



Long Bridge Project

Environmental Impact Statement (EIS)

Revised Purpose and Need

November 9, 2017

1.0 What is the Proposed Action?

The Long Bridge Project consists of potential improvements to the Long Bridge and related railroad infrastructure located between Rosslyn (RO) Interlocking in Arlington, Virginia, and L'Enfant (LE) Interlocking near L'Enfant Plaza SW in Washington, DC.

2.0 What is the Long Bridge Corridor?

The Long Bridge, constructed in 1904, is a two-track railroad bridge located in the Washington Monumental Core. The existing Long Bridge is owned and operated by CSX Transportation (CSXT), a Class I freight railroad, which also operates the Long Bridge Corridor. In addition to CSXT freight trains, the bridge is also currently utilized by Amtrak and Virginia Railway Express (VRE).

The Long Bridge Corridor extends approximately 1.8 miles between Arlington, Virginia and Washington, DC. The Long Bridge Corridor includes Federal parkland managed by the National Park Service; historic and cultural properties; the Potomac River; residential buildings, offices, and hotels; and transportation facilities (VRE L'Enfant Station, Long Bridge, Washington Metropolitan Area Transit Authority [WMATA] Metrorail right-of-way and bridge, five other railroad bridges, four roadway bridges, and numerous pedestrian and bicycle trails).

The District Department of Transportation (DDOT) and the Federal Railroad Administration (FRA) updated the Project Area limits of the Long Bridge Project Environmental Impact Statement (EIS) on November 9, 2017 from what has been previously presented to the agencies and the public. The updated Project Area limits are based on project refinement and additional information related to other projects in the area. These changes are reflected in the revised Coordination Plan.

The Long Bridge Project consists of potential improvements to the bridge and related railroad infrastructure located between the RO Interlocking in Arlington, Virginia near Long Bridge Park and LE Interlocking in Washington, DC. The Long Bridge Project connects logical termini, has independent utility even if no additional transportation improvements in the area are made; and does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements in the area.

The updated Project Area limits are based on the following:

- Concept refinement to date has established that any physical changes to existing infrastructure would not extend beyond the RO and LE interlockings.
- The official northern terminus of the DC to Richmond Southeast High-Speed Rail (DC2RVA) project as stated in the Tier II Draft EIS is Control Point Rosslyn (RO) at milepost CFP 110 in Arlington, Virginia. The RO Interlocking provides a transition point between these separate and independent projects and is therefore the appropriate place to set the limits of the Long Bridge Project.
- The planned Virginia Railway Express (VRE) L'Enfant Station and storage track project includes the eventual conversion of the existing storage tracks into a full fourth track between LE and Virginia

Interlockings. The LE Interlocking provides a transition point between the separate and independent Long Bridge and VRE projects and is therefore the appropriate place to set the limits of the Long Bridge Project.

3.0 What is the Purpose and Need of the Proposed Action?

This Purpose and Need Statement for the Long Bridge Project Environmental Impact Statement (EIS) has been prepared by the Federal Railroad Administration (FRA) and the District Department of Transportation (DDOT). FRA is the lead Federal agency and DDOT is the joint lead agency for the EIS.

This Statement was prepared as part of the development of an EIS in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. § 4321 *et seq.*), the Council of Environmental Quality (CEQ) NEPA Regulations (40 C.F.R. Parts 1500-1508), the FRA Procedures for Considering Environmental Impacts (64 Federal Register [FR] 28545 [May 26, 1999]), and FRA's Update to NEPA Implementing Procedures (78 FR 2713 [January 14, 2013]).

FRA issued a Notice of Intent to prepare the EIS in August 2016, which included a draft Purpose and Need Statement. FRA and DDOT invited public and agency comment on the draft Purpose and Need Statement. Based on these comments, FRA and DDOT have prepared the revised Purpose and Need Statement below.

Purpose and Need Statement

The purpose of the Proposed Action is to provide additional long-term railroad capacity and to improve the reliability of railroad service through the Long Bridge Corridor. Currently, there is insufficient capacity, resiliency, and redundancy to accommodate the projected demand in future railroad services. The Proposed Action is needed to address these issues and to ensure the Long Bridge Corridor continues to serve as a critical link connecting the local, regional, and national transportation network.

4.0 Why is the Proposed Action needed?

Insufficient Railroad Capacity. The Long Bridge Corridor must accommodate combined commuter, intercity passenger, and freight railroad services with minimal operational delays now and in the future. By the forecast year of 2040, passenger and freight train volumes are expected to increase by 150 percent.¹ Capacity constraints at critical infrastructure chokepoints, such as the current Long Bridge, limit service expansion as well as the ability to recover from service delays, making it difficult to accommodate growth in ridership and offer reliable service. Without additional capacity, the increased volumes in 2040 and beyond would strain the railroad network through the Long Bridge Corridor.

¹ Expected train volumes in 2040 were established based on input from bridge stakeholders, including CSXT, VRE, Amtrak, Norfolk Southern, and MARC, as well as the concurrent DC2RVA study.

To meet future demand, the railroad network will need to be able to maintain schedules under normal operations for all types of train travel, as well as provide flexibility to recover during periods of higher demand and service delays. Based on long-term adopted regional, state, and local transportation plans, the Long Bridge Corridor will continue to be shared by commuter, intercity passenger, and freight railroad services, each of which has different operating characteristics that may conflict (e.g., commuter railroads generally make intra-corridor station stops, while intercity railroads generally do not). Under scheduled conditions, each train occupies an assigned time slot and does not interfere with other trains.² However, if a train is delayed and falls outside its time slot, it could delay other trains. Under those conditions, the capacity of the corridor is governed by the slowest train. The ability to recover from service delays, and to limit conflicts, is primarily achieved by providing tracks and crossovers that allow trains to pass each other.

Continued Network Connectivity. The Long Bridge Corridor plays an essential role in the Washington metropolitan region and the East Coast transportation network by providing passenger and freight services. The Long Bridge Corridor connects intercity passenger trains from the Northeast Corridor to major transportation points in the South. The Long Bridge Corridor also connects the Virginia suburbs to established employment centers in downtown Washington, DC, and Crystal City in Arlington, Virginia. CSXT uses the Long Bridge corridor to connect goods and customers using freight and intermodal facilities through CSXT's network, including Philadelphia, Pennsylvania; Baltimore and Cumberland, Maryland; Newport News, Virginia; and Rocky Mount, North Carolina. Consistent with features shown in adopted regional, state, and local transportation plans, and with railroad operator plans, the Long Bridge Corridor must facilitate the movement of people and goods, including connections to other parts of the transportation network.

Currently the Long Bridge is a chokepoint, which limits the ability both to facilitate planned high-performance passenger railroad service between the population centers and provide freight service along the Eastern Seaboard. 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).

For commuter railroad passengers, network connectivity also includes access to and from stations within the corridor and transfers to other transportation services such as Metrorail at transportation hubs. VRE's two most utilized stations are within the Long Bridge corridor at Crystal City and L'Enfant. More than 86 percent of VRE customers transfer to their final destination via Metrorail or walking.³

Insufficient Resiliency and Redundancy. Resiliency and redundancy are important factors in maintaining normal operations during planned and unplanned events. Resiliency in a railroad context is defined as the ability of a railroad network to resume normal operations and minimize cascading delays following an unplanned event. System redundancy is the duplication of critical components or functions of the railroad system to increase the reliability of the railroad corridor and ensure that it is resilient to changing

² "Time slot" is defined as the time and location in the corridor a train is assigned in a timetable. Time slots vary based on the operating characteristics of a train, including whether it makes intermediate stops within the corridor.

³ Source: VRE 2017 Master Agreement Survey, February 22, 2017

circumstances. Redundancy enables the railroad system to continue to function during unanticipated outages, catastrophic incidents, or weather-related events, as well as during planned maintenance.

Currently, the railroad network lacks resiliency. The current two-track configuration of the Long Bridge is a physical bottleneck that prevents efficient train flow to the existing three-track and planned four-track sections located north and south of the Long Bridge. Substantial delays to intercity train service occur in the corridor daily, 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 railroad service to pass through the Corridor, affecting the efficiency and reliability of freight movements.

Currently the railroad network lacks redundancy. Due to the narrow space between the existing two tracks, both tracks need to be closed during construction or maintenance for safety reasons. When both tracks are closed, service across the Long Bridge is interrupted, and VRE and Amtrak are not able to provide train service from Virginia across the Potomac River to their primary destinations of L'Enfant Plaza or Washington Union Station and vice versa. Under those conditions, CSXT trains are redirected approximately 48 miles northwest to the crossing at Harpers Ferry, the next closest freight railroad crossing, substantially increasing service cost and time for CSXT.

In addition, incorporating redundant and resilient railroad facilities provides the necessary back-up that can maintain corridor services and minimize service disruptions during a wide range of planned and unplanned maintenance and upgrades to the system. Providing resiliency and redundancy will better support the reliability of the Long Bridge Corridor and help ensure that it is adaptable to changing circumstances.

5.0 Will the Long Bridge Project consider bicycle and pedestrian access?

Although not part of the Proposed Action's Purpose and Need, the Long Bridge Project will explore the potential opportunity to accommodate connections that follow the trajectory of the Long Bridge Corridor to the pedestrian and bicycle network. The feasibility of this opportunity will be assessed as the Project progresses, and will consider whether a path can be designed to be consistent with railroad operator plans and pursuant to railroad safety practices. Future efforts to accommodate connections to the pedestrian and bicycle network may be advanced as part of the Project, or as part of a separate project(s) sponsored by independent entities.