The Baltimore & Potomac (B&P) Tunnel is a two-track railroad tunnel running beneath central Baltimore City between Baltimore Penn Station and the West Baltimore Maryland Area Regional Commuter (MARC) station. This busy section of the Northeast Corridor is used by Amtrak and MARC passenger trains, as well as Norfolk Southern Railway freight trains.

Project Need

Built in 1873, the B&P Tunnel is among the oldest infrastructure along the Northeast Corridor (NEC). Due to its age, the tunnel is approaching the end of its useful life. Its obsolete design creates a low-speed bottleneck on this high-traffic section of the NEC. Both the constriction of tunnel volume from four tracks to two tracks, as well as the tunnel’s tight curvature, require trains to reduce speeds to 30 miles per hour, placing limitations on all train traffic. The tunnel requires replacement or service will have to be reduced for significant rehabilitation to extend its useful life. Any closure of the tunnel will greatly jeopardize the intercity, commuter and freight rail traffic that relies upon the tunnel to move people and goods throughout the region.

Infrastructure Background

The B&P Tunnel system is approximately 1.4 miles long and is comprised of three shorter tunnels: the John Street Tunnel, the Wilson Street Tunnel and the Gilmor Street Tunnel. The narrow, single-bored, double-track tunnel was originally constructed out of brick and stone masonry, though repairs have added additional building materials over time. Electrification was added in the 1930s, and the tunnel was rehabilitated in the 1980s. That work was not intended as a permanent fix and continuously increasing maintenance is required to address water infiltration and masonry repairs on the aging structure.
Project Benefits

MORE RELIABLE SERVICE
The B&P Tunnel Project will improve service reliability and help make Amtrak and MARC less susceptible to maintenance-related delays. Its aging condition has resulted in increased maintenance needs. One such example is the high saturation of water in the soil beneath the tunnel; this causes the tunnel’s aging floor slabs to slowly sink, forcing Amtrak to repeatedly make repairs. Amtrak performs thorough inspections and vigilant maintenance to ensure ongoing safety standards.

ABILITY TO MOVE MORE TRAINS
The existing tunnel does not provide sufficient capacity to meet projected passenger rail demand through 2040 and beyond. When completed, this project will create new capacity to support additional Amtrak and MARC operations. New tunnels could free the existing tunnels for renewal and other uses.

FASTER TRIP TIMES
The existing tunnel is not suited for modern high-speed train operations due to tight clearances and sharp curves, which limit train speeds. Replacement of the B&P Tunnel will allow for increased speeds through the Baltimore region. This improvement would contribute to unlocking the current bottleneck which now impedes operations along the most heavily traveled rail line in the country.

Project Status

The Federal Railroad Administration (FRA), Maryland Department of Transportation (MDOT), City of Baltimore and Amtrak have cooperated on an Environmental Impact Statement (EIS) for a replacement tunnel as required by the National Environmental Policy Act (NEPA). After evaluation of 16 alternatives, including public input, the Record of Decision was released in March 2017 for Selected Alternative 3B that provides:

- A four-track tunnel system, increasing capacity and speeds
- The best improvements to travel time
- Accessibility improvements at West Baltimore MARC station
- Mitigation measures to reduce environmental impacts

Funding is now needed to finish design and start construction of the approximately $5 billion new tunnel system. Funding will be pursued through a combination of Department of Transportation grant programs, funding for Amtrak and local matches.

NEC FUTURE Investment Plan: 2040 and Beyond

The B&P Tunnel replacement has been identified in the Federal Railroad Administration’s long-term NEC FUTURE investment plan as fundamental to improving the reliability, capacity, and connectivity of the NEC. NEC FUTURE recommends a modern, conflict-free high-speed rail operation would be best provided for with a four-track tunnel system that segregates high-speed inter-city passenger services on separate tracks from local commuter rail and freight services. The B&P Tunnel replacement is being designed with this recommendation in mind.