

July 21, 2022



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

**Commission of Fine Arts
Presentation**

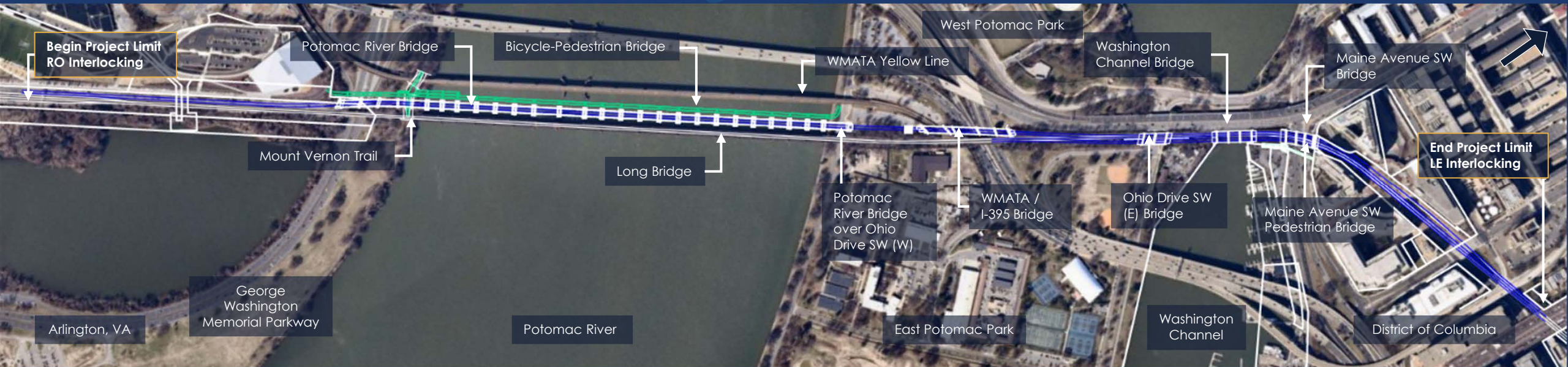


Agenda

- Project Location
- Project Scope & Schedule
- Design Parameters from EIS/ROD
- Design Intent
- Rail and Bicycle-Pedestrian Bridges
- Retaining Walls and Landscape Design
- Maine Avenue SW: Bridges and Retaining Walls



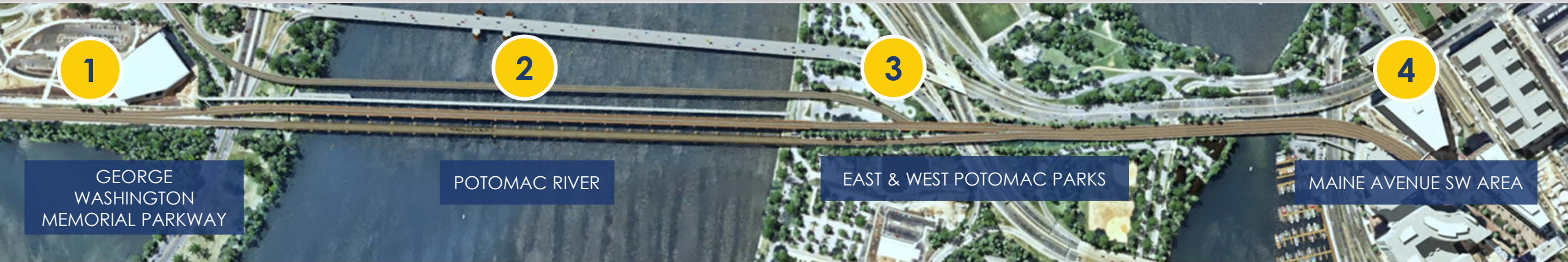
Project Location



Project Location: Bicycle-Pedestrian Bridge



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.

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



Project Schedule

DDOT Led

VPRA 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

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

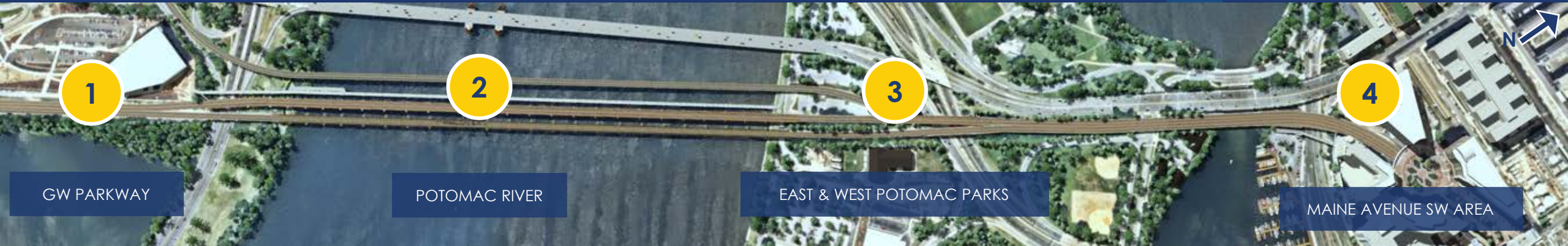
Land Acquisition
Activities

Permitting

Final Design &
Construction

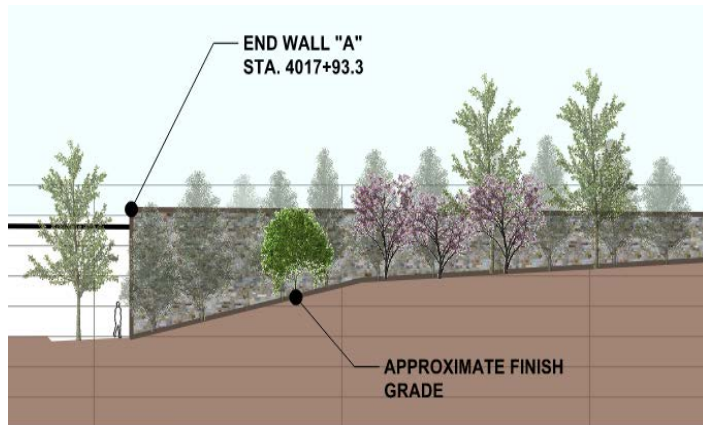


Design Parameters from EIS/ROD



GW PARKWAY	POTOMAC RIVER	EAST & WEST POTOMAC PARKS	MAINE AVENUE SW AREA
Compatible vocabulary with George Washington Memorial Parkway	Consistent, compatible vocabulary with historic railroad bridge	Use of retaining walls to reduce footprint	Use of retaining walls to reduce footprint
Rail Bridge: Steel through-plate girder structure	Rail Bridge: Steel through-plate girder structure	Design walls to be compatible with character of existing resources and appropriate for context of the Monumental Core	Design of walls to be compatible with character of existing resources and appropriate for context of the Monumental Core
Bicycle-Pedestrian Bridge: Pre-fabricated truss spans	Rail Bridge: Piers & retaining walls similar in size and form to historic piers and walls		
Bicycle-Pedestrian Bridge: Connection to Long Bridge Park, Long Bridge Aquatics & Fitness Center, Mount Vernon Trail	Bicycle-Pedestrian Bridge: Pre-fabricated truss spans	Design landscaping to mitigate visual impacts to East and West Potomac Parks	
	Bicycle-Pedestrian Bridge: Single-column concrete piers w/concrete caps		
	Bicycle-Pedestrian Bridge: Opportunity for interpretive displays to communicate Long Bridge corridor history		

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

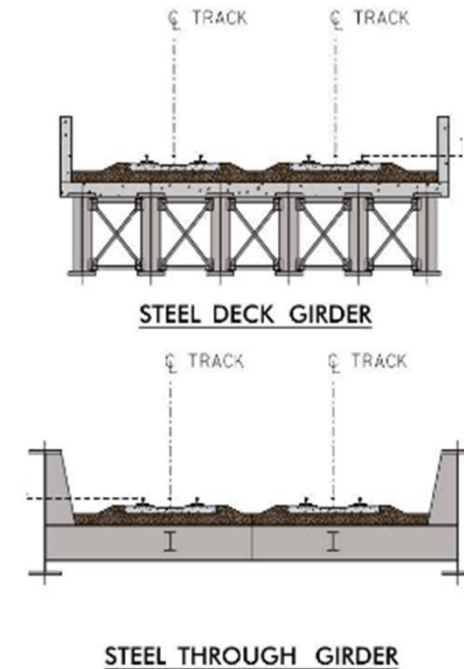


Proposed stone cladding for Potomac River & District of Columbia

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.

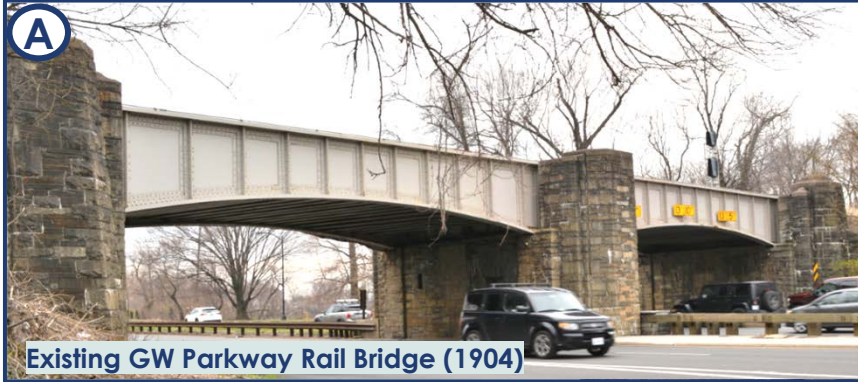
Bridge Type



Design Intent:

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

GW Parkway Rail Bridge



Existing GW Parkway Rail Bridge (1904)



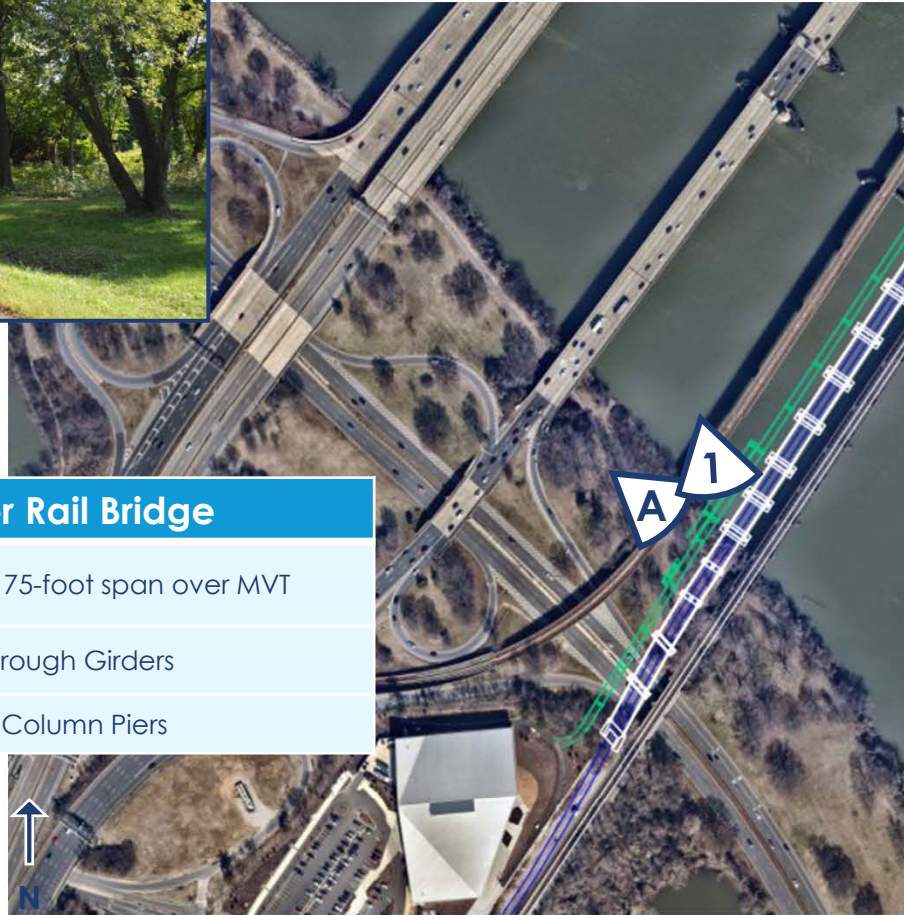
Rendering of proposed Rail Bridge over GW Parkway



GW Parkway-Potomac River Rail Bridge	
Number of Spans	Two 100-foot-long spans over the GW Parkway roadway.
Superstructure	Weathering Steel Arched Through Girders
Substructure	Abutment A – Cantilever Abutment with Stone cladding Pier 1 and 2 – Wall Piers with Stone cladding



Mount Vernon Trail (MVT) Rail Bridge



MVT- Potomac River Rail Bridge

Number of Spans	One approximately 75-foot span over MVT
Superstructure	Weathering Steel Through Girders
Substructure	Pier 3, 4 – Concrete Column Piers



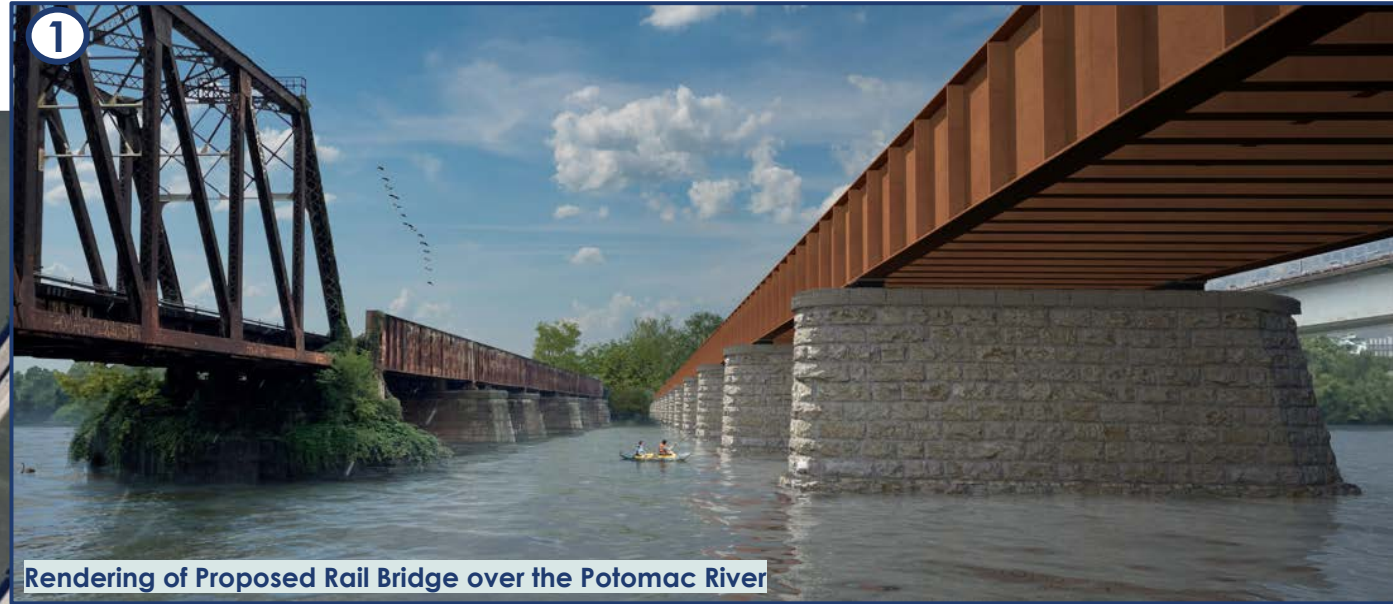
GW Parkway Bicycle-Pedestrian Bridge



Potomac River Rail Bridge



Long Bridge (1904)



Rendering of Proposed Rail Bridge over the Potomac River



Existing Potomac River Pier



Potomac River Rail Bridge	
Number of Spans	22 approach spans and one navigational channel span over the Potomac River. Spans vary from approximately 80 feet to 130 feet.
Superstructure	Weathering Steel Through Girders with depths of approximately 12 feet
Substructure	Pier 5 - 26 – Wall Piers

Potomac River Rail Bridge Pier



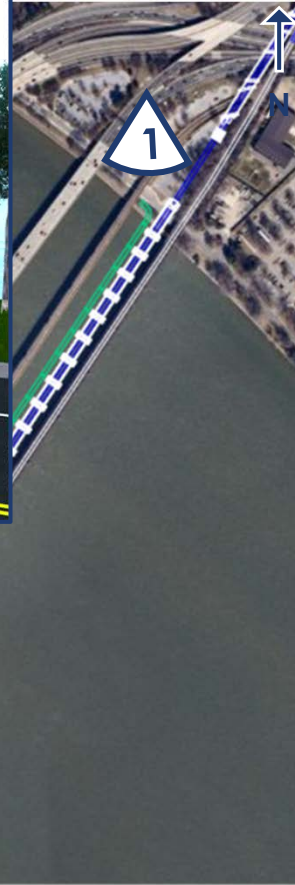
Note: The existing bridge stone masonry is red due to over-time rust staining from the steel above. The proposed stone is intended to match the original existing stone masonry color.

Pier Element	Existing Long Bridge River Pier	Proposed Potomac River Rail Pier
Pedestal	30" Deep Granite Blocks	Varying Height Reinforced Concrete
Granite Coping	10'-8" Wide	11'-8" Wide
Coping Overhang	4"	Matches Existing
Granite Cap Chamfer	6"	Matches Existing
Granite Coping Elevation	Approx. El. 19.5'	El 20.0'
Stem Geometry	Battered in all directions	Not Battered, Constant Width and Length
Upstream End	Ice Breaker Nose, Tapered	Matches Existing
Downstream End	Rounded End, Battered	Rounded End, Not Battered
Architectural Treatment	Granite Blocks	Granite Block Veneer, Matches Existing Sizing
Top of Granite Pile Cap	Below Mean Low Water	Minimum 1' above Mean High Water

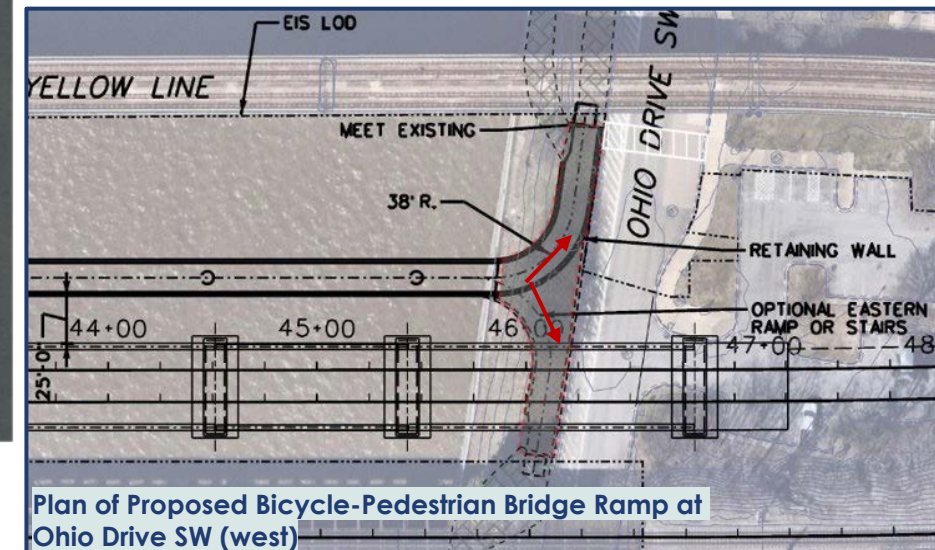
Potomac River Bicycle-Pedestrian Bridge



Ohio Drive SW (West) Bicycle-Pedestrian Bridge



T-Intersection Concept



I-395 Rail Bridge



Existing Rail Bridge over I-395 (1959)



WMATA/I-395 Rail Bridge	
Location	Between the existing I-395 rail bridge to remain and the 14th Street SW highway bridge
Number of Spans	Five Spans of varying length and skew crossing the WMATA Metrorail Yellow Line tunnel portal and I-395 northbound and southbound lanes



Rendering of Proposed Rail Bridge over I-395

Ohio Drive SW (East) Rail Bridge



Existing Rail Bridge over Ohio Drive SW (East) - 1904



Ohio Drive SW Rail Bridge	
Location	Between 14 th Street SW Bridge and I-395 Off-Ramp providing access between East and West Potomac Parks
Number of Spans	Two steel deck plate girder spans of equal length crossing Ohio Drive SW (East)



Rendering of Proposed Rail Bridge over Ohio Drive SW (East)



Washington Channel Rail Bridge



Existing Rail Bridge over Washington Channel - 1905



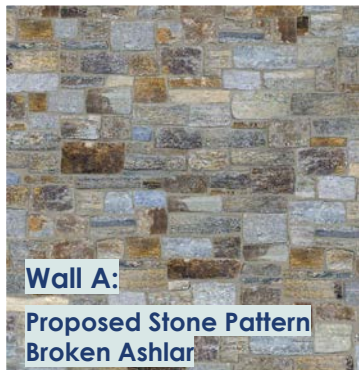
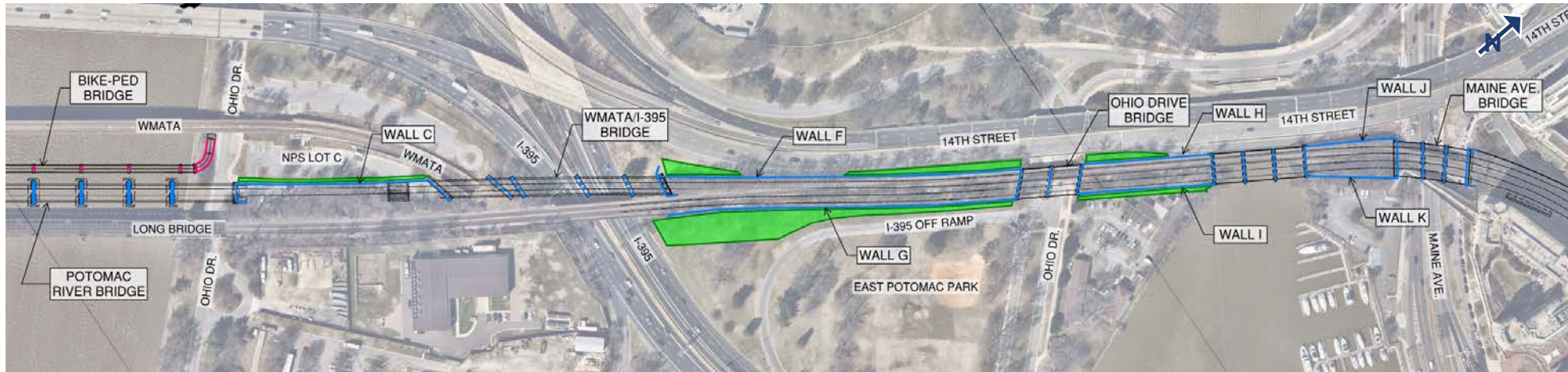
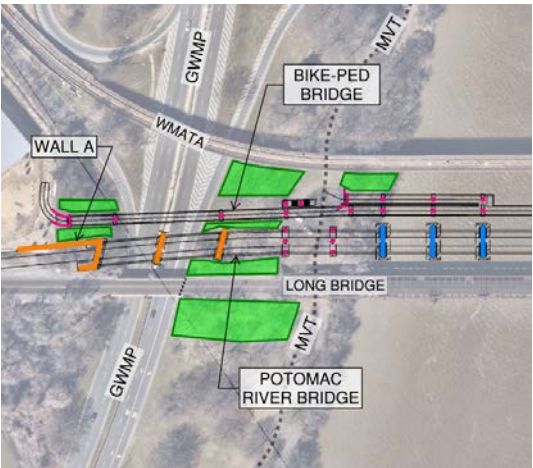
Rendering of Proposed Rail Bridge over Washington Channel



Washington Channel Rail Bridge	
Location	Adjacent to 14 th Street SW Off-Ramp Bridge and East Potomac Park
Number of Spans	Three steel deck plate girder spans of equal length crossing Washington Channel

Retaining Walls and Landscape Design

Overview



- █ PROPOSED GWMP - BROKEN ASHLAR
- █ PROPOSED MVT - SMOOTH CONCRETE
- █ PROPOSED POTOMAC - LARGE BLOCK ASHLAR
- █ PROPOSED LANDSCAPING



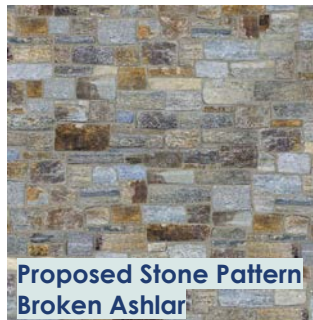
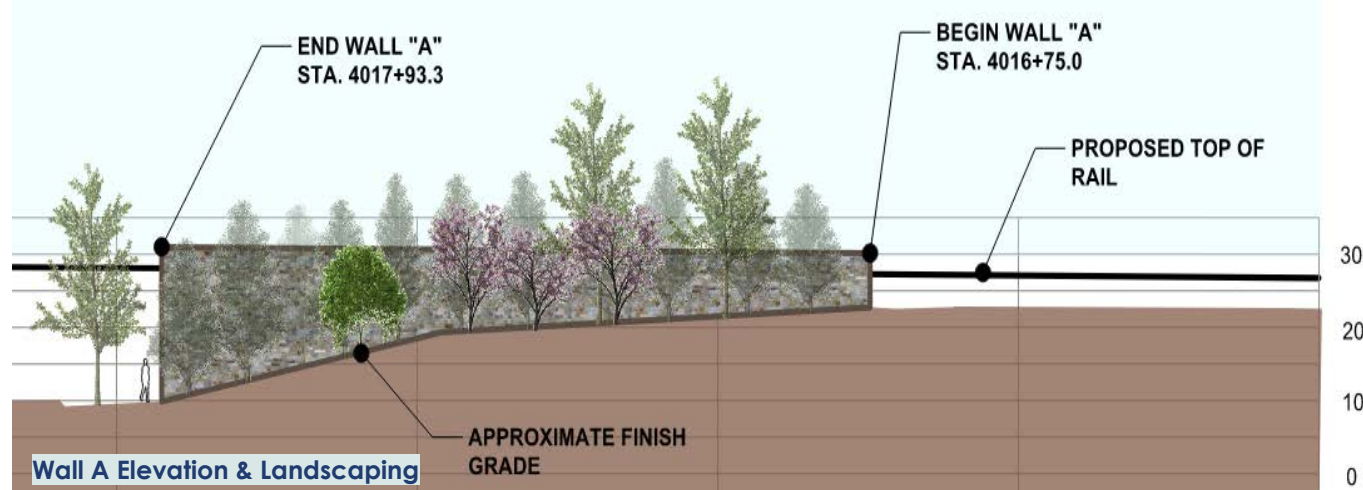
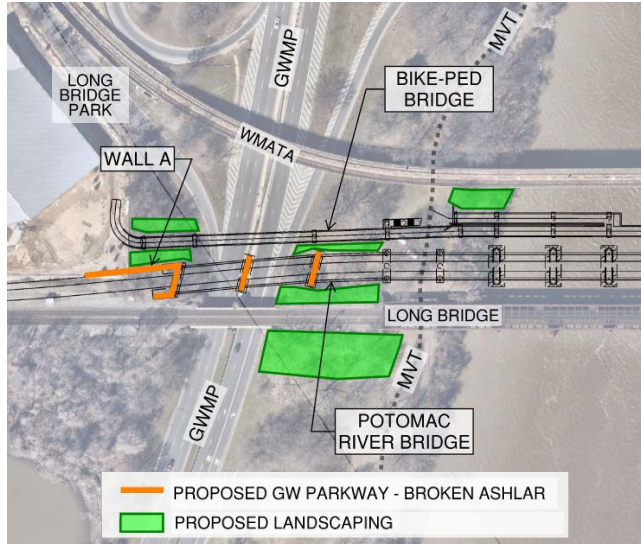
Historic Image of 14th Street and Long Bridge Rail Corridor With Landscape Screening

Source: District Department of Transportation (DDOT) Library, DDOT Historic Collection

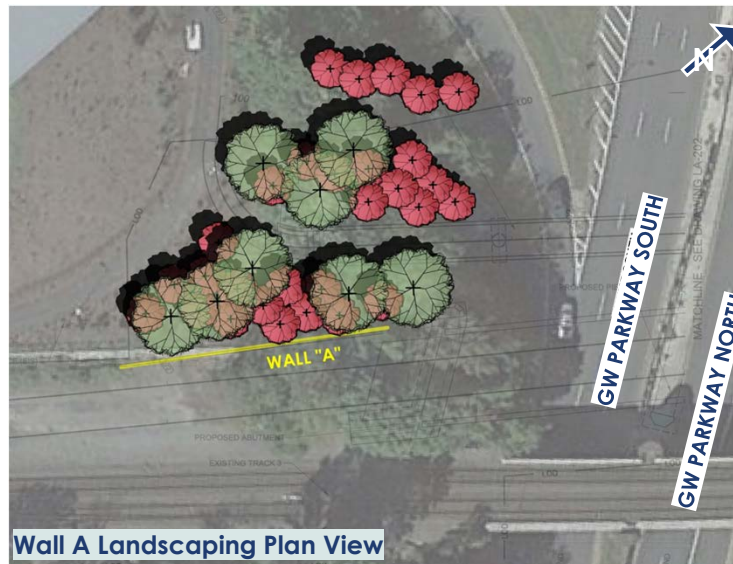


GW Parkway - Wall A

Retaining Wall and Landscape Design

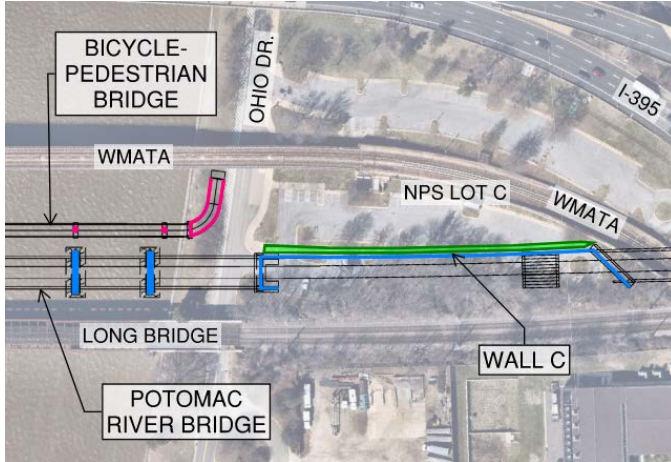


-  PROPOSED CANOPY TREE
-  PROPOSED FLOWERING TREE
-  EXISTING CANOPY COVER

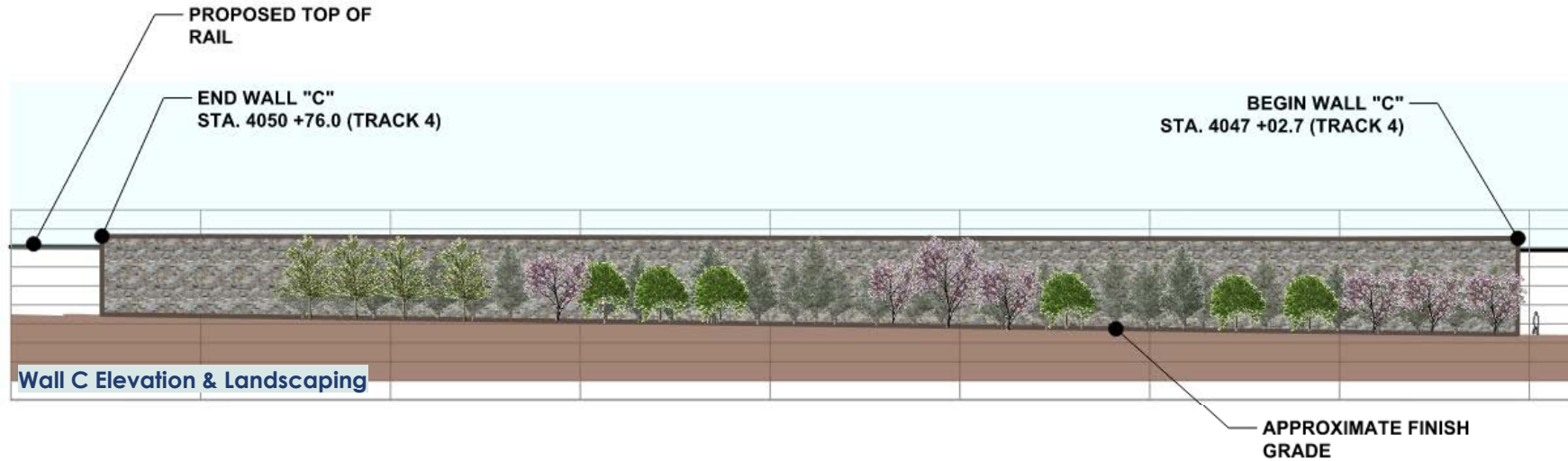


East & West Potomac Parks – Wall C

Retaining Wall and Landscape Design



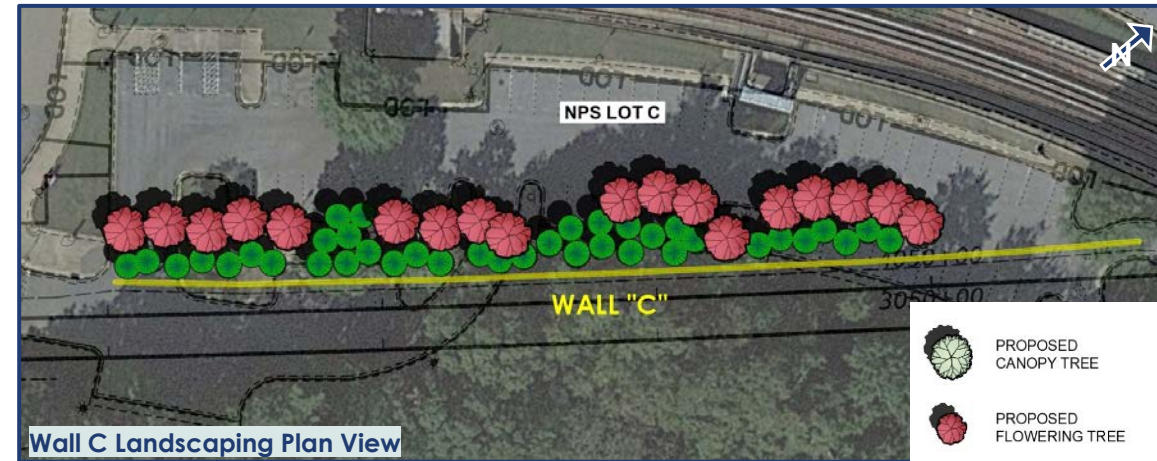
- PROPOSE BICYCLE-PEDESTRIAN BRIDGE - SMOOTH CONCRETE
- PROPOSED RAIL BRIDGE - LARGE BLOCK ASHLAR
- PROPOSED LANDSCAPING



Wall C Elevation & Landscaping



Proposed Stone Pattern
Large Block Ashlar

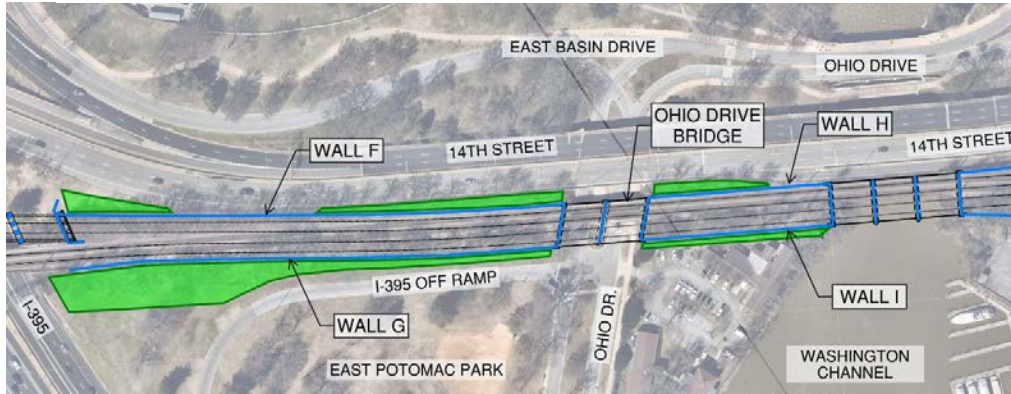


Wall C Landscaping Plan View

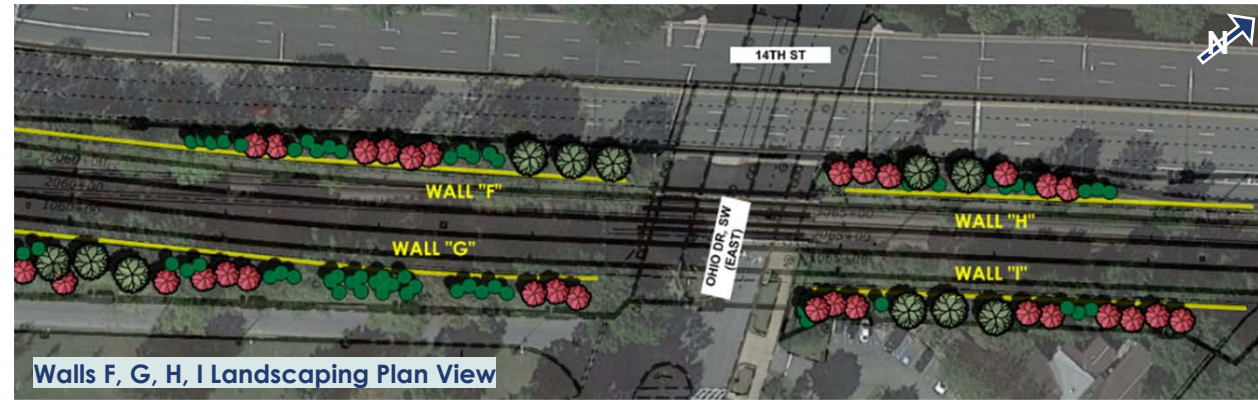
- PROPOSED CANOPY TREE
- PROPOSED FLOWERING TREE
- PROPOSED EVERGREEN TREE

East & West Potomac Parks – Walls F, G, H, I

Retaining Wall and Landscape Design



- PROPOSED POTOMAC - LARGE BLOCK ASHLAR
- PROPOSED LANDSCAPING



-  PROPOSED CANOPY TREE
-  PROPOSED FLOWERING TREE
-  PROPOSED EVERGREEN TREE



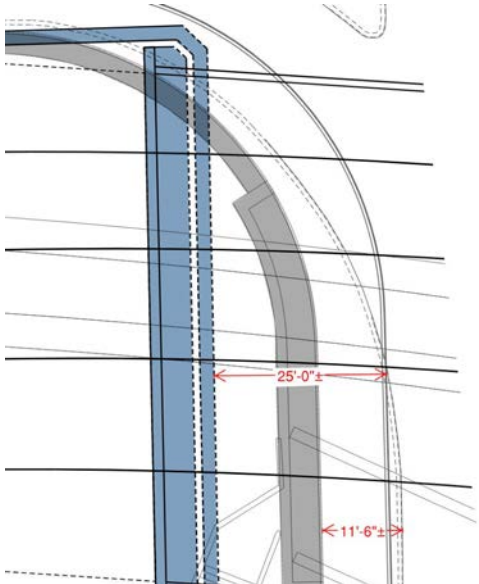
Maine Avenue SW Rail Bridge



Existing Rail Bridge over Maine Avenue SW - 1905



Existing Sidewalk Width



= indicates proposed abutment
 = indicates removal of existing abutment

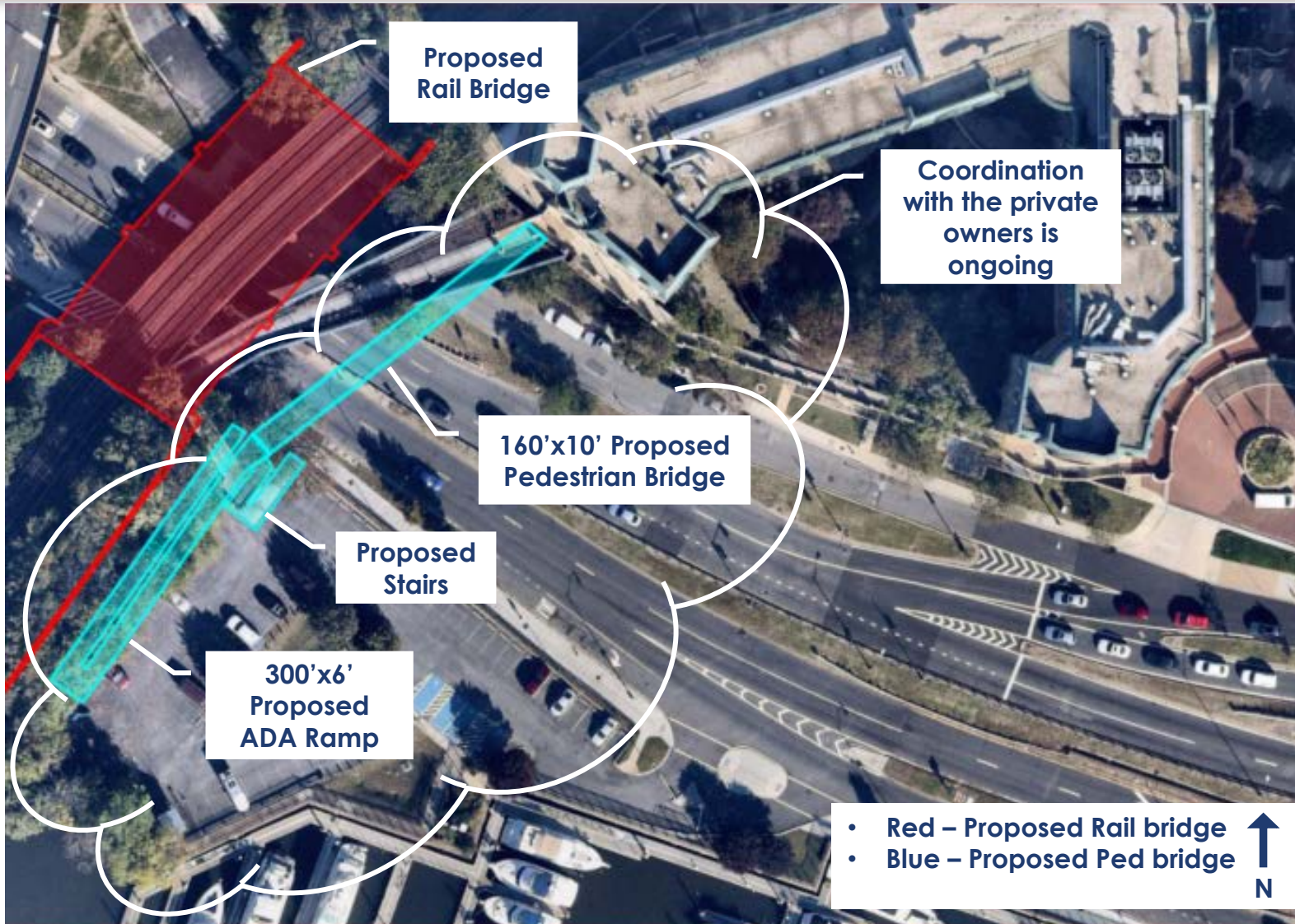


Rendering of Proposed Rail Bridge over Maine Avenue SW



Maine Avenue SW Pedestrian Bridge

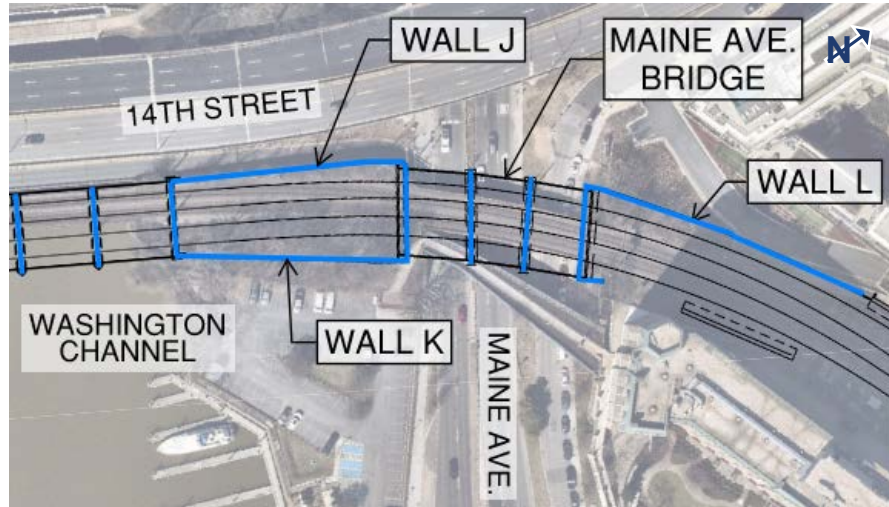
- **Design Intent: Coordination with private owners of pedestrian bridge on the Design Intent is ongoing.**
- Existing pedestrian bridge is privately owned by the *Portals Development Associates Limited Partnership* and serves Republic Properties and the Mandarin Oriental Hotel.
- Existing rail and pedestrian 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.

Maine Avenue SW - Walls J and K

Retaining Wall and Landscape Design



— PROPOSED POTOMAC - LARGE BLOCK ASHLAR



Proposed Retaining Wall J at 14th Street Off-Ramp



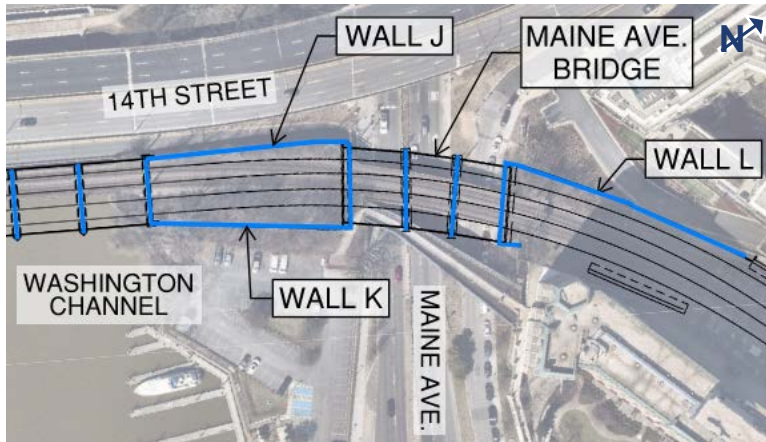
Proposed Retaining Wall K at Washington Marina Parking Lot



Proposed Stone Pattern
Large Block Ashlar

Maine Avenue SW - Wall L

Retaining Wall and Landscape Design



— PROPOSED POTOMAC - LARGE BLOCK ASHLAR



Wall L Elevation & Landscaping

QUESTIONS?

