

SEPTEMBER 2019

Executive Summary

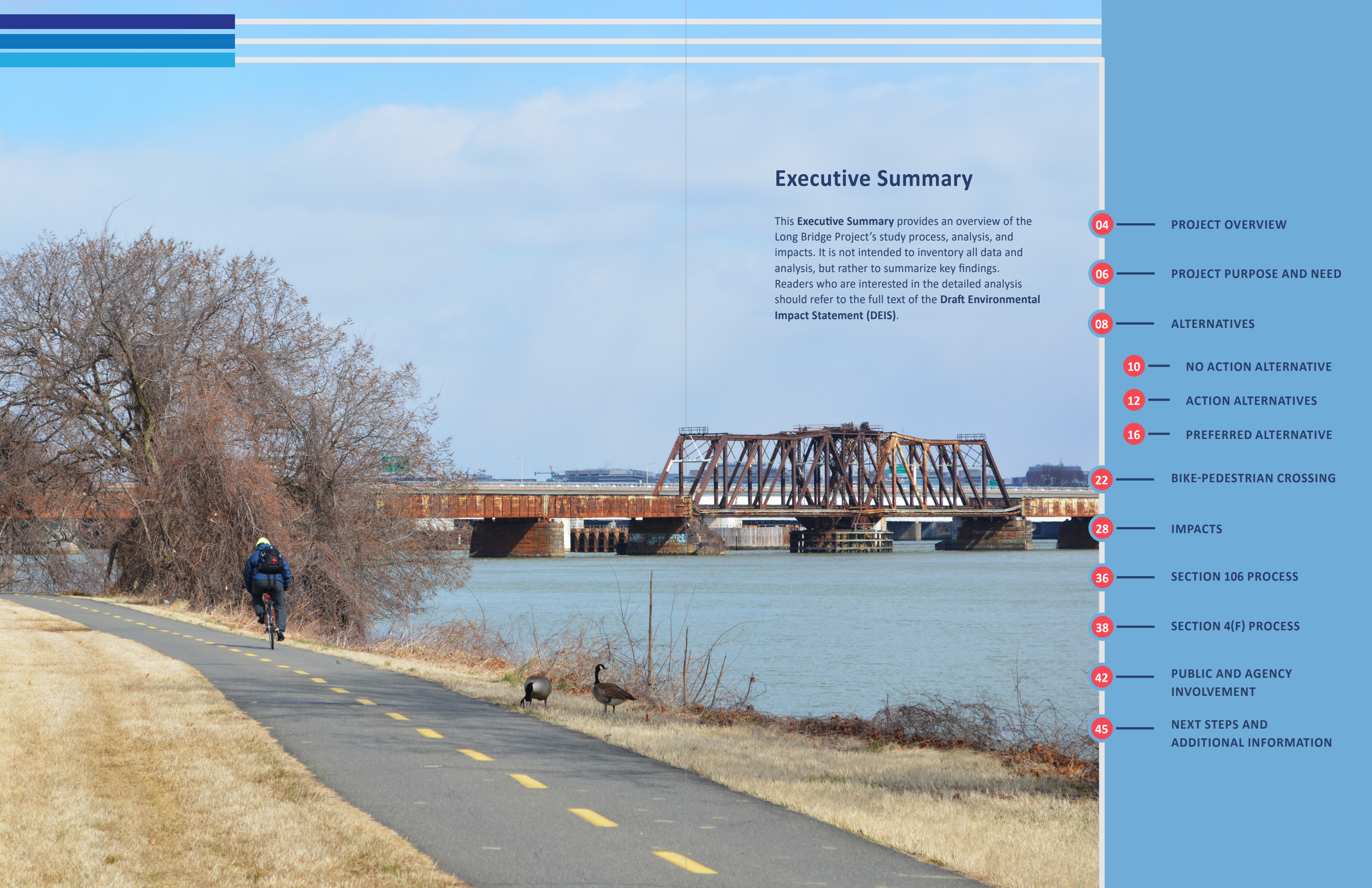


LONG BRIDGE PROJECT

Connecting North and South Through our Nation's Capital

Prepared by:





Executive Summary

This **Executive Summary** provides an overview of the Long Bridge Project’s study process, analysis, and impacts. It is not intended to inventory all data and analysis, but rather to summarize key findings. Readers who are interested in the detailed analysis should refer to the full text of the **Draft Environmental Impact Statement (DEIS)**.

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What is Long Bridge?

Long Bridge is the only railroad crossing over the Potomac River between the District of Columbia (the District) and Virginia. CSX Transportation (CSXT), a Class I freight railroad, owns and operates the existing two-track railroad bridge. Constructed in 1904, Long Bridge serves freight, intercity passenger, and commuter rail. CSXT, the National Railroad Passenger Corporation (Amtrak), and Virginia Railway Express (VRE) currently use the bridge and the Long Bridge Corridor. Maryland Area Regional Commuter (MARC) rail currently terminates at Washington Union Station and plans to expand into the Long Bridge Corridor and Northern Virginia. Norfolk Southern, also a Class I freight railroad, has rights to use Long Bridge, but does not currently exercise those rights. In addition, Long Bridge is a contributing element to the East and West Potomac Parks Historic District, and lies within the viewshed and crosses over the George Washington Memorial Parkway (GWMP), which is a unit of the National Park Service (NPS).

What is an EIS?

NEPA requires agencies to identify environmental effects of Federal actions. It also requires that agencies involve the public in decision-making. This allows agencies to make well-informed decisions. An EIS identifies the effects an action could have on the human and natural environment. An EIS also identifies measures to avoid, minimize, or mitigate potential impacts. Finally, it documents compliance with Federal, state, and local environmental laws and regulations.

What is the Long Bridge Project?

The Federal Railroad Administration (FRA) and the District Department of Transportation (DDOT) prepared this DEIS for the Long Bridge Project (the Project) to meet the requirements of the National Environmental Policy Act (NEPA) of 1969 (42 USC 4321), the Council on Environmental Quality (CEQ) Implementing Regulations for NEPA, (40 CFR Part 1500-1508), the FRA Procedures for Considering Environmental Impacts (64 FR 28545), and Efficient Environmental Reviews for Project Decisionmaking (23 USC 139). In addition to this DEIS, FRA is preparing a Draft Section 4(f) Evaluation to comply with Section 4(f) of the United States Department of Transportation Act of 1966 (49 USC 303).

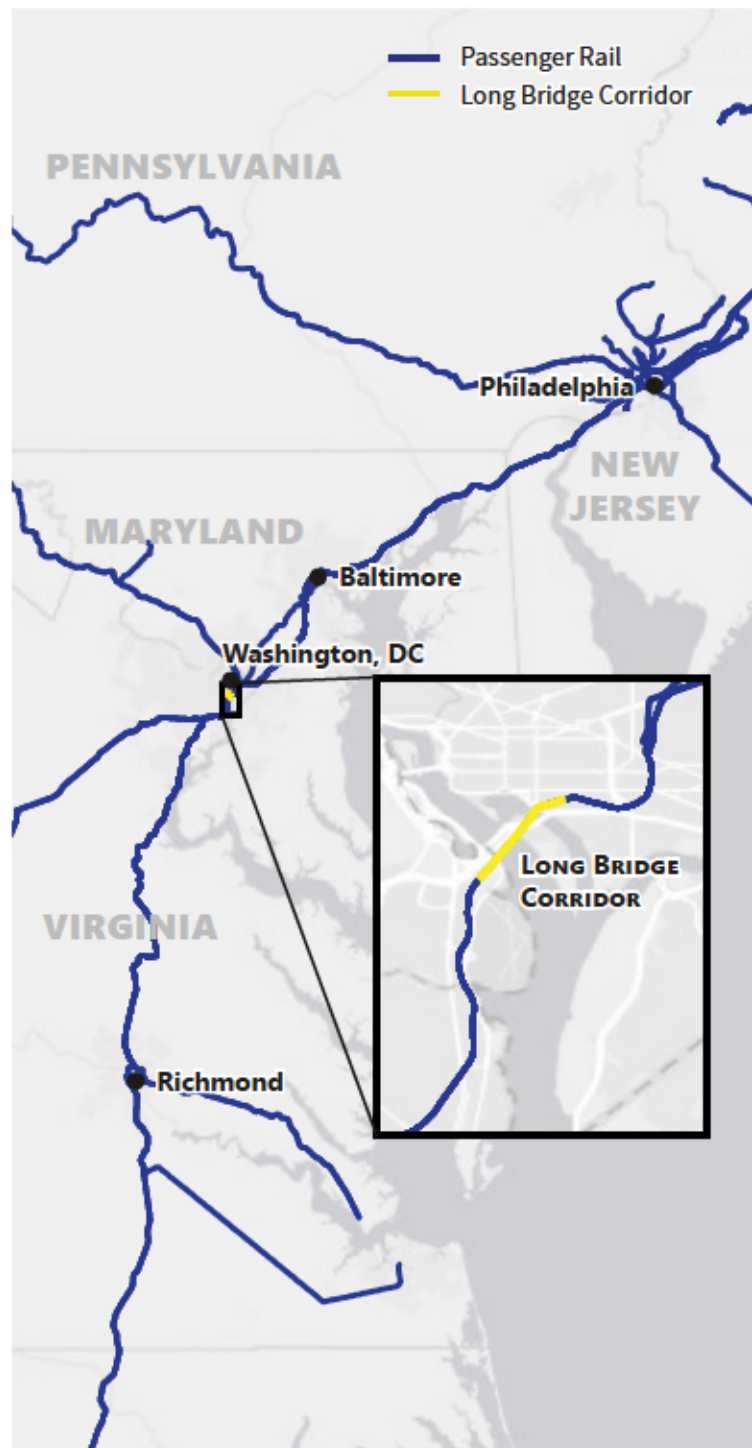
The Proposed Action (referred to in the EIS as the Project) consists of potential improvements to Long Bridge and related railroad infrastructure between RO Interlocking in Arlington, Virginia, and L'Enfant (LE) Interlocking near 10th Street SW in the District (the Project Area).

An interlocking is a segment of railroad infrastructure comprised of track, turnouts, and signals linked (interlocked) in a way that allows trains to safely move from one track to another, or across tracks, preventing conflicting train movements. Note that the proper name of RO Interlocking is "RO." It is not an acronym.

The Project proposes to address railroad capacity needs in year 2040. It connects logical termini, has independent utility, and does not restrict consideration of alternatives for other reasonably foreseeable transportation projects in the area. The Project is located in the Monumental Core, the symbolic and Federal center of the District, with important views of nationally significant cultural resources including the Washington Monument, Lincoln Memorial, and other prominent monuments, buildings, and lands, as well as the Potomac River.



What is the Purpose and Need of the Long Bridge Project?



The purpose of the Project 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 Project 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. More information on the need for the Project is outlined to the right.

Does the existing Long Bridge need replacing?

No. CSXT owns the bridge. They inspect all their bridges annually. CSXT completed a rehabilitation of Long Bridge in October 2016. CSXT states that they maintain Long Bridge in proper condition for railroad purposes and the bridge is sufficient to meet the needs of their freight customers for the foreseeable future.



Why does the Long Bridge Corridor need more capacity, resiliency and redundancy to ensure continued network connectivity?

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. Operators plan to increase passenger and freight train volumes across Long Bridge by 153 percent by 2040.

FRA and DDOT based expected train volumes in 2040 on input from bridge stakeholders, including CSXT, VRE, Amtrak, Norfolk Southern, and MARC, as well as the concurrent Washington, DC to Richmond Southeast High Speed Rail (DC2RVA) EIS.

Several conditions drive the future demand for railroad service in the Corridor, including population and employment growth, roadway congestion, and freight growth. Capacity constraints at critical infrastructure chokepoints, such as Long Bridge, limit service expansion.

The configuration of the existing Corridor also limits operators' ability to recover from service delays, making it difficult to accommodate growth in ridership and offer reliable service. Providing more tracks and crossovers would allow trains to pass each other. This would give operators the ability to expand service and recover from delays. Without more capacity, the Long Bridge Corridor would not be able to handle projected 2040 train volumes. These planned train volumes would cause unacceptable service and reliability implications.

INSUFFICIENT RESILIENCY AND REDUNDANCY

The railroad network currently lacks resiliency and redundancy. This is because of the number of tracks and absence of suitable detours.

Track Configuration. The current two-track configuration requires strict schedules to maintain normal operations in the Corridor. Slight schedule slips can cause large delays to intercity train service. These delays are a daily event in the Corridor, particularly between the District and Alexandria, Virginia. These delays cause cascading service disruptions that can affect thousands of travelers. The frequent delays and current

volume of commuter and intercity passenger trains in the Corridor affect CSXT freight operations. They limit CSXT's ability to operate during peak passenger periods and hinder the flow of the national freight network. Freight trains frequently must stop to allow passenger service to pass through the Corridor. This affects the efficiency and reliability of freight movements.

No Practical Detours. Closing both tracks in the Long Bridge Corridor interrupts service. During these times, VRE cannot offer train service between Virginia and the District; Amtrak cannot offer service between the Northeast Corridor and the Southeast; and CSXT must redirect its trains hundreds of miles.

CONTINUED NETWORK CONNECTIVITY

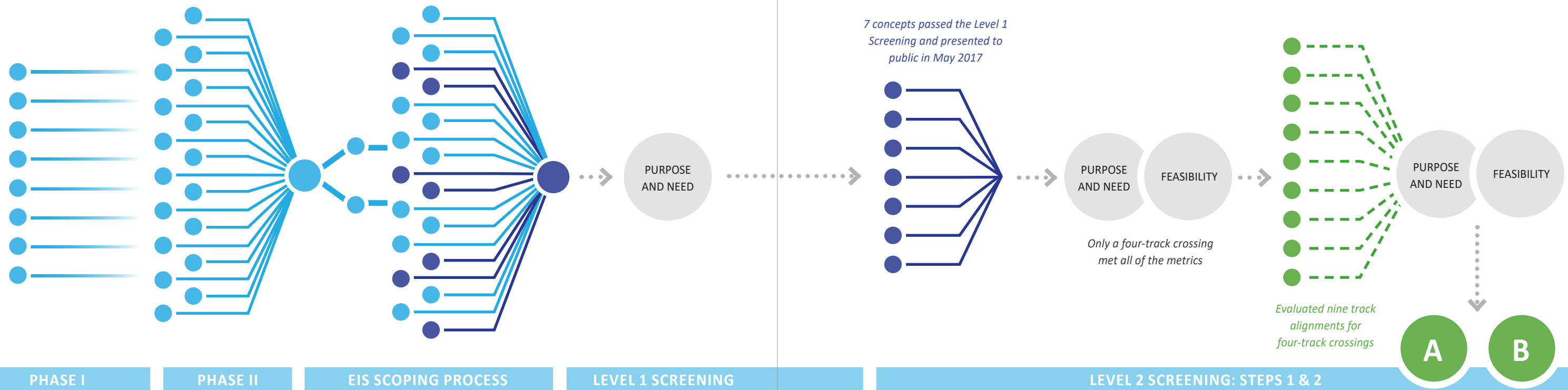
The Long Bridge Corridor plays an essential role in the Washington Metropolitan Region, the East Coast transportation network, and the national railroad network. Currently, Long Bridge is a chokepoint. It limits new passenger railroad service between population centers. It also limits added freight service along the Eastern Seaboard.

The Long Bridge Corridor connects intercity passenger trains between the Northeast Corridor and major destinations in the Southeast. The Long Bridge Corridor connects the Virginia suburbs to employment centers in the District's downtown. It also connects the District and Maryland to Crystal City in Arlington, Virginia. CSXT uses the Corridor as part of its freight network to connect goods and customers on the Eastern Seaboard. The Long Bridge Corridor must ease the movement of people and goods, as well as connections to other parts of the transportation network. Regional, state, and local transportation plans, as well as railroad operator plans, assume the Corridor will continue to play this role in the future. FRA and DDOT based expected train volumes in 2040 on input from bridge stakeholders, including CSXT, VRE, Amtrak, Norfolk Southern, and MARC, as well as the concurrent DC2RVA EIS.

Long Bridge Alternatives Development Process

KEY

- Concepts have no engineering design or configuration
- Concepts that passed Level 1 Screening
- - - Alignment options include potential configurations based on engineering



FRA and DDOT conducted a thorough alternatives development and screening process to identify the Action Alternatives for evaluation in the DEIS. FRA and DDOT identified a broad and reasonable range of concepts, as well as a No Action Alternative. FRA and DDOT examined the results of a pre-NEPA two-phase feasibility study, considered input from the agency

and public outreach process, and coordinated with railroad owners and operators (CSXT, Amtrak, and VRE). Following initiation of the EIS, FRA and DDOT screened these concepts in a two-level process using criteria and metrics based on the Project's Purpose and Need statement, in addition to feasibility.

PHASE I 2012-2015
LONG BRIDGE STUDY
Considered 8 multimodal concepts to address the deficiencies of the Long Bridge Corridor.

No Action

- Bridge
- Tunnel
- Two-track crossing
- Four-track crossing
- Multimodal connections, including streetcar, bike-pedestrian crossing, and vehicle lanes

PHASE II 2015-2016
LONG BRIDGE STUDY
Expanded to 18 concepts that included combinations of the following elements:

No Action

- Bridge
- Tunnel
- Two-track crossing
- Three-track crossing
- Four-track crossing
- Five-track crossing
- Constructing a new railroad corridor in a different location
- Multimodal connections, including streetcar, bike-pedestrian crossing, and vehicle lanes

EIS SCOPING PROCESS 2016
Split one concept into two options, resulting in 19 concepts that included combinations of the elements noted in the Phase II Long Bridge Study.

No Action

- Bridge
- Tunnel
- Two-track crossing
- Three-track crossing
- Four-track crossing
- Five-track crossing
- Constructing a new railroad corridor in a different location
- Multimodal connections, including streetcar, bike-pedestrian crossing, and vehicle lanes

LEVEL 1 2016-2017
CONCEPT SCREENING
Evaluated 19 concepts for their ability to meet the Project Purpose and Need. Concepts focused on the elements, as screening occurred before design and engineering development determined configurations.

A bike-pedestrian crossing could be accommodated with any alignment option.

LEVEL 2 2017-2018
CONCEPT SCREENING
Two-step screening process. FRA and DDOT also considered potential environmental impacts and cost, however, they did not use these considerations to eliminate concepts.

STEP 1
Considered whether each concept, which varied in terms of number of tracks crossing the Potomac River, could be designed to meet the Purpose and Need and feasibility metrics.

STEP 2
Evaluated 9 four-track alignment options using the same Purpose and Need and feasibility metrics as in Step 1. Alignments represented full range of bridge and track configurations based on safety, standards, and minimization of right-of-way impacts.

IDENTIFICATION OF ACTION ALTERNATIVES 2018
FRA and DDOT identified Alignment Option A and Alignment Option B as the two Action Alternatives for evaluation in the DEIS. Either alternative could accommodate a bike-pedestrian crossing.

What alternatives are evaluated in the EIS?

The CEQ regulations for implementing NEPA (40 CFR 1502) require that Federal agencies “use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.” The regulations call for an EIS to “rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.”

No Action Alternative

The CEQ regulations require consideration of a No Action Alternative. This alternative represents the conditions that would exist in the planning year (in this case, 2040) if a project is not implemented (40 CFR 1502.14). While the No Action Alternative does not meet the the Long Bridge Project’s Purpose and Need, it serves as comparison against the potential impacts of the Action Alternatives.

The Long Bridge Corridor is part of a multimodal transportation network that consists of railroads, transit, trails (bicycle and pedestrian), and roadways. The No Action Alternative includes the existing transportation network, plus all proposed transportation projects within the Study Area (0.25 miles of the existing Long Bridge Corridor) planned for completion by 2040. The projects included in the No Action Alternative all have independent utility from the Long Bridge Project.

Are DDOT and FRA considering a bike-pedestrian crossing?

Yes. During the alternatives development and screening process, FRA and DDOT evaluated multiple multimodal transportation options, including a bike-pedestrian bridge with connections to Long Bridge Park, the Mount Vernon Trail, and Ohio Drive SW. Following safety and engineering analysis and railroad operator coordination, FRA and DDOT selected a bike-pedestrian crossing option on an independent bridge over the Potomac River. The crossing would be located between the Metrorail bridge and a new upstream railroad bridge. FRA and DDOT are considering this crossing as potential mitigation for impacts to properties protected under Section 4(f) of the USDOT Act of 1966.

See page 22 for more information.



Projects included in the No Action Alternative

PLANNED RAILROAD PROJECTS

L’ENFANT NORTH AND SOUTH STORAGE TRACKS

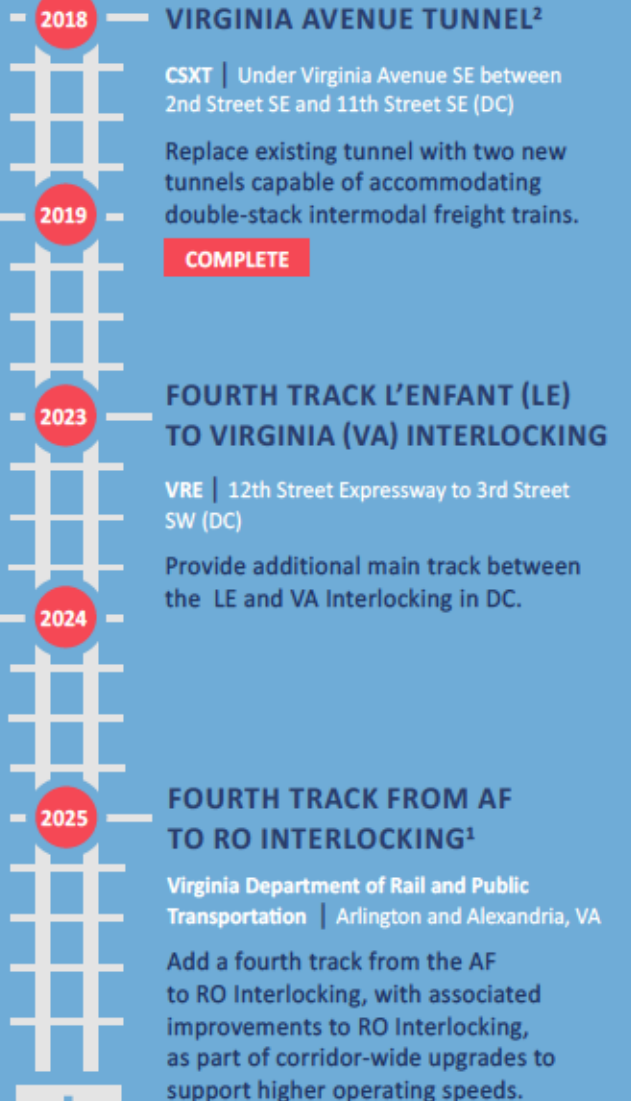
VRE | VRE L’Enfant Station (DC)
Convert existing side tracks at VRE L’Enfant Station to storage tracks while permanent Midday Storage Facility is under construction.

VRE L’ENFANT STATION IMPROVEMENTS

VRE | VRE L’Enfant Station (DC)
Create an island platform and allow for simultaneous boarding of two tracks at L’Enfant Station, and extend and widen platform to accommodate eight-car trains and a future fourth track.

BOUNDARY CHANNEL DRIVE INTERCHANGE

Arlington County | Boundary Channel Drive/I-395 Interchange in Arlington, VA
Redesign and reconstruction of Long Bridge Drive interchange with I-395 and Boundary Channel Drive to increase safety and better accommodate multimodal transportation.



CSXT | Under Virginia Avenue SE between 2nd Street SE and 11th Street SE (DC)

Replace existing tunnel with two new tunnels capable of accommodating double-stack intermodal freight trains.

VRE | 12th Street Expressway to 3rd Street SW (DC)

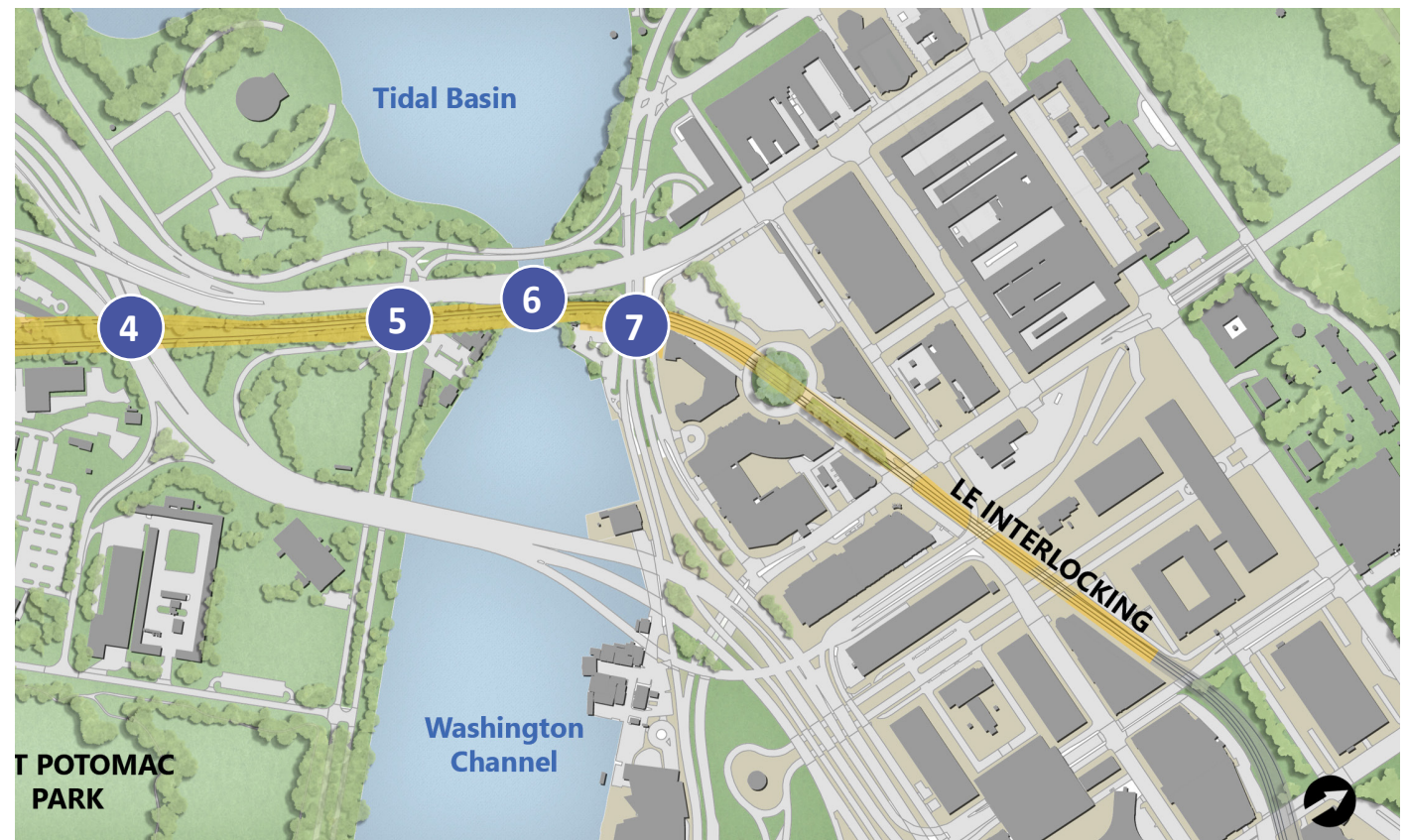
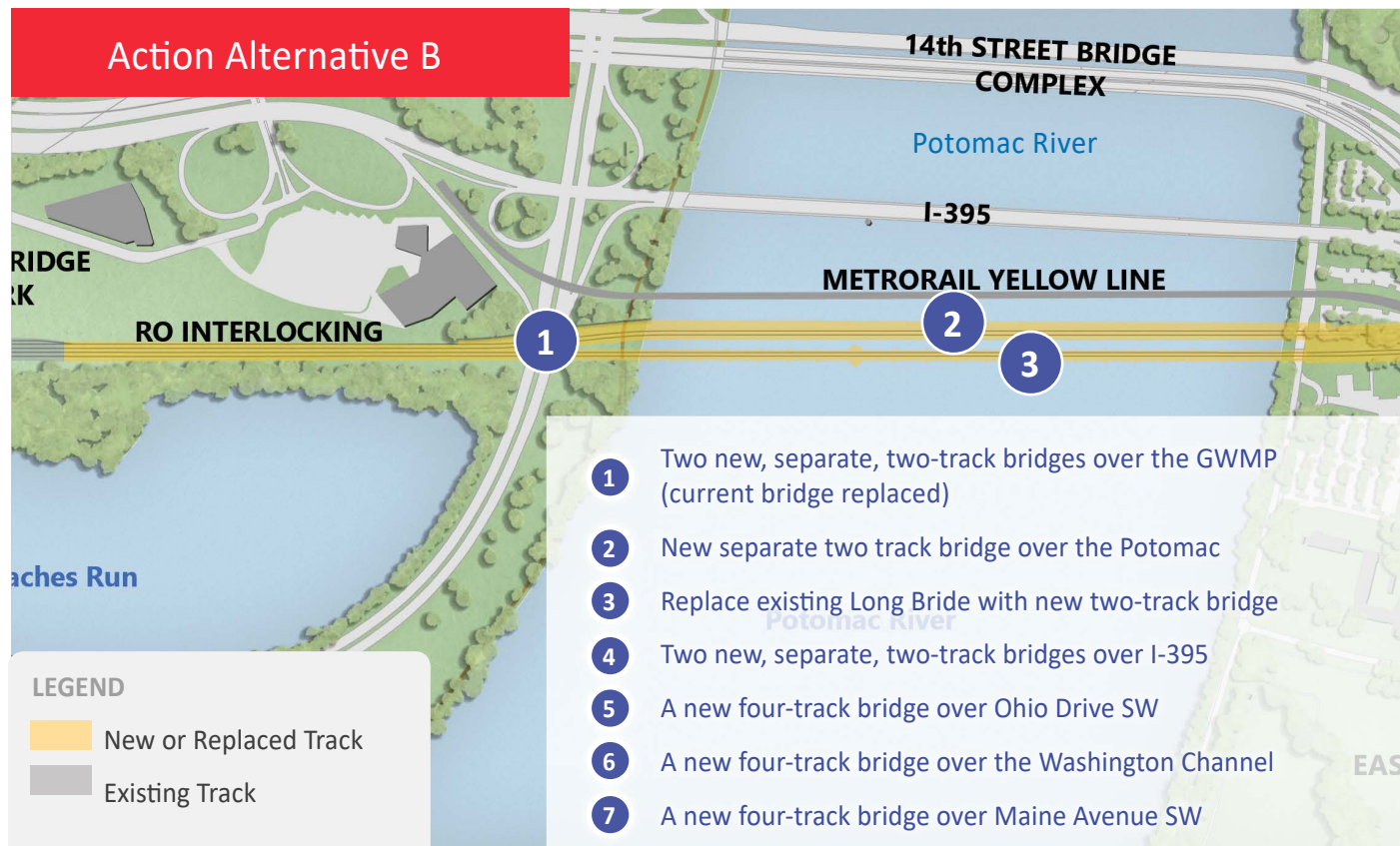
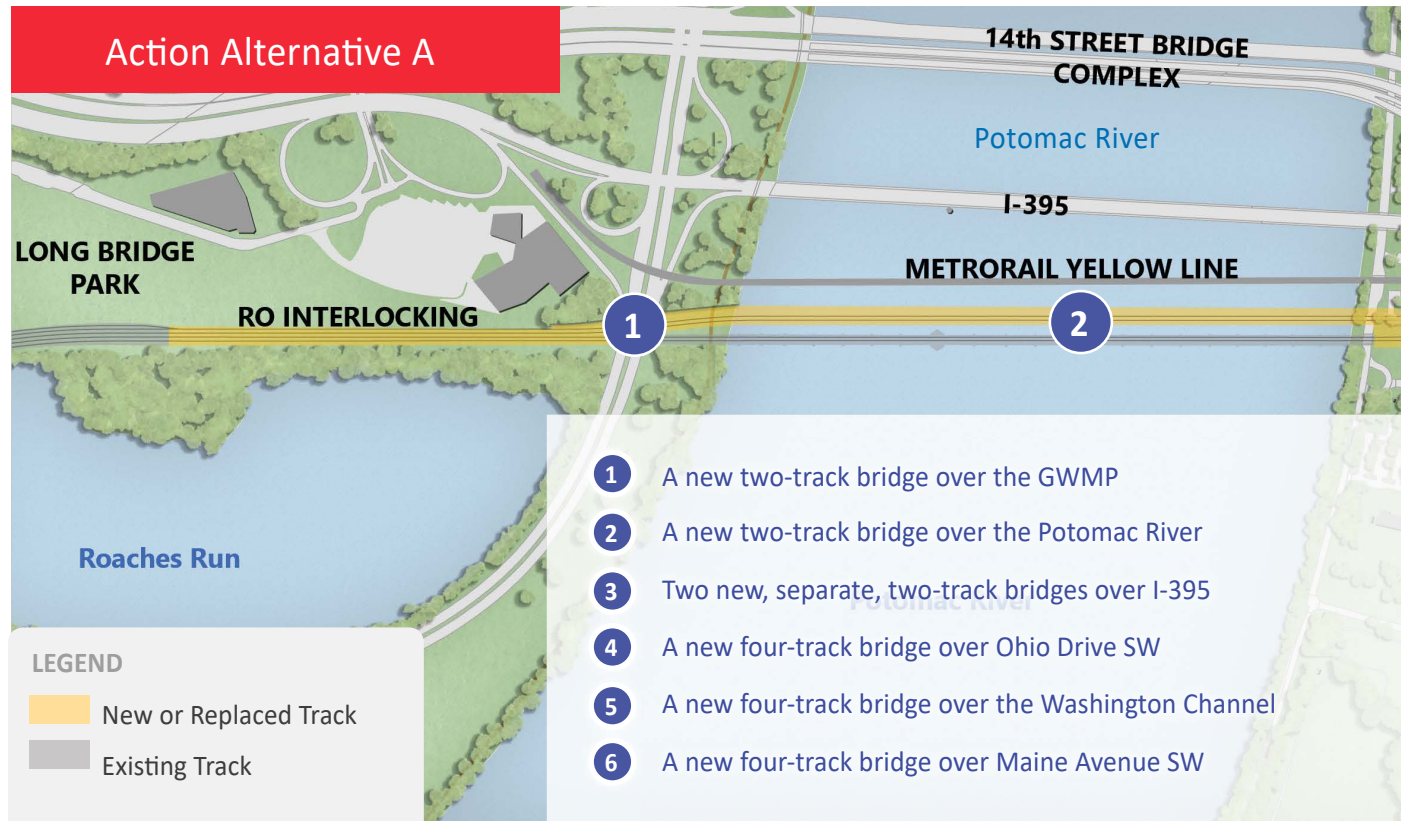
Provide additional main track between the LE and VA Interlocking in DC.

Virginia Department of Rail and Public Transportation | Arlington and Alexandria, VA

Add a fourth track from the AF to RO Interlocking, with associated improvements to RO Interlocking, as part of corridor-wide upgrades to support higher operating speeds.

¹ “AF” and “RO” are the proper names of the interlockings. They are not acronyms.

² The Virginia Avenue Tunnel is not within the Study Area, but directly relates to the operations and infrastructure of the corridor and therefore was included as part of the No Action Alternative Infrastructure.



Action Alternative A

Action Alternative A would construct a new two-track railroad bridge over the Potomac River and the GWMP between the existing railroad bridge and the Metrorail Bridge. It would expand the Long Bridge Corridor from two to four tracks, including all necessary infrastructure improvements from RO Interlocking in Arlington, Virginia through LE Interlocking in the District. This alternative would retain the existing Long Bridge over the Potomac River as well as the railroad bridge over the GWMP.

At the southern end of the Project, Action Alternative A would add two tracks to the existing Corridor and tie into the four tracks at RO Interlocking proposed by the concurrent DC2RVA project. This alternative would construct a new two-track railroad bridge over the GWMP while retaining the existing bridge. The new two-track bridge crossing would continue over the Mount Vernon Trail (MVT), Potomac River, and Ohio Drive SW.

After crossing the Potomac River and Ohio Drive SW, the Corridor would continue through East Potomac Park, crossing over the portal to the Metrorail Yellow Line tunnel with a new two-track bridge. After crossing the Metrorail Portal, Action Alternative A would continue with four tracks across East Potomac Park, the Washington Channel, and Maine Avenue.

The four tracks would continue underneath Maryland Avenue SW. From Maryland Ave SW, the tracks would travel along the existing Corridor underneath 12th Street SW and the 12th Street Expressway. Near L'Enfant Plaza SW the tracks would tie into the four tracks proposed at LE Interlocking in a separate project by VRE. Throughout the Corridor, Action Alternative A would construct and reconstruct related infrastructure like retaining walls and embankments and regrade and realign the existing tracks as necessary.

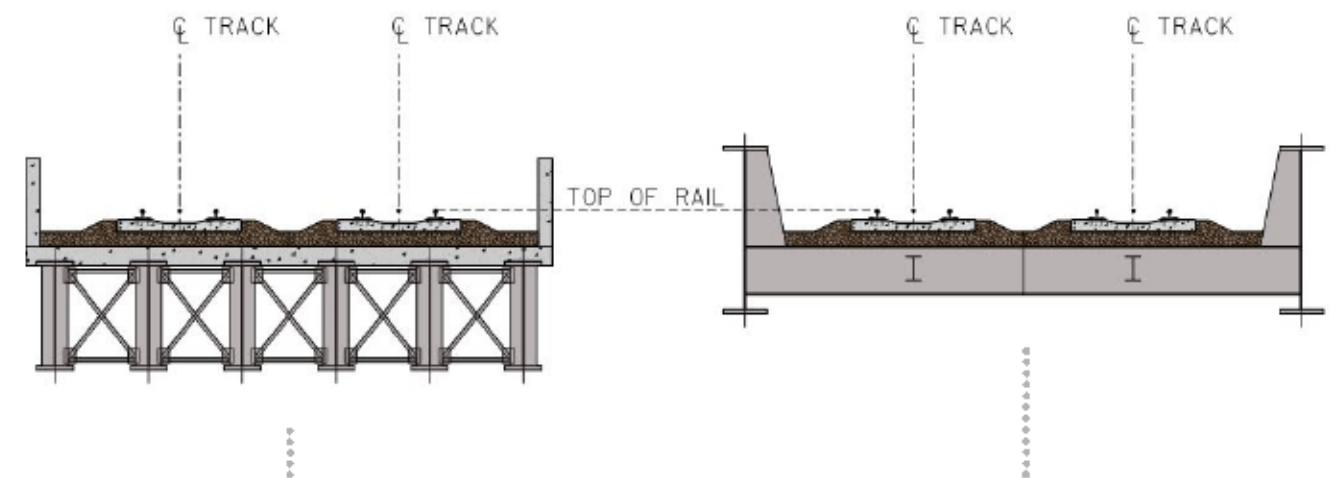
Action Alternative B

Similar to Action Alternative A, Action Alternative B would construct a new two-track railroad bridge over the Potomac River and the GWMP between the existing railroad bridge and the Metrorail Bridge. However, Action Alternative B would also replace the existing Long Bridge and the railroad bridge over the GWMP rather than keeping those bridges. In addition to replacing the bridge over the GWMP and Long Bridge, Action Alternative B would expand the Long Bridge Corridor from two to four tracks in the same manner as Action Alternative A.

To achieve a four-track corridor, either Action Alternative would require the demolition of some existing crossings through this area and would construct several new bridges.

BRIDGE STRUCTURE TYPES

In both of the Action Alternatives, the new bridge(s) would be either a steel deck girder bridge or a steel through girder bridge. These bridge types are common railroad bridge structures used in the United States.



A steel deck girder bridge is composed of a concrete deck carried on multiple lengthwise steel plate girders and cross frames.

A steel through girder bridge is comprised of two lengthwise girders spanned by floorbeams.



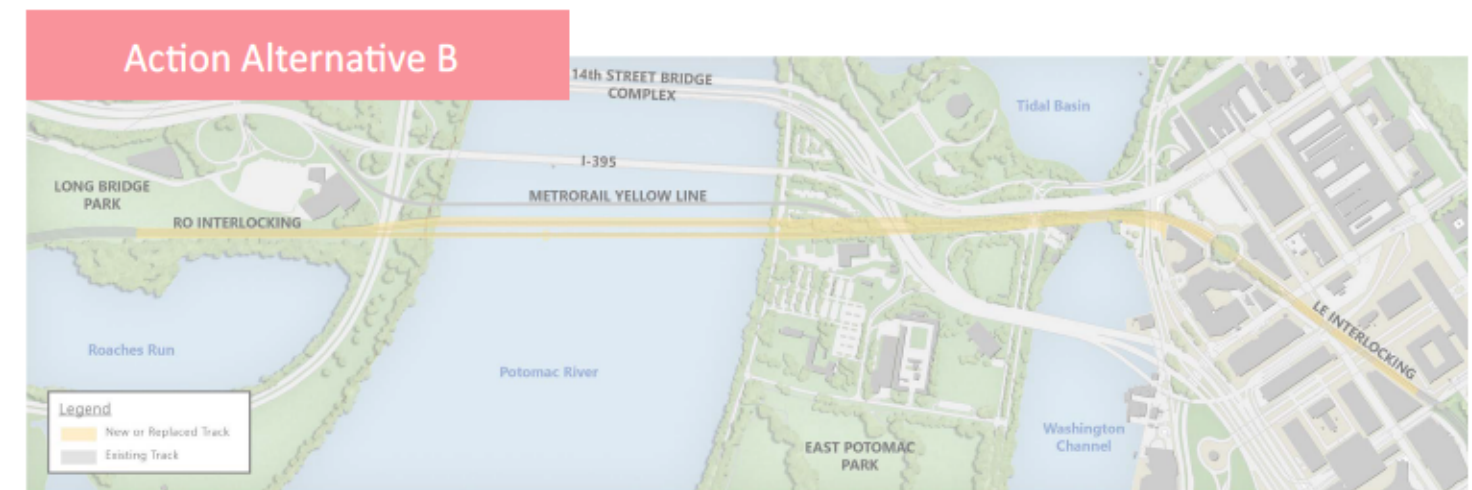
What is FRA and DDOT's Preferred Alternative?

FRA and DDOT selected **Action Alternative A** as the Preferred Alternative for the Project after considering the Purpose and Need of the Project; potential short-term and long-term benefits and impacts; public and agency comments; and costs of the Alternatives. When compared to Action Alternative B, **Action Alternative A** would have fewer impacts, a shorter construction duration, and a lower capital cost. In addition, a replacement bridge would provide minimal operational benefits compared to the existing Long Bridge.

Potential Non-Environmental Benefits and Costs of the Alternatives

	NO ACTION ALTERNATIVE	ACTION ALTERNATIVE A	ACTION ALTERNATIVE B
SUPPORT FOR PURPOSE AND NEED			
Capacity: Eliminates/prevents operational bottleneck	No	Yes	Yes
Network Connectivity: Facilitates access to existing stations, nodes, freight network, and trains	No	Yes	Yes
Resiliency and Redundancy: Facilitates continued operations during planned maintenance or emergency conditions	No	Yes	Yes
CAPITAL COSTS AND CONSTRUCTION DURATION			
Estimated Capital Costs	-	Approx. \$1.9 billion	Approx. \$2.8 billion
Construction Duration	-	Approx. 5 years	Approx. 8 years and 3 months

FRA and DDOT selected **Action Alternative A** as the Preferred Alternative for the Project.



How would the Action Alternatives be built?

FRA and DDOT developed the construction methods, access and staging locations, and overall construction schedule to understand how the Project could construct the Action Alternatives while maintaining two railroad tracks in operation throughout construction. This information provides the basis for the evaluation of potential environmental impacts during construction. The addition of two tracks along the Corridor would significantly impact several structures. The Long Bridge Corridor contains six existing undergrade bridges, four existing overgrade bridges and viaducts, and one pedestrian bridge as well as Long Bridge. Other work through the Corridor would include reconfiguring existing tracks, installing track turnouts, installing new communication and

signal equipment, completing drainage modifications, and constructing several thousand linear feet of retaining walls along the railroad alignment. The following construction methods would be used for the construction of the Action Alternatives.

PHASED CONSTRUCTION

New bridges in the Corridor would include both steel through girder and steel deck girder structures. Contractors would construct the through girder structures off-site. Deck girder structures allow for on-site phased construction, which contractors would complete in three phases to maintain two tracks in operation at all times (except for 1- to 2-hour-long planned shutdowns for activities that crews cannot

conduct over live tracks). The I-395, Ohio Drive SW, Washington Channel, and Maine Avenue SW bridges would all require phased construction.

CONSTRUCTION ON LAND

Constructing the structures over land—the GWMP, I-395, Ohio Drive SW, and Maine Avenue SW—would require traffic control to address the high traffic volume roadways near the bridges while allowing for continued visitor access and safe work zones and worker protection. The traffic control measures to be implemented would include lane shifts, intermittent lane closures primarily during nighttime hours for construction vehicle access, and short duration traffic stoppages to allow for critical construction operations such as the erection of bridge components in a safe manner.

CONSTRUCTION OVER WATER

Constructing structures over the Potomac River and Washington Channel would require barges to store and assemble materials, to deliver labor and equipment, and

to support various construction activities. Crews would place barges at each pier for construction purposes as well as downstream for staging. The construction of temporary finger piers on each shore would allow crews to receive materials and equipment from the barges. Crews would erect superstructures over water with cranes on barges. Construction of the piers and some abutments would require watertight enclosures, which would involve excavating the river bottom.

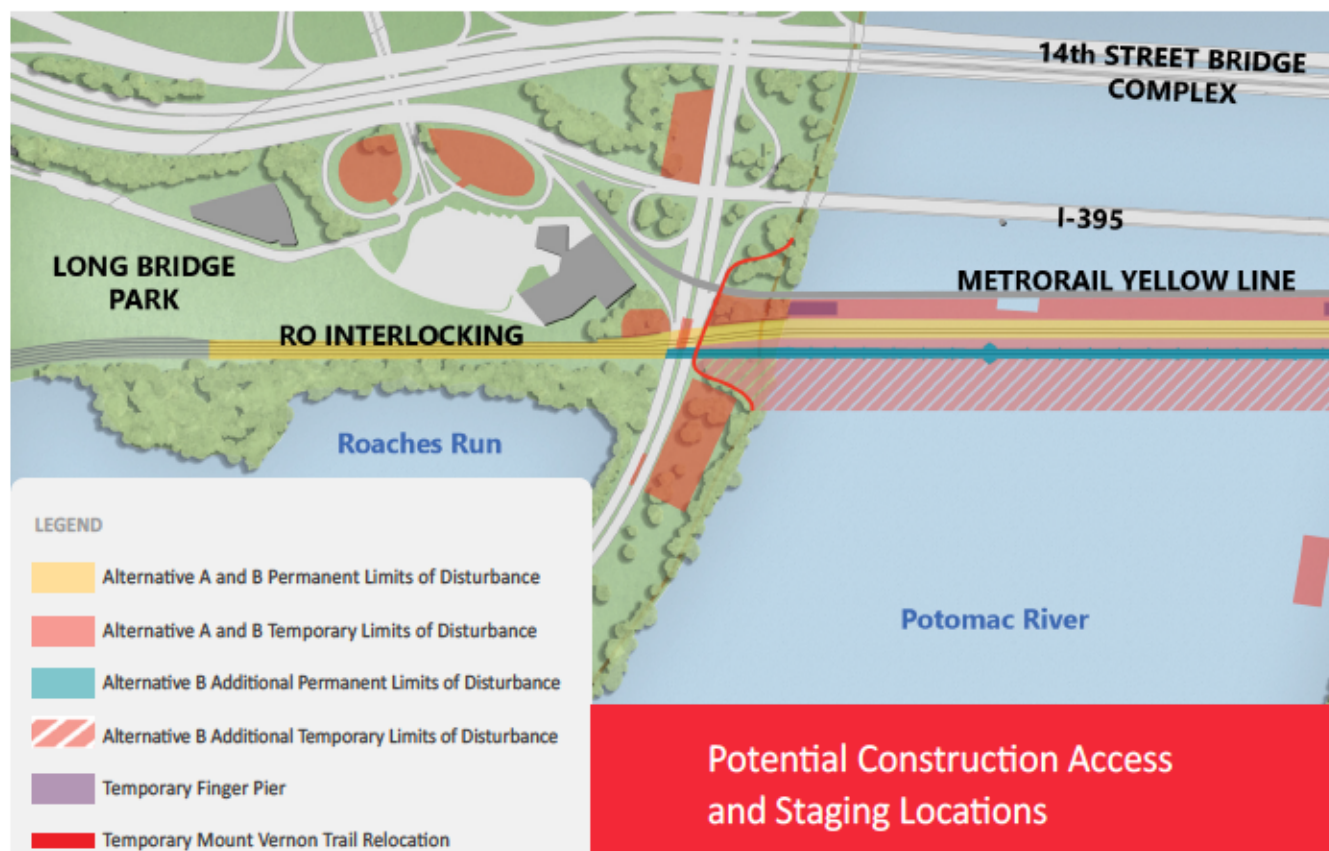
How long would it take to build the Action Alternatives?

Action Alternative A: approx. 5 years

Action Alternative B: approx. 8 years 3 months

While all other work in Action Alternative B would be the same as Action Alternative A, replacing the existing bridge over the GWMP and the existing Long Bridge would add approximately 3 years 3 months to the construction schedule.

The estimated construction durations are based on assumed work hours, site complexities, and phased construction.



How many trains will run in the Long Bridge Corridor in the future?

Train operators plan to substantially increase the number of trains running in the Corridor by 2040. To inform the evaluation of alternatives and their environmental impacts, FRA and DDOT coordinated with the train operators to understand the number of trains that would run in the Long Bridge Corridor with the No Action Alternative and Action Alternatives.

Currently, VRE and Amtrak operate trains across Long Bridge under an agreement with the bridge owner, CSXT. The agreement specifies a maximum number of trains each operator can run per day through the Long Bridge Corridor. For the No Action Alternative, which would not increase the capacity of the Corridor, FRA and

DDOT confirmed with CSXT that they would not renegotiate the agreements with the railroad operators to give them additional slots. This is because CSXT needs to maintain enough capacity on the bridge to meet its freight network demands. Therefore, in the No Action Alternative each operator would run the maximum number of trains allowed under the current agreement with CSXT, while CSXT would continue to add trains as needed within the available capacity limits.

Train operators plan to substantially increase the number of trains running in the corridor by 2040.

The train volumes in the No Action Alternative are significantly lower than the volumes anticipated in the operators' long-range plans. Operations modeling conducted during the Phase II Long Bridge Study showed that the two-track Corridor in the No Action Alternative could not handle future train volumes planned by the operators (192 trains per day). The operations simulation did not evaluate whether the existing infrastructure could handle 112 trains per day.

With the Action Alternatives, the operators would run more trains based on their long-range plans, as more capacity would be available. FRA and DDOT based the planning year 2040 train volumes on input from the railroad operators.

By 2040, the Action Alternatives would increase the number of passenger and freight trains running in the Corridor by 153 percent compared to today.

TRAIN OPERATOR	CURRENT NUMBER OF TRAINS PER DAY ¹	NUMBER OF TRAINS PER DAY WITH THE NO ACTION ALTERNATIVE ²	NUMBER OF TRAINS PER DAY WITH THE ACTION ALTERNATIVES ³
VRE	34 ⁴	38	92
MARC	0	0	8
AMTRAK/DC2RVA	24	26	44
CSXT	18	42	42
NORTHERN SOUTHERN	0	6	6
TOTAL	76	112	192

¹ Train volumes are based on existing operation agreements and were confirmed by train operators.

² Planning year 2040 No Action train volumes were established based on the concurrent DC2RVA EIS, Rail Service Growth in the No Build Alternative, Table 2.5-2, http://www.dc2rvairail.com/files/5315/0412/9086/Chapter_02_Alternatives_DC2RVA_DEIS.pdf, and confirmed by bridge stakeholders. The infrastructure assumed for the No Action Alternative may be able to accommodate the projected increased number of trains (112 trains per day). The operations simulation conducted during the Phase II Study evaluated the No Action infrastructure scenario against operator plans (192 trains per day). This resulted in fatally poor results that were operationally unacceptable for both passenger and freight operations.

³ Planning year 2040 planned train volumes were established based on input from bridge stakeholders, including CSXT, VRE, Amtrak, Norfolk Southern, and MARC, as well as the concurrent DC2RVA EIS.

⁴ The current number of VRE trains per day includes non-revenue movements.

Will the Project accommodate a bike-pedestrian crossing?

While a bike-pedestrian crossing is not part of the Purpose and Need for the Long Bridge Project, DDOT and FRA explored the potential opportunity to accommodate connections within the pedestrian and bicycle network in the Long Bridge Corridor. A crossing would provide an important connection within the regional trail system, linking Crystal City in Arlington, Virginia, and the District via Long Bridge Park and East Potomac Park. NPS, the Official with Jurisdiction over several parks impacted by the Project, agreed that a bike-pedestrian crossing could potentially serve as Section 4(f) mitigation for the impacts.

FRA and DDOT developed, analyzed, and screened several bike-pedestrian crossing options. During this process, FRA and DDOT sought input from the public and agencies. They also studied ways to safely provide a crossing alongside a heavily used corridor in the Monumental Core of the nation's capital.

FRA and DDOT identified an independent bike-pedestrian crossing as proposed Section 4(f) mitigation. This crossing would be on an independent bridge between the new railroad bridge and the Metrorail bridge. It would begin in Long Bridge Park; cross over the GWMP, MVT, Potomac River, and Ohio Drive SW; and end in the NPS Parking Lot C in East Potomac Park. Ramps would connect the crossing with a path just north of the new Long Bridge Park Aquatic Center, the MVT, and East Potomac Park.

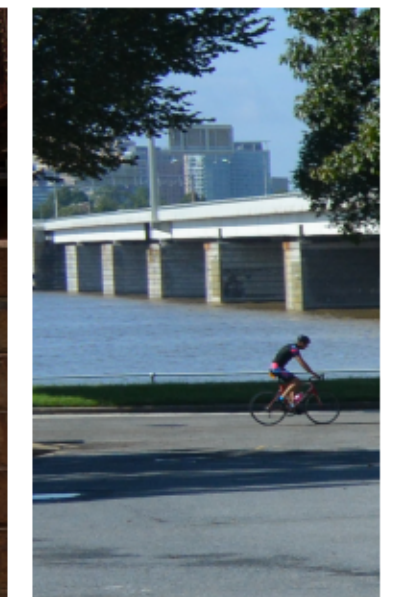
The identified bike-pedestrian crossing would have fewer potential adverse impacts to resources within the Study Area, lower security risk, and simpler maintenance, and would cost less than the other options previously considered. NPS and the railroad operators prefer this option to other options considered.

What is an "Official with Jurisdiction"?

An Official with Jurisdiction is the legal representative of the agency owning or administering a Section 4(f) resource, unless the agency has delegated or relinquished this authority via formal agreement. For historic properties, the Official with Jurisdiction is the State or Tribal Historic Preservation Office. Some Section 4(f) properties, such as an historic park, may have multiple Officials with Jurisdiction.

How would the bike-pedestrian crossing be built?

The bike-pedestrian crossing could be constructed along with the railroad bridge construction contract or separately following completion of the Project. If constructed along with the Project construction contract, it is anticipated that construction would begin following completion of the project as the same space is needed to deliver equipment and materials for the railroad bridge pier construction. Therefore, the construction of the bike-pedestrian bridge piers would take place after completion of the railroad bridge piers. Construction would take approximately two additional years.



What are the potential impacts of the alternatives?

The DEIS comprehensively inventoried the existing conditions of the elements of the human and natural environment within the Project Area and analyzed how the Action Alternatives may directly and indirectly impact environmental resources in the planning year 2040. The sections below describe the permanent and temporary impacts to key resource areas within the Project Area.

Key resources include those that differentiate among the Action Alternatives, those with major impacts, and those in which agencies, stakeholders, and the public expressed interest.

See Chapters 5 - 21 of the DEIS for potential impacts to all resources evaluated.

RAILROAD INFRASTRUCTURE & OPERATIONS

Increasing the capacity of the Long Bridge Corridor by expanding the Corridor from two to four tracks, including necessary infrastructure improvements, would result in major beneficial effects on railroad service, capacity, and frequency. The installation of additional tracks would also enable separation of passenger and freight trains, and allow continued operations during maintenance and breakdowns, minimizing delays, and improving railroad operational flexibility.

Construction activities for the Action Alternatives would have moderate (Action Alternative A) or major (Action Alternative B) adverse effects on railroad operations. Construction staging would maintain two tracks of railroad service operational during the entire construction period, except for some limited track outages for construction activities. The contractor and operators would schedule interruptions to two-track service to complete track shifts and realignments primarily for nights and weekends, and would keep interruptions to a minimum.

ROADWAY NETWORK

The existing roadway network within the Project Area contains several regionally important arterial and collector roadways that carry large volumes of traffic each day, especially during peak commute times when they can become heavily congested. Construction activities for the Action Alternatives would require traffic control measures, temporary lane closures, and temporary lane shifts on heavily trafficked roads such as the GWMP, I-395, and Maine Avenue SW, resulting in an adverse impact to traffic operations. The reductions in operations would vary depending on the day, time of day, duration of construction activity, and other factors. Construction on I-395 and Maine Avenue SW would also impact local and commuter bus routes that utilize those road segments. The extended construction duration for certain segments of the Corridor under Action Alternative B would lead to more intense traffic impacts to the GWMP and Ohio Drive SW.

LAND USE & PROPERTY

Conversion of existing land uses to railroad use in small areas of Crystal City, Long Bridge Park, East Potomac Park, and at the Washington Marina would cause minor land use impacts under both Action Alternatives. On the GWMP, the conversion to railroad use of the landscaped area between the existing Long Bridge and the Metrorail Bridge would reduce the ability to screen the views of transportation infrastructure, constituting a moderate impact. The increased frequency of trains traveling the Corridor near Long Bridge Park, the Mandarin Oriental Hotel, and the Portals V residential building would impact land use as a result of increased noise. The conversion of property to railroad use would affect several private properties, though none of the property impacts would result in displacement of residences or businesses. Most of the property impacts would affect local or Federal park properties.

“Effects” and “impacts” are used synonymously in the CEQ Implementing Regulations and this DEIS. Effects vary based on the environmental consequences of constructing and operating the Project.

Direct effects are caused by the action and occur at the same time and place as the proposed action.

Indirect effects are caused by the action and are later in time or farther removed in distance from the proposed action, but are still reasonably foreseeable. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Negligible effects may be adverse or beneficial, but would occur at levels that are not measurable.

Minor effects would be noticeable, but would not affect the function or integrity of the resource.

Moderate effects would be readily apparent and would influence the function or integrity of the resource.

Major effects would result in severely adverse or exceptionally beneficial changes to the resource.



WATER RESOURCES

The Long Bridge Corridor spans waters of the United States, Resource Protection Areas (RPAs), floodplains, wetlands, and watersheds. Action Alternative A would construct two new bridges over bodies of water—the Potomac River and the Washington Channel. In addition, Action Alternative B would replace the current Long Bridge. Despite the numerous water resources in the Corridor, the Project would have limited impacts on these resources.

Action Alternative A would slightly increase impervious areas within the three watersheds located in the Project Area, which could impact water quality without proper mitigation. Action Alternative B would lead to twice as much new impervious surface in the Potomac River watershed than Action Alternative A due to the addition of two new closed-deck bridges and removal of the existing open-deck bridge.

A portion of the additional impervious surface in Action Alternatives A and B would cause a permanent impact to the Chesapeake Bay Preservation Areas through increased pollutant loading to waterbodies and loss of vegetation underneath bridge areas. The slight increase in the width of the replacement bridge deck would result in additional impacts to RPAs under Action Alternative B.

Both Action Alternatives would permanently impact less than an acre of waters of the United States from placing bridge piers in the Potomac River and Washington Channel. Construction staging and methods would temporarily impact an additional 0.4 and 0.6 acres of RPAs in Action Alternatives A and B, respectively.

NOISE & VIBRATION

The Long Bridge Corridor is an existing railroad corridor where the predominant sources of noise and vibration include railroad operations and traffic on roadways. While not located in a heavily residential area, the Long Bridge Corridor contains several noise and vibration-sensitive locations where noise may interfere with activities.

Noise levels would increase under the No Action Alternative because of increased train operations. Noise levels would further increase under the Action Alternatives as increased capacity in the Corridor would allow for even more trains to operate. Increased noise levels would exceed FTA severe noise criteria at the Portals V Residences, the Mandarin Oriental Hotel, and parts of Long Bridge Park. Noise levels would exceed FTA moderate noise criteria in other parts of Long Bridge Park.

Construction activities for the Action Alternatives also have the potential to increase noise in the Long Bridge Corridor, exceeding the District daytime noise limits at three locations and exceeding the District and Arlington County nighttime noise limits at several other locations. The construction noise impacts would extend for a longer period of time under Action Alternative B as the construction duration is approximately 3 years and 3 months longer.

Construction activities for the Action Alternatives would have no vibration impact at nearby buildings and the Jefferson Memorial Ashlar seawall. Construction vibration from all equipment and all activities would not exceed even the most stringent criterion for potential damage to fragile buildings. There is the potential for construction vibration to reach 0.9 inches per second (107 VdB) at the East Potomac Park seawall due to pile driving at approximately 20 feet. Since the sensitivity of the seawall to vibration is not known at this time, the seawall should be included in the contractor's Construction Noise and Vibration Control Plan.

AESTHETICS & VISUAL RESOURCES

The Long Bridge Corridor is in the Washington Monumental Core, the symbolic and Federal center of the District. The Corridor is part of viewsheds to and from the Washington Monument, Lincoln Memorial, and other prominent monuments, buildings, and lands.

To assess the visual impacts of the Action Alternatives, FRA and DDOT used 12 representative viewsheds and viewpoints of the Corridor. The most substantial visual impact under Action Alternative A from most of the viewsheds is the addition of the railroad bridges over the GWMP and the Potomac River and the removal of mature trees, some of which were planted to screen the railroad corridor from view.

Action Alternative B would have the same impacts as Action Alternative A but would also include the negative impact of removing the existing truss on Long Bridge, which removes a visual landmark from several viewsheds. Construction activities under both Action Alternatives would disrupt the visual experience from multiple viewsheds as well, with a longer disruption duration under Action Alternative B.

CULTURAL RESOURCES

Six historic districts are within the area potentially affected by the Long Bridge Project: the GWMP Historic District, the Mount Vernon Memorial Highway (MVMH) Historic District, the East and West Potomac Parks Historic District, the National Mall Historic District, the Rock Creek and Potomac Parkway Historic District, and the Richmond, Fredericksburg and Potomac Railroad Historic District.

The introduction of a new railroad bridge structure in Action Alternative A would alter views from the historic districts. It would also result in the removal or alteration of mature trees that were part of the original planting plan for the GWMP and the removal of Japanese cherry trees in East Potomac Park. In addition to impacting additional contributing vegetation, Action Alternative B would remove and replace the historic Long Bridge and the railroad bridge over the GWMP, which are contributing resources to, and visual components of, multiple historic districts.

PARKS & RECREATION

Much of the land surrounding the Long Bridge Corridor is local and Federal parkland. Within 0.25 miles of the Corridor, there are 245 acres of parks, including East Potomac Park in the District and the GWMP and Long Bridge Park in Arlington, Virginia. The GWMP and the National Mall and Memorial Parks (including East Potomac Park) are units of NPS. Action Alternative A would directly impact park users by converting approximately 3 acres of parkland to railroad use, as well as indirectly impacting park and recreation resources through increased noise from additional passing trains and removal of vegetation. Action Alternative B would have similar impacts to Action Alternative A. However, because Action Alternative B would replace two existing bridges, it would remove more vegetation and impact an additional 0.1 acres of parkland in East Potomac Park. The replacement bridges would also be more visible from the parks as their profiles would be slightly raised.

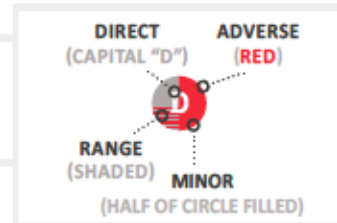
Construction staging and access would impact portions of the local and Federal parks as well, including visual impacts, use of parkland, and temporary relocation of important elements like the MVT. The construction impacts to parks and recreation would be more severe under Action Alternative B, which has a longer construction duration.



Summary of Potential Permanent Impacts to Key Resources

	IMPACT	NO ACTION ALTERNATIVE	IMPACT	ACTION ALTERNATIVE A (PREFERRED ALTERNATIVE)	ACTION ALTERNATIVE B
Increased railroad service capacity across the Potomac River	No		D	Yes	
Increased train service frequency	D	Yes, increased freight frequency and limited increase in passenger rail and commuter rail frequency	D	Yes	
Improved railroad operational flexibility	No		D	Yes	
Removal of spaces at NPS Parking Lot C	No		D	50 out of 67 public parking spaces	
Removal of spaces at Washington Marina parking lot	No		D	1/3 of ~88 parking spaces at Washington Marina parking lot	
Conversion of property to railroad use	No		D	2.94-acre park property; 0.38-acre private property	D 3.04-acre park property; 0.38-acre private property
Exceedance of FTA moderate noise criteria	D	Increased noise levels due to additional trains	D	2 locations: Long Bridge Park South & North	
Exceedance of FTA severe noise criteria	D	Increased noise levels due to additional trains	D	3 locations: Long Bridge Park Center, Mandarin Oriental Hotel, and Portals V Residences	
Direct impact to Long Bridge Park	No		D	0.04 or 0.14 acres	
Direct impact to GWMP	No		D	0.4 or 0.5 acres	
Vegetation removal within GWMP	No		D	Approx. 70 trees, including 3 larger trees	D Approx. 95 trees, including 4 larger trees
Direct impact to East Potomac Parks	No		D	2.4 acres	D 2.5 acres
Japanese cherry trees removed in East Potomac Park	No		D	Up to 4 trees	D Up to 7 trees

LEGEND



Summary of Potential Permanent Impacts to Key Resources *Cont.*

	IMPACT	NO ACTION ALTERNATIVE	IMPACT	ACTION ALTERNATIVE A (PREFERRED ALTERNATIVE)	ACTION ALTERNATIVE B
Vegetation removal within East Potomac Park	No		D	Approx. 170 trees, including 8 larger trees	D Approx. 179 trees, including 9 larger trees
Impact to views from GWMP	No		D	Yes	D Yes, including removal of visual landmark (truss)
Impact to views from MVT	No		D	Yes	D Yes, including removal of visual landmark D Increased views towards Monumental Core
Impact to views from bridges spanning the Potomac River	No		D	Yes	D Yes, including removal of visual landmark (truss) D Increased views of the river and ridgeline
Impact to views from East Potomac Park	No		D	Yes	D Yes, including removal of visual landmark (truss)
Removal of contributing features to GWMP Historic District	No		D	Yes, vegetation	D Yes, vegetation and historic bridge
Visual changes to GWMP Historic District	No		I	Introduction of new bridge into viewshed	I Introduction of new bridge into viewshed and removal of existing bridge truss
Removal of contributing features to MVMH Historic District	No		D	Yes, vegetation	D Yes, vegetation and historic bridge
Visual changes to MVMH Historic District	No		I	Introduction of new bridge into viewshed	I Introduction of new bridge into viewshed and removal of existing bridge truss
Removal of contributing features to East and West Potomac Parks Historic District	No		D	Yes, vegetation (up to 4 Japanese cherry trees)	D Yes, vegetation (up to 7 Japanese cherry trees) and historic bridge
Visual changes to East and West Potomac Parks Historic District	No		I	Introduction of new bridge would obstruct views of Long Bridge	I Introduction of new bridge into viewshed and removal of existing bridge truss
Natural habitat loss	No		D	3.7 acres	D 4.2 acres
Impact to impervious surface in Potomac River watershed	No		D	1.9-acre increase	D 3.8-acre increase
Impact to impervious surface in District Municipal Separate Storm Sewer System (MS4) watershed	No		D	0.8-acre decrease	
Impact to Waters of the U.S.	No		D	0.5 acres	
Impact to Resource Protection Areas	No		D	0.2 acres	D 0.3 acres

HUMAN ENVIRONMENT

NATURAL ENVIRONMENT

Summary of Potential Temporary Impacts to Key Resources During Construction

	IMPACT	NO ACTION ALTERNATIVE	IMPACT	ACTION ALTERNATIVE A (PREFERRED ALTERNATIVE)	ACTION ALTERNATIVE B
HUMAN ENVIRONMENT		No	2 years	5 years and 2 months	
	Increased heavy truck traffic and intermittent short-term closures along Crystal Drive, Long Bridge Drive, and Boundary Channel Drive	No	2 years	5 years and 2 months	
	Intermittent traffic control measures, lane closures, and lane shifts on the GWMP	No	4 years and 9 months	5 years and 2 months	
	Intermittent traffic control measures, lane closures, and lane shifts on I-395	No	4 years and 9 months	8 years and 1 month	
	Intermittent flagging/traffic control along Ohio Drive SW at NPS Parking Lot C	No	4 years and 1 month	4 years and 1 month	
	Intermittent traffic control measures, lane closures, and lane shifts on Maine Avenue SW	No	Limited outages over 5 years	Limited outages over 8 years and 3 months	
	Interruptions to two-track railroad service	Yes, due to projects included in the No Action Alternative	Yes, primarily during nights and weekends		
	Service disruptions to Metrorail Yellow Line due to construction of new bridge over the Metrorail Portal	No	Yes		
	Impacts to local and commuter bus routes on I-395 and Maine Avenue SW	No	2 years	5 years and 2 months	
	Realignment of MVT	No	4 years and 9 months	8 years and 1 month	
	Intermittent closures of pedestrian walkways in East Potomac Park	No	4 years and 1 month		
	Closure of Maine Avenue pedestrian bridge and Maine Avenue sidewalk	No	3 years and 4 months	8 years and 1 month	
	Periodic closure of main Potomac River navigation channel and adjacent spans	No	3 locations		
	Exceedance of District daytime noise limits	No	Yes		
	Exceedance of District and Arlington nighttime noise limits	No	0.01 or 0.4 acres 4 years and 2 months	0.01 or 0.4 acres 6 years, 8 months	
	Construction staging impacts to Long Bridge Park	No			

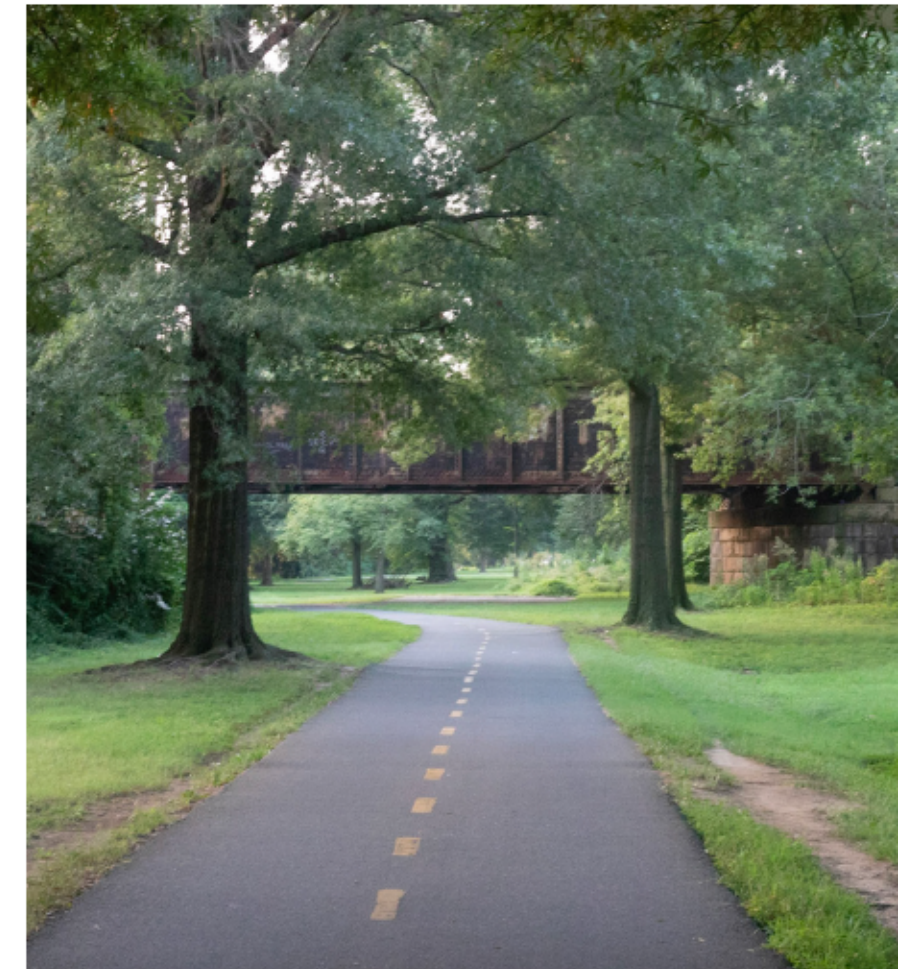


Summary of Potential Temporary Impacts to Key Resources During Construction *Cont.*

	IMPACT	NO ACTION ALTERNATIVE	IMPACT	ACTION ALTERNATIVE A (PREFERRED ALTERNATIVE)	ACTION ALTERNATIVE B
HUMAN ENVIRONMENT		No	3.4 or 3.8 acres 3 years and 4 months	3.4 or 3.8 acres 8 years, 1 month	
	Construction staging and access impacts to GWMP and MVT	No	4.8 acres 4 years and 9 months	4.8 acres 8 years, 1 month	
	Construction staging and access impacts to East Potomac Park	No	0.09 acres 3 years	0.09 acres 5 years	
	Construction access impacts to Hancock Park	No	Yes		
	Construction activities visible from the GWMP and MVT	No	Yes		
	Construction activities visible from Long Bridge Park	No	Yes		
	Construction activities visible from Potomac River and Washington Channel	No	Yes		
	Construction activities visible from East Potomac Park and Monumental Core	No	Yes		
	Construction activities visible from L'Enfant Plaza and Southwest Waterfront	No	Yes		
	Construction staging and access within portions of the GWMP Historic District would be noticeable and would diminish integrity	No	Yes		
	Construction staging and access within portions of the MVMH Historic District would be noticeable and would diminish integrity	No	Yes		
	Construction staging and access within portions of the East and West Potomac Parks Historic District would be noticeable and would diminish integrity	No	Yes		
	Construction staging and access within portions of the National Mall Historic District would be noticeable and would diminish integrity	No	Yes		
	Community disruption due to impacts to traffic and pedestrian and bicycle facilities during construction	No	1,822 jobs	1,683 jobs	
	Annual direct jobs during construction	No	441 jobs	407 jobs	
	Annual indirect jobs during construction	No			

Summary of Potential Temporary Impacts to Key Resources During Construction *Cont.*

NATURAL ENVIRONMENT	IMPACT	NO ACTION ALTERNATIVE	IMPACT	ACTION ALTERNATIVE A (PREFERRED ALTERNATIVE)	ACTION ALTERNATIVE B
	Temporary natural habitat loss	No	D	6.4 acres	D 6.9 acres
	Temporary fish habitat loss	No	D	0.7 acres	D 1.4 acres
	Increase in vessel traffic and potential vessel strikes with fish	No	D	Yes	
	Displacement of species that use the existing bridge	No		No	D Yes
	RPAs impacted	No	D	0.4 acres	D 0.6 acres
	Soil removed	No	D	29,000 cubic yards	D 45,000 cubic yards
	Concrete removed	No	D	12,000 cubic yards	D 40,000 cubic yards
Steel removed	No	D	3,000 cubic yards of steel	D 10,000 cubic yards of steel	



What are the potential impacts of the bike-pedestrian crossing?

The bike-pedestrian crossing would have adverse and beneficial permanent impacts on resources within the Study Area. It would have **beneficial impacts** on:

Recreation and parks due to enhanced connectivity and new recreational opportunities provided by the crossing.

Social and economic resources due to improved safety for bicyclists and pedestrians, additional connections among neighborhoods, and enhanced recreational resources.

Public health and elderly persons due to the creation of additional opportunities for active recreation.

Transportation due to enhanced connectivity within the bicycle and pedestrian network.

Air quality as the additional pedestrian and bicycle trips would reduce vehicle trips and the corresponding vehicular pollutant emissions.

The bike-pedestrian crossing would have **negligible to minor adverse impacts** to:

Natural systems and endangered species due to removal of some vegetation and disturbance of the bottom of the Potomac River, which would affect aquatic animal and plant life.

Water resources and water quality in the Potomac River and Roaches Run watershed due to increases in impervious area that would allow for buildup and wash-off of pollutants.

Geologic resources due to grading and filling in the floodplain to link the bike-pedestrian crossing with existing infrastructure on the north and south sides of the Potomac River.

Solid waste disposal due to increases in solid waste generation by users of the bike-pedestrian crossing.

Energy due to electricity demands for lighting as well as vehicles and equipment for maintenance.

Land use and property due to direct impacts to Long Bridge Park, the GWMP, and East Potomac Park.

Parking due to the placement of the proposed bike-pedestrian ramp in a parking lot in East Potomac Park, reducing the number of permanent parking spaces.

Navigation due to the installation of additional piers in the Potomac River, which pose hazards such as marine vessel strikes.

Safety and security due to the need for additional police and emergency response resources to ensure the safety and security of bridge and park users.

The bike-pedestrian crossing would have **moderate adverse impacts** on:

Aesthetics and visual resources due to the addition of a new bridge and the removal of some trees and mature vegetation within the viewshed.

Cultural resources due to a change in the historic character and views resulting from the addition of a new bridge crossing and the removal of some contributing vegetation.

The bike-pedestrian crossing would have adverse and beneficial permanent impacts on resources within the Study Area.



What is the Section 106 consultation process?

Section 106 of the National Historic Preservation Act of 1966 and its implementing regulations (36 CFR 800), require Federal agencies to take into account the effects of a project on historic properties. Section 106 also requires that the Federal agency involve agencies, the public, and "Consulting Parties." The Consulting Parties include the State Historic Preservation Office; Indian tribes; representatives of local governments; applicants for Federal assistance, permits, licenses, and other approvals; and other individuals or organizations with a demonstrated interest in the Project or historic preservation expertise. FRA is the Lead Federal Agency for the Section 106 process for the Long Bridge Project.

FRA consulted with District of Columbia State Historic Preservation Office (DC SHPO), Virginia Department of Historic Resources (VDHR), and other Consulting Parties regarding the Project's:

- Area of Potential Effect (APE),
- Identification of historic properties,
- Assessment of the Project's potential effects on historic properties, and
- Measures proposed to avoid, minimize, and mitigate adverse effects to historic properties.

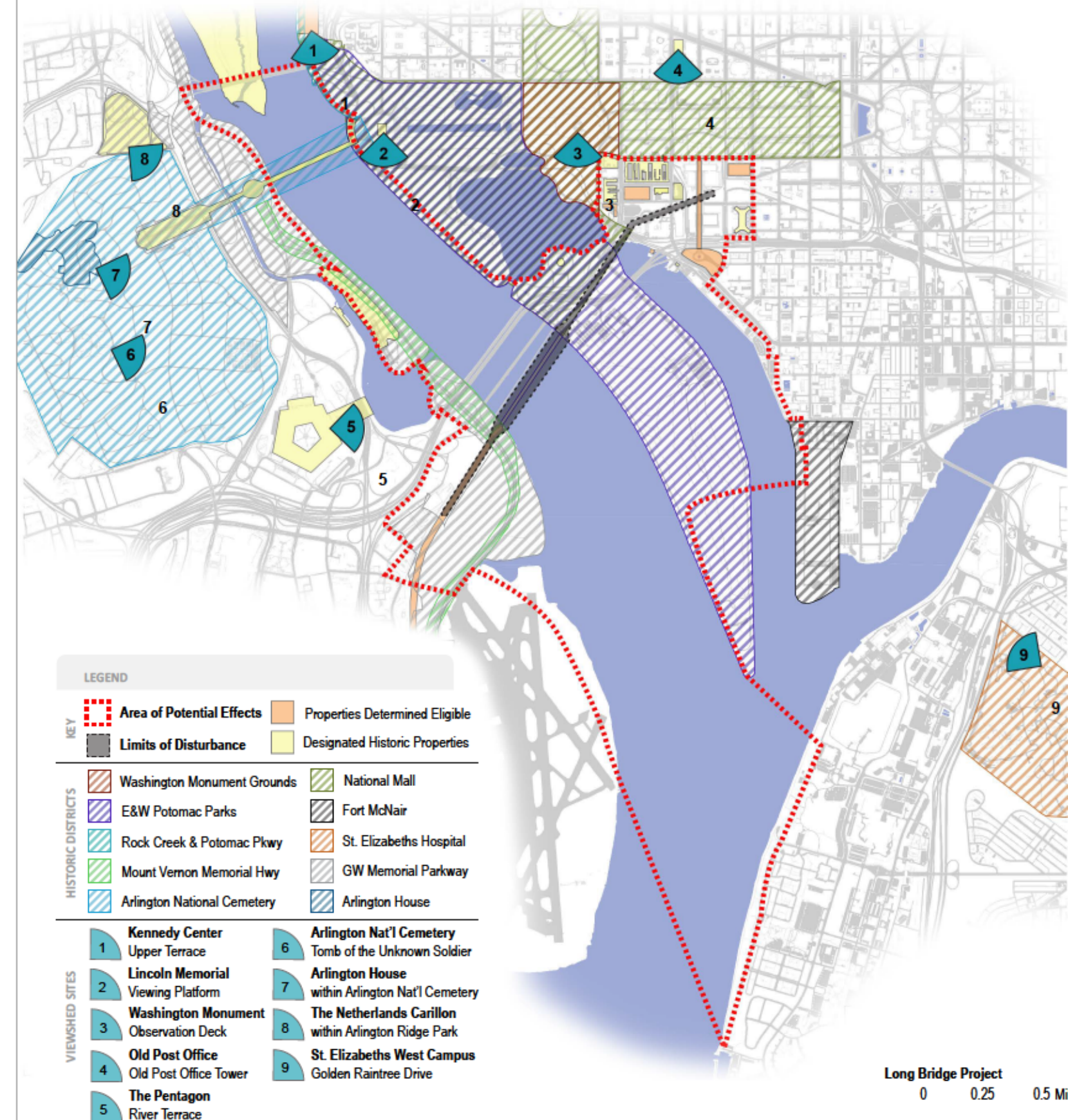
The assessment of effects determined that the Action Alternatives would adversely affect four historic districts within the Project's APE: the GWMP Historic District, the MVMH Historic District, the East and West Potomac Parks Historic District, and the National Mall Historic District.

The Action Alternatives would remove or alter some features that contribute to the historic significance of these resources. This would result in adverse effects. Action Alternative B would intensify the adverse effects because it would disturb a larger area and remove the existing Long Bridge, which is a contributing resource to the East and West Potomac Parks Historic District. It would also remove the existing railway bridge that crosses above the GWMP. This bridge is a contributing resource to the GWMP.

Both Action Alternatives would create permanent, adverse effects from visual changes to the GWMP and MVMH Historic Districts. Construction activities for both Action Alternatives would adversely affect all four historic districts. These effects are temporary and would end once construction is complete. Construction management techniques could help avoid or minimize the intensity of some of these effects.

The Section 106 consultation process is ongoing. FRA continues to consult with DC SHPO, VDHR, and the Consulting Parties to identify ways to further minimize and mitigate adverse effects on these historic districts. FRA has drafted a Programmatic Agreement (PA) that commits identified parties to implement measures to avoid, minimize, and mitigate adverse effects to historic properties. The PA also outlines consultation that would continue through the design and construction processes. See **Appendix E5, Section 106 Draft Programmatic Agreement**. Some of the key minimization and mitigation measures are also listed on pages 40 through 41 of this summary.

Members of the public are invited to comment on the PA in conjunction with the DEIS. Please see page 47 for information on submitting comments.



What is a Draft Section 4(f) Evaluation?

Section 4(f) of the United States Department of Transportation Act of 1966 (49 USC 303) protects public parks and recreational lands, wildlife refuges, and historic sites of national, state, or local significance from acquisition or conversion to transportation use. A United States Department of Transportation agency, including FRA, may approve a transportation project that uses these resources only if there is no feasible and prudent avoidance alternative and the project includes all possible planning to minimize harm to the resources, or the use meets the requirements for a *de minimis* impact.

FRA determined that neither Action Alternative can avoid impacts to Section 4(f) properties. The Long Bridge Corridor crosses two major Federal parks, the GWMP and East Potomac Park. As part of the EIS process, FRA screened a wide range of concepts to determine the alternatives for evaluation. The concepts eliminated during the screening process did not meet the Section 4(f) criteria for a “prudent and feasible” alternative. Therefore, there are no feasible or prudent avoidance alternatives for the Project.

FRA and DDOT took steps throughout the alternatives development process to minimize harm to Section 4(f) properties. Conceptual engineering for each of the Action Alternatives minimized harm by staying within the existing railroad right-of-way to the extent practicable. Mitigation measures, such as restoring vegetation to areas cleared for construction staging and adding new landscaping, would also minimize impacts. Finally, FRA and DDOT coordinated with NPS and Arlington County (the Officials with Jurisdiction over the properties affected) to identify construction staging and work areas that would provide suitable access, sufficient space for storing equipment and supplies, and safety to workers and the public, all while minimizing harm to Section 4(f) properties.

Action Alternatives A and B would cause similar impacts to Section 4(f) resources within the Study Area. The Action Alternatives would convert small portions of Long Bridge Park, the GWMP, and East Potomac Park to railroad use. Construction areas would be located in

parts of Long Bridge Park, the GWMP, the MVT, East Potomac Park, and Hancock Park. Action Alternative B would impact the GWMP and MVMH Historic Districts by removing the historic railroad bridge over the GWMP roadway. It would also impact the East and West Potomac Parks Historic District by removing the existing historic Long Bridge.

FRA has determined that, after all possible measures have been taken to minimize or mitigate for adverse impacts, a Section 4(f) use would remain for the GWMP (and GWMP Historic District), the MVMH Historic District, and East Potomac Park (and East and West Potomac Parks Historic District).

FRA proposes a *de minimis* finding for permanent impacts to Long Bridge Park. The impacts would occur in the northeast corner of the park behind the planned aquatic center. Arlington County plans for this area to remain as a naturally vegetated area without any recreational uses. Therefore, its use by the Long Bridge Project would not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

Pending concurrence from the OWJs for the resources, FRA proposes that the temporary occupancy of Long Bridge Park, the MVT, Hancock Park, and the Plan of the City of Washington would not constitute a Section 4(f) use. The temporary occupancy associated with construction would be of short duration (less than the time needed for construction of the project), would not result in a change in ownership of the property, and would not result in adverse changes to the activities, features, or attributes of the property. Finally, the land would be fully restored to an equivalent or better condition following completion of the construction activities.

FRA, in coordination with regulatory agencies and park administrators are currently determining measures to minimize the temporary and permanent uses of Section 4(f) properties. FRA is considering the proposed bike-pedestrian crossing as potential mitigation for impacts to Section 4(f) properties. The public and agencies can review and comment on the Draft Section 4(f) Evaluation in conjunction with the public review period for the DEIS. The Project Sponsor, who will carry the Project through final design and construction, is responsible for satisfying the agreed-upon Section 4(f) mitigation commitments.

What is a *de minimis* impact?

For parks, recreation areas, and wildlife or waterfowl refuges, a *de minimis* impact occurs when a transportation program or project would not adversely affect the activities, features, and attributes that make the resource eligible for protection (49 USC 303(d)(3)). For historic sites, a *de minimis* impact occurs when the Section 106 process determines a transportation program or project would have no adverse effect on the historic site (49 USC 303(d)(2)).



Key Minimization and Mitigation Measures

The conceptual engineering conducted in support of the DEIS avoided or minimized adverse impacts to the natural and built environment where feasible. Where adverse impacts cannot be avoided or minimized, or when no other reasonable or feasible alternative would be available, the impacts are mitigated where required. Mitigation can be accomplished through repairing, rehabilitating, or restoring the affected environment. Where necessary, impacts may be mitigated by replacing or providing substitute resources. Mitigation will continue to be addressed throughout the NEPA process. Key minimization and mitigation measures proposed in the DEIS and the Section 106 PA are listed below.

TRANSPORTATION



Develop construction phasing to maintain two-track railroad service to the extent feasible and limit disruptions to two-track service to nights and weekends.

Coordinate interruptions in Metrorail service with WMATA and limit to nights and weekends.

Develop Traffic Management Plan including temporary traffic control plans, analysis of traffic operations, and a public outreach campaign for GWMP, I-395, and Maine Avenue SW.

Install wayfinding signage, as appropriate, to redirect pedestrian and bicycle traffic during temporary closures due to construction.

Coordinate with NPS to identify temporary parking or parking shuttles to mitigate for loss of parking spaces at NPS Park Lot C during construction, especially during periods of heavy usage.

Evaluate potential for alternate parking accommodations to mitigate the temporary loss of parking at the Washington Marin during construction.

LAND USE

Use areas already disturbed for other construction projects to minimize impacts of construction staging.

Incorporate vegetative buffers and screening as practicable between potentially sensitive land uses and new transportation infrastructure.

Maintain visitor use of recreation areas, parks, and trails to extent practicable during construction.

PROPERTY

Comply with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and applicable District, Virginia, and Arlington County laws in any instances where property acquisition or displacement would be necessary to implement the Project.

If full property acquisition is required, fairly compensate property owners for the land acquired and, if necessary, provide relocation assistance.

Establish agreements with private property owners and building tenants to provide construction access in a manner that minimizes adverse impacts to business activities and other land uses.

Work with property owners to temporarily relocate parking spaces where feasible, or appropriately compensate property owners for loss of parking spaces and revenue.

WATER RESOURCES

Implement erosion and sediment control measures to minimize stormwater runoff.

Implement stormwater BMPs to mitigate long-term adverse impacts to water quality in the Roaches Run and Potomac River watersheds.

Design piers with an elliptical shape to minimize turbulence and hydraulic force against pier walls.

Establish construction areas landward of the 100-year floodplain to extent possible.

Restore temporarily disturbed floodplain areas following construction.

NOISE AND VIBRATION



Implement top-of-rail friction modifier system and gauge-face lubrication to minimize wheel squeal.

Use either a spring-rail frog or moveable-point frog to reduce noise produced by gap in railroad running surface.

Develop Construction Noise and Vibration Control Plan detailing methods to minimize construction-period noise and vibration impacts.

VISUAL RESOURCES

Implement final landscaping, including planting, plant selection, and berms, to screen transportation infrastructure from viewers.

Design structures to be aesthetically compatible with character of existing structures.

Include NPS in the design process.

Use aesthetically pleasing construction fencing and barriers to block potentially unattractive views into construction areas.

Avoid use of GWMP to transport construction equipment, as possible.

CULTURAL RESOURCES

Develop PA in consultation with DC SHPO, VDHR, and signatories under Section 106 of the National Historic Preservation Act of 1966 to avoid, minimize, and/or mitigate all adverse effects. Draft provisions include:

- Design structures to be aesthetically compatible with character of existing structures.
- Restore vegetative screening and mature vegetation.
- Monitor for potential archaeological resources.

RECREATION AND PARKS



Develop a tree protection plan prior to construction.

Replace mature vegetation removed during construction to extent possible.

Mitigate direct property impacts to Long Bridge Park, GWMP, and East Potomac Park through construction of a bike-pedestrian bridge that will connect the parks and the regional trail system.

Maintain visitor use of recreation areas, parks, and trails to extent practicable during construction.

Continue to refine construction access and staging plans to avoid or minimize use of park land.

NATURAL ECOLOGICAL SYSTEMS AND ENDANGERED SPECIES

Require contractor to employ tree and vegetation protection measures through fencing, pruning, mulch, and planking.

Restore vegetated areas to pre-construction function and appearance, either through reseeding or replanting of woody vegetation using native species.

Require contractor to employ erosion control and stormwater management measures during construction.

Implement Best Management Practices to reduce or eliminate anticipated undesirable effects to wildlife, such as performing certain activities during months when migratory birds are not nesting.

Avoid dredging to the extent practicable, to minimize impacts to riverbed habitats.

Perform work behind cofferdams to reduce turbidity.

Use noise attenuating tools such as a cushion block to reduce noise levels below injury or behavioral modification thresholds for fish.

Do not perform in-stream construction work during specific periods when migratory fish are most likely to be present in the Project Area.

Who is involved in the NEPA process?

Public and agency coordination are integral aspects of the NEPA process. Decisions about the future of the Long Bridge Corridor affect a range of stakeholders, including residents, travelers, railroad operators, and agencies. FRA and DDOT developed the Agency and Public Coordination Plan in compliance with *Efficient Environmental Reviews for Project Decisionmaking* (23 USC 139(g)(1)), which details the required public and agency involvement process. The Lead Agencies distributed the Plan to the Cooperating and Participating Agencies and published it on the Project website.

Agency Coordination

The Lead Agencies conduct the NEPA process and prepare the DEIS for the proposed Project. They ensure the process and the document follow Federal laws and applicable regulations. They also may issue approvals and provide funding for construction of a project in the future. The Lead Agencies for the Project are:

- FRA— Lead Federal Agency
- DDOT— Joint Lead Agency

The Lead Agencies invited agencies with jurisdiction by law or with other special expertise related to the Project to be Cooperating Agencies. These agencies are:

- NPS
- Federal Transit Administration (FTA)
- National Capital Planning Commission
- United States Army Corps of Engineers – Baltimore District
- United States Coast Guard
- Virginia Department of Rail and Public Transportation
- VRE

As established in the Plan, FRA and DDOT coordinated with the Project’s Cooperating and Participating Agencies at required key points:

- Notice of Intent;
- Scoping;
- Invitation to relevant parties to become Cooperating and Participating Agencies;
- Development of the Agency and Public Coordination Plan; and
- Interagency Coordination Meetings.

The Lead Agencies also conducted regular outreach with the Cooperating and Participating Agencies throughout the Project, notifying them of important events and requesting agency review of key technical documents.

Public Coordination

Regarding public involvement, FRA and DDOT provided information to the public early and continued to solicit public feedback throughout the NEPA process. They encouraged an open discussion of Project details and issues and provided opportunities for comments and questions. FRA and DDOT have engaged the public using specific public meetings to present information and solicit comments at Project milestones. These milestones include Scoping, alternatives development, and selection of the Preferred Alternative. To date, FRA and DDOT have held seven public meetings on the Project. This includes four meetings held during the Phase I and II feasibility studies before the NEPA process began.

FRA and DDOT used a variety of communication tools to inform and engage the public, stakeholders, and agencies regarding the public meetings and any Project updates. Tools include a Project website (www.longbridgeproject.com), electronic and traditional mailing lists, newspaper advertisements, press releases, publications, and meetings.

What is a Cooperating Agency?

A Cooperating Agency is any Federal agency, other than a Lead Agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative. There are seven Cooperating Agencies associated with the Project.

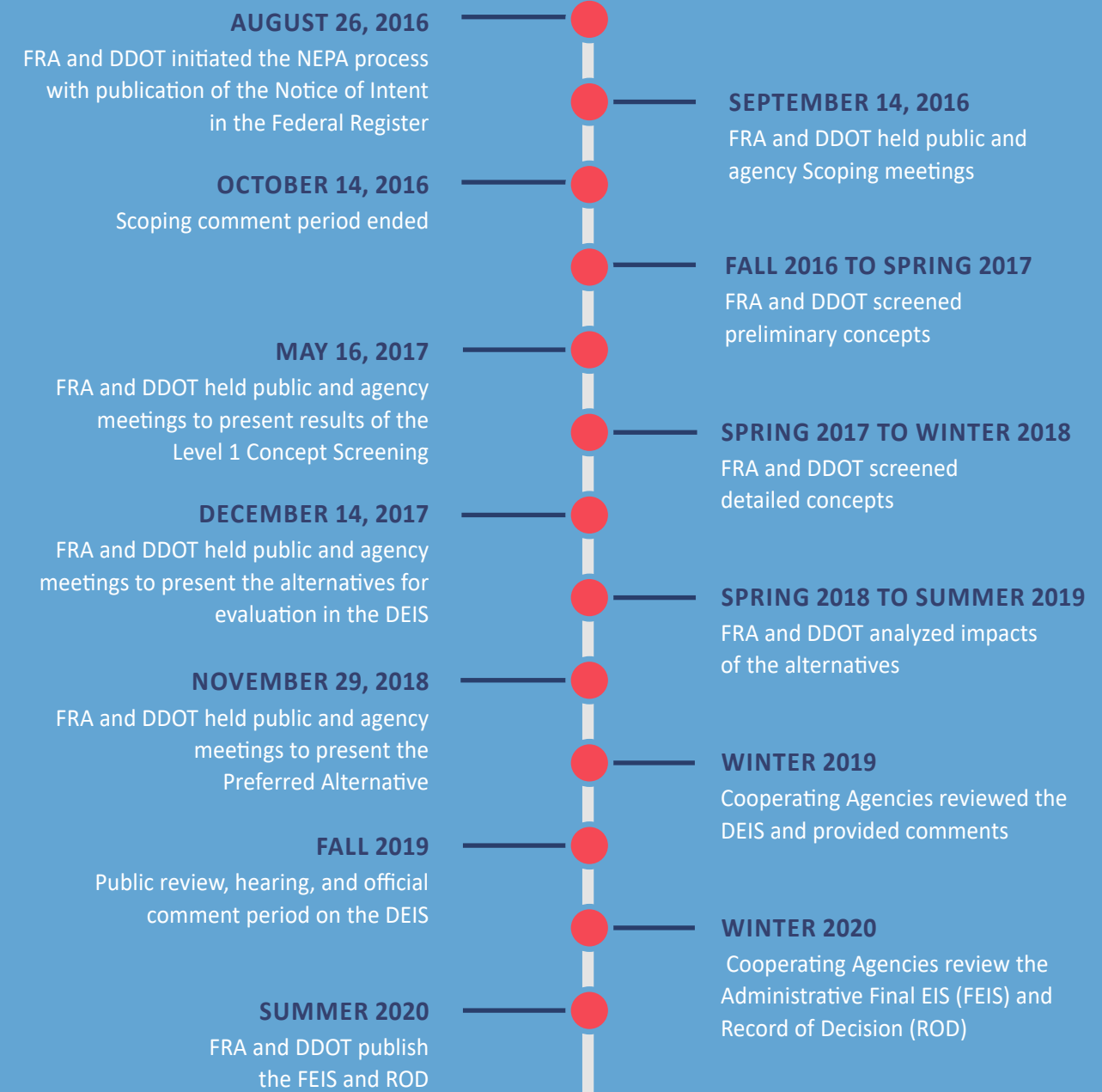
What is a Participating Agency?

Participating Agencies are Federal, state, or local agencies or Federally recognized tribal governmental organizations with an interest in the Project. There are 23 Participating Agencies associated with the Project. A full list of the Participating Agencies is included in Table 25-2 in Chapter 25.0, Public Involvement and Agency Coordination.





What is the timeline for the NEPA process?



What are the next steps in the NEPA process?

The DEIS and Draft Section 4(f) Evaluation are available for public review at the Project website: www.longbridgeproject.com. In addition, printed copies of the DEIS and Draft Section 4(f) Evaluation are available in several repositories listed on the Project website. FRA and DDOT will hold a public hearing in Fall 2019 to allow members of the public, elected officials, and agencies to provide oral testimony on the DEIS.

Comments on the DEIS and Draft Section 4(f) Evaluation are due by October 28, 2019, and may be submitted in the following ways:

- Through the online comment form at www.longbridgeproject.com;
- Via email to info@longbridgeproject.com

Following the public comment period, FRA and DDOT intend to issue a combined FEIS and ROD document pursuant to 49 USC 304(a), unless statutory criteria or practicability considerations preclude issuance of the combined document. Responses to the comments received on the DEIS will be included in the FEIS/ROD.

For Additional Information

The DEIS contains detailed information on the topics summarized in this document. The following table lists where further details are found in the DEIS.

EXECUTIVE SUMMARY TOPIC	DEIS LOCATION	
PROJECT OVERVIEW	Chapter 1	Introduction
	Chapter 2	Purpose and Need
PROJECT ALTERNATIVES AND PREFERRED ALTERNATIVE	Chapter 3	Alternatives
	Appendix B1	Alternatives Development Report
PROJECT IMPACTS AND MITIGATION	Chapter 4	Impact Analysis Framework
	Chapters 5 to 21	Resource Chapters
	Chapter 22	Bike-Pedestrian Crossing
	Chapter 24	Draft Section 4(f) Evaluation
	Appendix D3	Environmental Consequences Report
PUBLIC INVOLVEMENT AND AGENCY COORDINATION	Chapter 25	Public Involvement and Agency Coordination

