the MARC Growth and Transformation Plan will require continual investment and commitment from state leaders as well as support from local, regional, and federal partners. Riders will experience a world-class regional rail system; the ability to access essential locations regardless of the time of day or day of week; the ability to travel across Maryland using transit in an amount of time comparable to automobile travel; the ability to travel using reliable, effective rail service; and access to jobs and opportunities throughout Maryland.

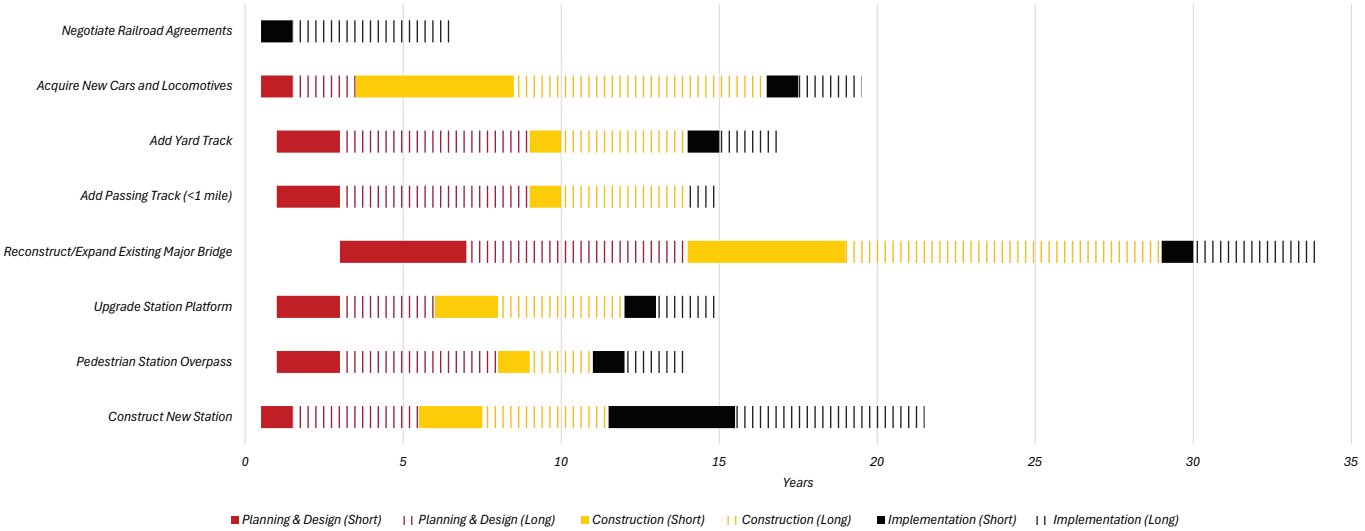
Implementation Strategy

The MARC Growth and Transformation Plan presents an opportunity to make improvements to the MARC system that serve a broader range of riders for a wider variety of trip purposes than the current suburb-to-central business district work commute.

Translating this plan into an implementable delivery plan will require clearly defining the expected customer experience, service levels, and integration with the rest of the MTA transit network and other first- and last-mile solutions to connect riders from their homes to stations and from stations to their ultimate destinations. As part of this effort, MTA will need to chart a phased approach to making infrastructure and service improvements based on funding, need, impacts, and physical constraints. Ahead of pursuing any improvements, MTA and partners across the State of Maryland will need to identify funding and financing to support this undertaking.

Toward that end, MTA is currently implementing several projects that will support infrastructure needed to advance the plan. These projects include completion of preliminary design for the new Elkton station, a feasibility study of the Silver Spring turnback track, preliminary engineering/National Environmental Policy Act (NEPA) documentation for the Penn Camden Connector (PCC), and a feasibility study of the Brunswick Line Third Track Improvements. The estimated timeframes to complete various types of MARC projects can vary by project phase and complexity, including from external factors outside of MTA's control. These general estimated timeframes are shown in **Figure 30**, with the potential range of time for each phase indicated by the length of the hatched portions of the bars in the graph.

Figure 30: Estimated Timeframes to Complete MARC Projects



Policy

The core policies advanced by the MARC Growth and Transformation Plan were informed by the goals, guiding principles, and commitments made by prior transportation plans such as MDOT's 2050 Maryland Transportation Plan (MTP) *The Playbook* and MTA's 2021 Strategic Plan (Strategic Plan) *Rebuilding Better*. They also are consistent with the 2022 Maryland State Rail Plan. The following sections outline how this plan aligns with these earlier commitments made by both MDOT and MTA.

IMPROVED ACCESS

The MARC Growth and Transformation Plan has carried forward both MDOT's 2050 MTP and MTA's 2021 Strategic Plan commitment of improving access by making MARC service market focused, instead of commuter market focused. This allows MARC to dramatically increase its access to Marylanders throughout the day and evening, seven days a week, thereby removing barriers for individuals to use MARC service for access to non-traditional job opportunities as well as non-work-related trips. It balances stopping patterns so that most stations benefit from additional train times. The plan also recommends improved physical accessibility at some MARC stations.

PROVIDING SAFE, RELIABLE, AND EFFICIENT TRANSIT SERVICE

Development of the proposed service plan for MARC takes into careful consideration improving the safety and reliability of existing and future service by improving the coordination of MARC schedules with freight rail and Amtrak service needs and adding capacity to reduce train congestion throughout the MARC system. Implementation of these measures will support MTA's strategic commitment to provide reliable, efficient transit service. Through these efforts, the goals outlined in the MTP to deliver system quality will be achieved by improving on-time performance and the strategic allocation of resources.

COMMUNICATING WITH OUR STAKEHOLDERS

The successful delivery of MARC service depends on transparent planning with customers and stakeholders that collaboratively informs decision-making and provides for the execution of targeted investments that unlock growth and support strong business performance for MARC, as well as other rail operators servicing the lines on which MARC operates. Consistent with MTA's strategic commitment to communicate with its stakeholders, the MARC Growth and Transformation Plan has been developed with the input of the public and MARC customers and stakeholders, and will be updated annually to report on implementation progress and performance.

PLANNING FOR A SUSTAINABLE FUTURE

MTA's commitment to planning for a sustainable future is reflected in the bold vision to transform MARC service into a comprehensive all-day, all-week system that will dramatically improve access to transit, increase connections to other transit networks, and leverage micromobility options, which can significantly reduce emissions and improve environmental stewardship. Providing true regional rail service would achieve the MTP's goal of serving Maryland's communities and supporting the economy.

PROMOTING ENVIRONMENTAL STEWARDSHIP AND A RESILIENT TRANSIT SYSTEM

In accordance with the 2024 MTA Climate Action Plan, the MARC Growth and Transformation Plan will reduce the impacts of traffic congestion across the entire MARC system by facilitating mode shift from passenger cars to transit, increasing transit capacity by offering more service, providing additional provisions for bikes on transit vehicles as part of the recapitalization and growth of MARC's fleet, providing for the exploration of zero-emission locomotives, supporting the expansion of identified opportunities for development around MARC stations, leveraging micromobility for first- and last-mile connectivity, and raising awareness about MARC's ability to deliver environmental benefits. These efforts support MTA's commitment to increasing ridership, reducing vehicle miles traveled per capita across the state as specified in the MTP.

MTA also will conduct a fare analysis study to explore opportunities to diversify MARC fare policies. Using information from the MARC Growth and Transformation Plan, along with system ridership and the recent MTA Origin-Destination Study, this analysis will consider options such as variable fares, improved alignment of MARC fares with other local transit systems, and how new fare technology could be incorporated into the MARC system. The effort will highlight inner line travel as well as how schedules with other modes could be aligned to open additional transit options. This fare analysis directly addresses the MTP's objective to improve the transportation system through better connectivity to the local transit systems.

Economic Benefit

Based on prior research, investments in MARC generate similar economic output benefits to Maryland as overall investments in Maryland's transit network. Applying the results of the Greater Washington Partnership's January 2025 analysis, *The Economic Impact of the Maryland Transit Administration's Capital and Operating Expenditures*, the $6.7 billion in capital improvements included in this plan to bring about the full Unconstrained Service Phase will generate an estimated $7.3 billion in economic output to Maryland. In addition, the annual operating expenditures to operate the additional MARC service, in 2050 dollars, of $2.1 billion are estimated to generate an ongoing $3.8 billion in annual economic output. These benefits begin to be realized with the implementation of each phase of the MARC Growth and Transformation Plan. Beginning with the 5-Year Phase, the capital improvements will provide $515 million in economic output, and the ongoing operation of the expanded service will provide a recurring annual economic output of $228 million. The 15-Year Phase will provide an additional $2.0 billion in capital investment-driven economic output and expand the recurring annual economic output by $522 million.

Transit-Oriented Development

MDOT is advancing transit-oriented development (TOD) along the MARC system through its Joint Development of State-owned land and support for local jurisdictions in their TOD efforts. Following the Penn Line TOD Strategy's recommendations for near-term development opportunities of State-owned land along the MARC Penn Line, MDOT is advancing a joint development solicitation at the Odenton MARC Station and plans to issue a solicitation at the Bowie State MARC Station in 2025. MDOT will continue to evaluate opportunities for State land at MARC stations in accordance with its Joint Development Policies. Additionally, MDOT's TOD Capital Grant and Revolving Loan Fund makes available $5 million annually to local jurisdictions and their development partners to advance TOD projects at State-designated sites. More information on MDOT's TOD program can be found at mdotrealestate.maryland.gov.

Funding and Financing

Funding is a critical part of service enhancements and expansions. As the demand for connected and frequent MARC service continues to increase, so will the need for funding to implement, operate, and maintain the service. Funding gaps between expenses and revenue require MARC to prioritize state of good repair efforts for assets it is responsible for maintaining in a safe condition and honoring contractual financial commitments to Amtrak and CSXT to support maintenance of the lines on which MARC operates. New funding will be instrumental in being able to implement projects that address MARC service growth opportunities beyond existing needs. Currently, nearly all transit funding in Maryland comes from either federal, state, or county government sources. Maximizing the use of all available funding resources is a key component to MDOT's MTP to deliver system quality.

FEDERAL FUNDING

The United States Department of Transportation (USDOT) funds public transit systems through various formula-based programs and funds public transit and rail projects through discretionary grant programs, most of which must be matched with state and local funds, if awarded. The required funding for state and local matching varies by grant program and can range between 20 to 80 percent of the total cost of a project.

Formula grants are determined based on various factors such as population and transit system size. Formula grants are typically used for larger projects that are intended to support maintenance and state of good repair efforts for existing infrastructure.

Discretionary grants are awarded to specific projects through a competitive application process. Recent large-scale discretionary grant programs for transit projects include:

- Better Utilizing Investments to Leverage Development (BUILD) Grants
- Capital Investment Grants (CIG)
- Federal-State Partnership for Intercity Passenger Rail (FSP) Grant Program (NEC)
- Consolidated Rail Infrastructure and Safety Improvements (CRISI) Program

Federal surface transportation programs are commonly funded through a multiyear surface transportation authorization bill that is typically five to six years. The current bill is set to expire at the end of Federal FY2026, creating a significant funding challenge within the first year of the MARC Growth and Transformation Plan. While it is unclear what a successor bill may look like, the current Administration is indicating support for speeding up permits for federally supported infrastructure projects, which could reduce overall project costs, while at the same time signaling support for significant reductions in federal spending overall. Therefore, focusing on maximizing formula program funding to meets its SGR commitments, including the initial fleet recapitalization on the Penn Line to support operational requirements once the Frederick Douglass Tunnel project is complete, will be a priority for MTA. Over the 2050 horizon of the MARC Growth and Transformation Plan, MTA is forecasting approximately $3.0 billion total in federal formula funding from the Urbanized Area Formula Grants (Section 5307) program and the State of Good Repair (Section 5337) program. Section 5307 funding can be used for capital and operating assistance, while 5337 funding is for capital assistance only. Federal Highway Administration (FHWA) Congestion Mitigation and Air Quality (CMAQ) program formula funds may also be used for transportation projects that help reduce congestion and improve air quality.

Beyond federal formula funds, MTA will consider preparing for, and prioritizing, competitive discretionary applications that request smaller amounts of federal funding for early project development activities (e.g., environmental compliance, preliminary engineering) in the near term. This will allow MTA to advance projects and prepare to be competitive for future requests of larger amounts for final design and construction if and when higher levels of federal funding become available.

USDOT also provides long-term, low-cost financing through the Transportation Infrastructure Finance and Innovation Act (TIFIA) and the Railroad Rehabilitation and Improvement Financing (RRIF) credit programs. Neighboring systems like VRE have successfully used RRIF to support equipment acquisitions. MTA may consider using TIFIA or RRIF for fleet recapitalization and fleet growth; however, it is important to recognize these programs are loans, not grants, and must be paid back. In addition, state funding used to repay the loan typically counts against a state's debt ceiling limit, which may put MTA in a position of competing against other state priorities.

STATE FUNDING

The Maryland Legislature recently passed the Governor's proposal to raise revenues for Maryland's transportation system. With the Governor's budget, MTA can now make progress toward state of good repair projects that maintain service levels and improve reliability.

LOCAL AND PRIVATE FUNDING

MTA will continue to work with local jurisdictions on opportunities to advance MARC improvements in their communities. Beyond project-specific general fund and private contributions, some of the best opportunities for local funding include incentivizing transit-oriented development opportunities around MARC stations and utilizing the increase in property tax receipts from new development to pay for public improvements that promote economic development in the area.

BEYOND FUNDING

MTA's needs for implementing the MARC Growth and Transformation Plan go beyond funding and include several other factors, including:

- Continuing to monitor and update MARC's state of good repair needs
- Coordinating and finalizing agreements with host railroads
- Determining a fleet strategy and storage requirements for trains and equipment
- Expanding staff and management capacity to:
  - Plan and design capital improvements
  - Advance innovative procurement packages
  - Deliver capital improvements
  - Deliver higher levels of service all day and all week
- Conducting annual tracking and progress reporting to:
  - Highlight progress and accomplishments
  - Identify gaps and resulting impacts to implementing the plan

These items will be critical steps to facilitate implementation of the MARC Growth and Transformation Plan.

5-Year Action Plan and Next Steps to Advance Future Phases

During the 5-Year Phase, MTA will prioritize implementing MARC service adjustments, implementing the proposed Camden Line bus service and Hagerstown-Monocacy bus service on the Brunswick Line, acquiring new locomotives for the Penn Line, planning for the development of infrastructure needed in the 15-Year Phase, building the institutional capacity of MTA to deliver the 15-Year and Unconstrained Phases, continuing discussions with the host railroads, and updating MTA's CTP and CNI. **Table 10** below provides a breakdown of the $116.8 million 5-year capital programming gap that is necessary to move the MARC Growth and Transformation Plan forward.

Table 10: 5-Year Funding Gap

Project	FY2026	FY2027	FY2028	FY2029	FY2030	Total 5-Year Funding Gap
Penn Line						
Penn-Camden Connector	-	-	$8,250,900	-	-	**$8,250,900**
Martin's Yard and Shop Electrification	-	$1,401,300	1,401,300	-	-	**2,802,600**
Fleet Recapitalization	-	500,000	500,000	$9,923,200	$55,401,600	**66,324,800**
Camden Line						
Camden Line Bus Service	-	-	-	323,000	$323,000	**646,000**
College Park Station Improvements	$252,700	-	-	-	-	**252,700**
Brunswick Line						
Washington Union Terminal Track	-	-	1,840,900	1,840,900	-	**3,681,800**
Silver Spring Turnback	-	-	-	-	1,803,400	**1,803,400**
Kensington Station Siding	-	-	-	11,499,600	11,499,600	**22,999,200**
Brunswick Yard and Station Improvements	-	4,500,000	4,500,000	-	-	**9,000,000**
Hagerstown-Monocacy Bus Service	-	-	-	92,500	92,500	**185,000**
Germantown Station Area Improvements	-	-	-	-	864,000	**864,000**
TOTAL	**$252,700**	**$6,401,300**	**$16,493,100**	**$23,679,200**	**$69,984,100**	**$116,810,400**

The MARC Growth and Transformation Plan is a 25-year plan, but the identified service plans and capital projects represent discrete improvements that MTA can work to implement over time. As MTA advances the plan, the agency also will produce an annual report to highlight progress, identify any gaps, and recommend adjustments to continue toward successful implementation. Implementation of the 5-Year Phase will involve the following actions:

- **Frederick Douglass Tunnel and Fleet Recapitalization**: MTA will need to begin making contributions toward the project in FY2027 and also will need to take steps to acquire eight locomotives to support electrified service on the Penn Line once the project is complete.
- **Camden Line Bus Service and Hagerstown-Monocacy Bus Service**: MTA will need to finalize routing and schedules for the proposed service including stop locations, develop wayfinding packages, order and install signs and shelters, procure a contract operator, conduct public notification activities, publish schedules and launch the service.
- **Germantown Station Area Improvements**: MTA has completed 30% design and will need to advance the project into final design and construction.
- **MTA Capital Needs Inventory**: MTA will need to complete the ongoing update of its inventory in 2026.
- **NEC Payments and CSXT Joint Benefit Payments**: MTA will need to continue making payments in accordance with established agreements.

MTA will establish an internal implementation team that will be charged with administering the MARC Growth and Transformation Plan, working with MTA to annually forecast and program funding needs for the plan, and provide an annual update on implementation progress.