

Penn-Camden Connector

DOT MPDG Mega Grant Application

FY 2025-26

Project Description



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The Maryland Department of Transportation (MDOT) Maryland Transit Administration (MTA) is requesting \$198 million from the U.S. Department of Transportation's (USDOT) Mega grant program to fund final design and construction for the Penn-Camden Connector (PCC), a lynchpin project that will provide the missing rail connection between the two MARC commuter rail lines connecting Baltimore and Washington D.C. – the Penn and Camden lines. This multifaceted project will improve connectivity and increase efficiency and reliability for commuter, intercity, and freight rail service. The PCC is also critical to other future projects and services, such as Amtrak's intercity Acela service expansion and the redevelopment of Baltimore Penn Station. In 2023, the Federal Railroad Administration's CRISI Grant Program awarded MTA \$8.8 million in funding for preliminary (30 percent) design and NEPA documentation for the PCC Project.

The Penn Line operates on Amtrak's Northeast Corridor (NEC), while the Camden Line operates on the CSX Transportation, Inc. (CSXT)-owned Capital Subdivision. By connecting the two lines at a layover facility in Southwest Baltimore, the PCC Project will enable Penn Line service to access downtown Baltimore, including the Inner Harbor and regional event spaces such as the Baltimore Convention Center and Camden Yards Sports Complex, and the MARC Riverside Layover and Maintenance Facility for locomotive repair and heavy maintenance. This project will provide a critical foundation for achieving future multimodal transportation, equity, and development goals in the region.

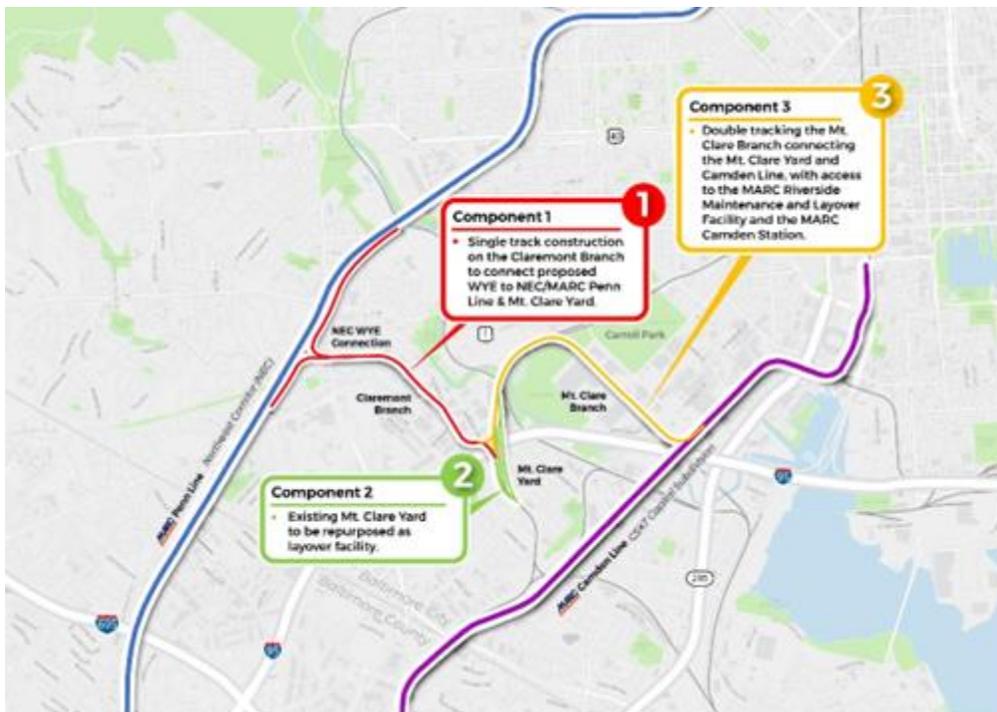


Figure 1: Project Area Inset

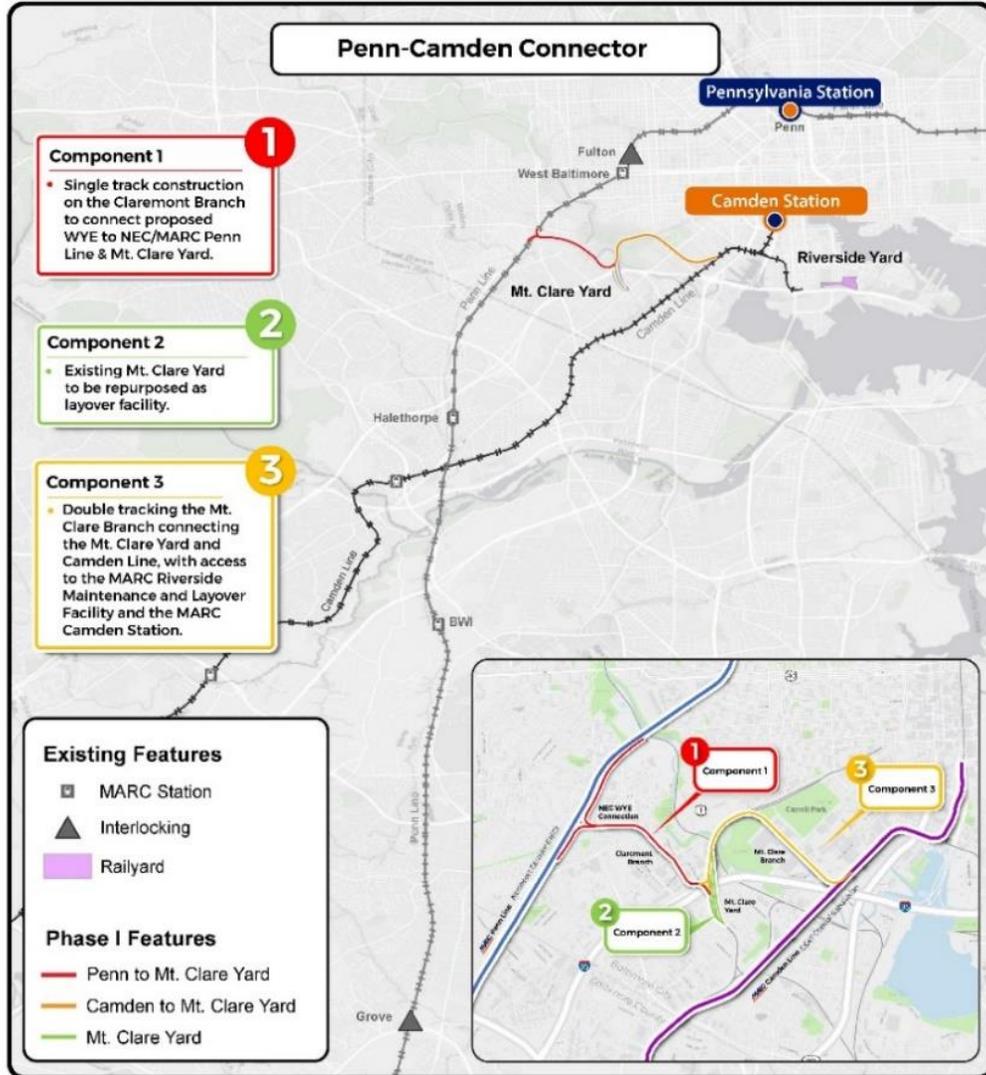


Figure 2: Project Area Extent

The PCC Project comprises the following components:

Component 1 – *Construct a single track along the Claremont Branch between the proposed NEC Wye Connection and the Mount Clare Yard and the Mount Clare Branch.*

MTA will construct the NEC Wye Connection at the western limits of the Project to connect the NEC to the proposed Claremont Branch, which will consist of a single track between the proposed NEC Wye Connection and the Mount Clare Yard and Mount Clare Branch. Two railroad bridges will be needed to complete this connection – one to be constructed over South Caton Avenue, and another to be constructed over Wilkens Avenue along the Claremont Branch.

MTA will construct an overhead catenary system (OCS) along the westerly end of the Claremont Branch to facilitate the operation of dual-mode trains, which will operate in electric mode when entering and exiting the NEC. Modifications to Amtrak Substation 21 will be required to supply traction power. MTA must replace or modify existing OCS structures on the NEC to support the proposed PCC catenary system. MTA must also construct noise and retaining walls at various locations along the alignment.

Component 2 – *Repurpose the current CSXT-owned Mount Clare Yard into a new layover facility for MARC's Camden Line and Penn Line service, with capacity for future MARC service expansion on the Penn Line and Camden Line.*

The Project will include facilities, parking, and support operations on property adjacent to Mount Clare Yard. MTA will construct a 1,200 square foot prefabricated crew quarters on the south side of the existing building and will build a service to provide delivery access to the locomotive servicing tanks, sand tower, and storage containers for equipment and materials.

MTA will also provide security and access control features to support the Mount Clare Yard, including CCTV and access control systems and infrastructure. This will include installing fiberoptic connectivity between the Mount Clare Yard and MDOT's GigE backbone from the I-95 overpass. The agency also anticipates constructing crash walls to protect the I-95 overpass piers.

Improvements at the Mount Clare Yard, owned by CSXT, will maximize storage for MARC trainsets and provide yard servicing facilities. The proposed Mount Clare Yard layout allows for overnight and midday storage, staging and running repair of seven sets of trains consisting of two locomotives and 10 coaches, with an option for a future eighth track capacity to store two locomotives and seven coaches. A protect track has also been proposed at the north end of the yard with the capacity to store two locomotives for rescuing trains and ensuring reliable service, and two full-length inspection pits will allow MARC trains to undergo federally mandated five-day pit inspections.

Component 3 – *Construct a second track to double track the connection between the Mount Clare Yard and Claremont Branch to the Camden Line, with access to the MARC Riverside Maintenance and Layover and Maintenance Facility and the MARC Camden Station.*

MTA will create provisions for two runaround tracks on the east side of the Mount Clare Yard for the benefit of CSXT to allow freight trains to bypass the new MARC storage yard. The construction of an additional track will enable double tracking to connect the Mount Clare Yard and Claremont Branch to the CSXT Capital Subdivision, where the Camden Line operates. This extra track construction will require replacing a single-track bridge over the Western Maryland Railroad and a retaining wall on the Mount Clare Branch.

Component 4 – *System-wide enhancements.*

The Project will provide the following servicing activities on each track:

- Fueling, diesel exhaust fluid (DEF), and lubrication systems
- Compressed air systems
- Pneumatic sand distribution system
- Water and toilet servicing on all tracks
- Ground power for each track, including the protect track to power trainsets during layovers and minimize diesel engine idling, which will reduce emissions and noise impacts

The Project also includes signalization and Positive Train Control (PTC) to support rail operations on the NEC Wye Connection, Claremont Branch, Mount Clare Branch, and the Mount Clare Yard (except within yard limits). Additionally, MTA and partners will construct water, electric, sanitary sewer, oily wastewater, storm drain, and telecommunication utilities to support the PCC Project. Overhead electric and underground utilities will be relocated within the limits of work, as required.

Current Challenges

The PCC Project is necessary to address ongoing train movement issues along the NEC between Baltimore and Washington. MARC trip frequency, scheduling, and capacity are limited by train slots, deadheading, and storage limitations. Maryland rail infrastructure does not support operational separation between commuter and intercity passenger trains. This logistical hurdle is further complicated by both MARC and Amtrak requiring additional rolling stock to meet service requests beyond current operations. The primary impediments to Penn Line on-time performance and service expansion stem from operating conflicts between MARC and Amtrak trains, as well as speed and line capacity constraints. General operating conflicts also exist between Amtrak's longer-distance, limited-stop operations and MARC's moderate-speed operations with more frequent local stops. In 2023, MARC on-time performance (OTP) averaged 90.77 percent overall, with the Penn Line averaging 88.8 percent. Primary reasons for ongoing delays include conflicts with Amtrak intercity trains, train equipment failure, and slow orders.

Without an infrastructure-based solution, the capacity and reliability issues that impact the Baltimore-Washington rail corridor will remain.

Moving forward, population growth projections in the Baltimore metropolitan region continue to increase due to the confluence of two key factors: an ongoing housing affordability crisis in the Washington metropolitan region, and the mass expansion of telework policies which now more readily enable many employees to live much further from their place of work. MARC trains, pre-pandemic, were routinely standing-room-only on peak service trains, and ridership was increasing at a pace that would have exceeded available train capacity during peak service on the Penn Line faster than infrastructure could have been constructed to increase train capacity. The COVID-19 pandemic reset ridership to allow investment in infrastructure to meet future ridership demand as required, but these challenges remain.

To address these issues, the Project will provide MTA access to an existing rail yard that will be repurposed into a storage and layover facility using the proposed connecting track. Relocating the MARC trainset storage facility will enable Amtrak to advance its plans for redevelopment of Penn Station (Baltimore) and Union Station (Washington). These train station projects will expand intercity rail connectivity and increase job access, including for the transit-dependent, underserved communities of the Baltimore and Washington metropolitan areas, and spur additional economic investment in both regions.

MARC trains are currently stored overnight at Penn Station and have federally mandated daily inspections performed at Union Station during the day. These inspections are not performed at Penn Station as it does not have the proper infrastructure to perform daily inspections. Union Station capacity is a significant concern and impediment to anticipated Amtrak, MARC, and VRE service expansion in the coming decades. PCC facilitates daily inspections on MARC trains being performed overnight at Mt. Clare Yard, reducing train congestion and providing additional capacity at Union Station, enabling future service expansion. Likewise, removing MARC train storage from Penn Station ensures that Penn Station redevelopment can be maximized to provide service expansion and benefits to the traveling public.

Enabling this connection to Mount Clare Yard and removing the need for MARC train storage at Penn Station will also allow MARC to improve efficiency and capacity. The PCC Project will add three to four additional tracks for train storage beyond the current train storage capacity, allowing three to four new trainsets for service expansion. Mount Clare Yard will also accommodate 10-car trainsets versus the current maximum of eight-car trainsets, allowing MARC to add capacity to its existing trains.

To address congestion issues, the Project will create two runaround tracks on the east side of Mount Clare Yard (Component 3). Allowing CSXT freight trains to bypass the storage yard and connect the Mount Clare Yard and Claremont Branch to the CSXT Capital Subdivision with an additional track will alleviate freight and Camden Line congestion.

Lastly, the requested funding will advance progress toward full implementation of the Penn-Camden Connector by covering final design and construction. This will enable subsequent investments in intercity and rail connectivity, increasing overall access to job opportunities, particularly for non-drivers. This project also advances progress toward enabling the replacement of the Frederick Douglass Tunnel, which will facilitate significant improvements to the West Baltimore MARC Station. These transportation projects build upon one another, serving as a series of transformational infrastructure investments for Baltimore City and the surrounding metropolitan area that will collectively reduce auto dependence, remove barriers to job access, increase regional economic vitality, and meet mobility needs of the area's growing population.

Project Location

The Project is located in the City of Baltimore. The PCC will be constructed in the seventh Congressional District of Maryland. As shown in the figure below, the Project will impact

two MARC commuter lines and Amtrak’s intercity passenger service on the NEC between Boston and the District of Columbia.

The Project area encompasses six Census Tracts 245102101.00, 245102102.00, 245102502.06, 245102503.03 (border), 245102006.00, and 245102008.00. Tracts 245102102.00 and 245102503.03 are designated as both Historically Disadvantaged Communities (HDCs) and Areas of Persistent Poverty (AoPPs). Census Tract 245102006.00 is a designated HDC, and Census Tract 245102008.00 is a designated AoPP.

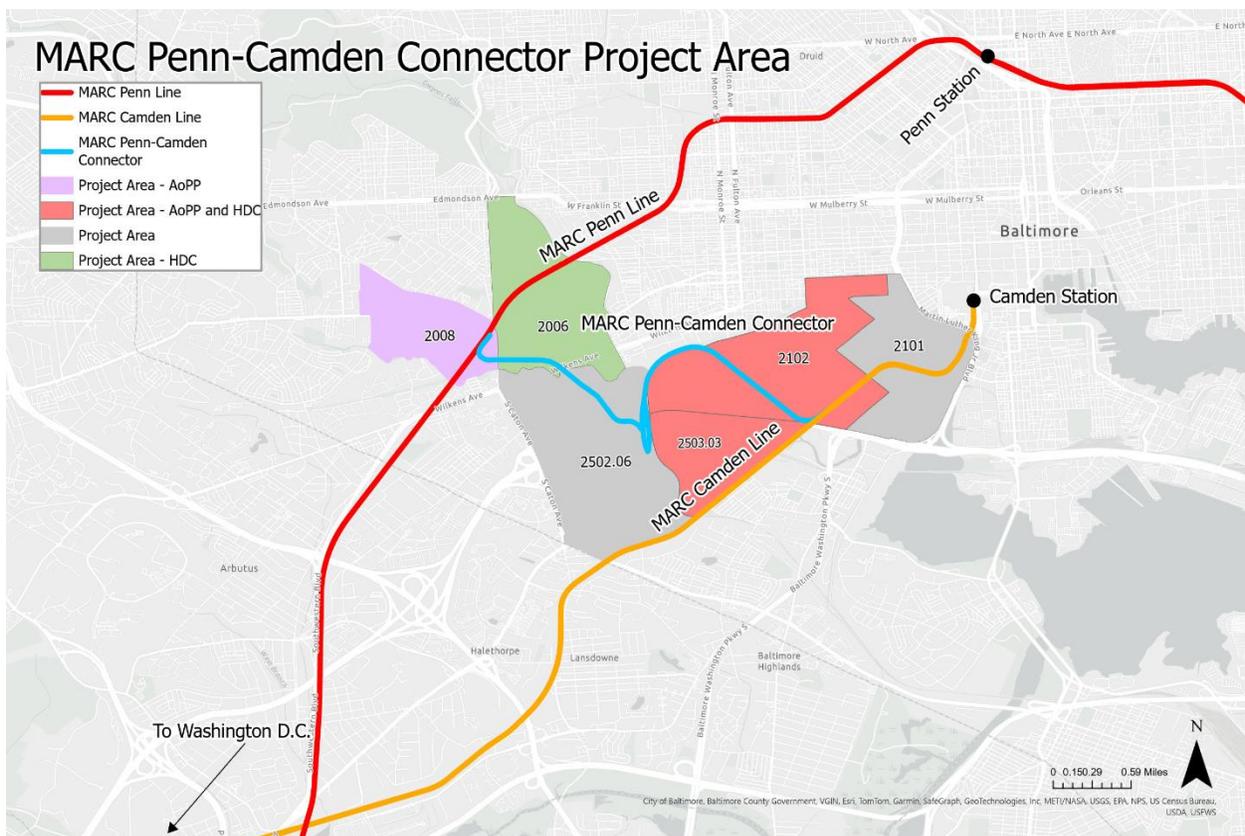


Figure 3: Project Area Census Tracts