



WELCOME TO THE LONG BRIDGE PROJECT

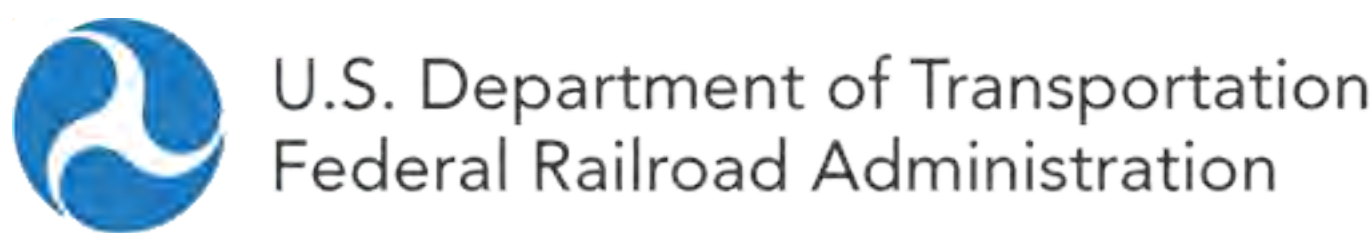
Public Meeting

Thursday, November 29, 2018

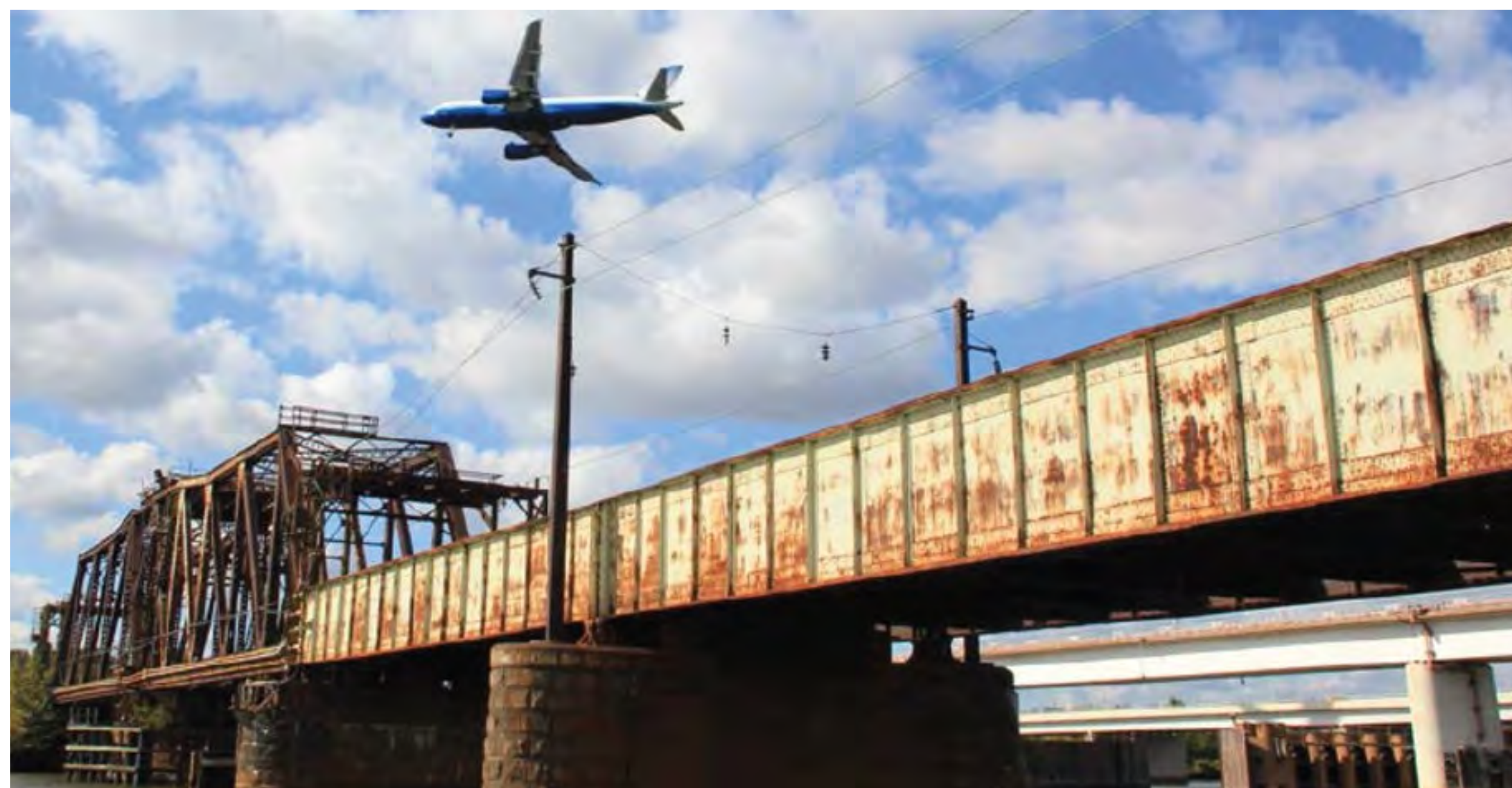
Open House Format: 4:00 p.m. to 7:00 p.m.

Formal Presentations: 4:30 p.m. and 6:00 p.m.

(same presentation at both times)



Project Overview



What is the Project?

- The Federal Railroad Administration (FRA) and the District Department of Transportation (DDOT) are preparing an Environmental Impact Statement (EIS) in accordance with the National Environmental Policy Act (NEPA).
- The Long Bridge Project consists of potential improvements to the Long Bridge and related railroad infrastructure located between the Rosslyn (RO) Interlocking near Long Bridge Park in Arlington, Virginia and the L'Enfant (LE) Interlocking near 10th Street SW in the District of Columbia.
- The two-track Long Bridge was built in 1904 and is owned and maintained by CSX Transportation (CSXT).
- Virginia Railway Express (VRE) and Amtrak also currently use Long Bridge.
- Long Bridge is a contributing element to the East and West Potomac Parks Historic District.

Project Overview

What is NEPA?

- The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to assess the environmental effects of their proposed actions prior to making decisions.
- NEPA encourages integrated compliance with other environmental laws so that a proposed project's impacts are comprehensively evaluated before implementation.
- To comply with NEPA, FRA and DDOT are preparing an EIS that will be made available for public review and comment.

What is Section 106?

Section 106 of the National Historic Preservation Act (NHPA) requires Federal agencies to:

- Consider and determine the direct AND indirect effects of a proposed undertaking on historic properties.
- Consult with State Historic Preservation Offices, Tribes, and other consulting parties.
- Avoid, resolve, or mitigate adverse effects to historic properties.
- See: 36 CFR Part 800 (Protection of Historic Properties).

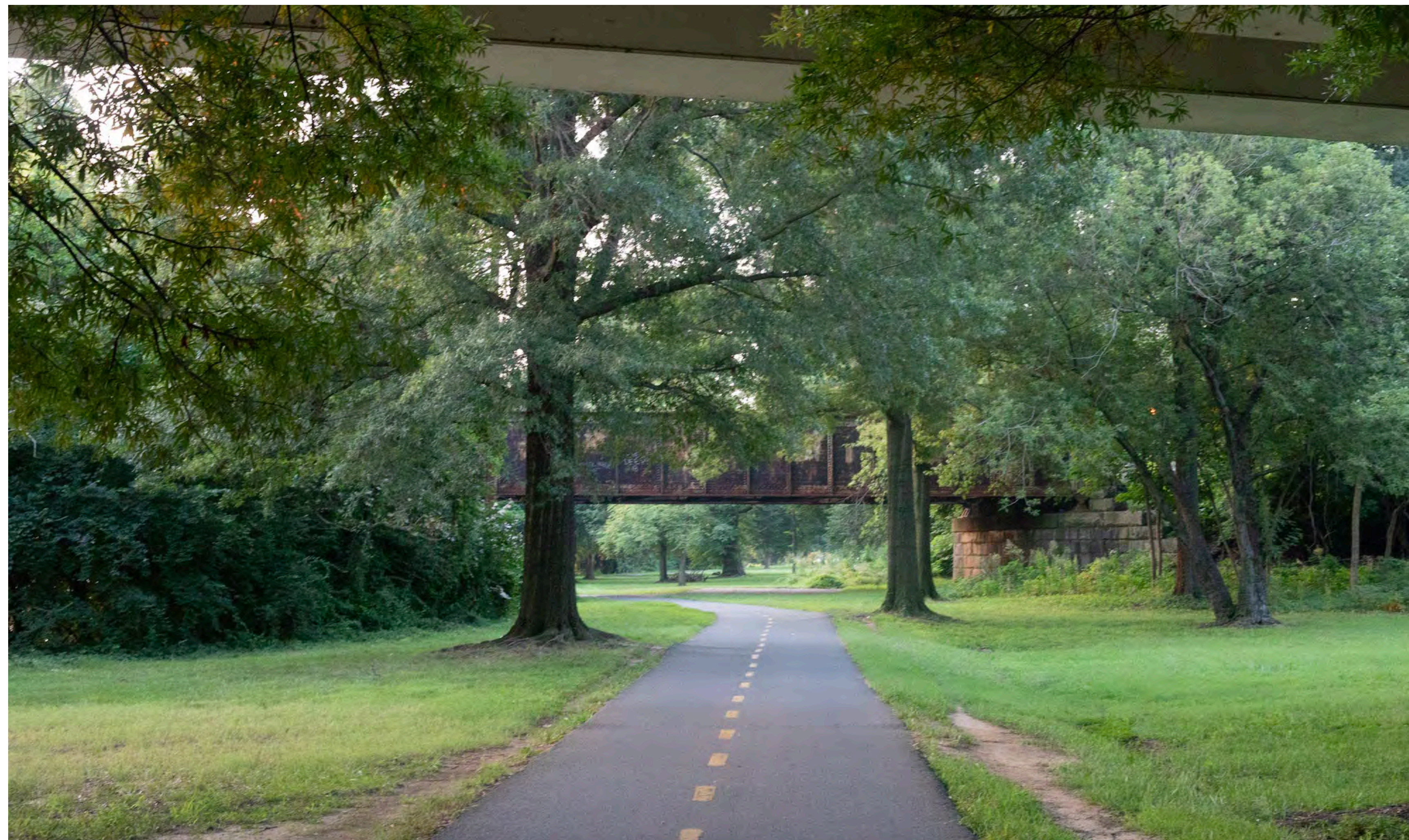


Project Overview

What is Section 4(f)?

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 prohibits projects funded or approved by a USDOT agency from using publicly owned park and recreational areas, wildlife and waterfowl refuges, or historic sites and structures unless...

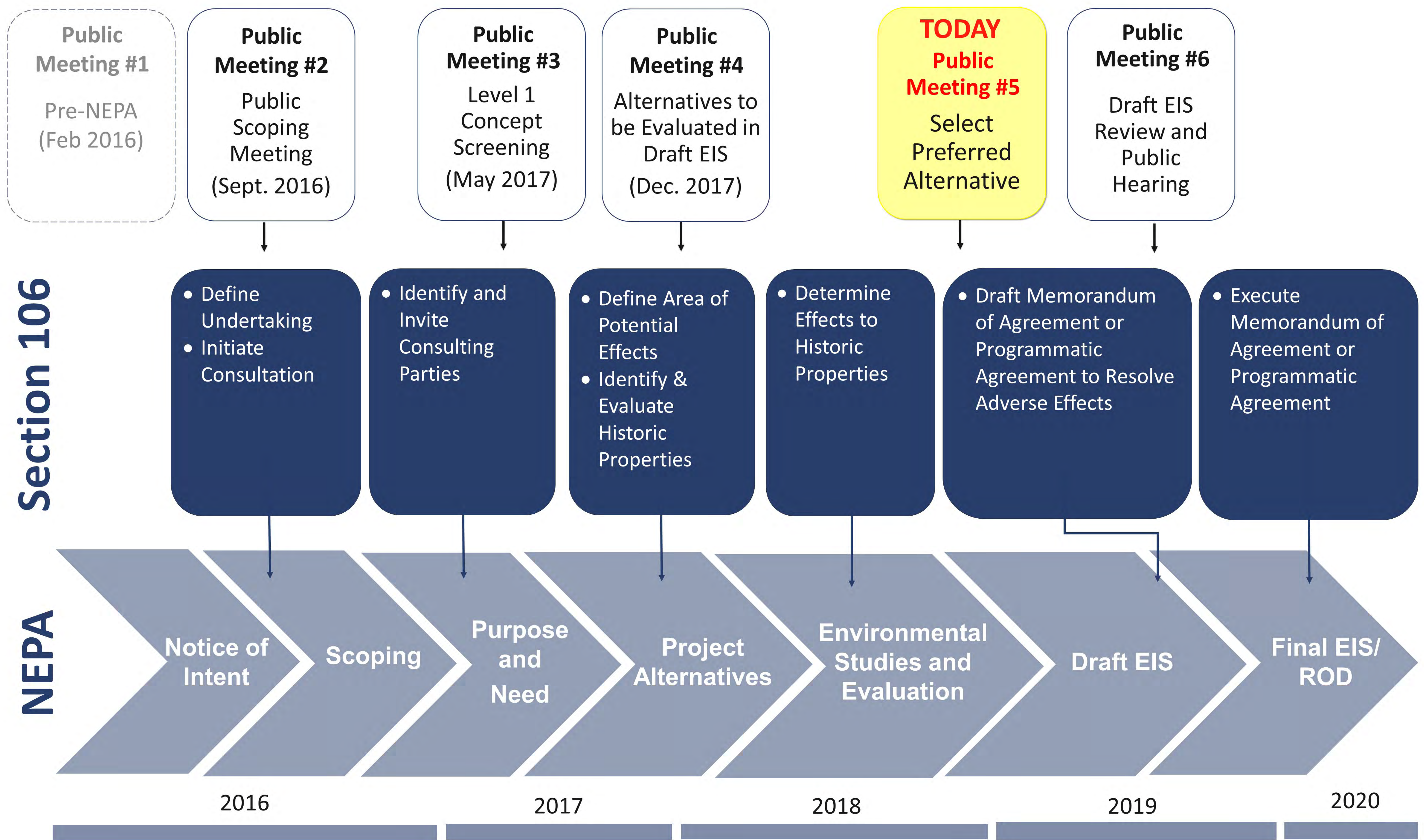
- There is no feasible or prudent avoidance alternative, and
- The project includes all possible planning to minimize harm to the property resulting from use.
- Or, the Project would have a *de minimis* impact on Section 4(f)-protected resources.



*Section 4(f)-protected historic properties are illustrated on the Section 106 Summary of Adverse Effects board

There are several Section 4(f)-protected historic sites and parks within the Long Bridge Project Study Area

Section 106 and NEPA Coordination



Project Area



The 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.



Project limits extend from RO Interlocking near Long Bridge Park in Arlington, Virginia to LE Interlocking near 10th Street SW in the District

Purpose and Need

The purpose of the Proposed Action is to provide **additional long-term railroad capacity** 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.

Train Operator	Current # of Trains per Day	2040 # of Trains per Day	Percent Increase
VRE	34	92	171%
MARC	0	8	--
Amtrak	24	44	83%
CSXT	18	42	133%
Norfolk Southern	0	6	--
Total	76	192	

On Time Performance		
	Current (Observed)	No Action (2040)
Commuter	91%	25%
Intercity Long Distance	70%	12%
Intercity Regional		7%



No Action Alternative



The No Action Alternative for the Long Bridge Project EIS consists of the existing transportation network, plus all projects within the Project Area that are predictable by the planning year of 2040

The No Action Alternative does not include the Long Bridge Project

LEGEND

Boundary Channel Drive Interchange Redesign (2021)

Virginia Avenue Tunnel (2018)

L'Enfant North Storage Track (2018)

L'Enfant South Storage Track (2019)

L'Enfant Station Improvements (2024)

Interlocking

Other Bridges

VRE Station

Metrorail Station

Long Bridge Corridor

Study Area

Fourth Track LE to VA locking (2023)

Fourth Track AF to RO Interlocking (2025)

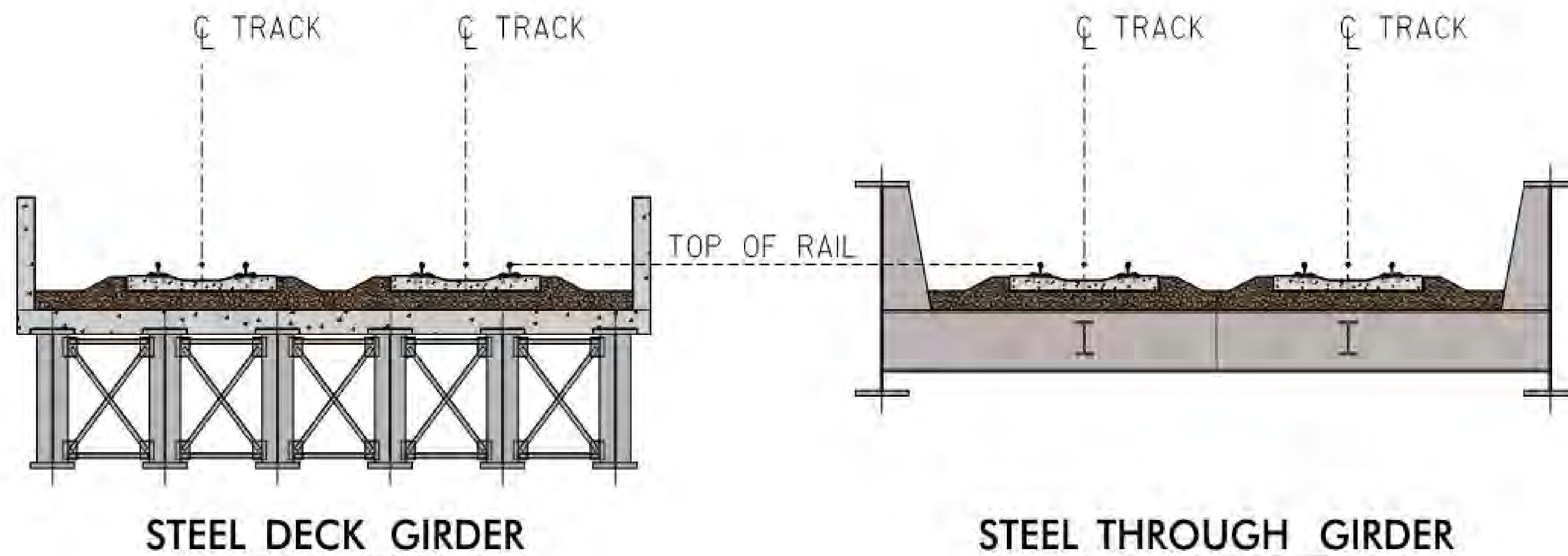
Railroads

Metrorail

Service Layer Credits: public/GLUP
GIS Mapping Center, VHB



New Railroad Bridge Type Options



- > Consists of multiple steel I-shaped girders with a steel or bridge deck at the top of the girders
- > Bridge type generally preferred when clearance below the structure is not an issue

- > Consists of two main girders on the outsides of the bridge with smaller floorbeams spanning perpendicular to the main girders to support the transportation load, allowing for railways to pass "through" the girders
- > Bridge type generally preferred when clearance below the structure is critical

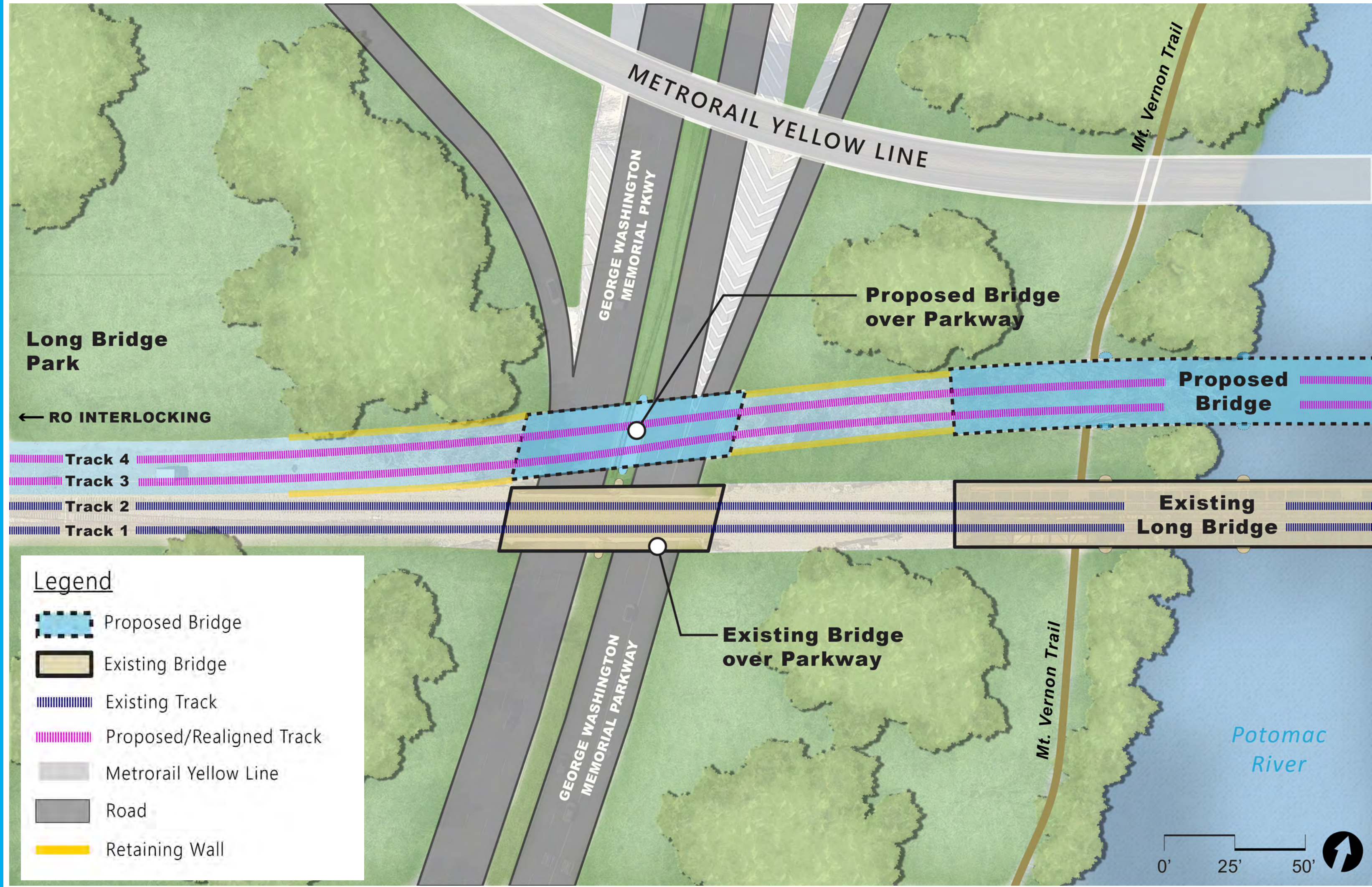
Steel through girder bridges & steel deck girder bridges

- Common railroad bridge structure types
 - Standard types used by CSXT
 - More cost effective than other structure types
- Allow for shallow structure depth over the Potomac River to retain existing vertical clearance over the navigation channel without significant increase to the bridge profile

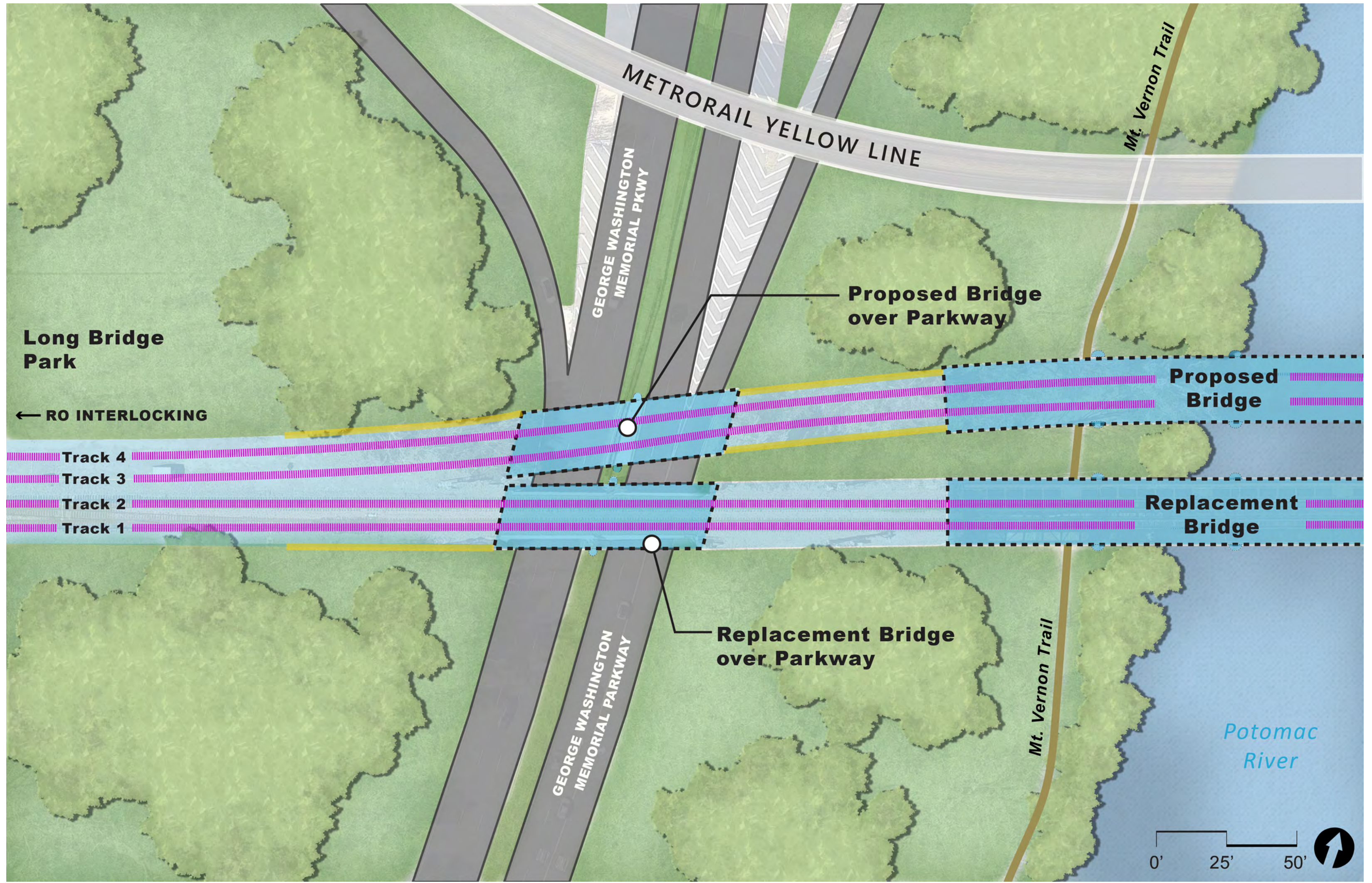
Action Alternatives

Long Bridge Park to the George Washington Memorial Parkway

Action Alternative A



Action Alternative B



Key Difference

- Action Alternative A **retains** the existing historic railroad bridge over the George Washington Memorial Parkway
- Action Alternative B **replaces** the existing historic railroad bridge over the George Washington Memorial Parkway



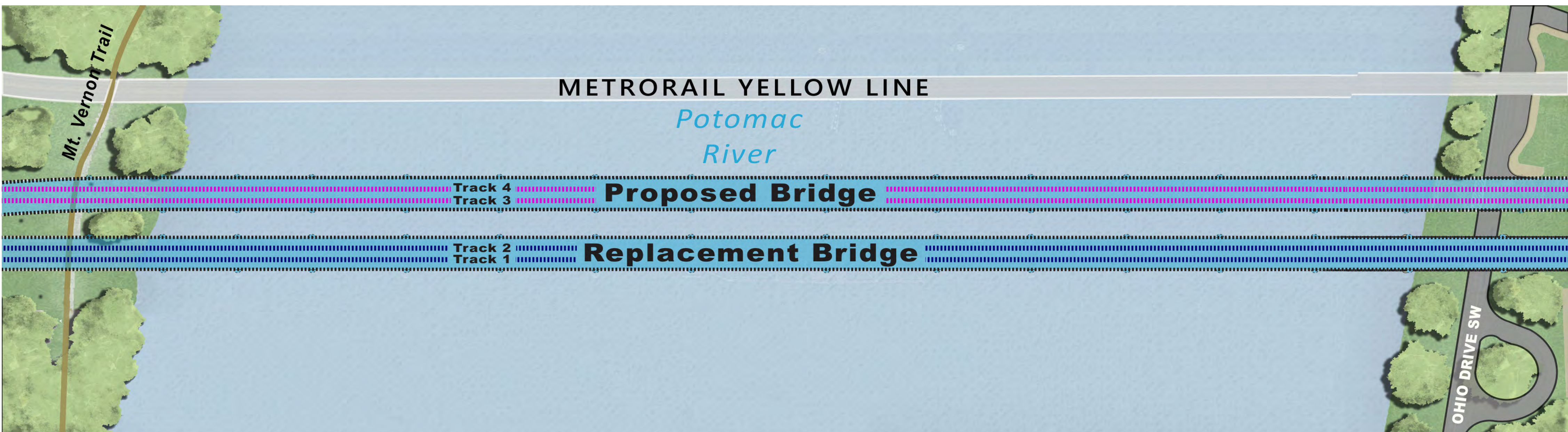
Action Alternatives

Spanning the Mount Vernon Trail and the Potomac River

Action Alternative A



Action Alternative B

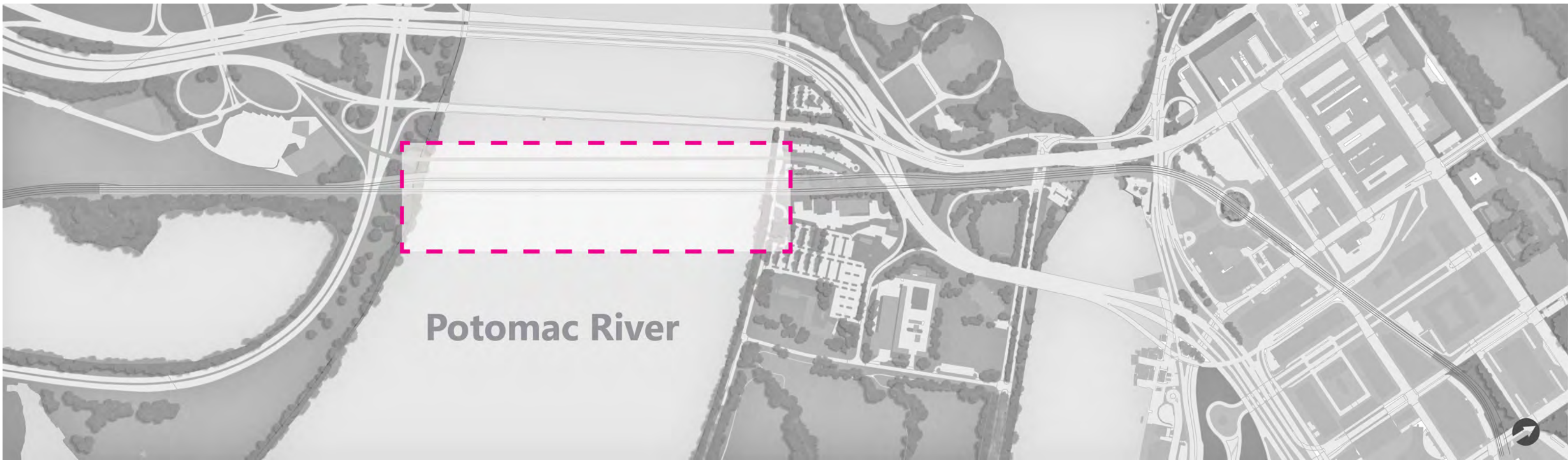


Key Difference

- Action Alternative A **retains** the existing historic Long Bridge over the Potomac River
- Action Alternative B **replaces** the existing historic Long Bridge over the Potomac River

Legend

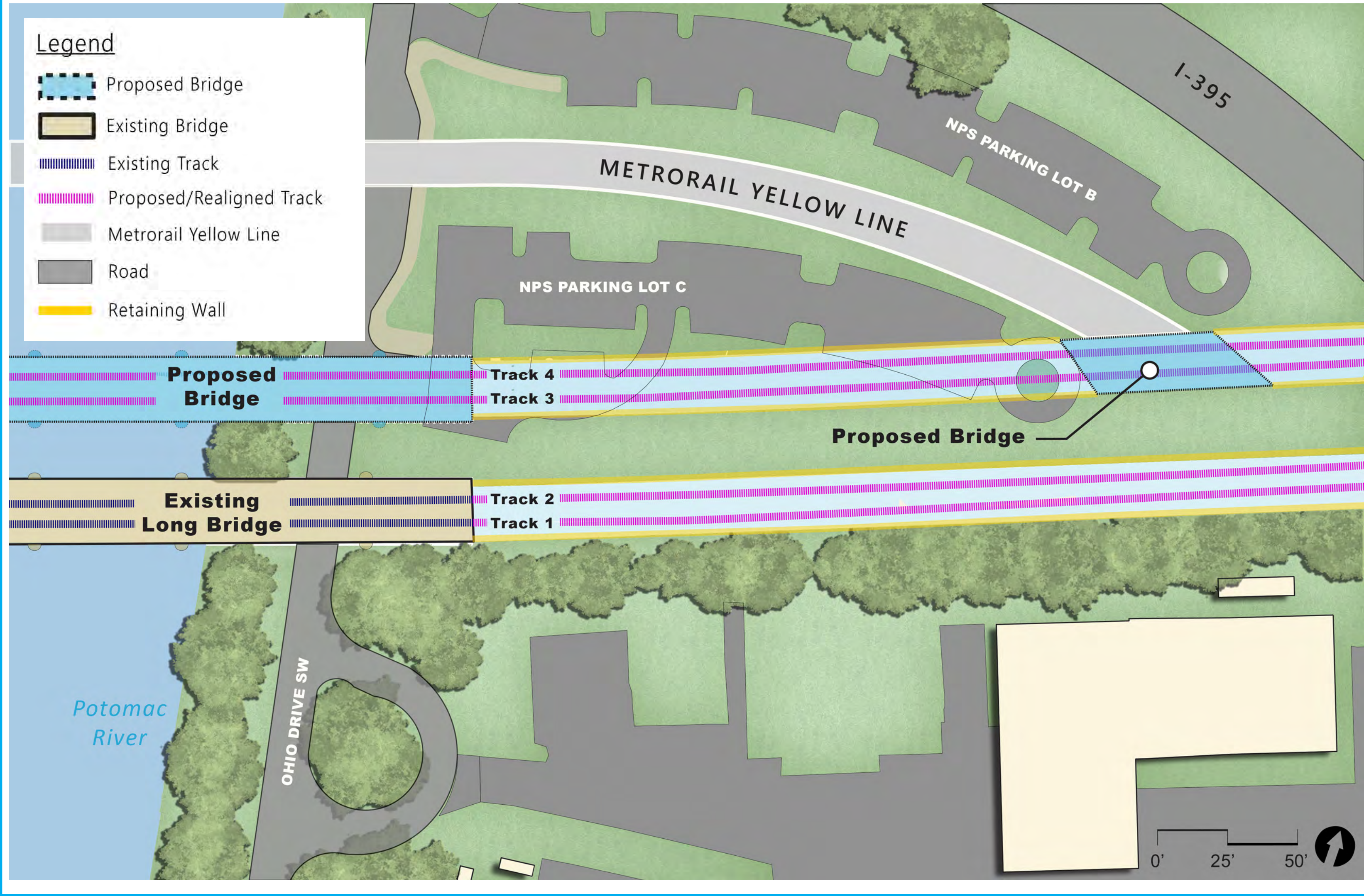
- Proposed Bridge
- Existing Bridge
- Existing Track
- Proposed/Realigned Track
- Metrorail Yellow Line
- Road



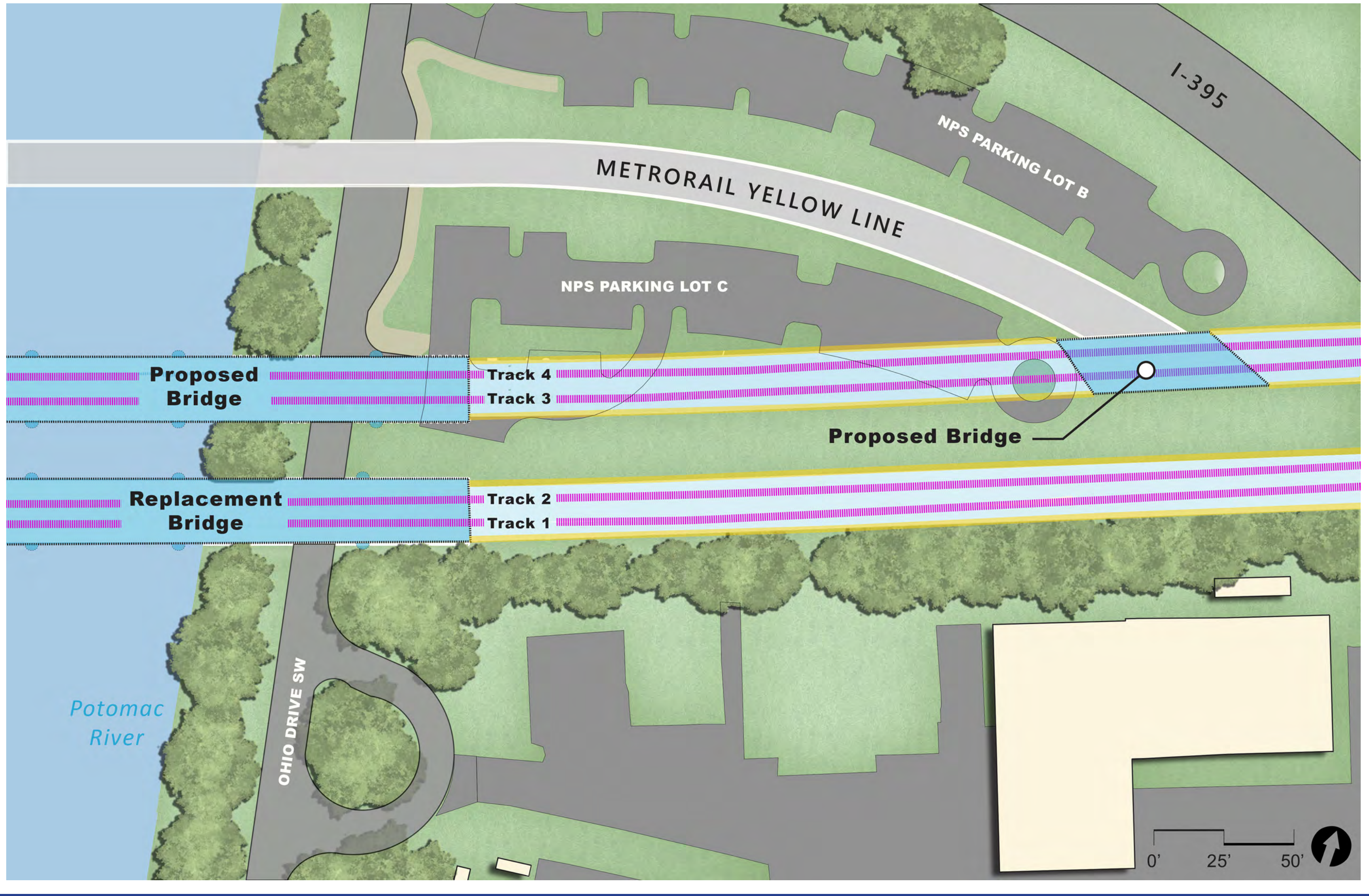
Action Alternatives

Ohio Drive SW and WMATA Metrorail Tunnel Portal

Action Alternative A



Action Alternative B



Key Difference

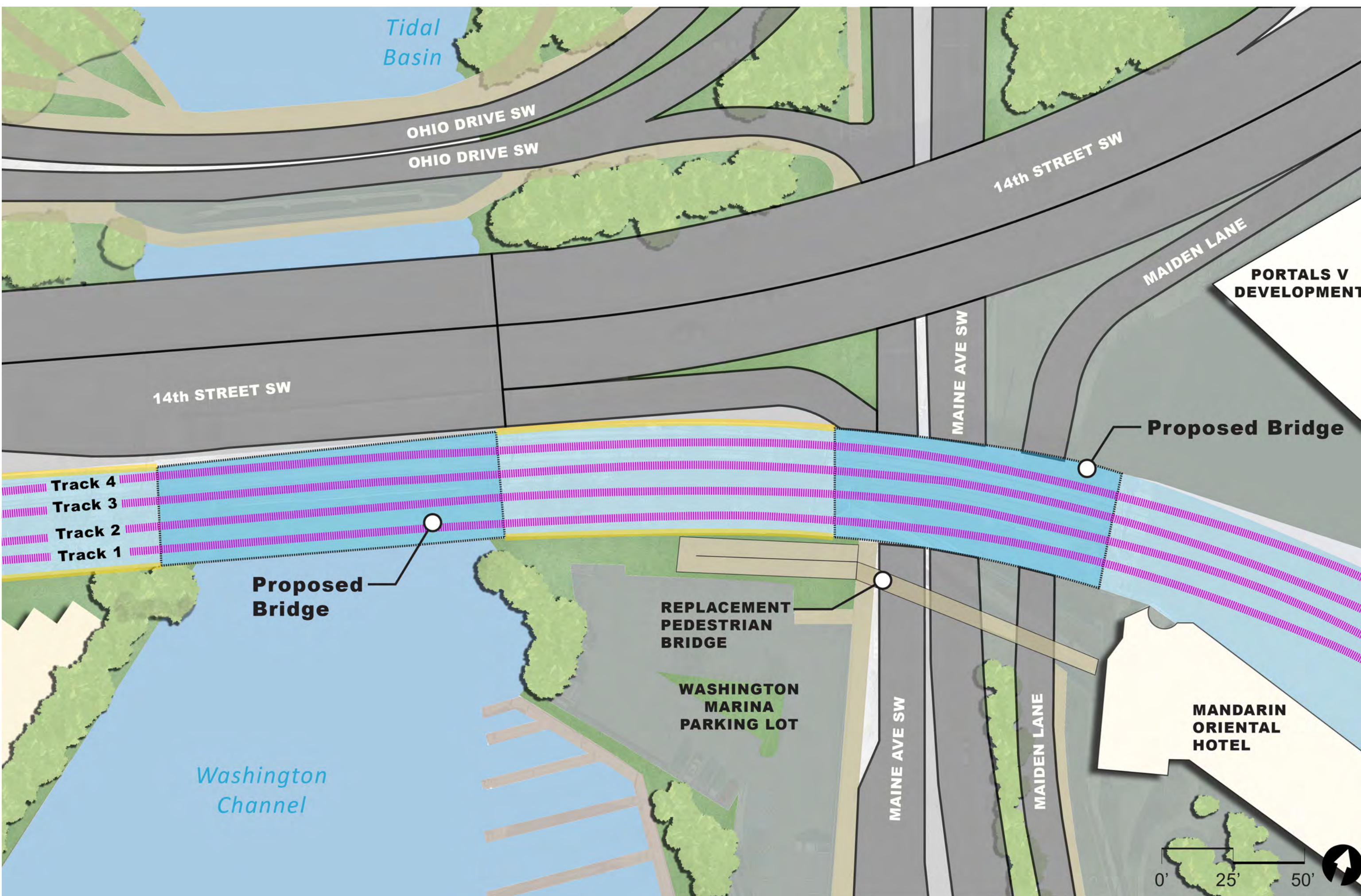
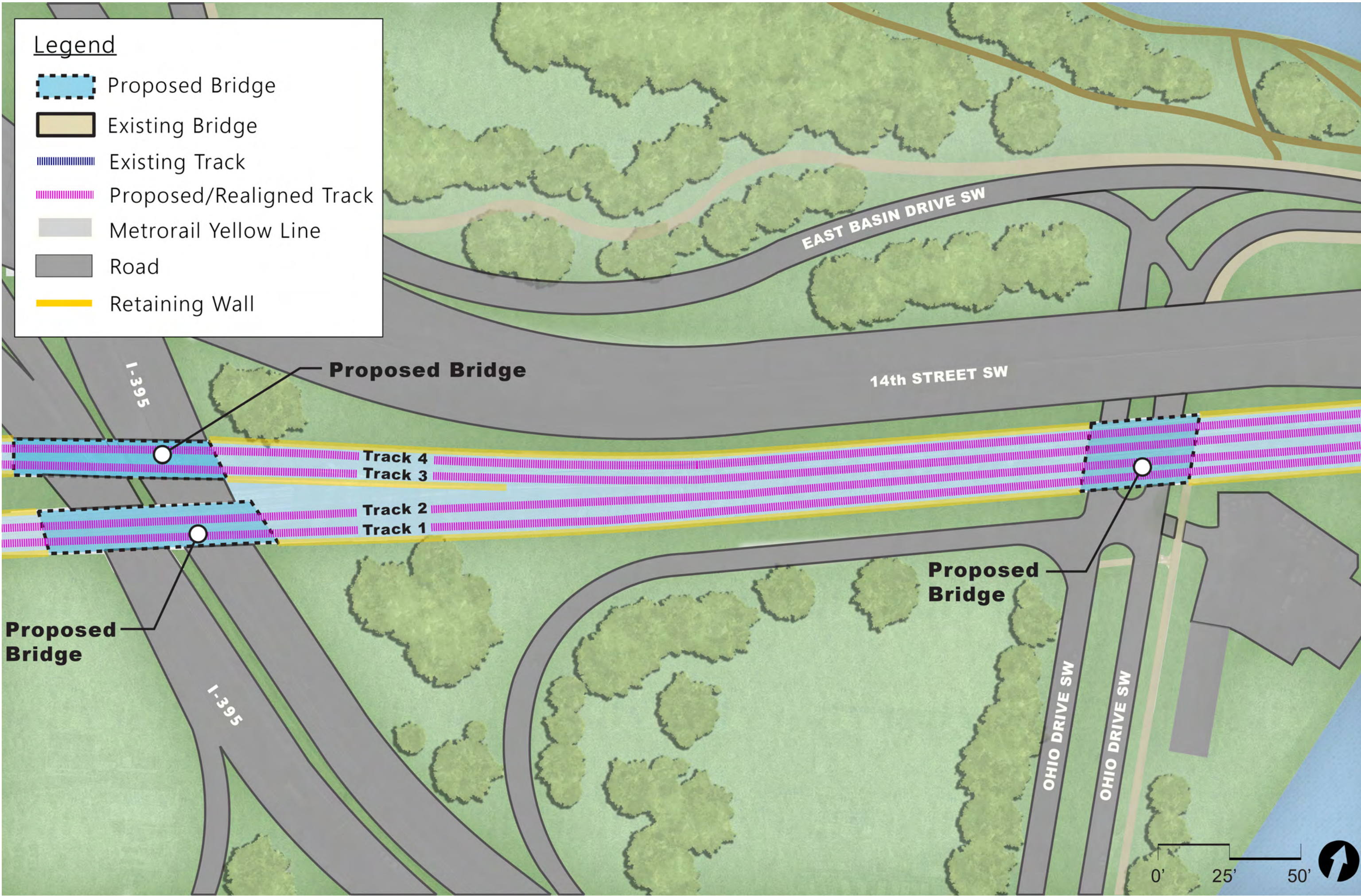
- Action Alternative A **retains** the existing historic Long Bridge over the Potomac River and Ohio Drive SW
- Action Alternative B **replaces** the existing historic Long Bridge over the Potomac River and Ohio Drive SW



Action Alternatives

I-395 to Maine Avenue SW Action Alternatives A & B

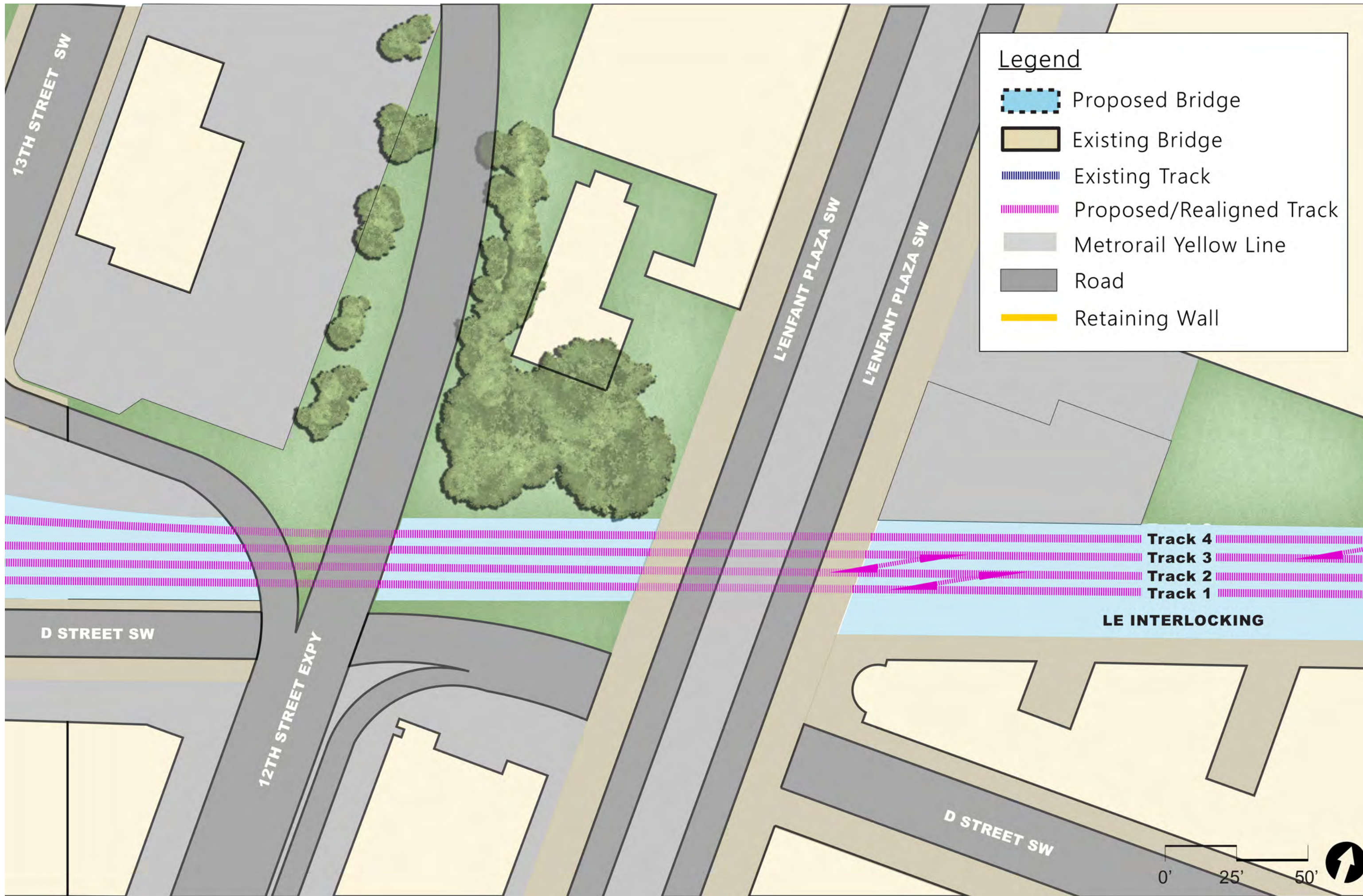
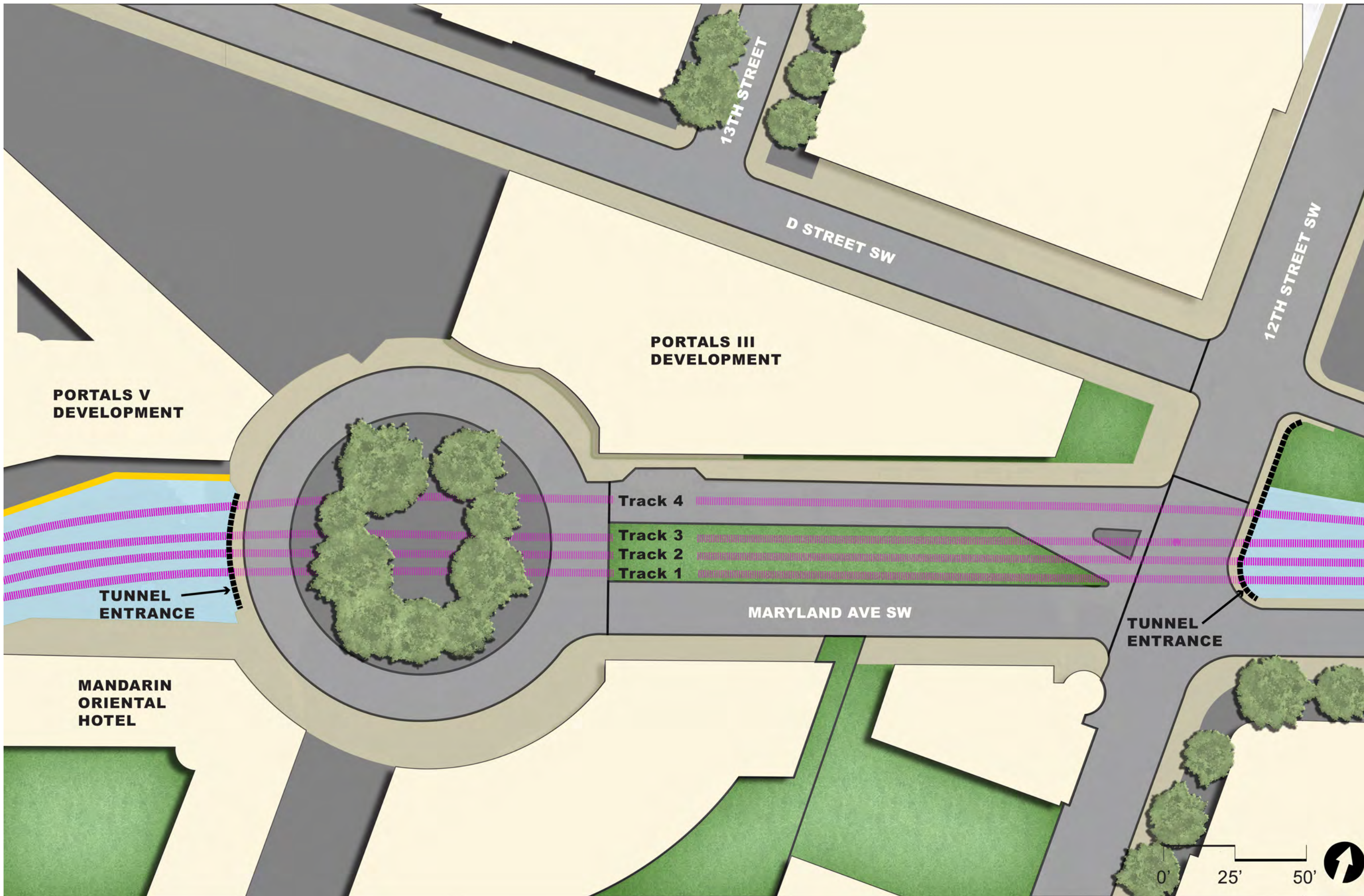
> Design elements do not vary between the Action Alternatives in these segments of the Project corridor <



Action Alternatives

Maryland Avenue SW Overbuild to LE Interlocking Action Alternatives A & B

> Design elements do not vary between the Action Alternatives in these segments of the Project corridor <



Selection of Preferred Alternative - Action Alternative A

FRA and DDOT have selected **Action Alternative A** as the Preferred Alternative

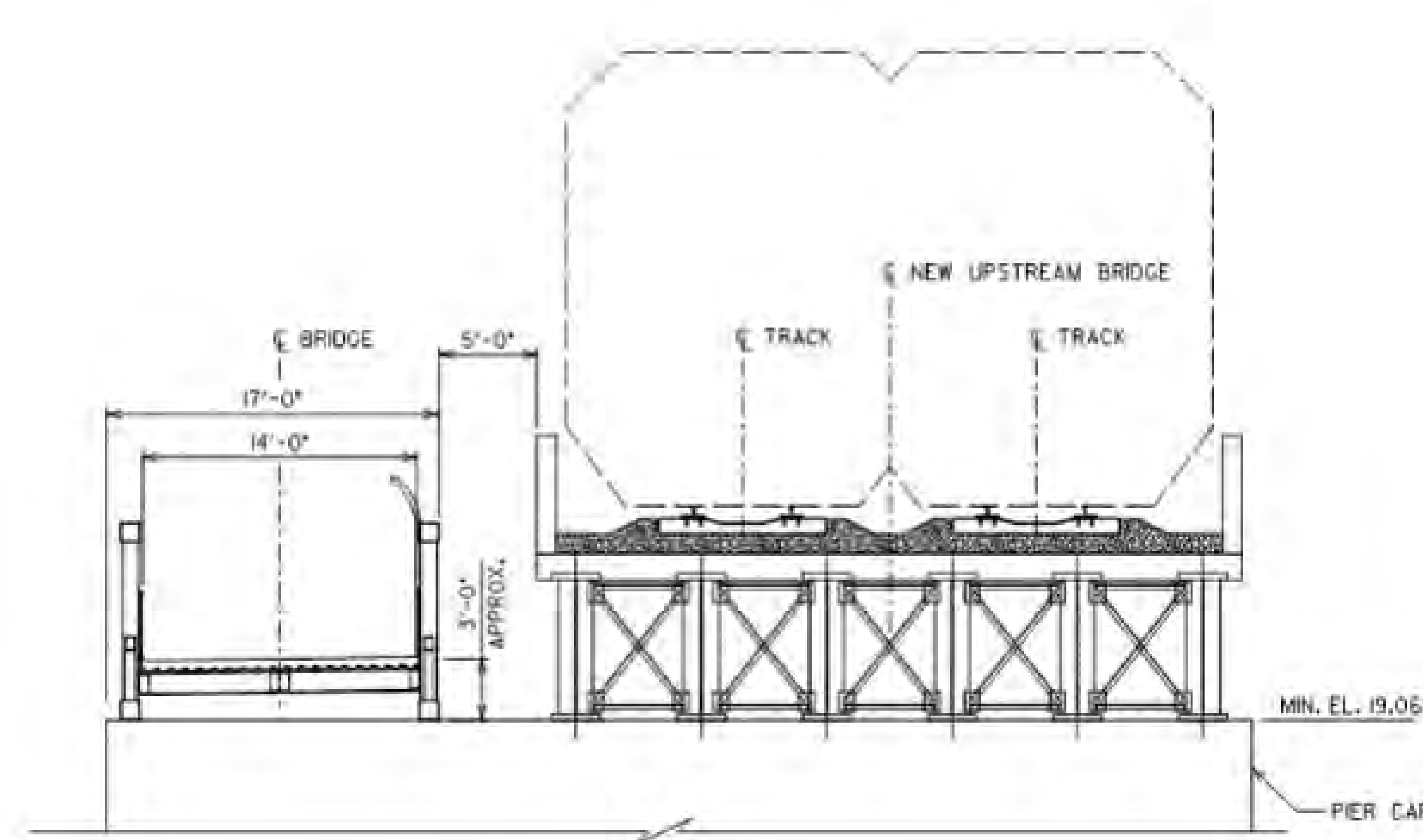
Action Alternative A has a **lower capital cost, shorter construction duration, and fewer impacts**



- Both Action Alternatives support the Purpose and Need and provide the same anticipated benefits
- Selection of the Preferred Alternative occurred after consideration of all comments from agencies and the public on the Project to date

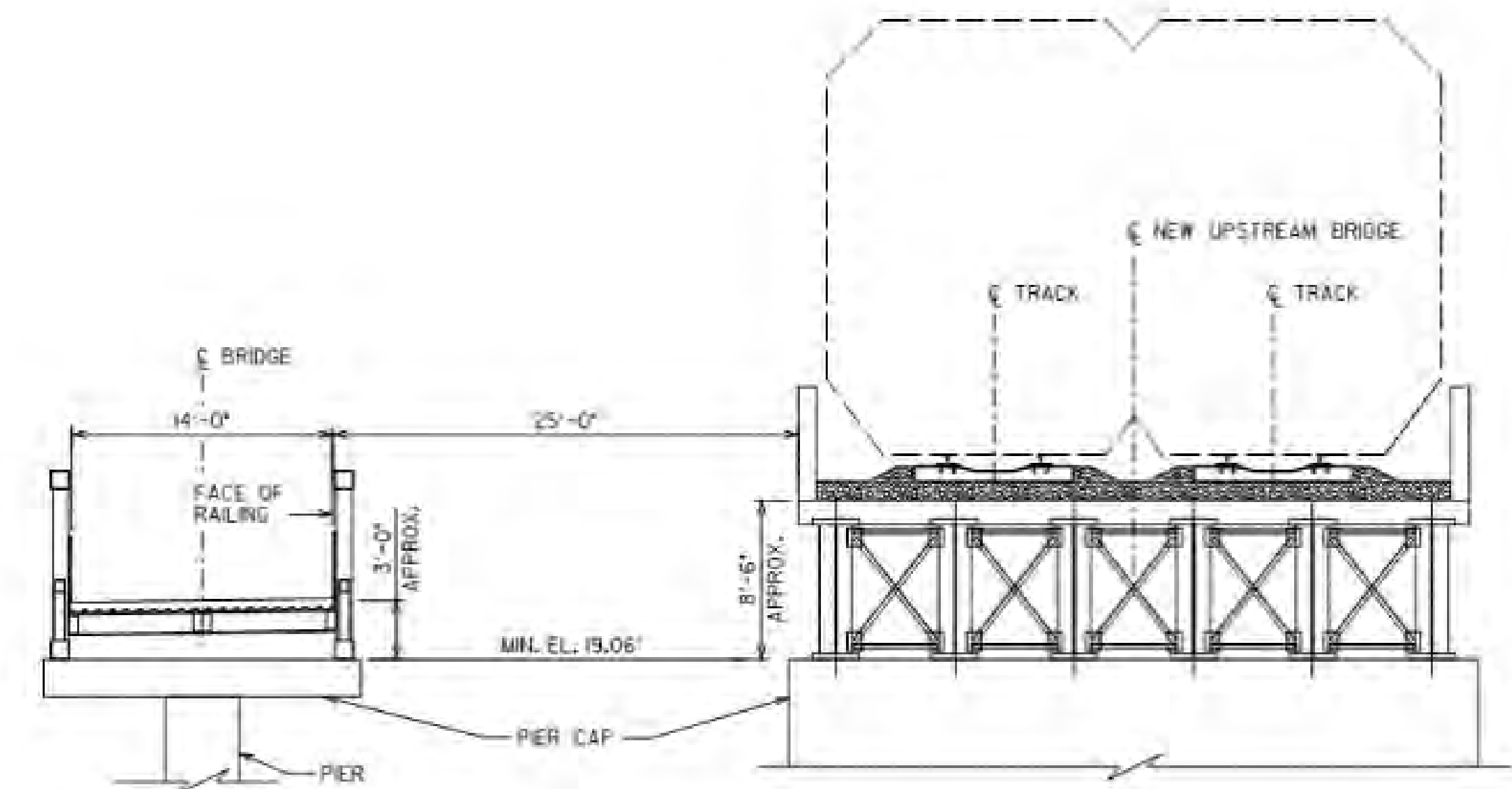
Bicycle and Pedestrian Crossing

Potential Section 4(f) Mitigation



Option 1 - Shared structure with upstream railroad bridge

- > Connection to Long Bridge Park
- > Prefabricated truss superstructures
- > Extended railroad piers
- > Larger permanent footprint
- > Additional railing and screening required between bridges for security and safety
- > Construction cost approximately 20% greater than Option 2



Option 2 - Independent structure upstream of railroad bridge

- > Connection to Long Bridge Park
- > Prefabricated truss superstructures
- > Single column piers
- > Smaller permanent footprint
- > 25-foot separation from upstream railroad bridge
- > Simpler inspection and maintenance
- > Preferred by railroad operators and property owners
- > Construction cost approximately 20% less than Option 1

Option 2 selected as the crossing option to be considered as potential mitigation

Comparison of Alternatives

	No Action Alternative	Action Alternative A	Action Alternative B
Support of Purpose and Need			
Increases capacity; facilities connectivity; and expands resiliency and redundancy	No	Yes	Yes
Capital Costs and Construction Duration			
Capital Costs*	--	Approx. \$1.3 to \$1.6 billion	Approx. \$2.0 to \$2.3 billion
Construction Duration	--	Approx. 5 years	Approx. 8.25 years
Differentiating Infrastructure Elements**			
Existing railroad bridge over George Washington Memorial Parkway (GWMP) retained	Yes	Yes	No
Existing Long Bridge retained	Yes	Yes	No

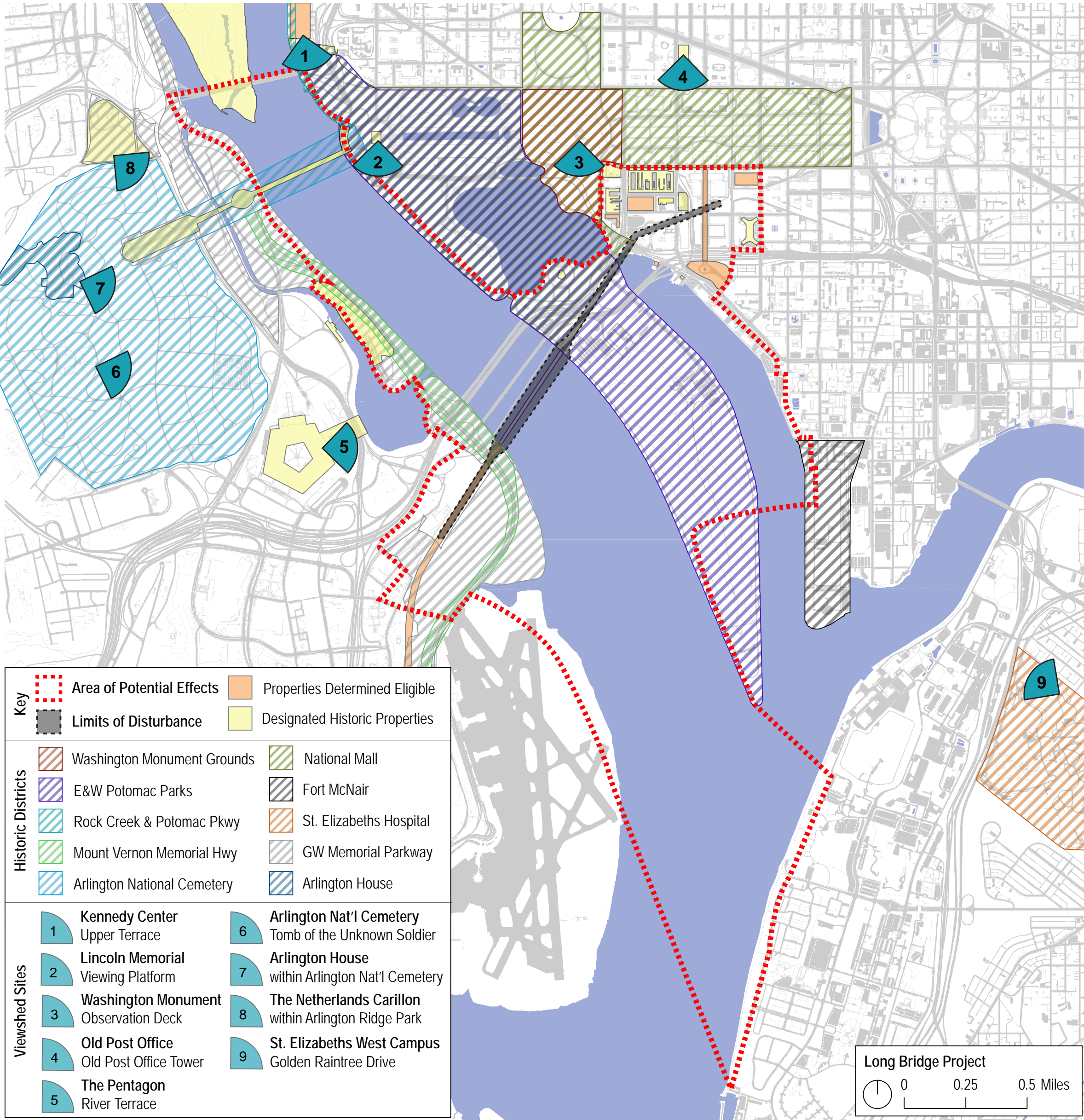
**Approximate costs are based on conceptual engineering and subject to change as design advances. Costs in 2018 dollars.
**All other infrastructure elements are the same for Action Alternatives A and B.*



Compared to Action Alternative A, **Action Alternative B** would have...

- > **More permanent environmental impacts** due to replacement of existing Long Bridge and the railroad bridge over the GWMP
- > **More temporary construction impacts** due to demolition of existing bridges, construction of replacement bridges, and longer construction duration (up to 3.25 years longer)
- > **Greater Section 106 impacts** due to replacement of existing historic bridges - Long Bridge and the railroad bridge over the GWMP
- > **Greater Section 4(f) impacts to historic properties** protected under Section 4(f) due to replacement of the existing historic bridges and **greater Section 4(f) impacts to parks** protected under Section 4(f) due to additional construction staging areas and wider right-of-way required in East Potomac Park
- > **Greater temporary beneficial impact** on jobs due to construction

Section 106 Summary of Adverse Effects Determination



George Washington Memorial Parkway Historic District

Action Alternative A	Physical Effects: Construction of a new railroad bridge would remove contributing vegetation. DIRECT ADVERSE EFFECT.
Action Alternative B	Physical Effects: Construction of a new railroad bridge would remove contributing vegetation and <u>contributing railroad bridge</u> . DIRECT ADVERSE EFFECT. Visual Effects: Removal of existing Long Bridge and truss would diminish integrity of setting and feeling. INDIRECT ADVERSE EFFECT.
Cumulative	Construction of a bike-pedestrian crossing and access ramp would remove contributing vegetation. DIRECT ADVERSE EFFECT.
Temporary	Construction staging, access, and trail relocation would diminish integrity of feeling, association, and setting of the historic district. DIRECT AND INDIRECT ADVERSE EFFECT.

Mount Vernon Memorial Highway Historic District

Action Alternative A	Physical Effects: Construction of a new railroad bridge would remove contributing vegetation. DIRECT ADVERSE EFFECT.
Action Alternative B	Physical Effects: Same as Action Alternative A. DIRECT ADVERSE EFFECT. Visual Effects: Removal of existing Long Bridge and truss would diminish integrity of setting and feeling. INDIRECT ADVERSE EFFECT.
Cumulative	Construction of a bike-pedestrian crossing and access ramp would remove contributing vegetation. DIRECT ADVERSE EFFECT.
Temporary	Construction staging, access, and trail relocation would diminish integrity of feeling, association, and setting of the historic district. DIRECT AND INDIRECT ADVERSE EFFECT.

National Mall Historic District

Action Alternative A	Physical Effects: No contributing features within railroad corridor. NO ADVERSE EFFECT. Visual Effects: No significant views or visual resources in this portion of the historic district. NO ADVERSE EFFECT.
Action Alternative B	Physical Effects: Same as Action Alternative A. NO ADVERSE EFFECT. Visual Effects: Same as Action Alternative A. NO ADVERSE EFFECT.
Cumulative	No contributing features within railroad corridor nor potential to alter significant views or visual resources. NO ADVERSE EFFECT.
Temporary	Construction staging and access would diminish integrity of feeling, association, and setting of the historic district. INDIRECT ADVERSE EFFECT.

East and West Potomac Parks Historic District

Action Alternative A	Physical Effects: Construction of a new railroad bridge would remove contributing vegetation. DIRECT ADVERSE EFFECT. Visual Effects: Addition of a new bridge would obstruct views of the existing Long Bridge, diminishing the visual integrity of the contributing structure. INDIRECT ADVERSE EFFECT.
Action Alternative B	Physical Effects: Removal of Long Bridge represents a <u>total loss of contributing feature</u> . Construction of a new railroad bridge would remove contributing vegetation. DIRECT ADVERSE EFFECT. Visual Effects: Removal of contributing visual element Long Bridge would diminish integrity of setting, feeling, and association. INDIRECT ADVERSE EFFECT.
Cumulative	Construction of a bike-pedestrian crossing and access ramp would remove contributing vegetation and obstruct views of the Long Bridge, diminishing the visual integrity of the historic district. DIRECT AND INDIRECT ADVERSE EFFECT.
Temporary	Construction staging and access would diminish integrity of feeling, association, and setting of the historic district. Temporary construction noise has potential to diminish integrity of contributing U.S. Engineers' Storehouse. DIRECT AND INDIRECT ADVERSE EFFECT.