

Rehabilitate Tidal Basin and West Potomac Park Seawall Environmental Assessment

National Park Service, National Mall and Memorial Parks

Virtual Public Scoping Meeting - July 19, 2022





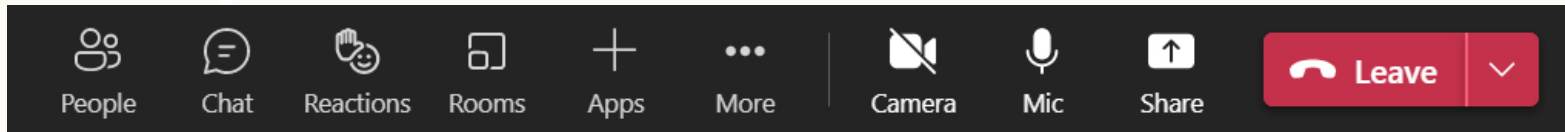
VIRTUAL MEETING OVERVIEW

- This meeting is being **recorded**
- Type your questions into the Meeting Chat at any time
- Questions will be answered at the end of the presentation as time allows
- Questions or comments submitted as part of this meeting will **not** be considered formal comments on the project.
 - Formal comments must be submitted online or postmarked by September 12, 2022



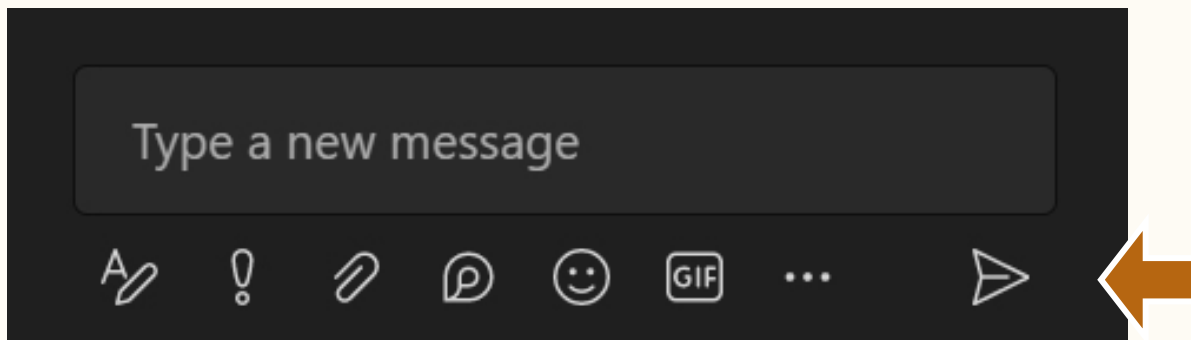
HOW TO ASK A QUESTION

1. Click on the “Chat” icon at the top of your screen



2. The Meeting Chat panel will open on the right side of the screen.

3. Enter your question into the text box and select **Send**. ➤





SPEAKER INTRODUCTIONS

- **Jeffrey Reinbold**, Superintendent, National Mall and Memorial Parks
- **Sean Kennealy**, Deputy Superintendent, National Mall and Memorial Parks
- **Tammy Stidham**, Deputy Associate Regional Director - Lands and Planning, National Park Service
- **Kent Brogger**, Federal Program Manager, HDR Inc.
- **Brent Moore**, Vice President - Ports & Harbors, HDR Inc.
- **Margaret Boshek**, Senior Coastal Engineer, Moffatt & Nichol, Inc.



AGENDA

- National Environmental Policy Act (NEPA) and Section 106 of the National Historic Preservation Act (NHPA) Processes
- Purpose and Need
- History of the Seawalls
- Existing Conditions
- Prior Analyses
- Project Requirements
- How to Comment and Next Steps
- Chat Session



MEETING GOALS

- Initial ideas for the proposed seawall rehabilitation
- How to submit formal comments on the scope of issues to be addressed in the Environmental Assessment



01

NEPA + SECTION 106 PROCESSES



NATIONAL ENVIRONMENTAL POLICY ACT

- The National Environmental Policy Act (NEPA) of 1969 is a national policy for **protecting the environment**
- NEPA requires federal agencies to:
 - Analyze the environmental impacts of federal actions
 - Engage the public in the decision-making process
- Goal is to ensure **informed decision-making**



NATIONAL HISTORIC PRESERVATION ACT

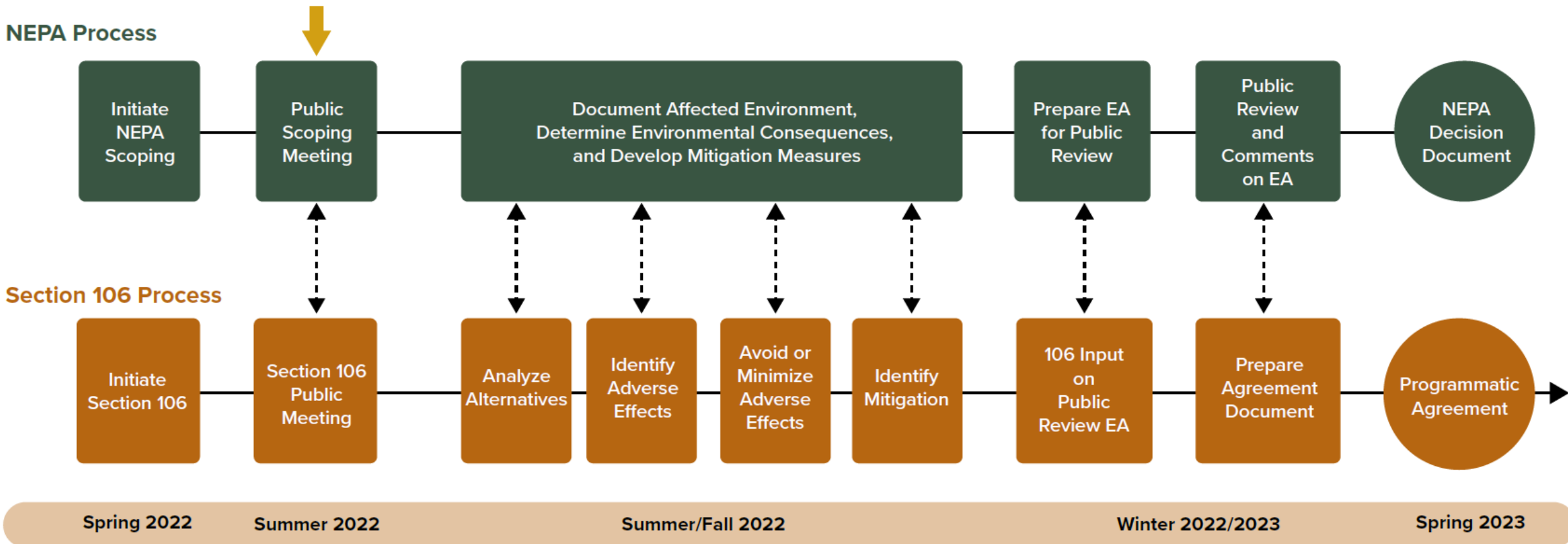
- Section 106 of the National Historic Preservation Act (NHPA) of 1966 established a process to **protect historic resources**
- Requires federal agencies to
 - Consider and determine the direct and indirect effects of a proposed undertaking on historic properties
 - Consult with State Historic Preservation Officers, Tribes, and other consulting parties
 - Avoid, resolve, or mitigate adverse effects to historic properties
- Goal is to **minimize potential harm and damage to historic properties**

NEPA + SECTION 106: A COORDINATED APPROACH



Scoping Period: 7/19/2022 - 9/12/2022

WE ARE HERE





PROJECT AREA MAP





02

PURPOSE AND NEED



PURPOSE

The **purpose** of the proposed action is to:

- Restore the historic functional height of the seawalls
 - Provide some flood protection
- Stabilize / eliminate settlement of the seawalls
- Minimize soil erosion and safety hazards
- Restore the cultural landscape
- Improve visitor experience along the shorelines



NEED

The existing structural deficiencies of the seawalls:

- Negatively impact the experience and safety of park visitors
- Allows brackish water to drown out vegetation affecting the landscape



03

HISTORY OF THE SEAWALLS



FOUR SEAWALL ZONES



- Approximately 6,800 linear feet of seawall
- Administered by the NPS through the National Mall and Memorial Parks

WEST POTOMAC PARK SOUTH SEAWALL

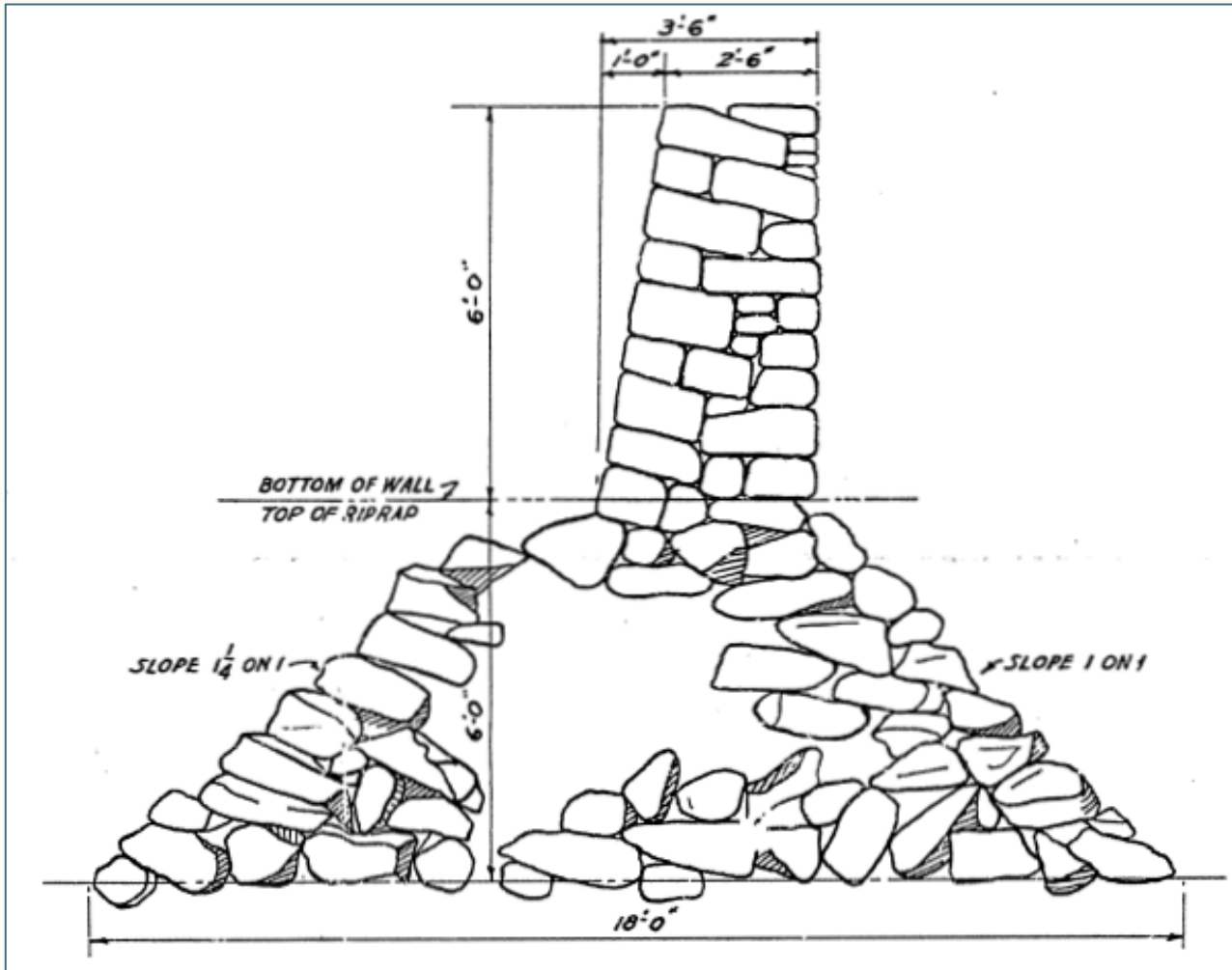
Construction History



- 1884: Foundations completed
- 1890-1891: Top of wall completed
- Riprap and other materials continued to be added as late as the 1990s

WEST POTOMAC PARK SOUTH SEAWALL

Historic Design and Existing Condition Photos



Original Seawall Design Cross Section (NPS 1940)



West Potomac Park South – Looking Northeast



West Potomac Park South – Looking Northwest

WEST POTOMAC PARK NORTH SEAWALL

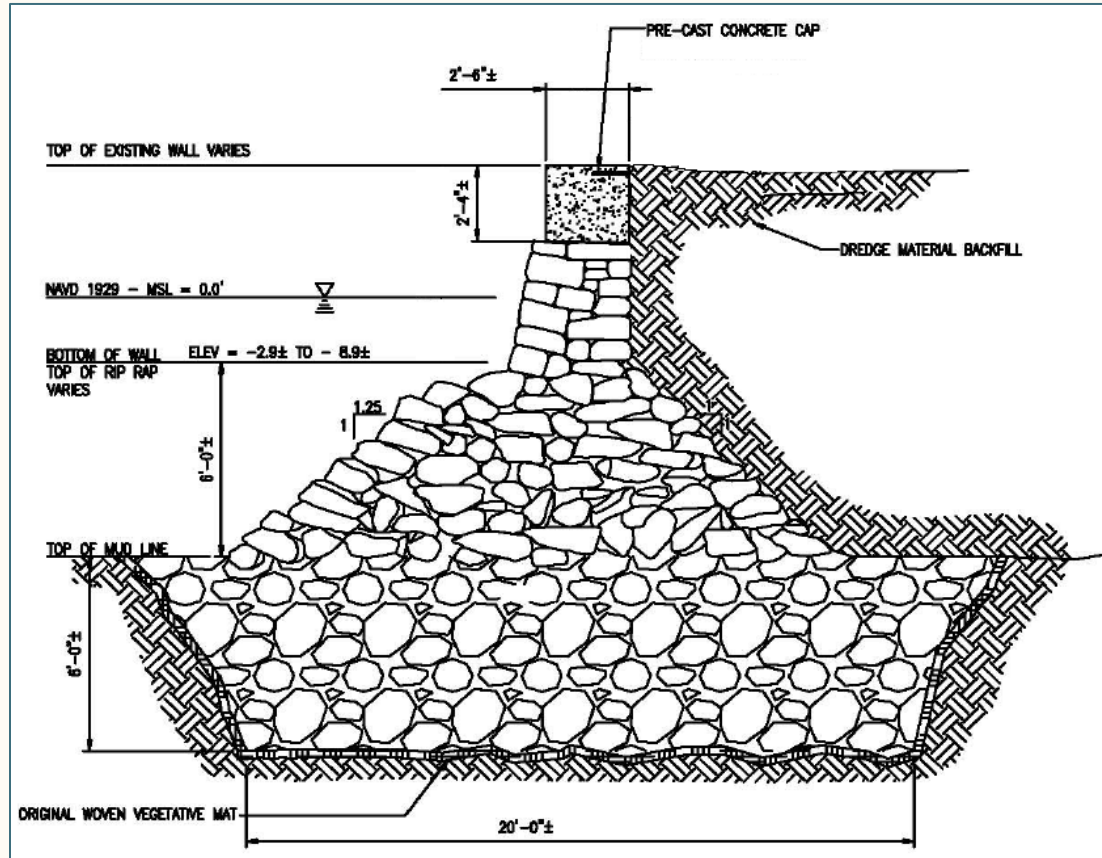
Construction History



- 1957: Section rebuilt by PEPCO
- Repair details unknown
- Top of wall heighted with concrete cap

WEST POTOMAC PARK NORTH SEAWALL

Historic Design and Existing Condition Photos



Assumed Concrete Repair (Dewberry 2011)



West Potomac Park North – Looking Northwest

TIDAL BASIN WEST SEAWALL

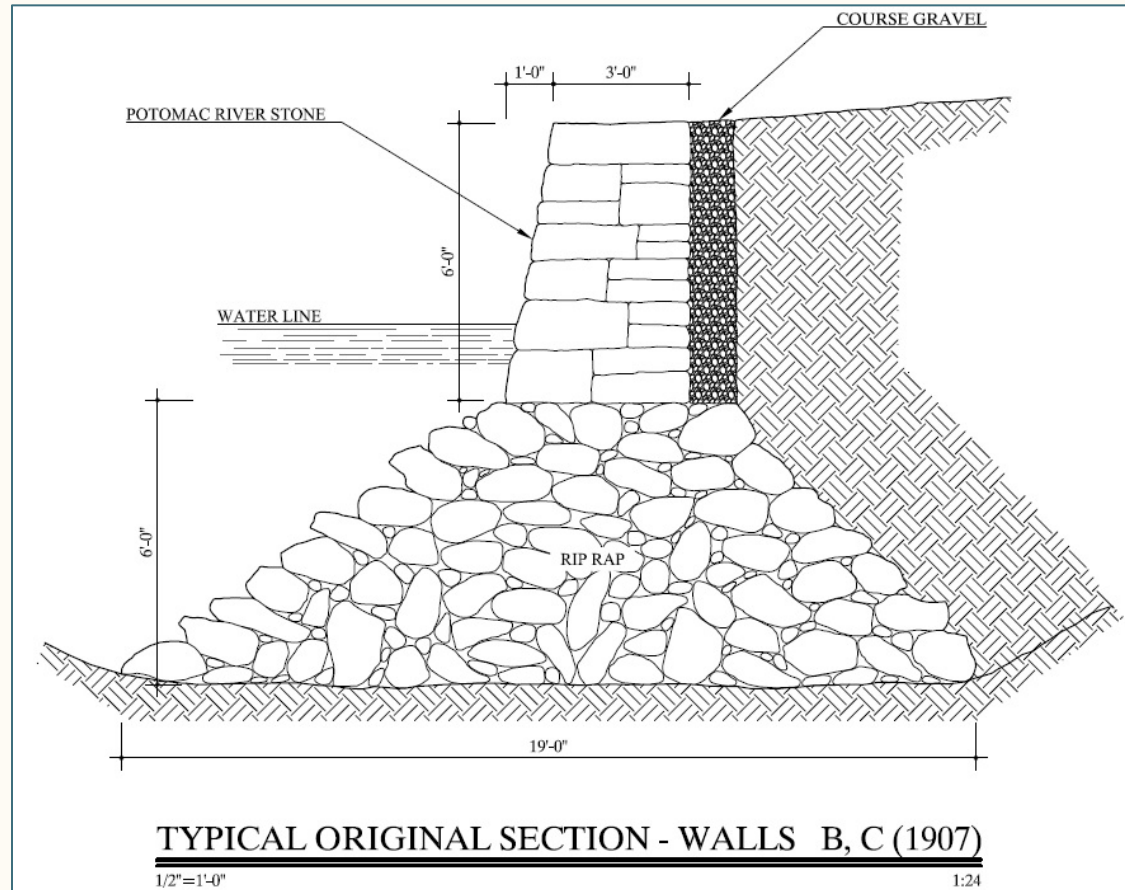
Construction History



- 1909: Original walls reconstructed due to construction of Inlet Bridge
- Mortar and gravel drain added to original design
- 1941: Seawall coping added – 8” thick cement coping

TIDAL BASIN WEST SEAWALL

Historic Design and Existing Condition Photos



*Original 1907 Design Cross Section
(NPS Cultural Landscape Report, June 2020)*



Tidal Basin West – Looking South

TIDAL BASIN EAST SEAWALL

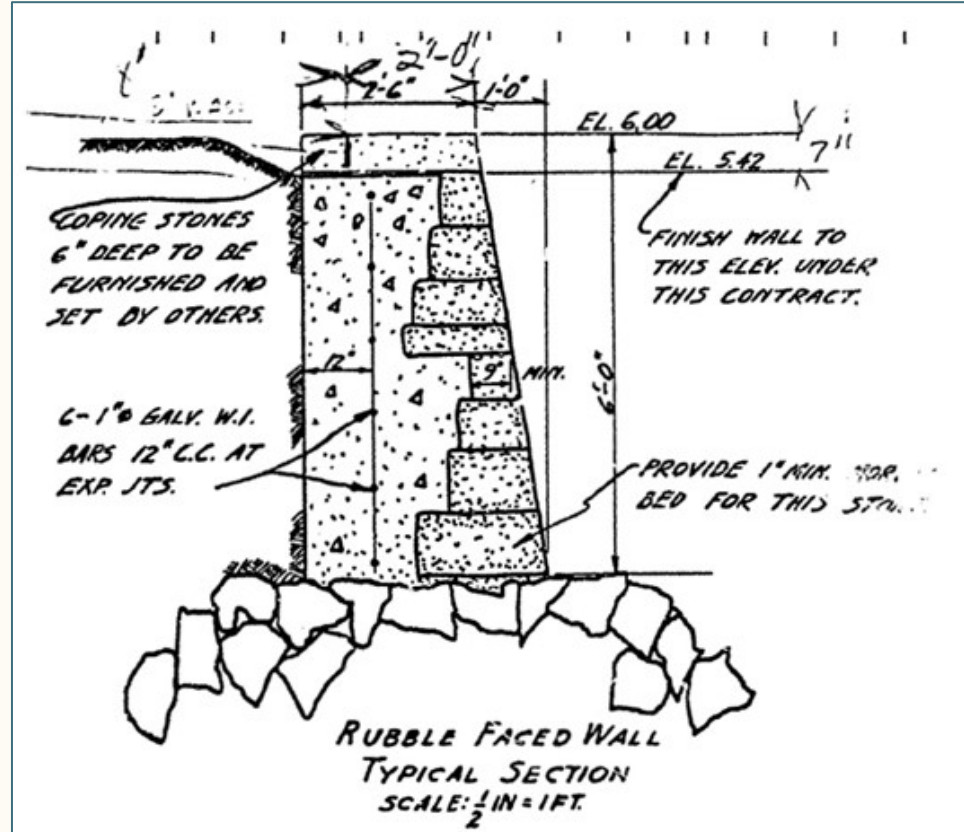
Construction History



- Late 1930s: Tidal Basin seawalls adjusted for Jefferson Memorial
- New construction type using concrete backing and stone facing
- 1940s: New seawall alignment completed

TIDAL BASIN EAST SEAWALL

Historic Design and Existing Condition Photos



Typical 1940s Tidal Basin East Seawall section



Tidal Basin East – Looking South

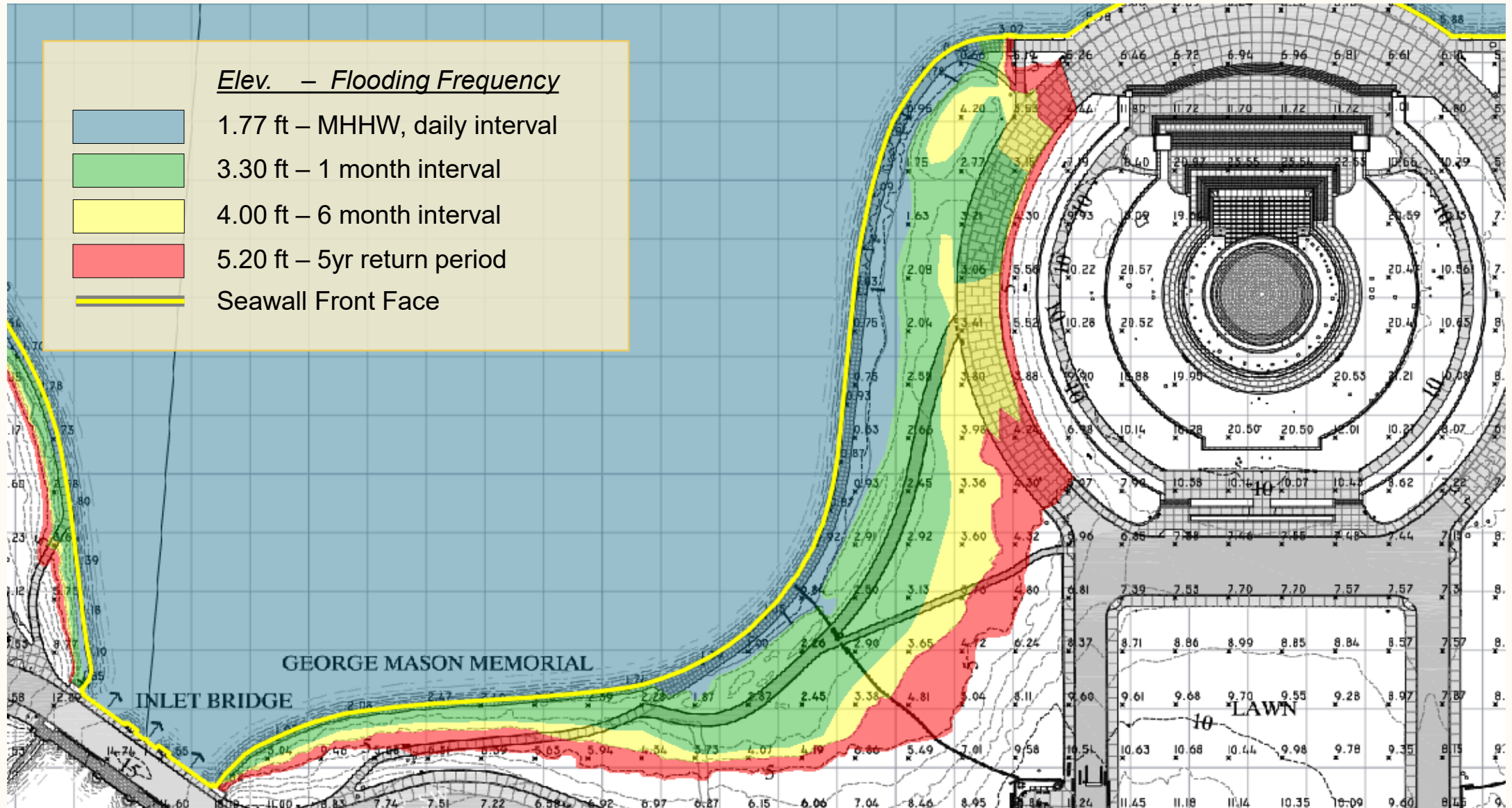


04

EXISTING CONDITIONS

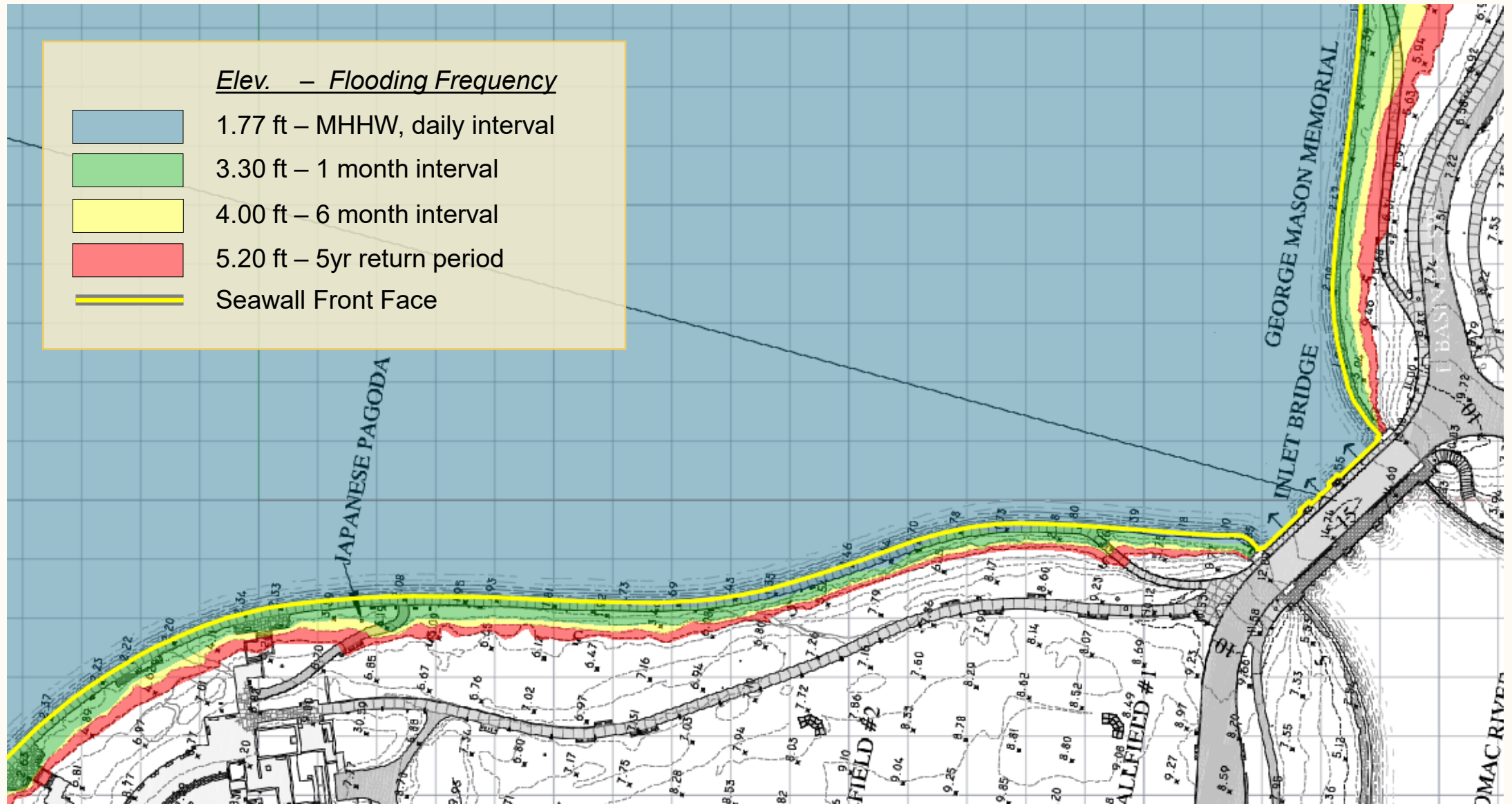


FLOODING – TIDAL BASIN EAST





FLOODING - TIDAL BASIN WEST



FLOODING



Tidal Basin West – Looking North



Tidal Basin East – Looking North



Tidal Basin West – Looking North from Inlet Bridge



Tidal Basin East – Looking South



Tidal Basin East – Looking North



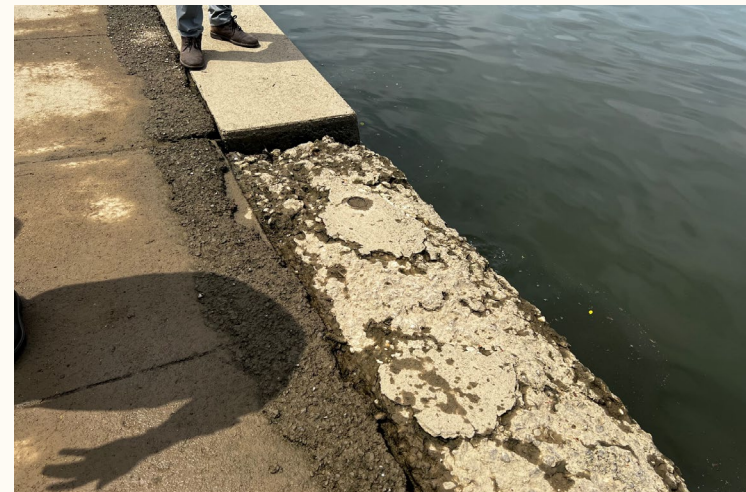
DETERIORATING SEAWALL



Tidal Basin East – Looking North



West Potomac – Looking Southeast



Tidal Basin East – Looking South

DETERIORATING SEAWALL



West Potomac Park – Looking Northwest from Inlet Bridge



West Potomac Park – Looking Northwest



West Potomac Park – Looking Southeast

VEGETATION

- Cherry Trees are contributing resources to the Historic District and Cultural Landscape
- Some date back to 1912, though they are contributing regardless of their age
- Factors leading to the decline of Cherry Trees include regular flooding and soil compaction



Tidal Basin West – Looking North



Tidal Basin East – Looking West



Tidal Basin East – Looking East from Inlet Bridge



Tidal Basin West – Looking South



05

PRIOR ANALYSES



PRIOR ANALYSES

1994 – WEST POTOMAC PARK SEAWALL ALTERNATIVES

- 1994 FHWA Report presenting preliminary alternatives to address the failing seawall
- Five alternatives presented

**HYDRAULIC
REPORT NO. 3-94**

**WEST POTOMAC PARK
SEAWALL ALTERNATIVES**

**WEST POTOMAC PARK
SEAWALL ALTERNATIVES
ALONG THE POTOMAC RIVER
BETWEEN
ARLINGTON MEMORIAL BRIDGE AND INLET BRIDGE**

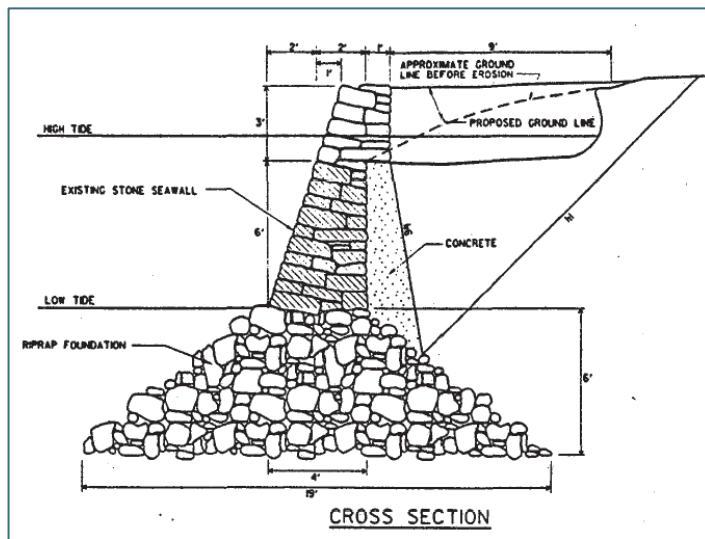
**FEDERAL HIGHWAY ADMINISTRATION
EASTERN FEDERAL LANDS HIGHWAY ADMINISTRATION
STERLING, VA
MARCH 1994**



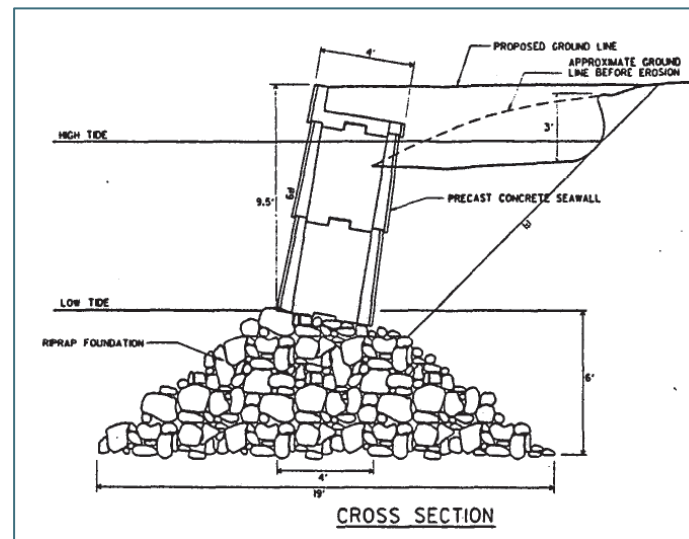
PRIOR ANALYSES

1994 – WEST POTOMAC PARK SEAWALL ALTERNATIVES

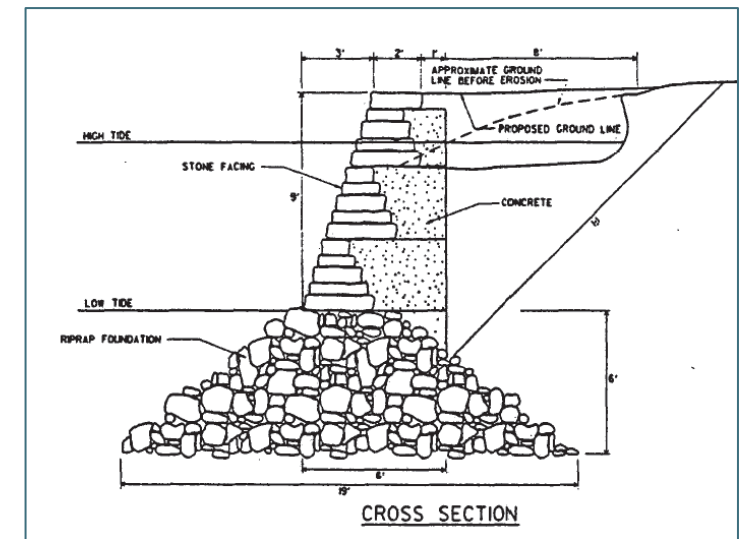
- Alt 1 – Riprap Erosion Control
- Alt 2 – Additional Stone
- Alt 3 – Precast Concrete Wall
- Alt 4 – Stone Faced Concrete Wall
- Alt 5 – Simulated, Stone Faced, Precast Concrete Wall



FWHA 1994 Alternative 2



FWHA 1994 Alternative 3




FWHA 1994 Alternative 4



PRIOR ANALYSES

2011 – EAST POTOMAC PARK SEAWALL ALTERNATIVES

- Presented a conditions assessment and preliminary alternatives to address the failing seawall
- Recognized three mechanisms affecting seawalls
 - Settlement / Sea Level Rise
 - Loss of Fill through Wall Deterioration
 - Loss of Fill through Wall Penetrations



**Phased Rehabilitation Plan
Historic Washington Sea
Task Five - Initial Rehabilitation Plan**

**East Potomac Park, West Potomac Park & Tidal Basin
National Mall and Memorial Parks (NAMA), Washington, DC**

**Prepared by
Dewberry & Davis LLC
Fairfax, VA**

**Task Five FINAL SUBMISSION
August 2011**

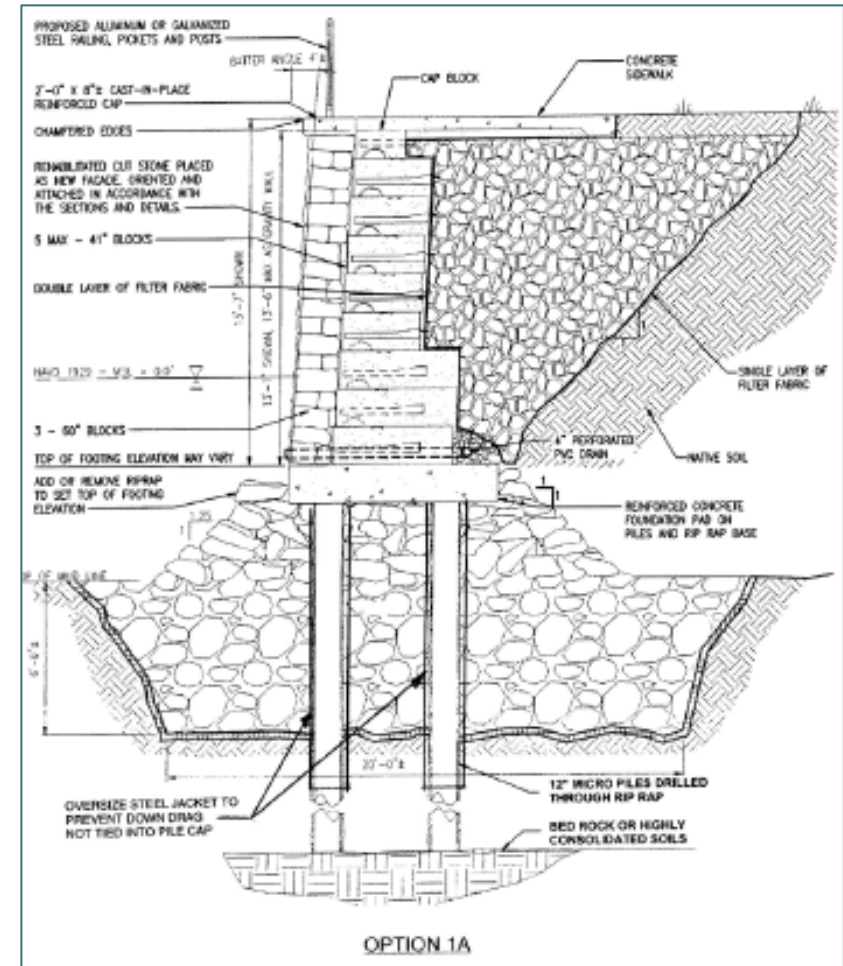
PRIOR ANALYSES

2011 – SEAWALL ALTERNATIVES

- Alt 1 – Gravity Wall w/ Micropile Foundation
- Alt 2 – Soldier Pile Wall
- Alt 3 – Gravity Wall w/ Spread Footing
- Alt 4 – Tie-Back Wall w/ Spread Footing
- Alt 5 – Riprap Revetment
- Alt 6 – Geoweb Planted Face w/ Micropile Foundation
- Alt 7 – Living Shoreline

Conclusion – Heightening of wall will result in additional settlement

- Recommended foundation extends to bedrock if wall is heightened



NPS 2011 Alternative 1



06

PROJECT REQUIREMENTS



PROJECT REQUIREMENTS

- Rebuild and elevate the seawalls to re-establish the historic functional height of the walls
- Provide a sustainable solution that:
 - Expands the lifecycle of the seawalls
 - Allows for future extensions of the wall to respond to changing climate patterns, including storms of greater intensity and frequency
- Stabilize and raise the existing seawall along historic alignment



PROJECT REQUIREMENTS

- Salvage and reuse stone from the historic wall and reuse in construction of the higher walls
- Replace existing sidewalk on top of the seawall along the Tidal Basin
- Rehabilitate the existing landscaping adjacent to each of the seawall system to improve the cultural landscape
- Repairs to the surrounding infrastructure may include grading, stormwater control, pedestrian/multi-use paths improvements, curbing, and replacement in-kind of any construction damage to the landscape and trees

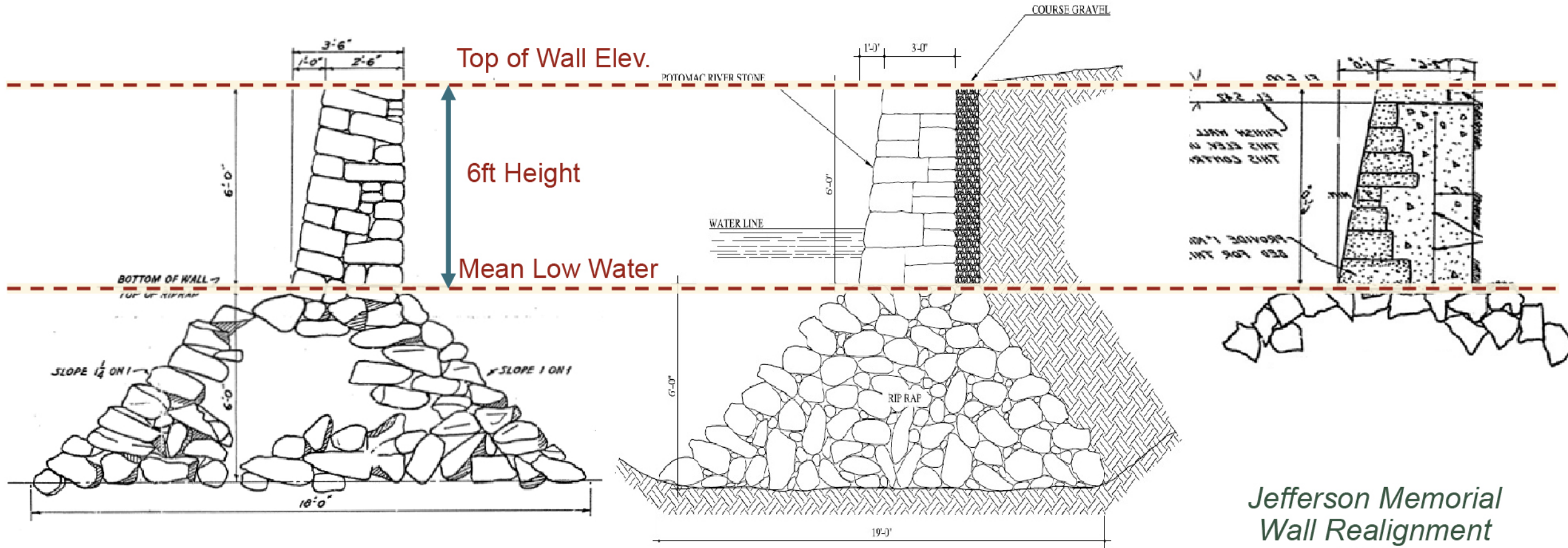


DESIGN REQUIREMENTS

- Main Design Requirements
 - Maintain Historic Look – Stacked Potomac River Stone
 - Maintain Historic Alignment
 - Elevate Seawalls to Re-Establish Historic Functional Height
 - Prevent Future Settlement



HISTORIC FUNCTIONAL SEAWALL HEIGHT



Top of Wall Elev.

6ft Height

Mean Low Water

Original 1890s Construction

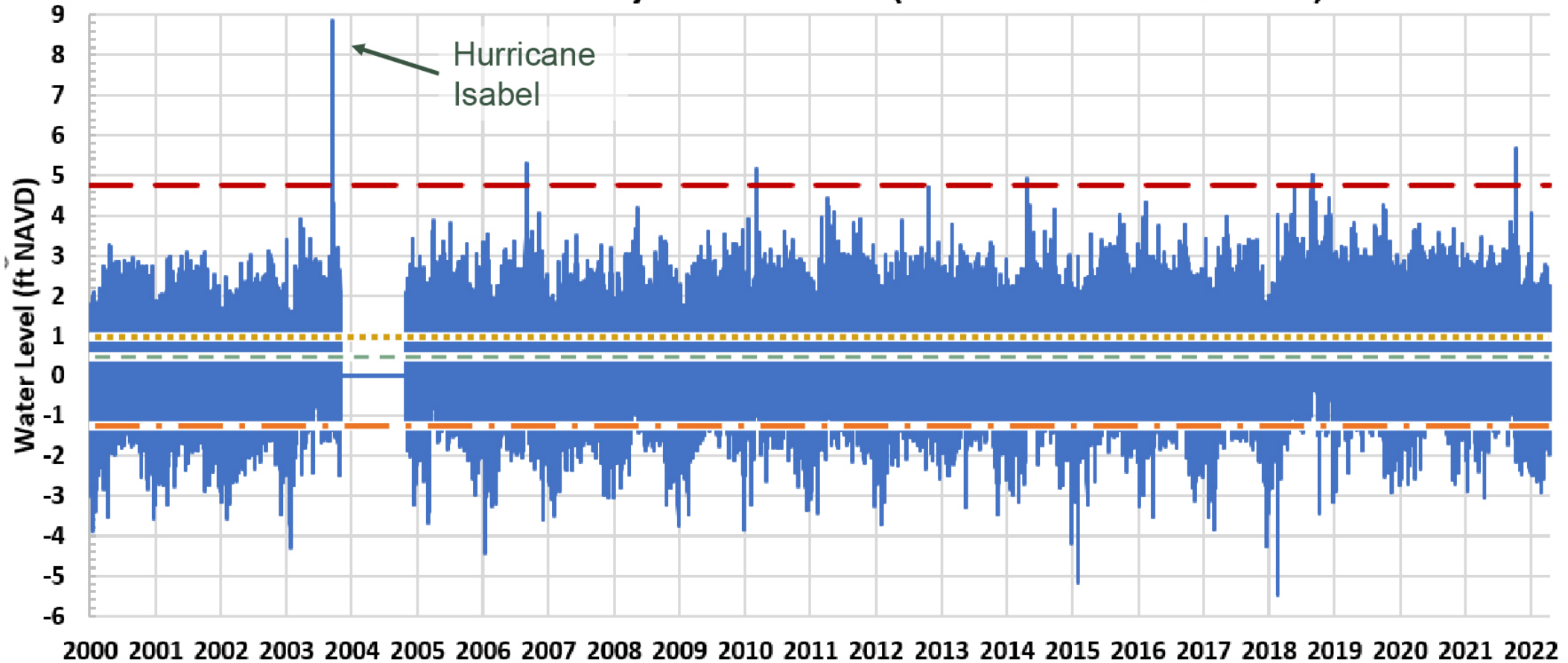
Updated 1910s Construction

Jefferson Memorial Wall Realignment (1940s Construction)



HISTORIC WATER LEVELS

Verified Hourly Water Levels (NOAA CO-OPS 8594900)

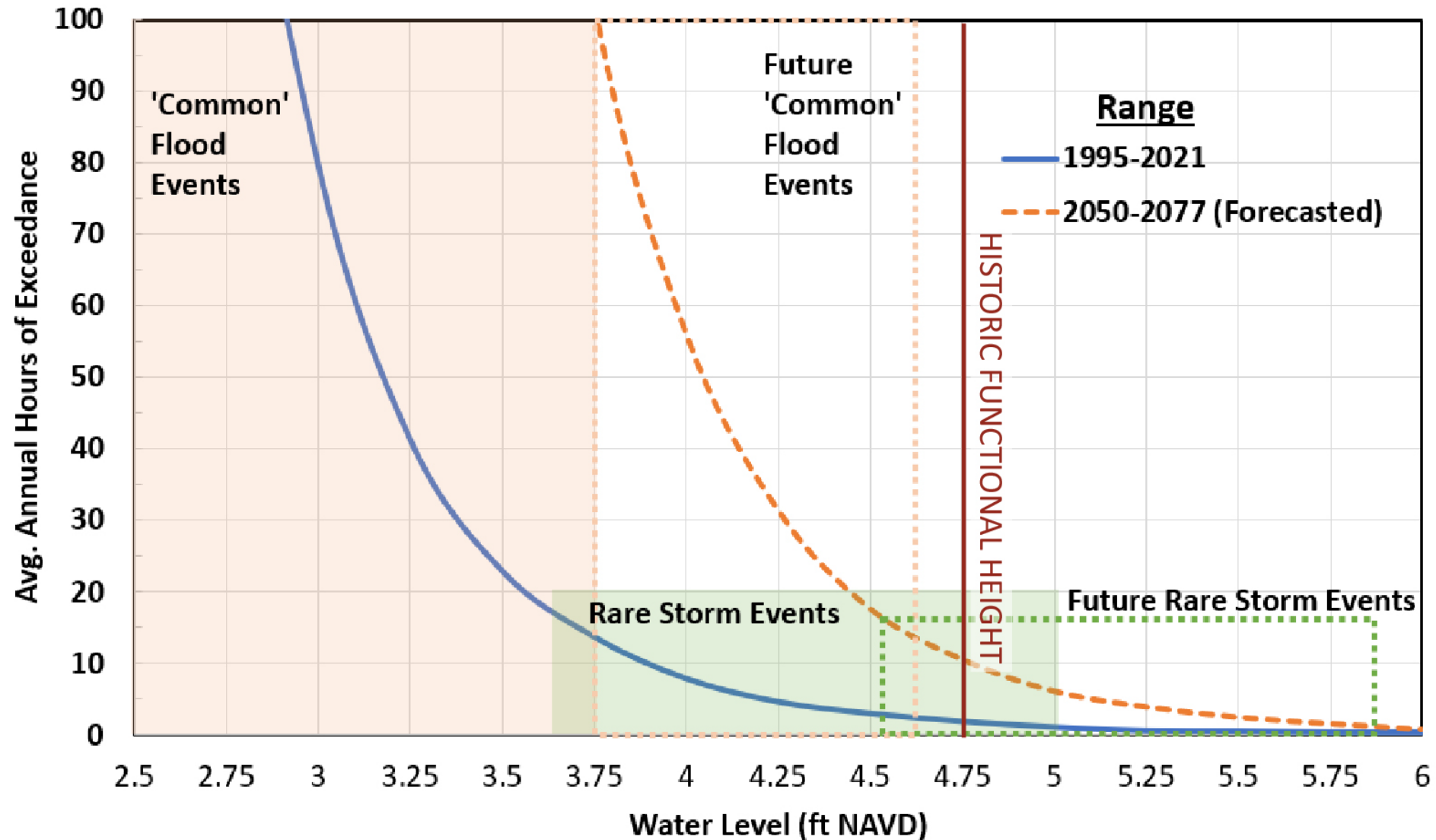


--- TB East Lowpoint
..... TB West Lowpoint

—•— Mean Low Water (MLW)
- - - 6ft Above MLW = 4.75ft



ESTABLISHING WALL HEIGHT





PROJECT AREA MAP



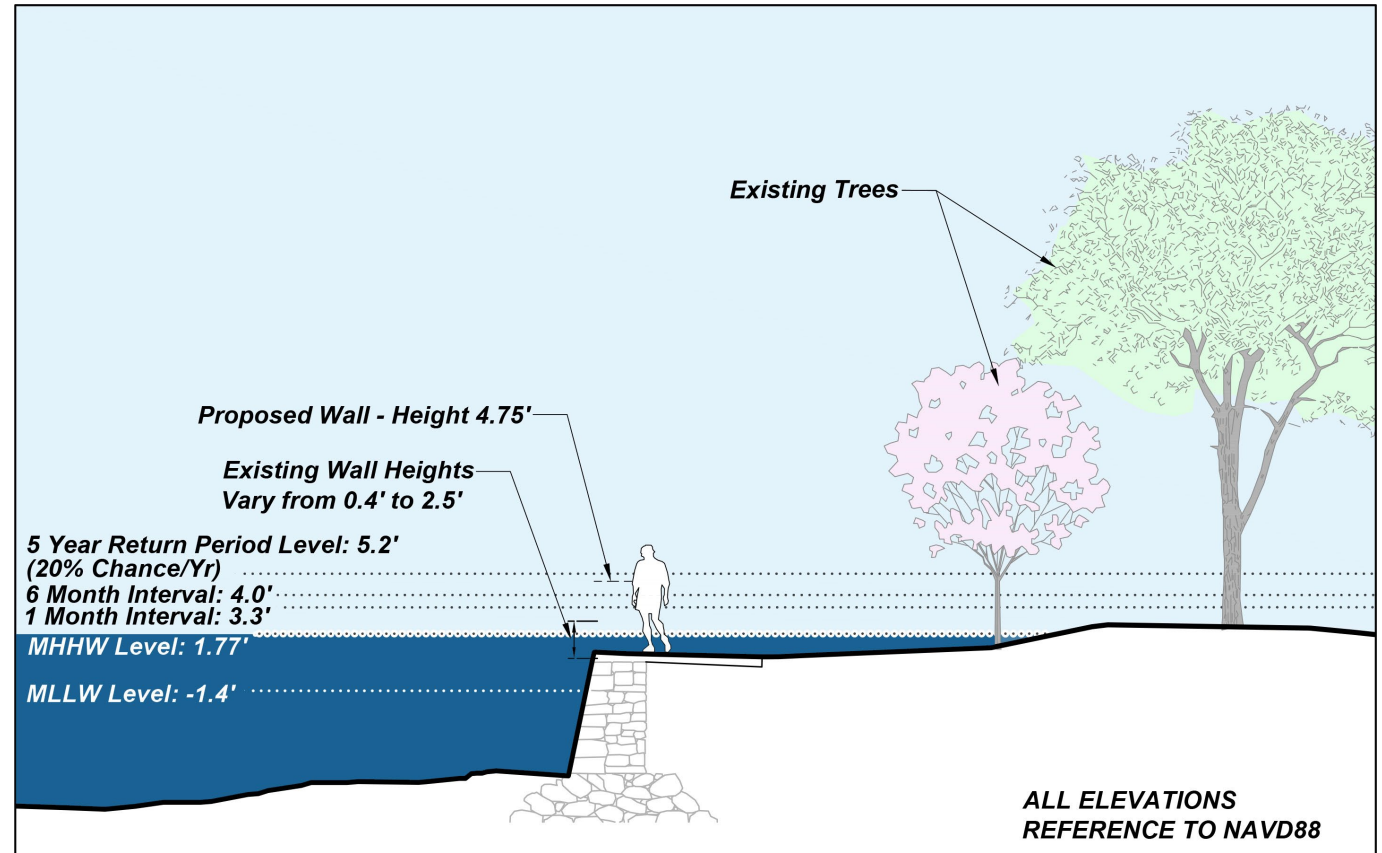


TIDAL BASIN EAST - EXISTING



Tidal Basin East – Looking Southwest

Tidal Basin East - Existing Conditions (Typical) (Visualization for Planning Purposes Only)



SCALE: 1/8" = 1'-0"
SECTION 1

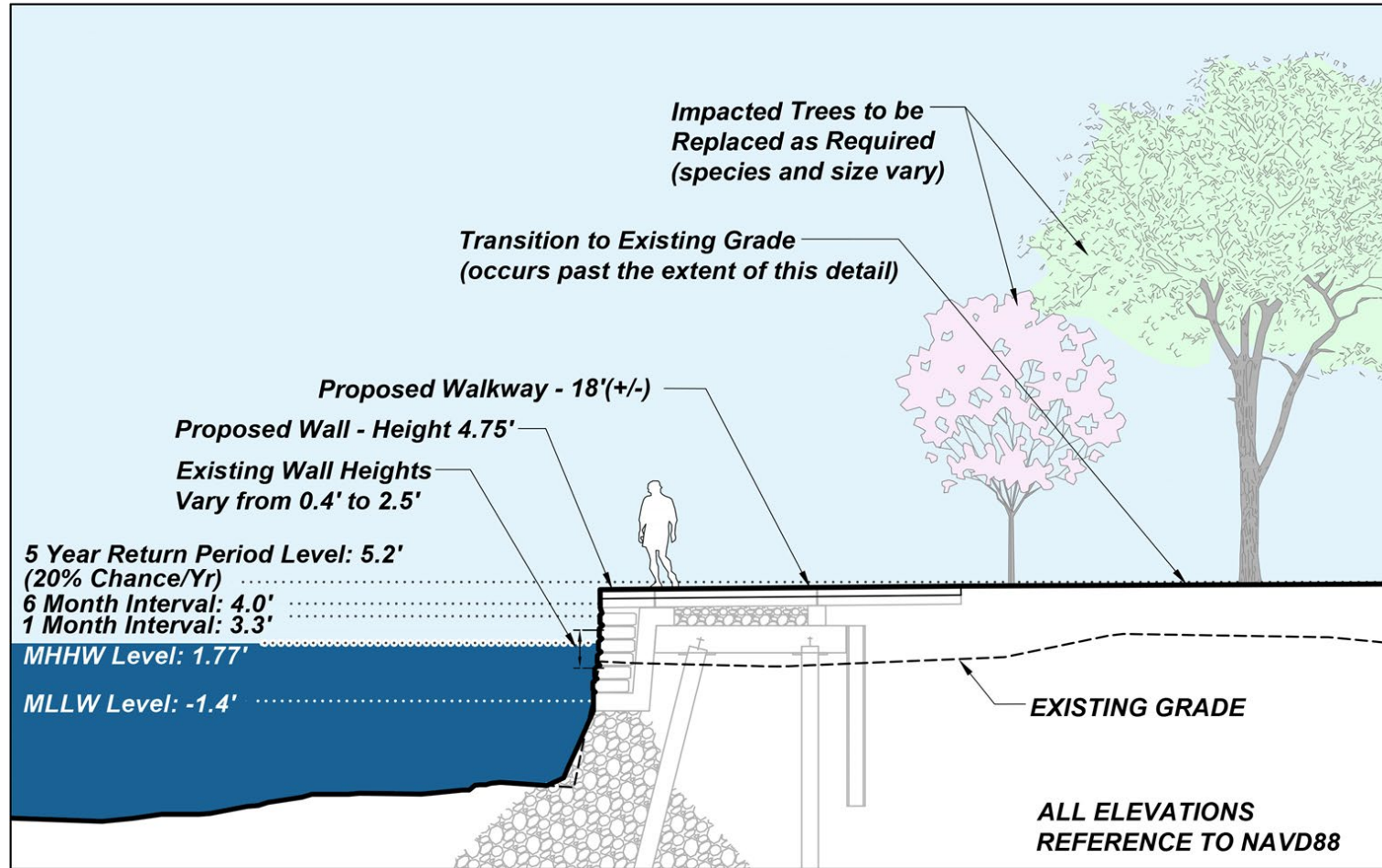
*Mean Higher High Waters (MHHW) | Mean Lower Low Waters (MLLW)



TIDAL BASIN EAST - PROPOSED

Tidal Basin East - Proposed Conditions (Typical)

(Visualization for Planning Purposes Only)



SCALE: 1/8" = 1'-0"
SECTION 2

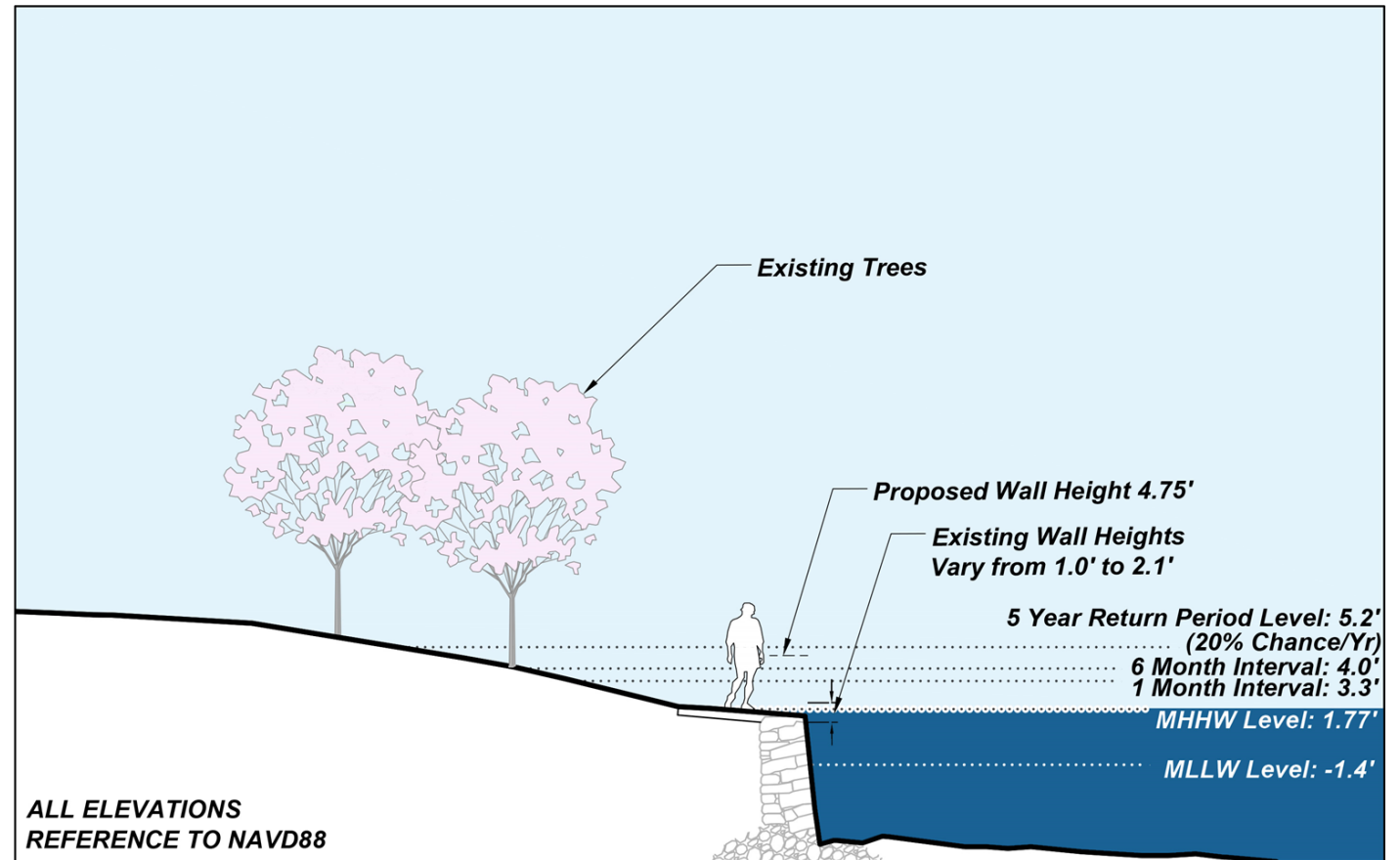


TIDAL BASIN WEST - EXISTING



Tidal Basin West – Looking East

Tidal Basin West - Existing Conditions (Typical) (Visualization for Planning Purposes Only)



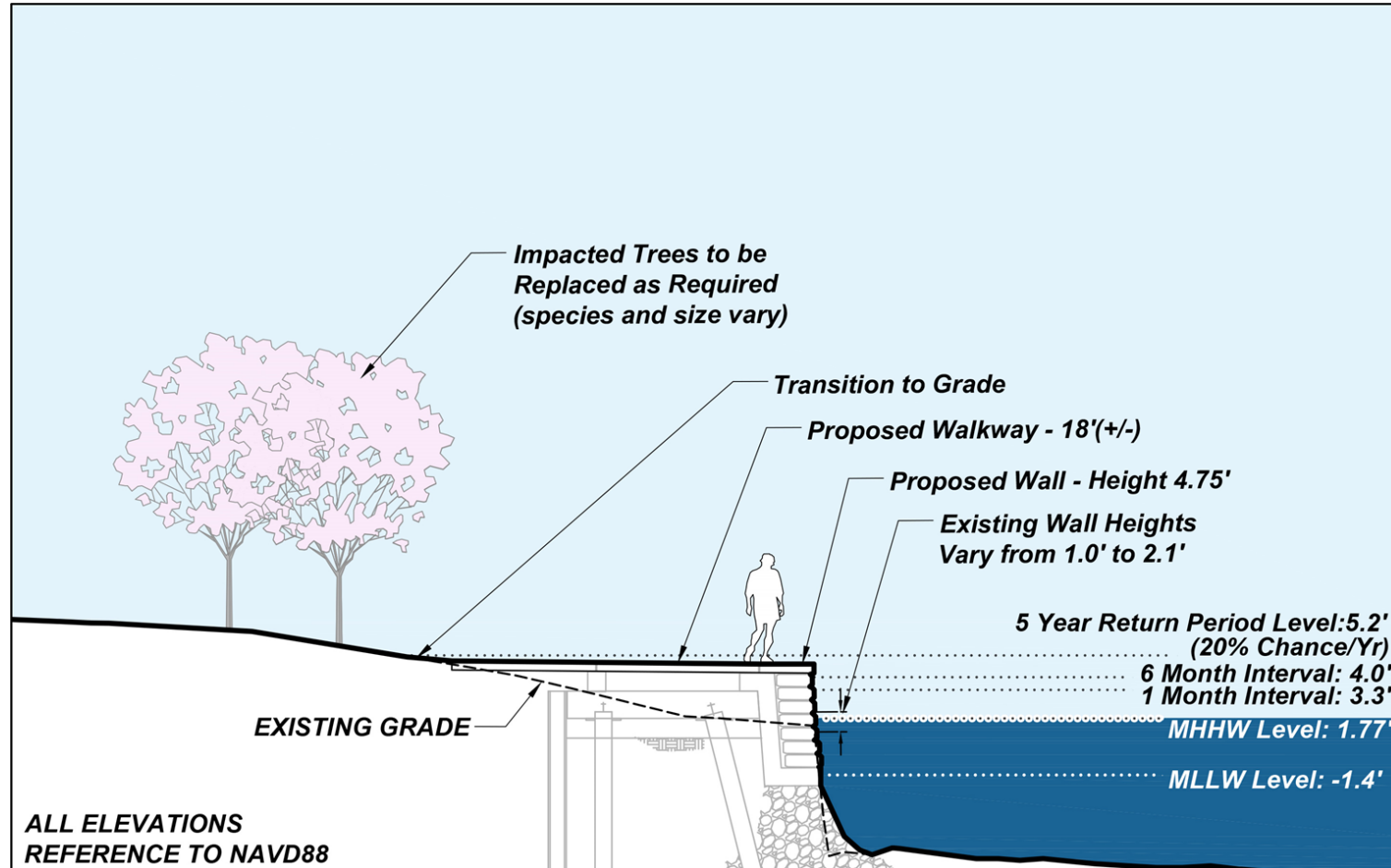
SCALE: 1/8" = 1'-0"
SECTION 3



TIDAL BASIN WEST - PROPOSED

Tidal Basin West - Proposed Conditions (Typical)

(Visualization for Planning Purposes Only)



ALL ELEVATIONS
REFERENCE TO NAVD88

SCALE: 1/8" = 1'-0"
SECTION 4



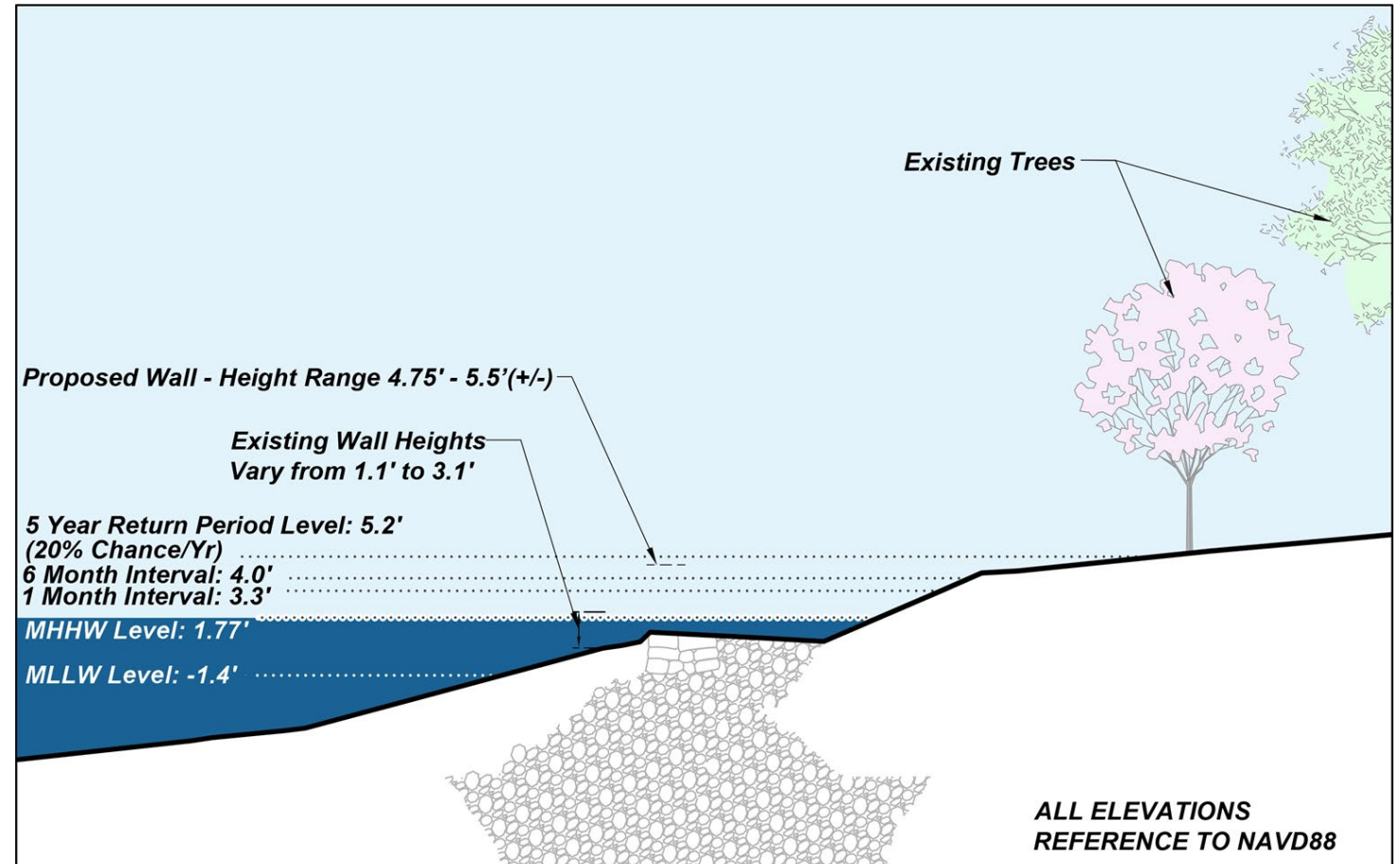
WEST POTOMAC PARK SOUTH - EXISTING

West Potomac Park South - Existing Conditions (Typical)

(Visualization for Planning Purposes Only)



West Potomac Park South – Looking South



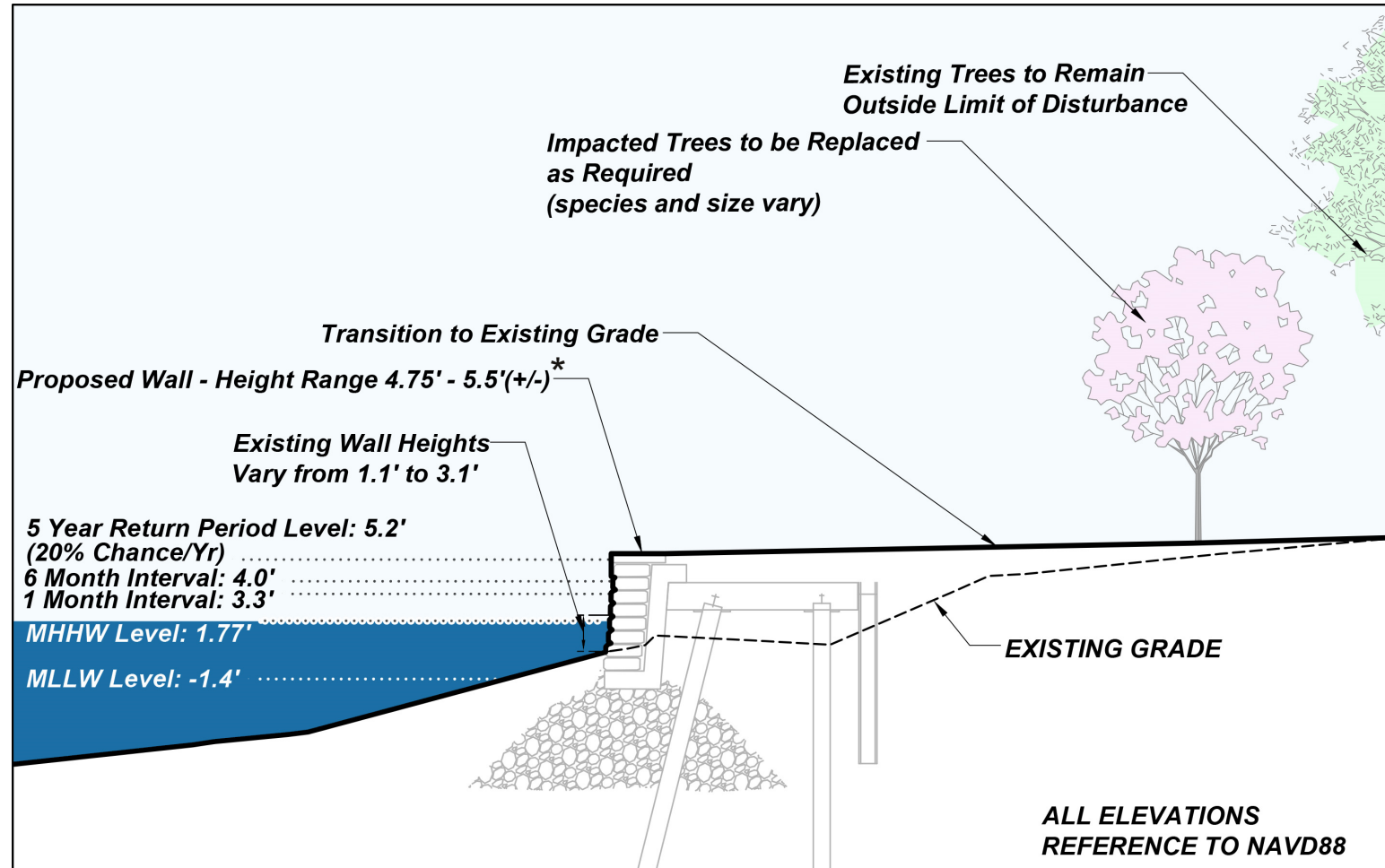
SCALE: 1/8" = 1'-0"
SECTION 7



WEST POTOMAC PARK SOUTH - PROPOSED

West Potomac Park South - Proposed Conditions (Typical)

(Visualization for Planning Purposes Only)



*Hydraulic analysis ongoing

SCALE: 1/8" = 1'-0"
SECTION 8

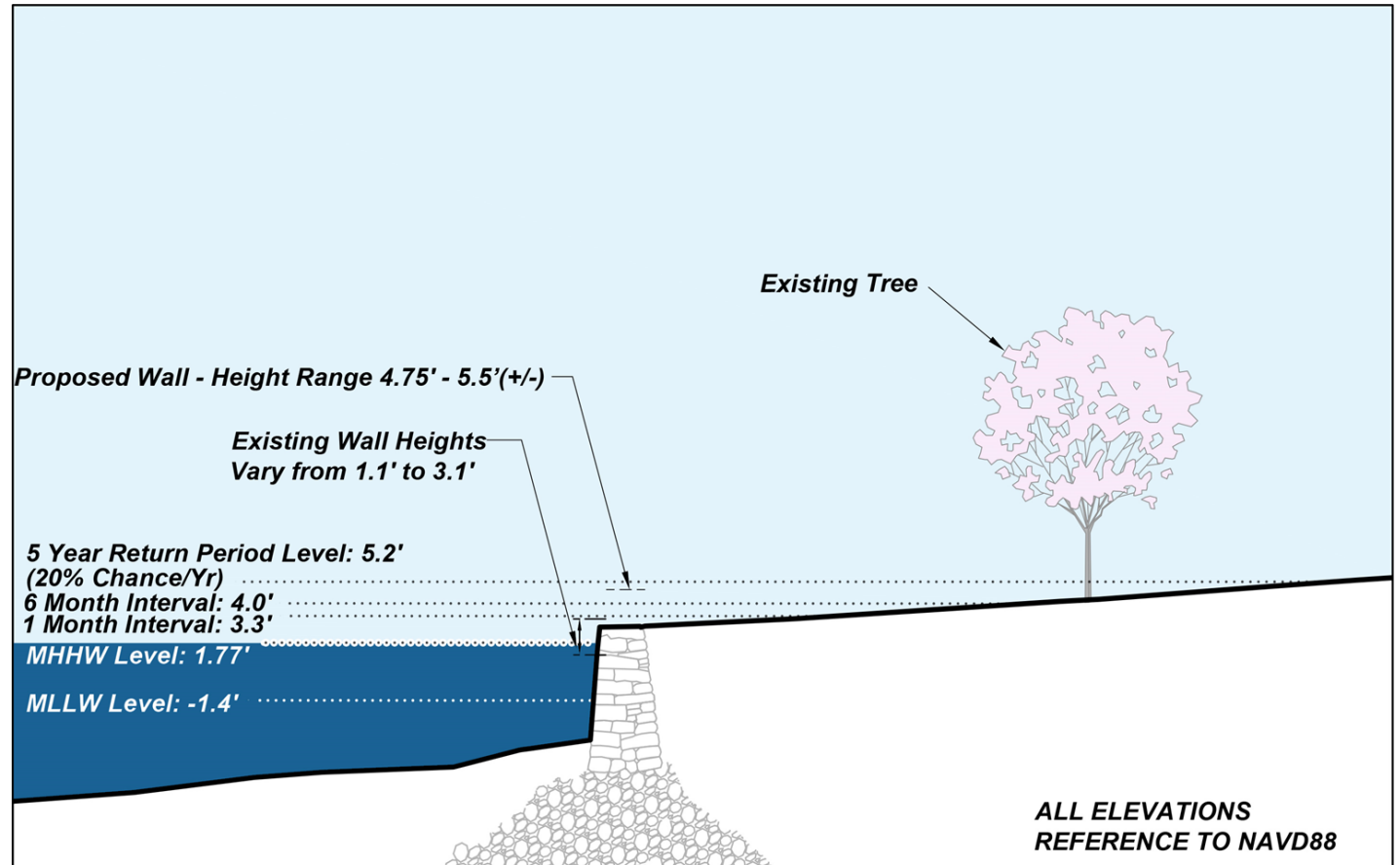


WEST POTOMAC PARK NORTH - EXISTING



West Potomac Park North – Looking West

West Potomac Park North - Existing Conditions (Typical) (Visualization for Planning Purposes Only)



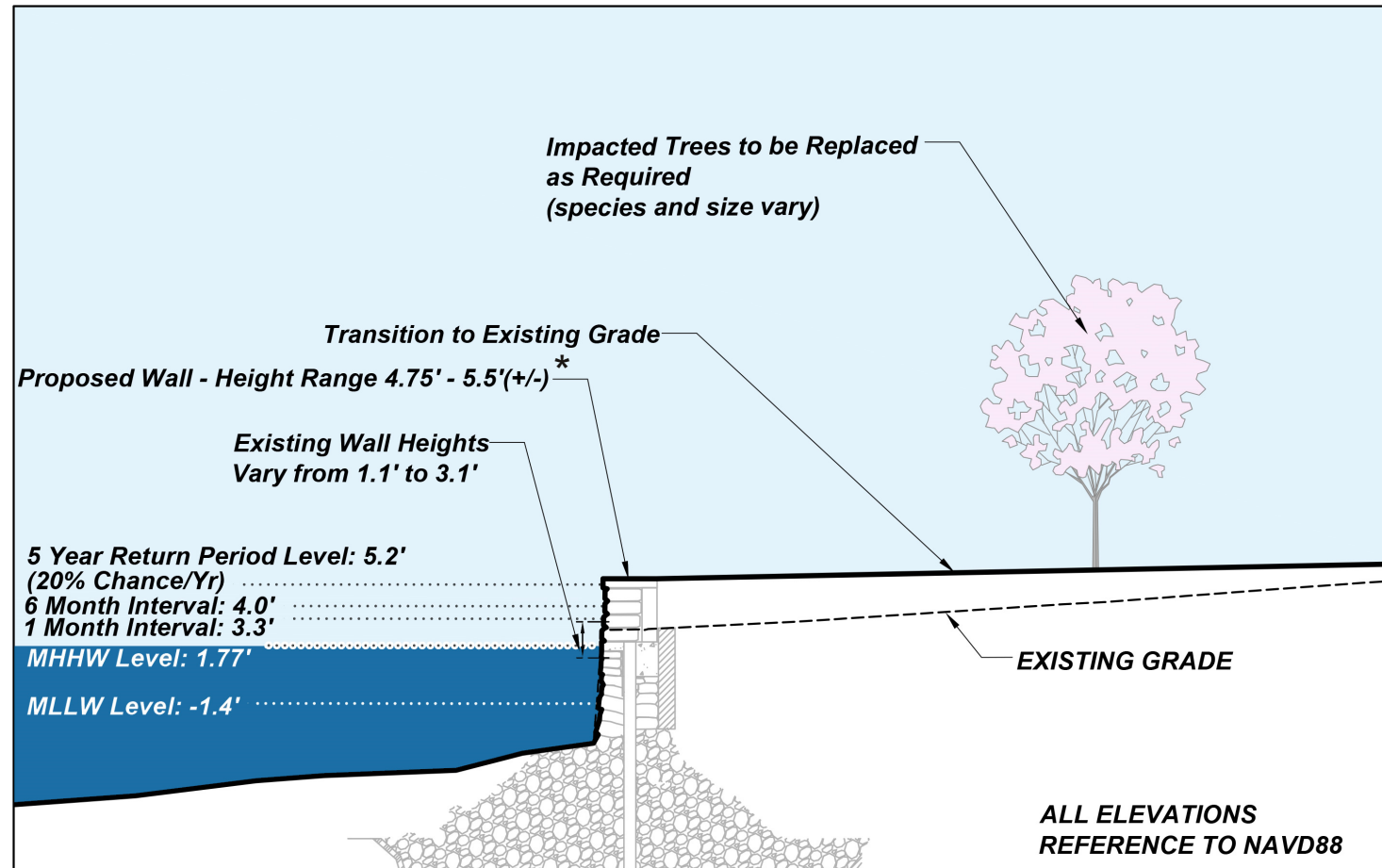
SCALE: 1/8" = 1'-0"
SECTION 5

WEST POTOMAC PARK NORTH - PROPOSED



West Potomac Park North - Proposed Conditions (Typical)

(Visualization for Planning Purposes Only)



*Hydraulic analysis ongoing

SCALE: 1/8" = 1'-0"
SECTION 6



07

HOW TO COMMENT AND NEXT STEPS



HOW CAN YOU SUBMIT COMMENTS?

- Comments must be submitted online or postmarked by **September 12, 2022**, to receive consideration.

- **Online Comments:** Submit at the [National Parks Service Seawall Rehabilitation Project Website](https://parkplanning.nps.gov/SeawallRehabilitation).

<https://parkplanning.nps.gov/SeawallRehabilitation>

- **Written Comments:** Mail to:

Jeffrey P. Reinbold

Superintendent

Attn: Rehabilitate Tidal Basin and West Potomac Park Seawalls EA

National Park Service

National Mall and Memorial Parks

900 Ohio Dr. SW

Washington, DC 20024

Please Note: Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment – including your personal identifying information – may be made publicly available at any time.

While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.



PROJECT SCHEDULE*



*Time estimates are approximate and may shift as the project progresses.



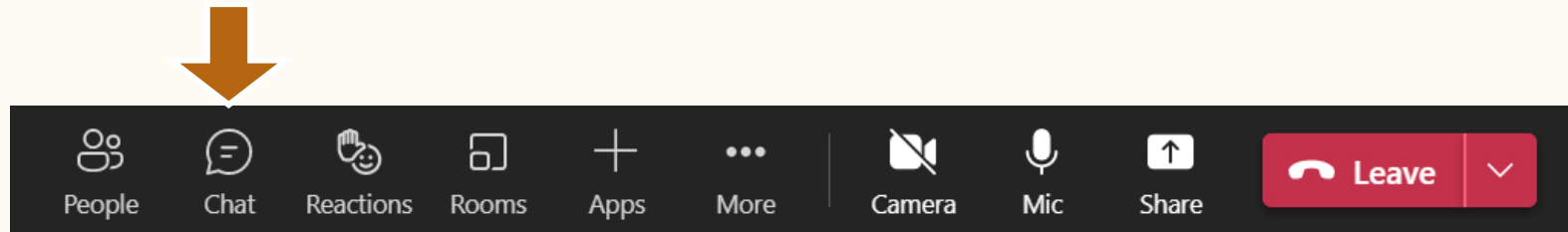
08

CHAT SESSION



CHAT SESSION INSTRUCTIONS

- Share your questions with the project team!
- The meeting recording will be made available on PEPC site after the meeting.





THANK YOU

- Please tell us what you think about:
 - Project requirements
 - Environmental concerns
 - Historic resource concerns
 - Community impacts
 - Any data you think will help us
- Questions or comments submitted as part of this meeting will **not** be considered formal comments on the project.
 - Formal comments must be submitted online or postmarked by September 12, 2022
- To stay informed, please visit the [National Parks Service Seawall Rehabilitation Project Website](https://parkplanning.nps.gov/SeawallRehabilitation).

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