

The Proposed Action

The Proposed Action consists of improvements to the Long Bridge and related railroad infrastructure located between Virginia Railway Express (VRE) Crystal City Station in Arlington, VA and Control Point (CP) Virginia in Washington, DC.

Environmental Impact Statement (EIS) Study Area

The Long Bridge, constructed in 1904, is a two-track rail bridge located within the Washington Monumental Core. The EIS Study Area (also referred to as the Long Bridge corridor) extends approximately 3.2 miles from the VRE Crystal City Station in Arlington, Virginia to CP Virginia located near 3rd Street, SW in Washington, DC. The Study Area includes federal park land managed by the National Park Service; historic and cultural properties; the Potomac River; offices, hotels, and apartment buildings; transportation facilities (VRE Crystal City Station, VRE L'Enfant Station, Long Bridge, Metrorail right of way and bridge, eleven other railroad bridges, and four roadway bridges); and numerous pedestrian and bicycle trails.

Draft Purpose and Need

The purpose of the Proposed Action is to address reliability and long-term railroad capacity issues in the Long Bridge corridor. The Proposed Action is needed to identify alternatives that would increase capacity to meet projected demand for passenger and freight rail services; improve operational flexibility and resiliency; and provide redundancy for this critical link in the local, regional, and national railroad network. The Proposed Action needs are described in more detail below:

Railroad Capacity. Railroad capacity is the ability of the existing Long Bridge corridor to accommodate freight and passenger trains. The existing Long Bridge corridor provides sufficient capacity to support current rail traffic but will fail to meet the combined projected 2040 demands of commuter, intercity passenger, and freight markets.

Based on existing track infrastructure and train scheduling constraints, intercity passenger and commuter services operate at or close to maximum capacity limits within the corridor during the morning peak hour, with eight passenger train movements¹ scheduled in 60 minutes. Over the course of a full weekday, Amtrak and VRE currently operate 24 and 34 trains across the Long Bridge, respectively. CSX Transportation (CSXT) freight trains operate approximately 18 through-freight trains each day on the same tracks used by the two passenger train operations.

Future rail capacity demand in peak periods is forecasted to exceed the current capacity for Long Bridge. The existing track infrastructure, which is limited by the two-track design of the Long Bridge, cannot support the increased demand. According to the Long Bridge Long Range Service Plan prepared in 2016, by 2040, the passenger trains in the morning peak hour are expected to more than nearly double to 17². The six reverse peak commuter trains include four VRE trains originating from Washington Union Station and two MARC run-through trains from Maryland to Alexandria. Over the course of the full day, the number of trains crossing the bridge in 2040 is expected to increase to 44 trains for Amtrak, 92 for VRE, eight for MARC, 42 for CSXT, and six for Norfolk Southern, a major freight carrier that retains legal rights to operate over the bridge but does not

¹ One Amtrak and six VRE trains in the peak direction and one VRE train in the reverse peak direction.

² One Amtrak and nine VRE trains in the peak direction and one Amtrak and six commuter trains in the reverse peak direction.

exercise them today. The projected growth represents an average increase of over 100 percent in traffic on the bridge by 2040.

The removal of other rail capacity bottlenecks east and south of the Long Bridge highlights the need for greater railroad capacity within the wider corridor. These capacity improvement projects include:

- CSXT-funded reconstruction double tracking of the Virginia Avenue Tunnel,
- Doubling of the number of platform edges at L'Enfant Station and Crystal City Station,
- Platform improvements at Alexandria Station, and
- Additional platform edges where only single track access currently exists on the VRE Fredericksburg and Manassas Lines.

Population and employment growth in the Washington Metropolitan Area also will increase the demand for passenger rail travel within the Long Bridge corridor. Population growth and increasing rail ridership in the South, Mid-Atlantic, and Northeast are creating additional demand for intercity rail services that traverse the Long Bridge corridor. The DC to Richmond Southeast High Speed Rail EIS, VRE System Plan 2040, Amtrak Vision for the Northeast Corridor, NEC FUTURE, CSXT National Gateway, Washington Union Station Expansion, and the MARC Growth and Investment Plan all focus upon improving the flow of rail traffic locally across the Long Bridge and along the national rail network.

Resiliency. Resiliency of a rail network is the ability to provide operational flexibility and reliability for train services during normal operations, as well as during periods of higher demand and/or unexpected operating conditions. The shared-use infrastructure within the Long Bridge corridor limits the flexibility of commuter, intercity passenger, and freight service to operate efficiently. These conditions create a systemic bottleneck that results in operational conflicts and delays, decreasing reliability and on-time performance of train operations.

The current two-track configuration of the Long Bridge is a physical bottleneck that prevents efficient train flow to the existing three and four track sections located north and south of the Long Bridge. Substantial delays to train intercity service occur in the corridor on a daily basis, particularly between Washington, DC and Alexandria, Virginia. CSXT freight operations are impacted by the current volume of commuter and intercity passenger trains, which limits their ability to operate during peak passenger periods and hinders the flow of their national network. Freight trains are frequently stopped to allow passenger rail service to pass through the corridor, affecting the efficiency and reliability of freight movements. Given projections, the complexity of operations approaching the Long Bridge is expected to increase, creating even more delays and decreased on-time performance.

Network Connectivity. The Long Bridge is a major chokepoint, which limits the ability to provide freight service along the eastern seaboard, as well as high-performance passenger rail service between major population centers. This chokepoint limits efficient network connectivity for the rail operators within the Long Bridge corridor, including CSXT, VRE, Amtrak, and potentially MARC, and the overall transportation network. Rail operations are also affected well beyond the limits of the Long Bridge corridor given the extensive reach of freight, commuter, and intercity passenger services along the eastern U.S. and beyond.

The Long Bridge is in a high-volume Class I freight rail corridor. The Long Bridge is the easternmost south to north crossing for Class I freight rail movements and the only freight railroad crossing over the Potomac River between the District and Virginia. The next nearest freight rail crossing over the Potomac River is in Harper's Ferry, West Virginia, approximately 48 miles northwest of the Long Bridge.

The existing bridge is a critical link for intercity passenger rail service between the Northeast Corridor (NEC) and the federally-designated Southeast High Speed Rail Corridor (SEHSR). The existing commuter rail systems (MARC and VRE) both terminate all trains at Washington Union Station, which limits the ability to provide cross-jurisdictional trips for passengers (Virginia to Maryland and vice versa). The existing network forces passengers to complete regional trips via Metrorail, which forces riders to transfer rail systems, potentially leading to travel delays. The Proposed Action could provide the opportunity for alleviating future transfers to Metrorail, which also would allow for increased operational flexibility and system redundancy.

Redundancy. Redundancy is the inclusion of additional components that are not necessary for railroad functionality, but are available in the event of a failure of other components. No reasonable detours exist to route rail traffic around the Long Bridge for maintenance or emergencies without extensive service delays.

Due to the close distance between the existing two tracks, both tracks need to be closed during construction or maintenance for safety reasons. Should service across the Long Bridge be interrupted, VRE and Amtrak would not be able to provide train service from Virginia across the Potomac River to L'Enfant Plaza or Washington Union Station, which are the primary destinations for passenger routes. CSXT trains would be redirected to the crossing at Harpers Ferry, thereby substantially increasing service cost and time.