

May 19, 2022



## Commission of Fine Arts Information Item



**TRANSFORMING  
RAIL IN VIRGINIA**



# Virginia Passenger Rail Authority (VPRA)





# Virginia Passenger Rail Authority

- Created by 2020 General Assembly
- Given all powers necessary for carrying out its statutory purposes:
  - Design, build, finance, and maintain rail facilities
  - Direct recipient of USDOT Grants
  - Eminent domain powers in Virginia
- Will own rail assets and right of way
- Will partner with others to operate passenger and commuter rail service
- Governed by a 15-Member Board



Transforming Rail in Virginia

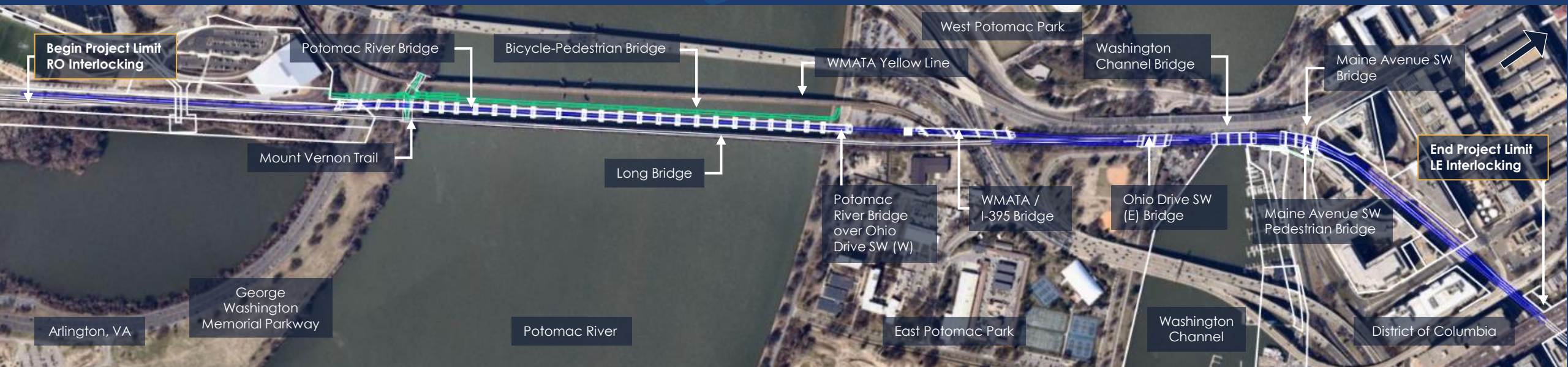
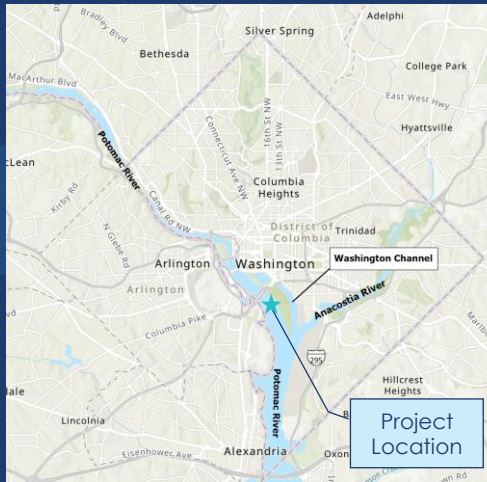


# Project Background



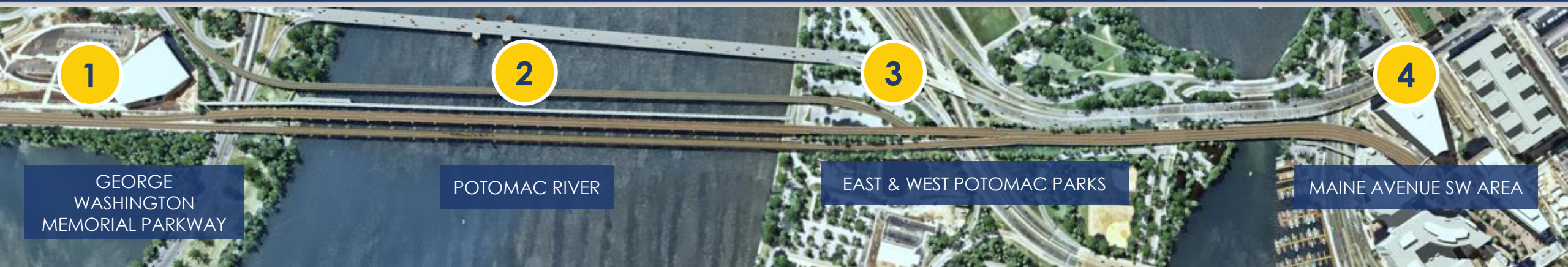


# Project Location





# Project Scope



The Project corridor is separated into four areas to reflect the varying site conditions and the transition from parkland to an urban context.

| Phase |                           | Structures   |
|-------|---------------------------|--|
| 1     | GW Parkway                | <ul style="list-style-type: none"><li>Potomac River Rail Bridge (extends over the Parkway and Potomac River)</li><li>Potomac River Bicycle-Pedestrian Bridge (extends over the Parkway and Potomac River)</li></ul>  |
| 2     | Potomac River             | <ul style="list-style-type: none"><li>Potomac River Rail Bridge (extends over the Parkway and Potomac River)</li><li>Potomac River Bicycle-Pedestrian Bridge (extends over the Parkway and Potomac River)</li><li>Retaining Walls and Landscape Design</li></ul> |
| 3     | East & West Potomac Parks | <ul style="list-style-type: none"><li>Potomac River Bicycle-Pedestrian Bridge Landing</li><li>WMATA/I-395 Bridge</li><li>Ohio Drive SW (East) Bridge</li><li>Washington Channel Rail Bridge</li><li>Retaining Walls and Landscape Design</li></ul>               |
| 4     | Maine Avenue SW Area      | <ul style="list-style-type: none"><li>Maine Avenue SW Rail Bridge</li><li>Retaining Walls</li><li>Maine Avenue SW Pedestrian Bridge</li></ul>  |



# Project Schedule

DDOT Led

## 2011-2016 Pre-NEPA

2011 FRA ARRA Grant

Phase I Study  
2012-2015

Phase II Study  
2015-2016

DDOT-DRPT Partnership  
through MOU

## 2016-2020 NEPA

2016 FRA TIGER Grant

FEIS/ROD Complete  
September 2020

Long Bridge Act  
December 2020

Identified Mitigation  
Commitments &  
Permit Identification

VPRA Led

## 2021-2023 Preliminary Engineering (PE)

Design 15% to 30%

Determine Project  
Delivery Method

Begin Environmental  
Mitigation & Permits

Agreements with  
Partner Organizations

## 2023-2030 Final Design & Construction

Design-Bid-Build or  
Alternative Project  
Delivery

Land Acquisition  
Activities

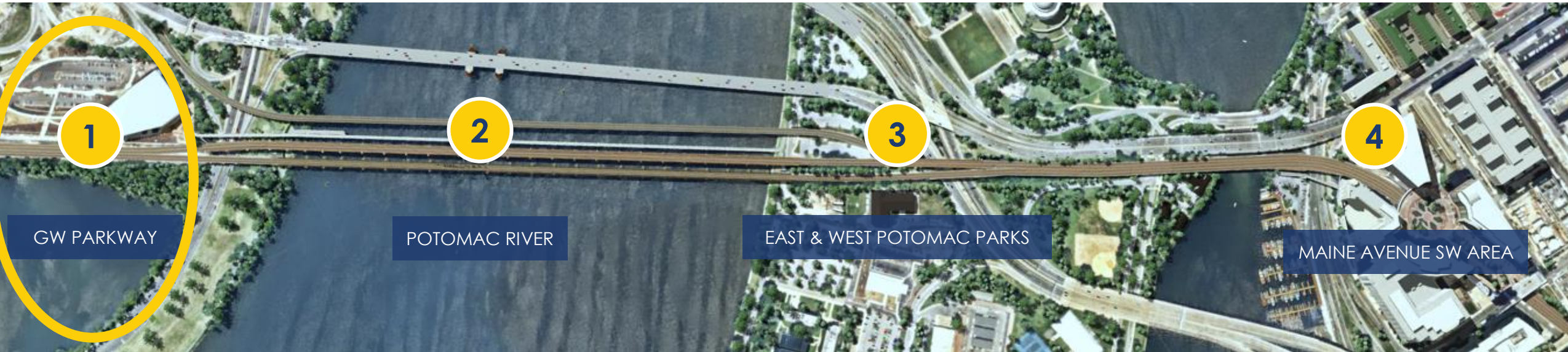
Permitting

Final Design &  
Construction





# Area 1 Design Parameters



## ***GW Parkway Railroad Bridge***

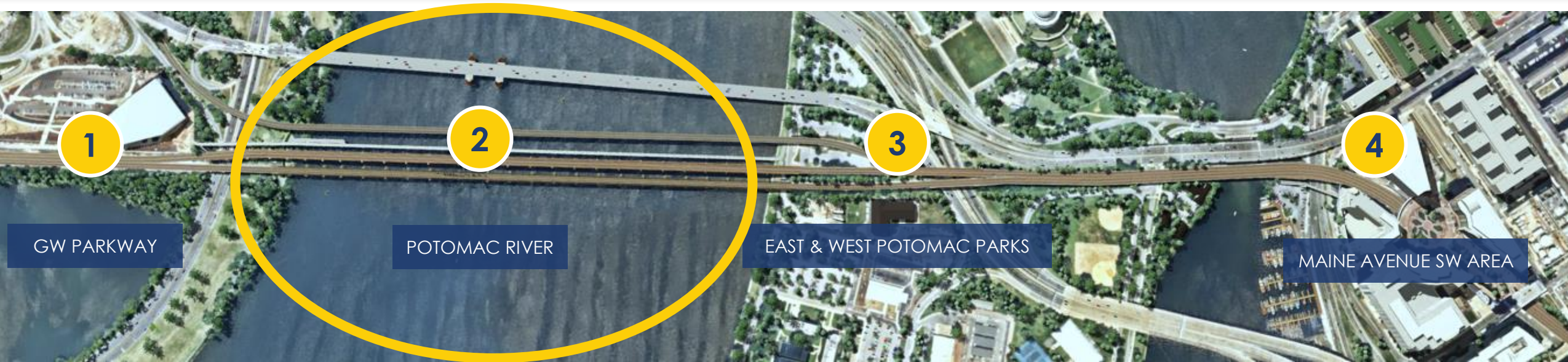
- Compatible vocabulary with George Washington Memorial Parkway
- Steel through-plate girder structure

## ***GW Parkway Bicycle-Pedestrian Bridge***

- Pre-fabricated truss spans
- Connection to Long Bridge Park and Long Bridge Aquatics & Fitness Center
- Connection to Mount Vernon Trail



# Area 2 Design Parameters



## **Potomac River Railroad Bridge**

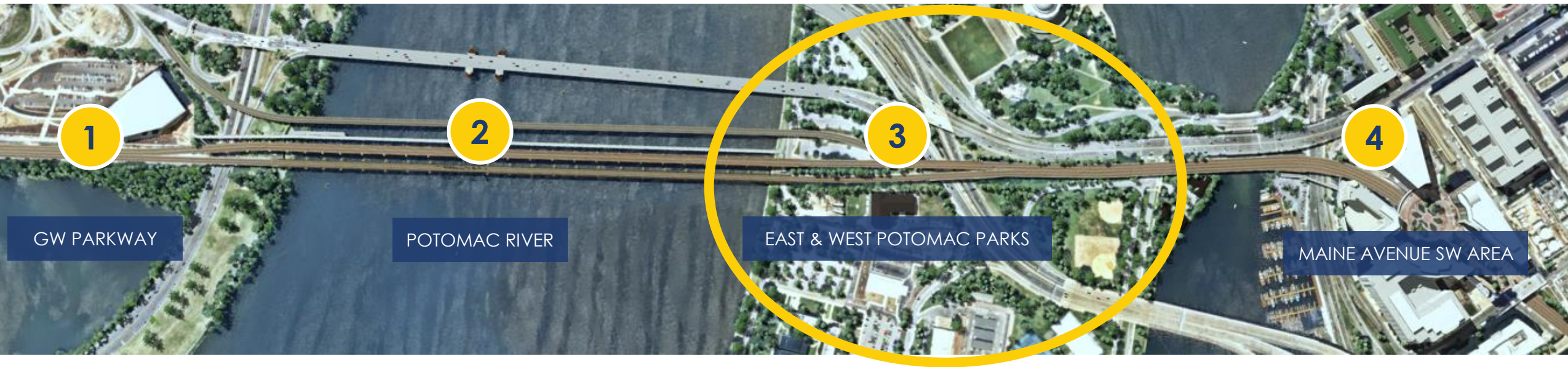
- Consistent, compatible vocabulary with historic railroad bridge
- Steel through-plate girder structure
- Piers & retaining walls similar in size and form to historic piers and walls

## **Potomac River Bicycle-Pedestrian Bridge**

- Pre-fabricated truss spans
- Single-column concrete piers w/concrete caps
- Opportunity for interpretive displays to communicate Long Bridge corridor history



# Area 3 Design Parameters

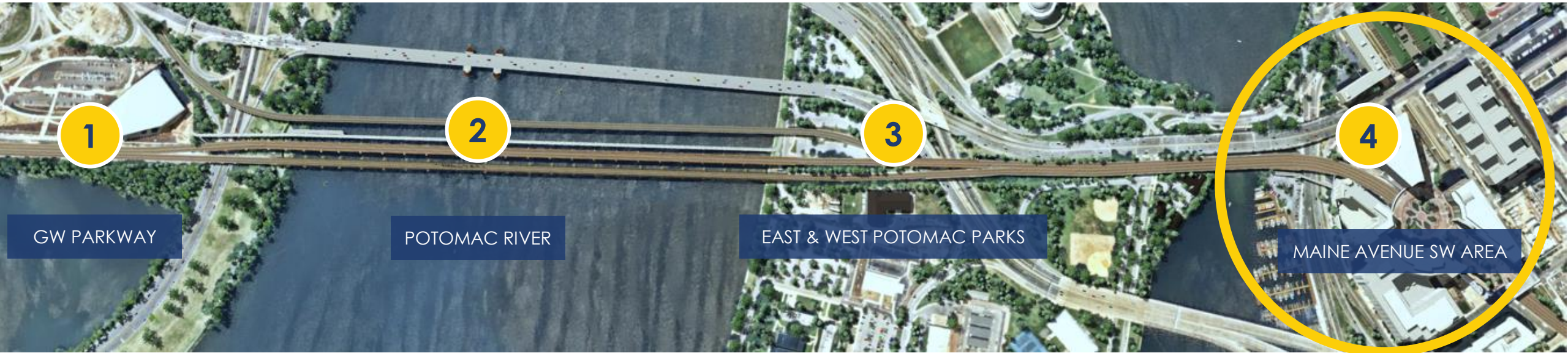


## ***East & West Potomac Parks***

- Use of retaining walls to reduce footprint
- Design walls to be compatible with character of existing resources and appropriate for context of the Monumental Core
- Design landscaping to mitigate visual impacts to East and West Potomac Parks



# Area 4 Design Parameters



## ***Maine Avenue SW Area***

- Use of retaining walls to reduce footprint
- Design of walls to be compatible with character of existing resources and appropriate for context of the Monumental Core



# Existing Conditions

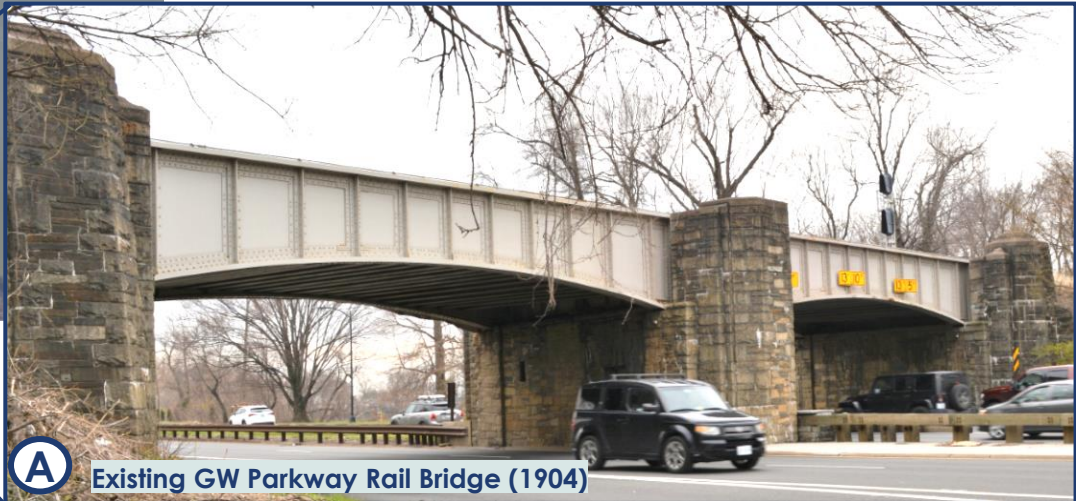
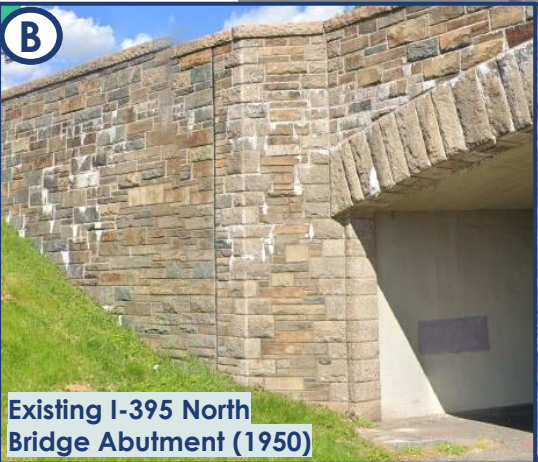
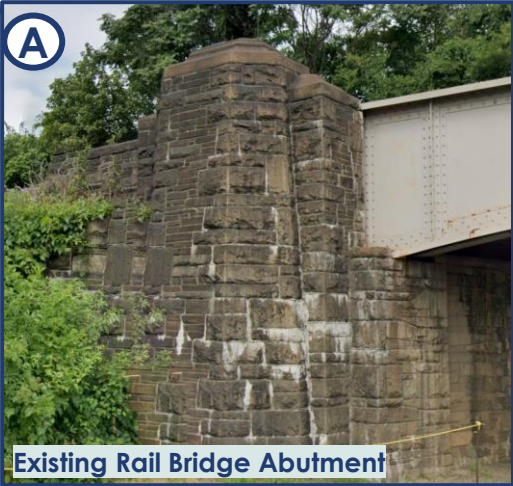




# GW Parkway Rail Bridge

1

LONG  
BRIDGE  
PROJECT  
A Transforming Rail in Virginia Project

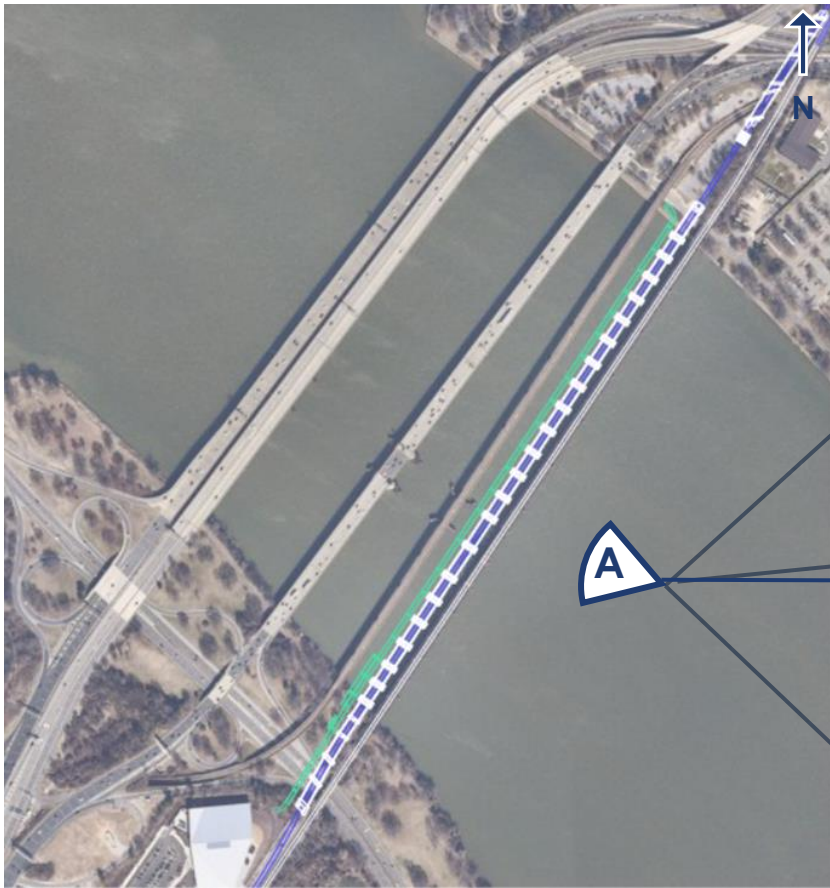




# Potomac River Rail Bridge

2

**LONG  
BRIDGE  
PROJECT**  
A Transforming Rail in Virginia Project





# East & West Potomac Parks: I-395 Rail Bridge

3

**LONG  
BRIDGE  
PROJECT**  
A Transforming Rail in Virginia Project



District Department of Transportation, "14th Street Bridge Complex (Various)," *DDOT Historic Collections*, accessed May 10, 2022, <https://ddotlibrary.omeka.net/items/show/39>



**A** Rail Bridge over I-395 (1959)



# East & West Potomac Parks: Ohio Drive SW (East) Rail Bridge 3



Rail Bridge Pier at Ohio Drive SW

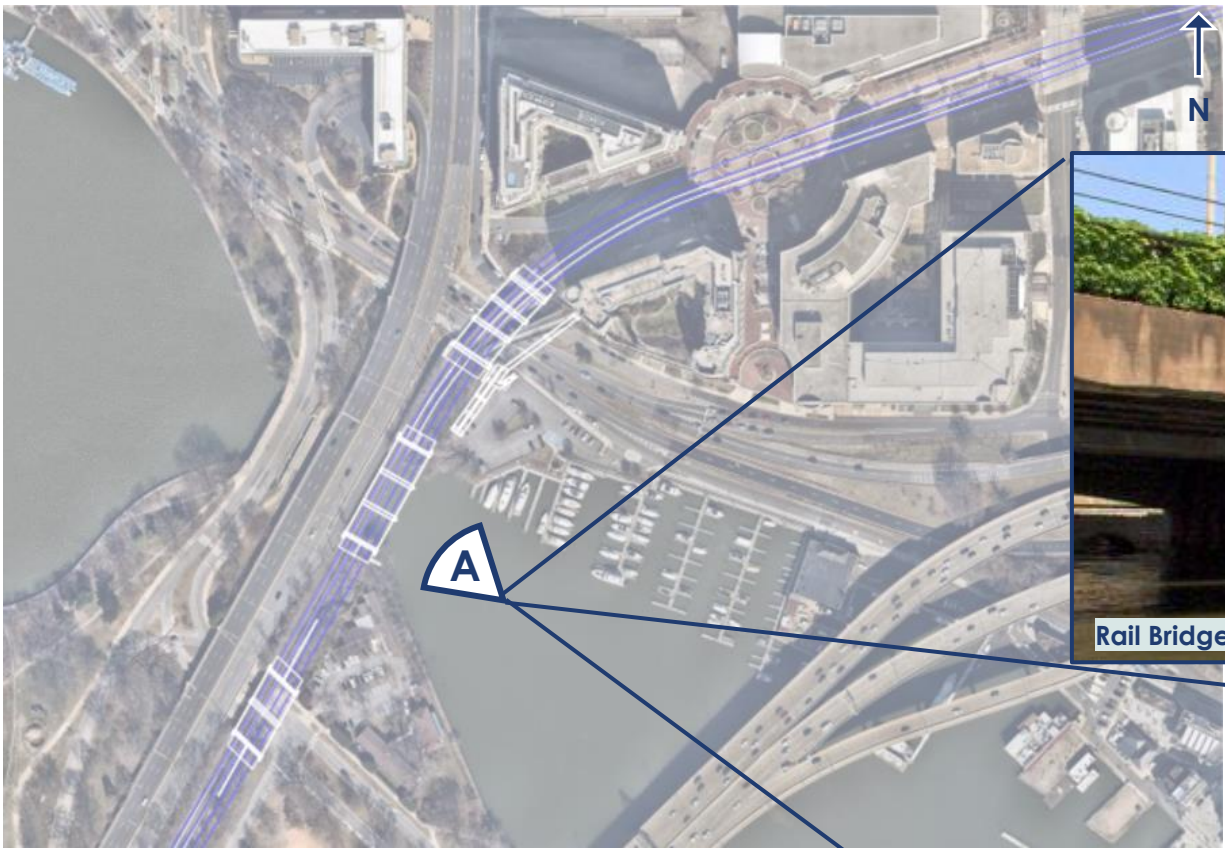


Rail Bridge over Ohio Drive SW (1904)



# East & West Potomac Parks: Washington Channel Bridge

3

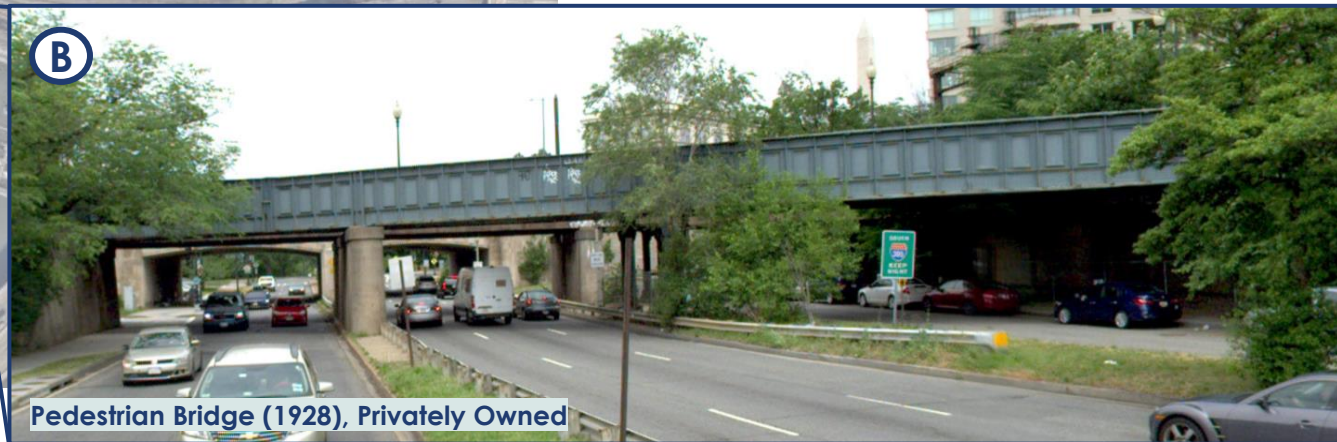
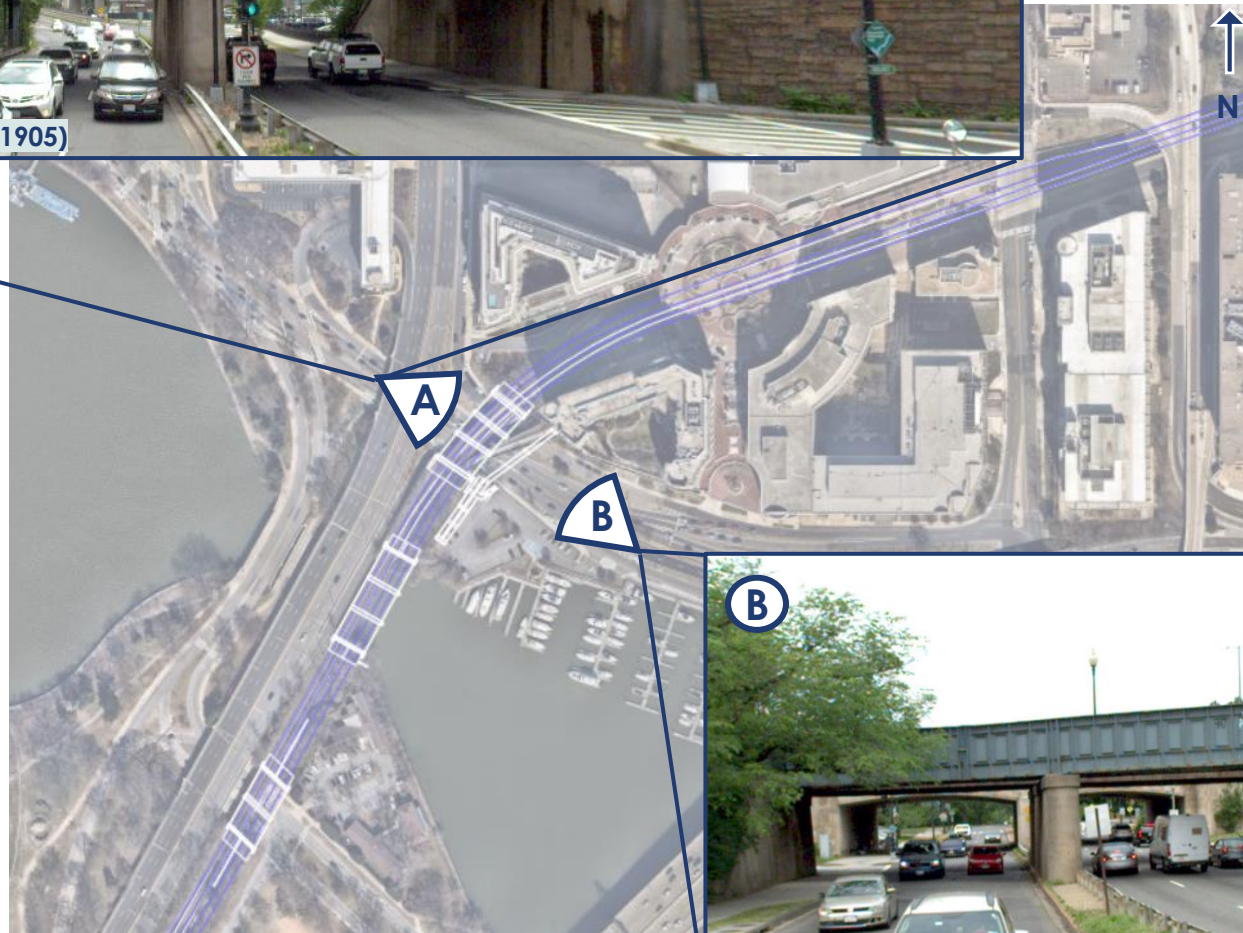




# Maine Avenue SW Rail & Pedestrian Bridge

4

**LONG  
BRIDGE  
PROJECT**  
A Transforming Rail in Virginia Project

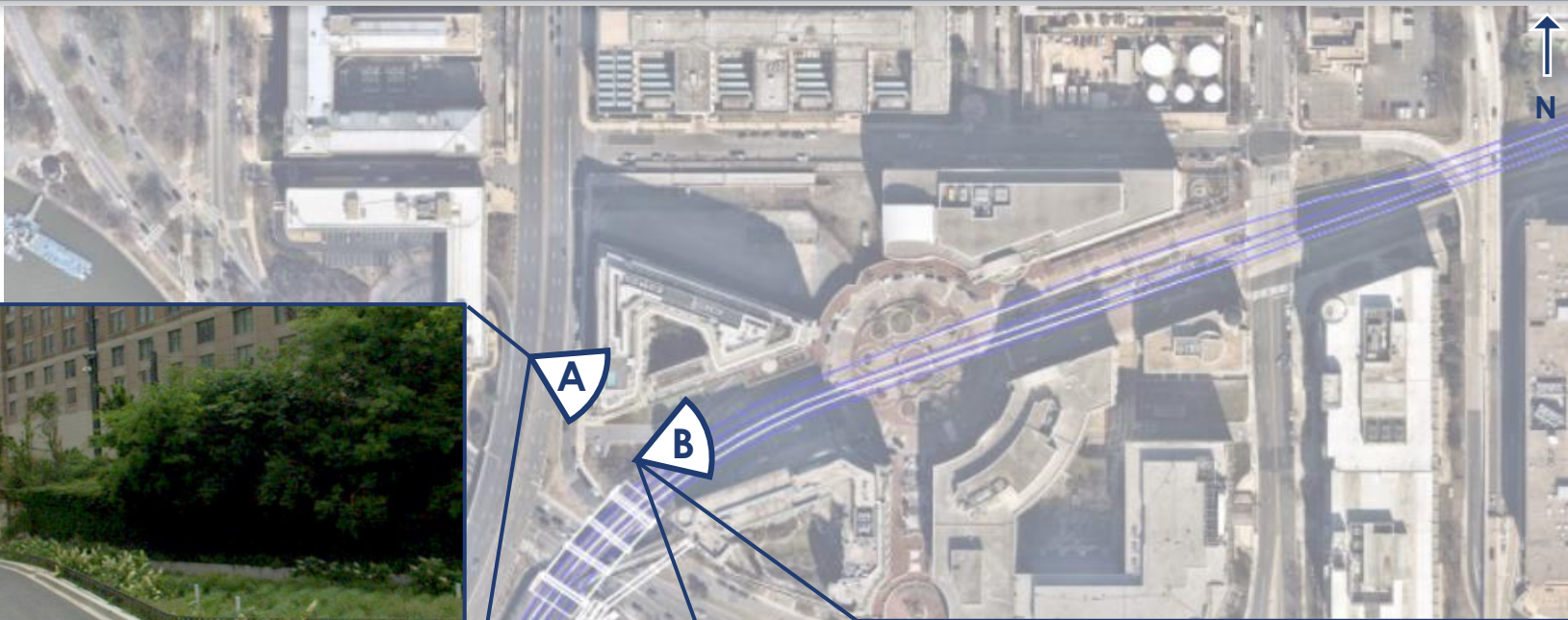




# Maryland Avenue SW Overbuild

4

LONG  
BRIDGE  
PROJECT  
A Transforming Rail in Virginia Project



Entrance to Portals V Driveway



Approach to Maryland Avenue SW Overbuild



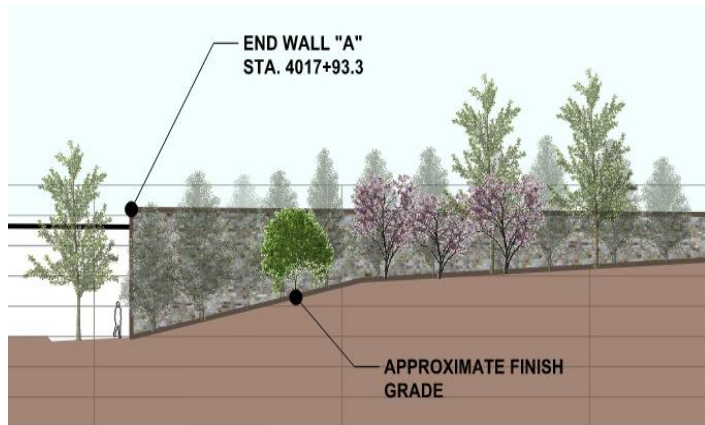
# Design Intent: Landscaping, Walls, & Bridges





# Design Intent: Landscaping, Retaining Walls, Bridge Type

## Landscaping



### Design Intent:

- Restore historic landscapes planned in parkland around rail corridor
- Screen existing and proposed rail bridges and walls
- Bicycle-Pedestrian Ramp landscaping design to address safety concerns and maximize visibility of users

## Retaining Walls, Piers & Abutments



*Proposed Stone cladding for GW Parkway*

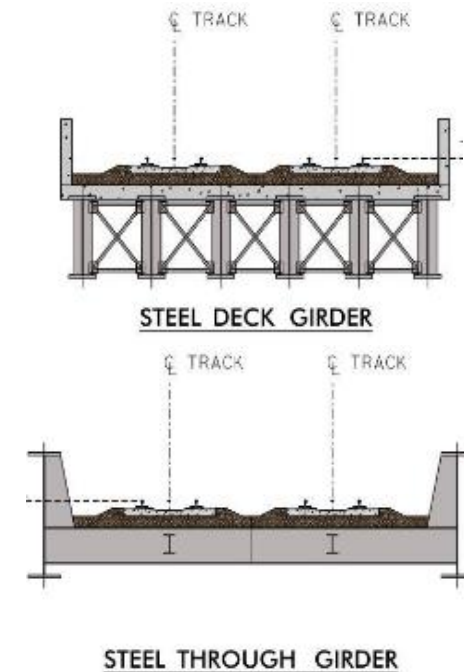


*Proposed stone cladding for Potomac River & District of Columbia*

### Design Intent:

- Granite block masonry stone cladding proposed
- Design vocabulary within the GW Parkway will be consistent with Parkway design vernacular
- Approximate, without replicating, the existing historic rail corridor not the surrounding highway corridor.

## Bridge Type

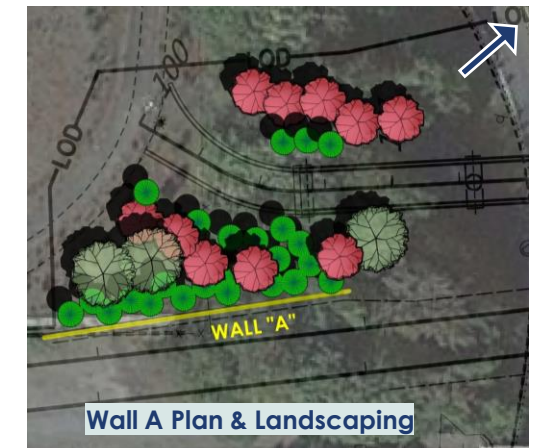
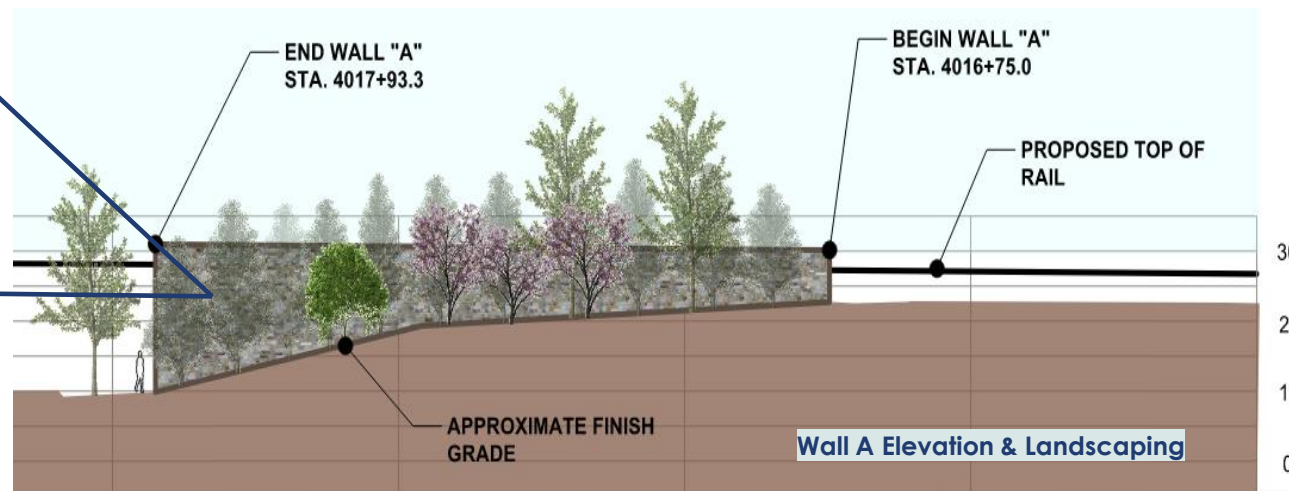
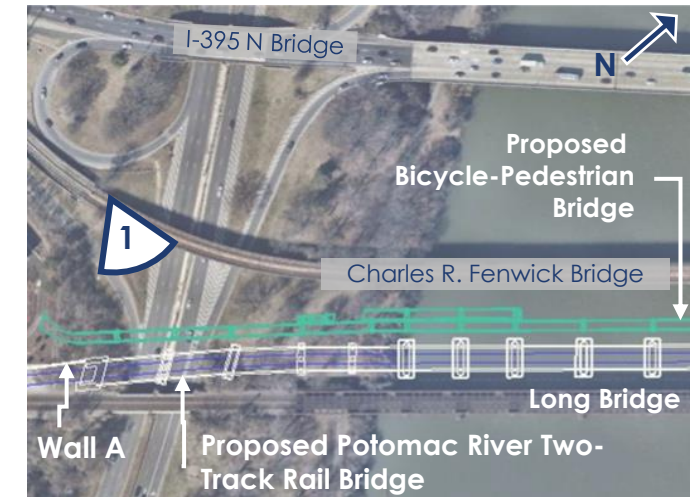


### Design Intent:

- Weathering steel girders
- Through girders over GW Parkway, Potomac River, I-395
- Deck girders over Ohio Drive SW (East), Washington Channel, Maine Avenue SW



## Potomac River Rail Bridge & Wall A

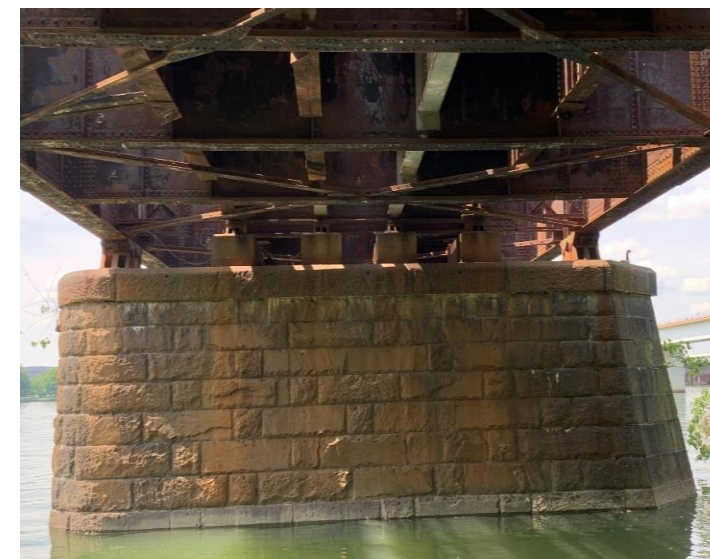




## 2 Potomac River



Existing Long Bridge

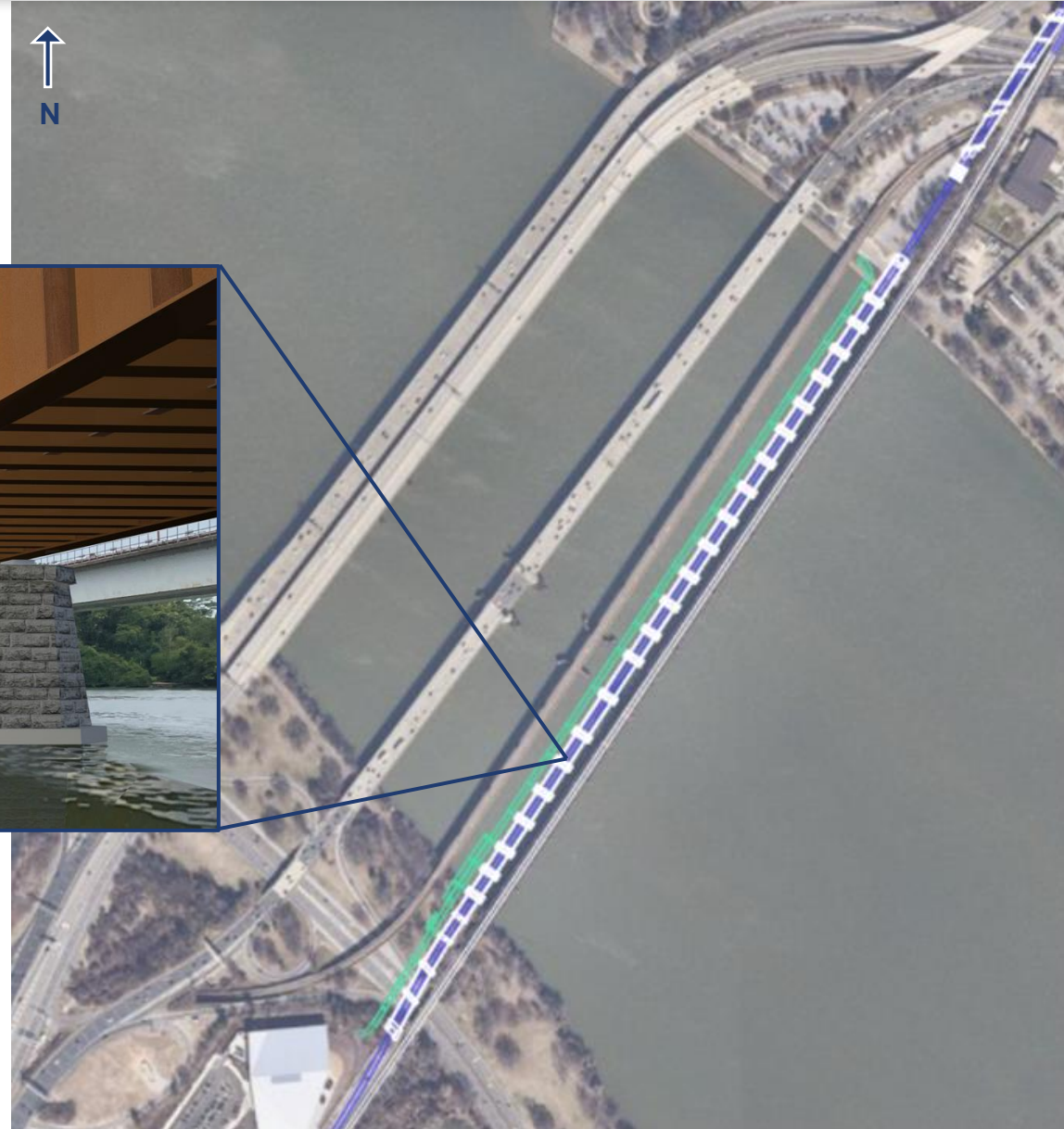
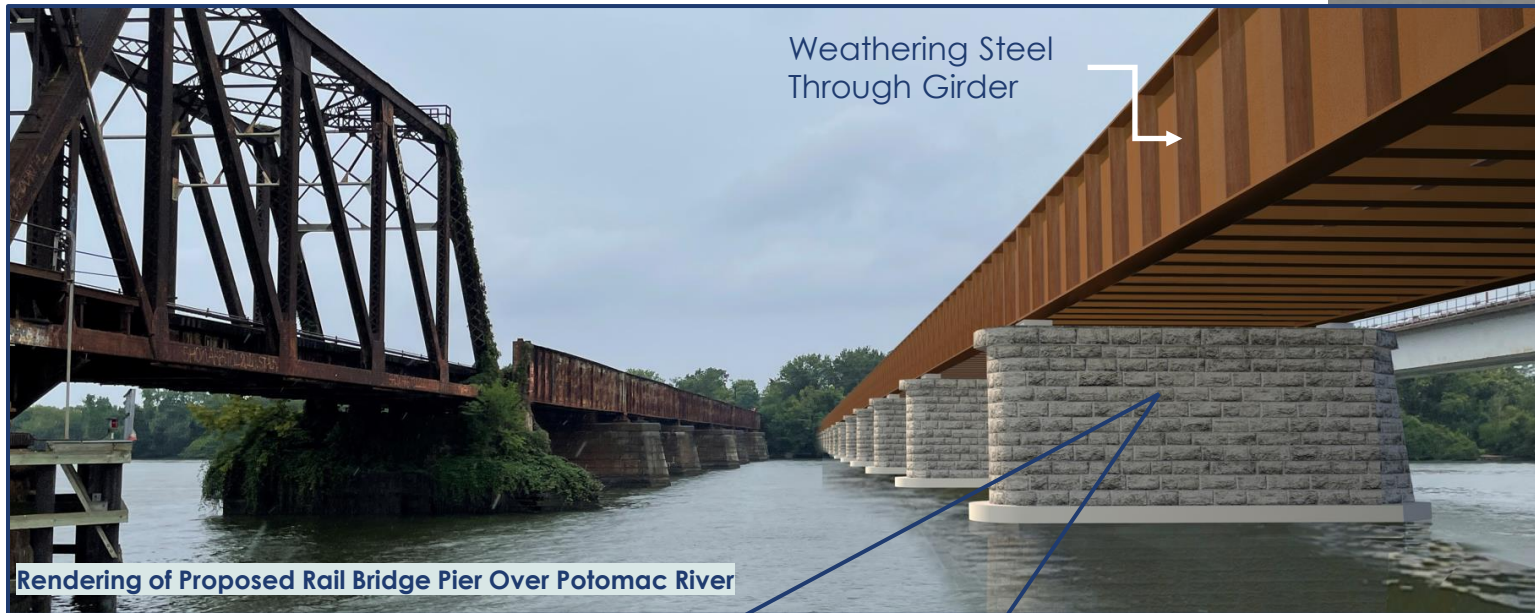




# 2 Potomac River

## Potomac River Rail Bridge

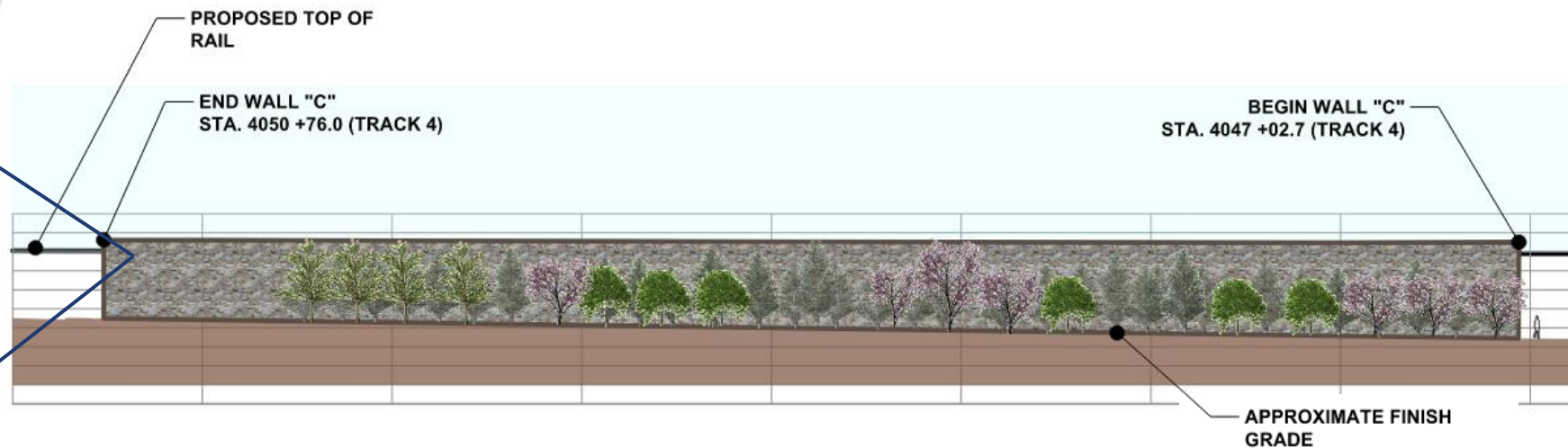
- Elements to approximate structure, material, form, through girders, and pier spacing



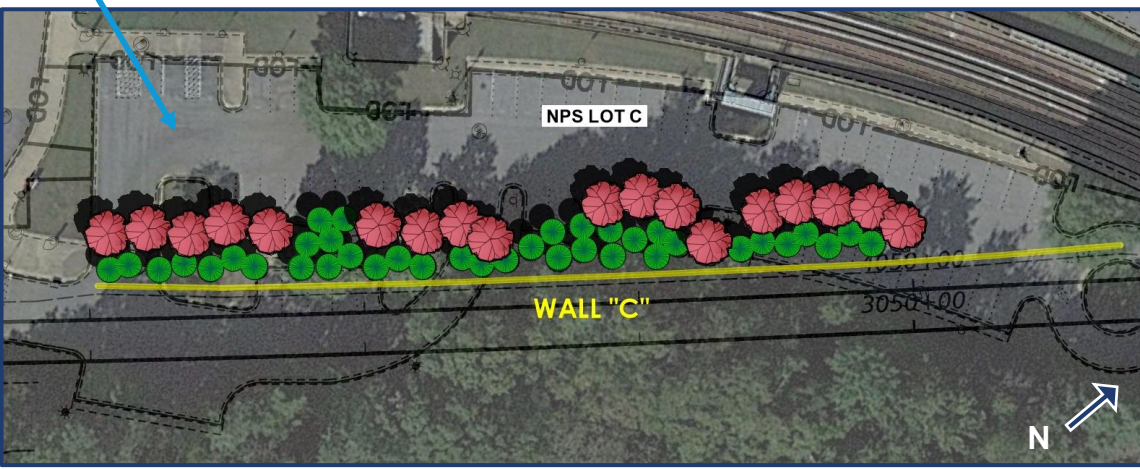


# 3 East & West Potomac Parks

## Wall C



NPS Parking Lot C  
to be redesigned

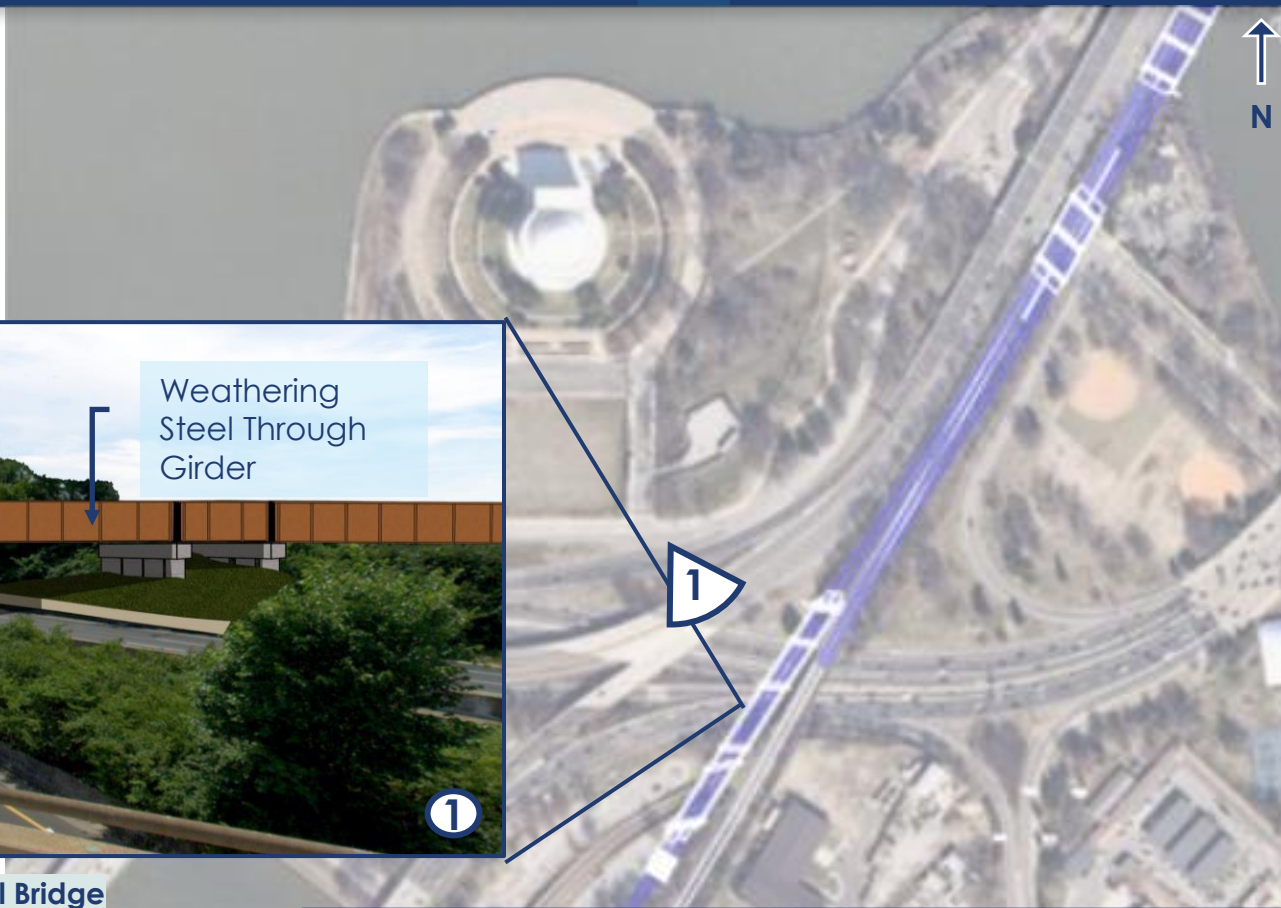




# 3 East & West Potomac Parks

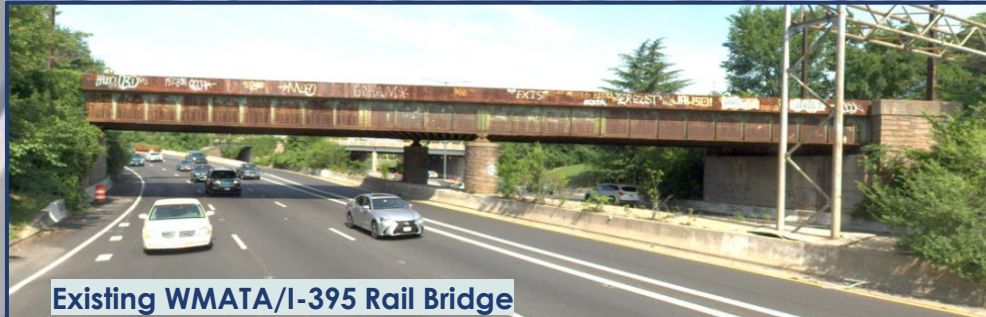
## Proposed Rail Bridge over WMATA/I-395

- Steel through plate girders
- Concrete column piers and concrete abutments
- Granite block masonry stone cladded walls



Proposed Stone Cladding

Rendering of the Proposed WMATA/I-395 Rail Bridge (from 14<sup>th</sup> Street SW Bridge looking towards East Potomac Park).



Existing WMATA/I-395 Rail Bridge

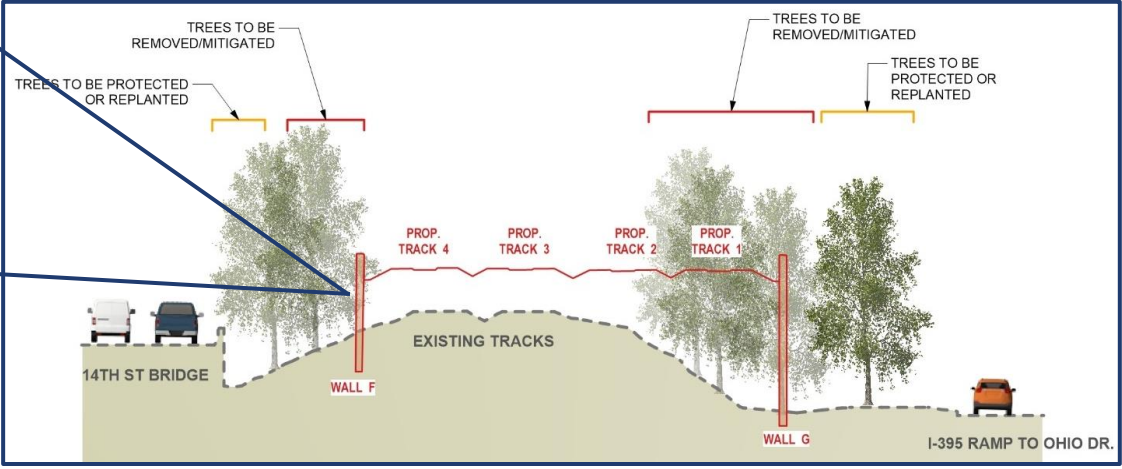


# 3 East & West Potomac Parks

## Wall F, G, H & I



Proposed Stone Cladding

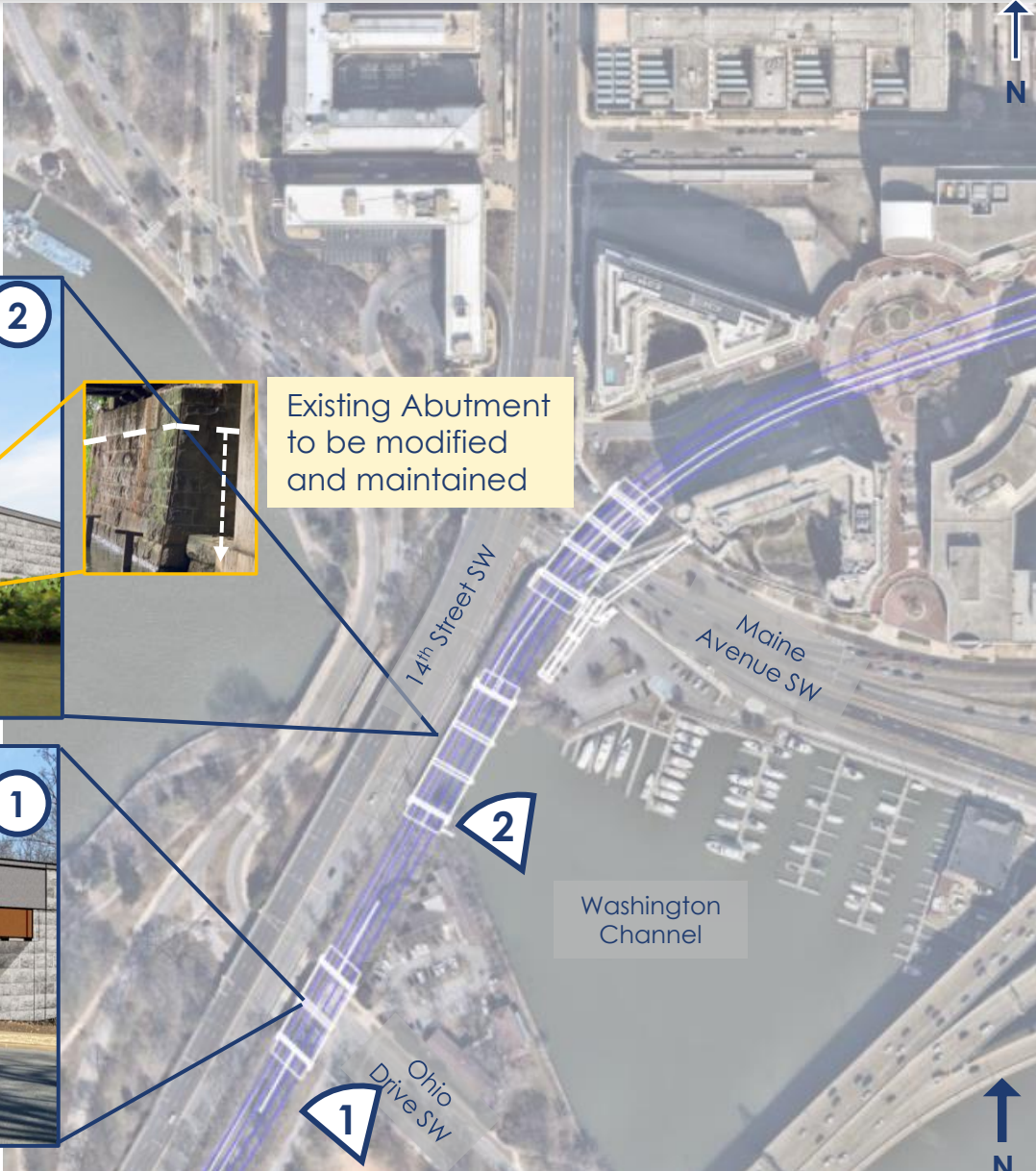




# 3 East & West Potomac Parks

## Ohio Drive SW & Washington Channel Proposed Rail Bridges

- Weathering steel deck plate girders
- Granite block masonry stone cladding for walls

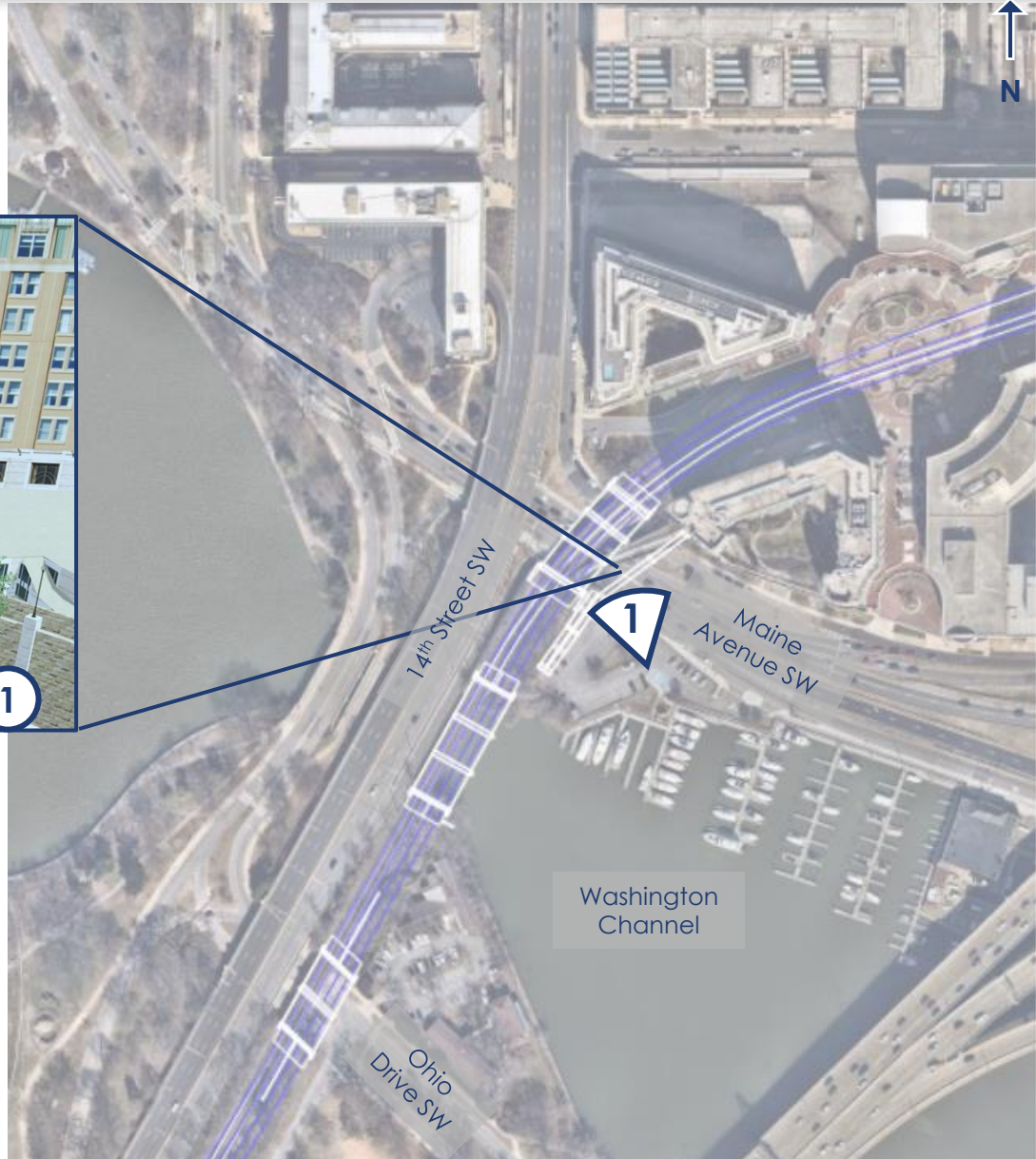




# 4 Maine Avenue SW

## Proposed Rail Bridge

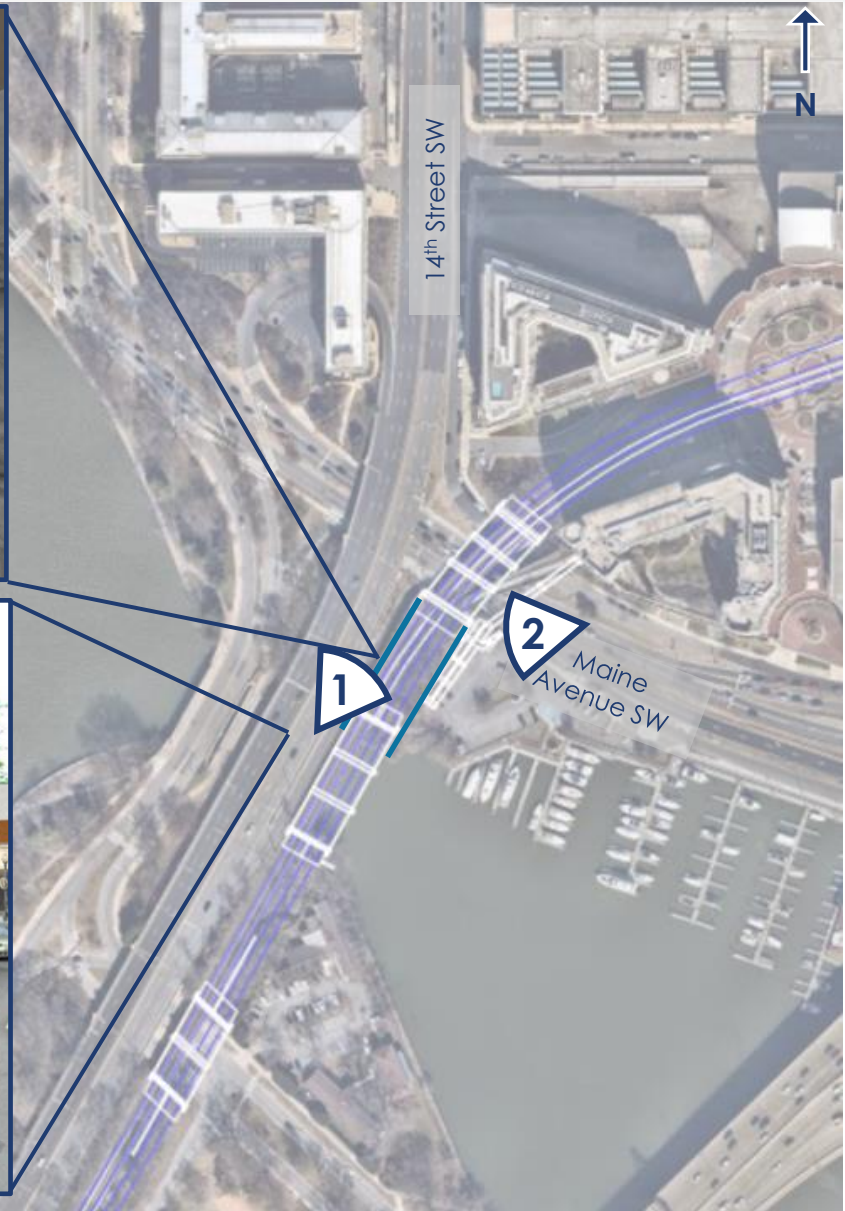
- Weathering steel girders
- Granite block masonry stone cladding for walls





# 4 Maine Avenue SW

## Wall J & K



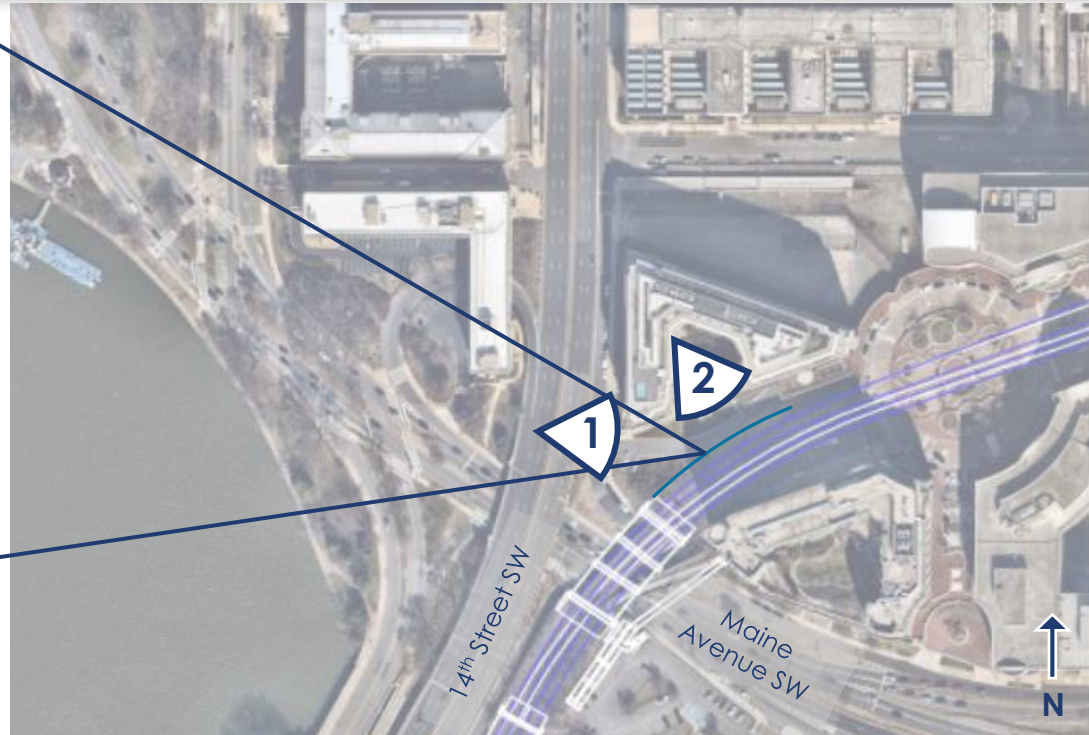


# 4 Maine Avenue SW

## Wall L

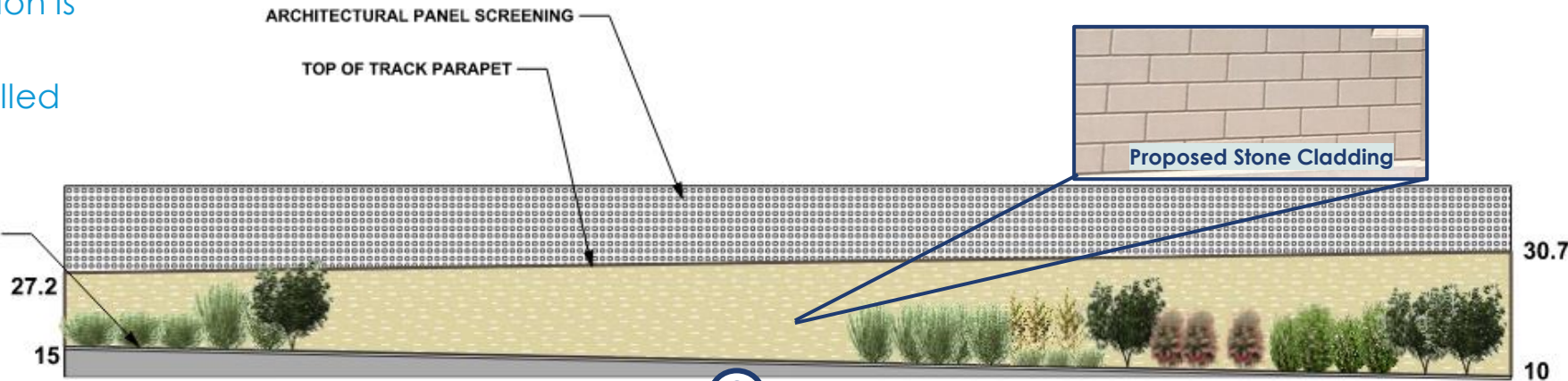


Note: Landscaping along Wall "L" not shown



### Design Intent Note:

- Adjacent property owner coordination is on-going
- An architectural panel may be installed atop the wall to visually screen the railroad from the residential use.



Elevation View showing landscape buffer along Wall "L"



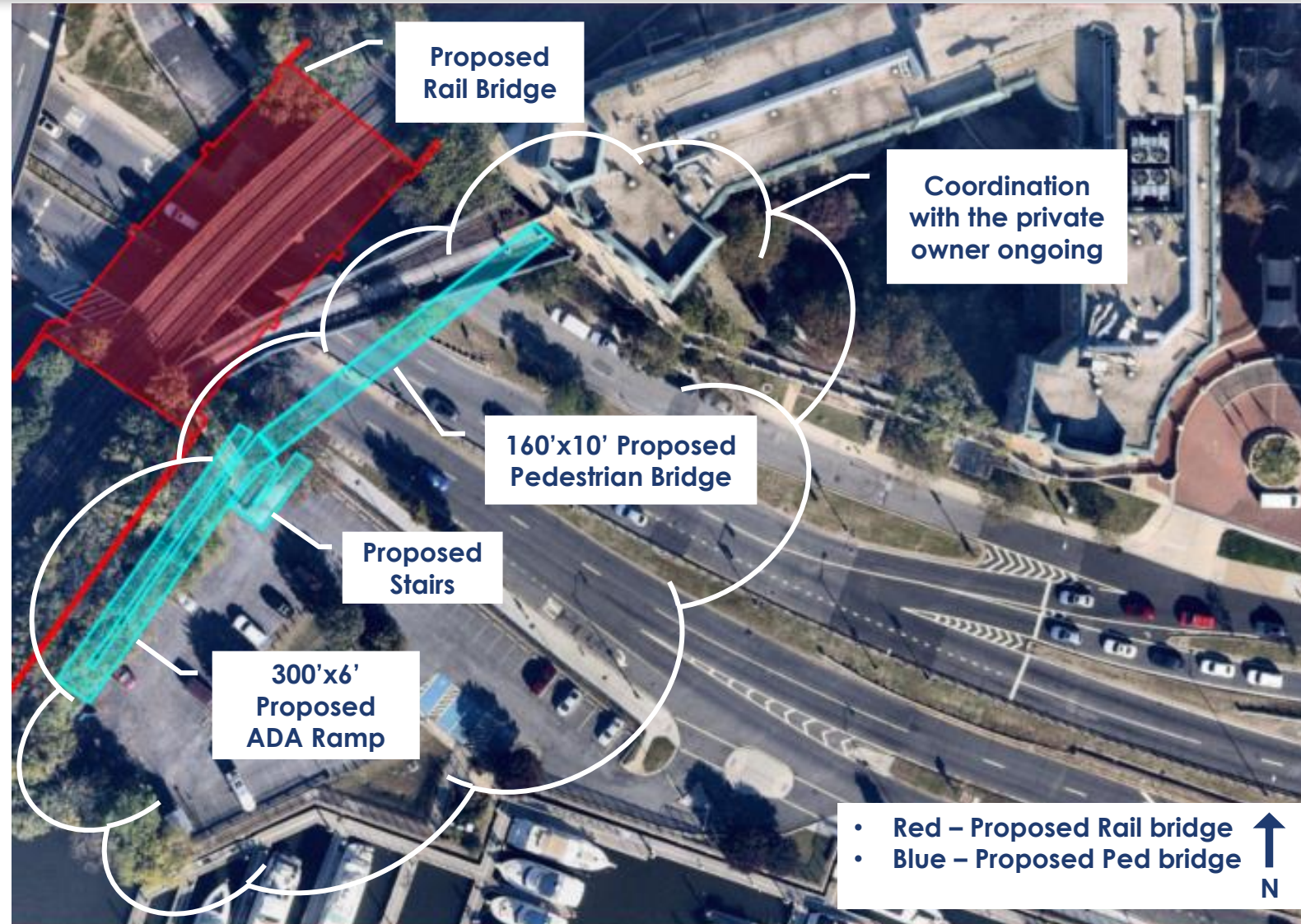
# Design Intent: Maine Avenue SW Pedestrian Bridge





# 4 Maine Avenue SW Pedestrian Bridge

- **Design Intent: Coordination with private owners of pedestrian bridge on the Design Intent is ongoing.**
- Existing pedestrian bridge is privately owned by the *Portals Development Associates Limited Partnership* and serves Republic Properties and the Mandarin Oriental Hotel.
- Existing rail and pedestrian bridges to be removed and replaced.
- The current pedestrian bridge does not provide an accessible route.
  - Options for accessible routes are being explored.
- South end includes stairs and a 6ft-wide accessible ADA ramp.
  - Including both a ramp and stairs reduces the potential conflicts for the ramp users.



Proposed rail and pedestrian bridges, ramp, and stairs.



# Design Intent: Potomac River Bicycle-Pedestrian Bridge



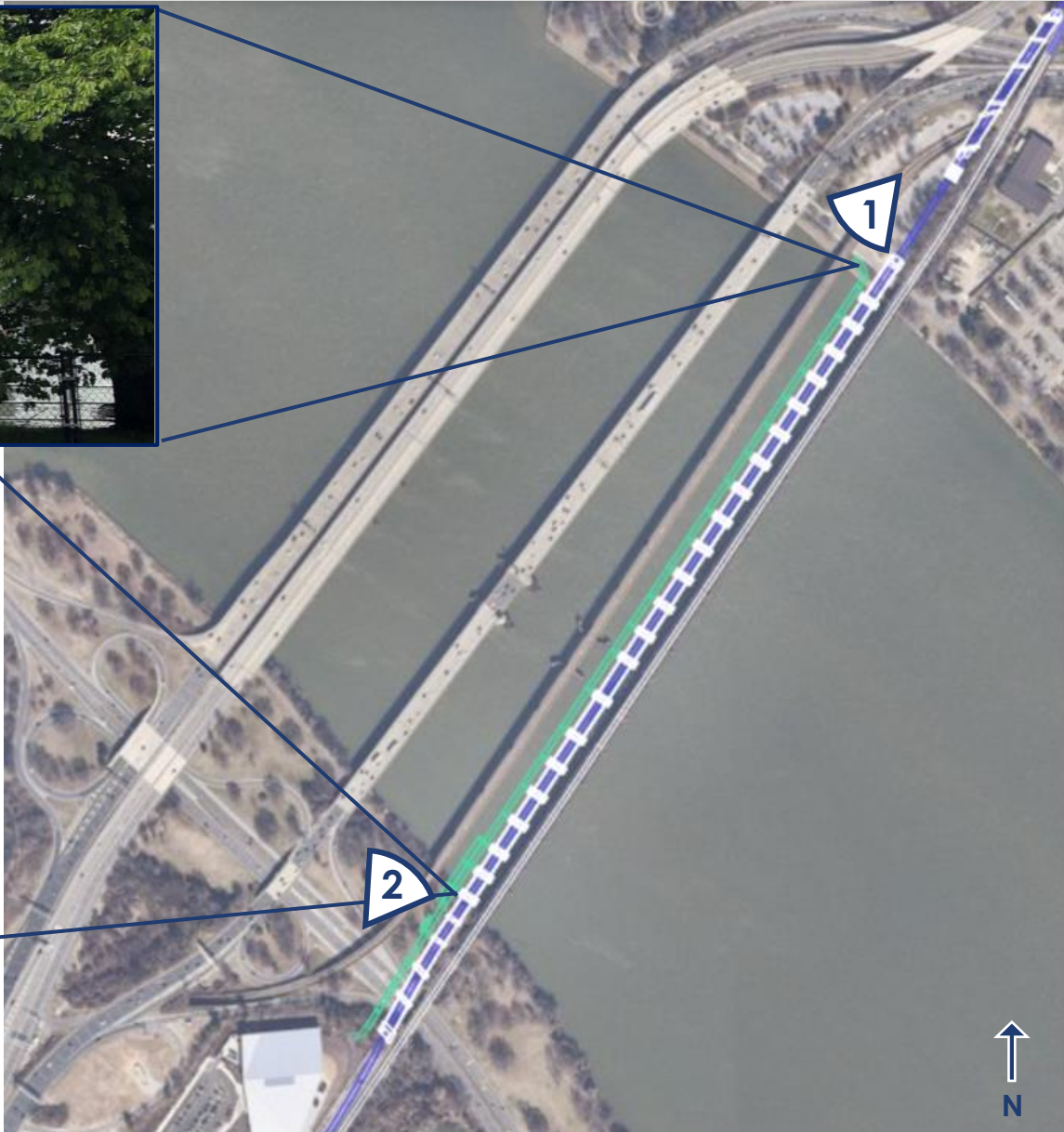


# Existing Bicycle-Pedestrian Network





# Potomac River Bicycle-Pedestrian Bridge: Existing Conditions





# Potomac River Bicycle-Pedestrian Bridge

## Proposed Connections to Existing Network



- Ramps and stairs will connect the bridge to the Mount Vernon Trail



- Ramp from bridge to Ohio Drive SW (West) will end in a T-intersection
- Prefabricated truss and pier shapes will match the bridge

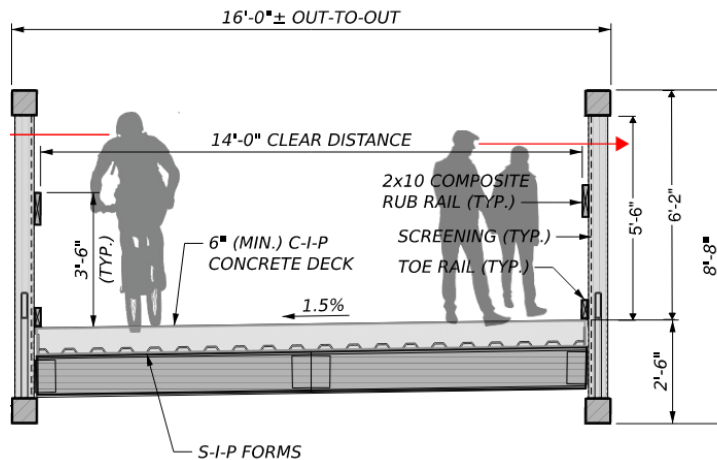
Renderings are for illustration purposes only.  
Design details will be refined based on comments.



# Potomac River Bicycle-Pedestrian Bridge

## Design Intent

- A safe, effective pedestrian and bike crossing
- Low profile and simple structure that blends with the surrounding bridges
- Truss size is based on span length determined by pier alignment
- Top chord is placed above eye-level



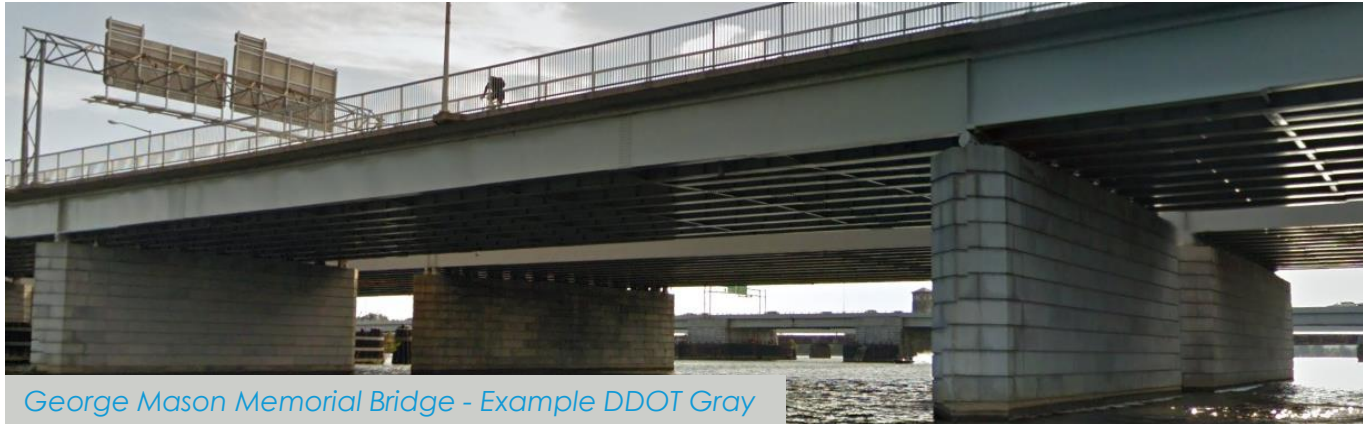
Bicycle-Pedestrian Bridge Transverse Section



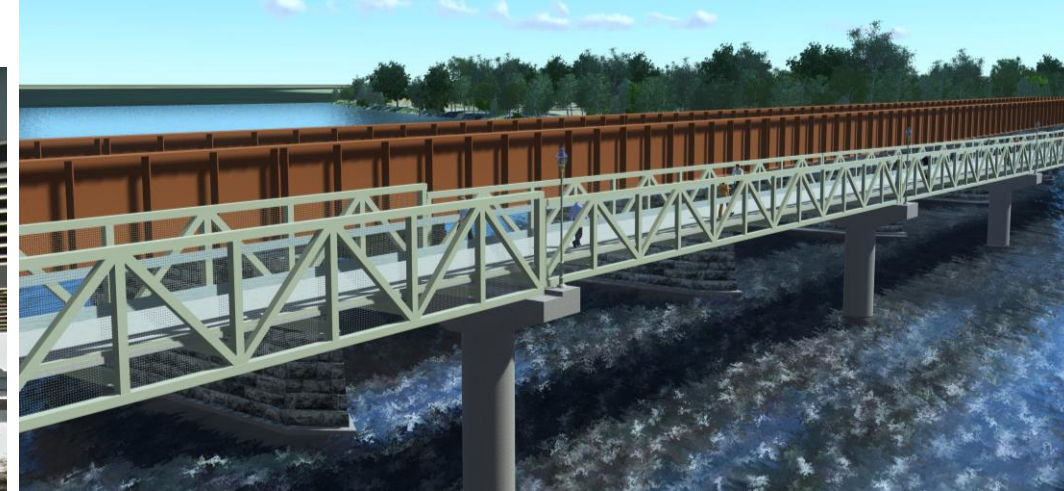


# Potomac River Bicycle-Pedestrian Bridge

## Proposed Color Options



DDOT light gray,  
Federal Standard No.  
26408.





# Potomac River Bicycle-Pedestrian Bridge

## Proposed Color Options



DDOT Red,  
Federal Standard  
No. 10076.

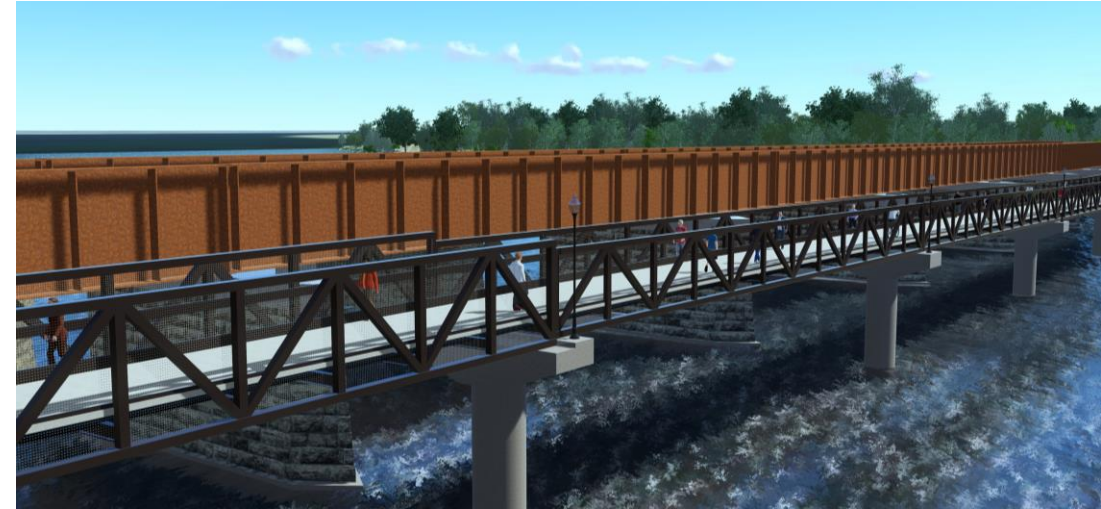
Historic Note:  
Existing 1904 Long  
Bridge was a truss  
bridge, originally  
painted red.





# Potomac River Bicycle-Pedestrian Bridge

## Proposed Color Options



DDOT Brown,  
Federal Standard  
No. 37056.





# Next Steps

- **May/June 2022**
  - CFA Concept Submission & Review
  - Public Meeting
  - Continue Private Property Owner Coordination
- **July 2022**
  - NCPC Concept/Preliminary Review
- **Fall/Winter 2022**
  - Continue CFA and NCPC reviews and Public Outreach
- **Early 2023**
  - 30% Preliminary Engineering Design Complete