

Gateway Development Commission

Hudson Tunnel Project Section 4(f) Coordination

Proposed Changes to Project
Work in Hudson River Park
(incl. Hudson River)

April 10, 2025

For Indicative, Illustrative, Contemplative Purposes Only



Agenda

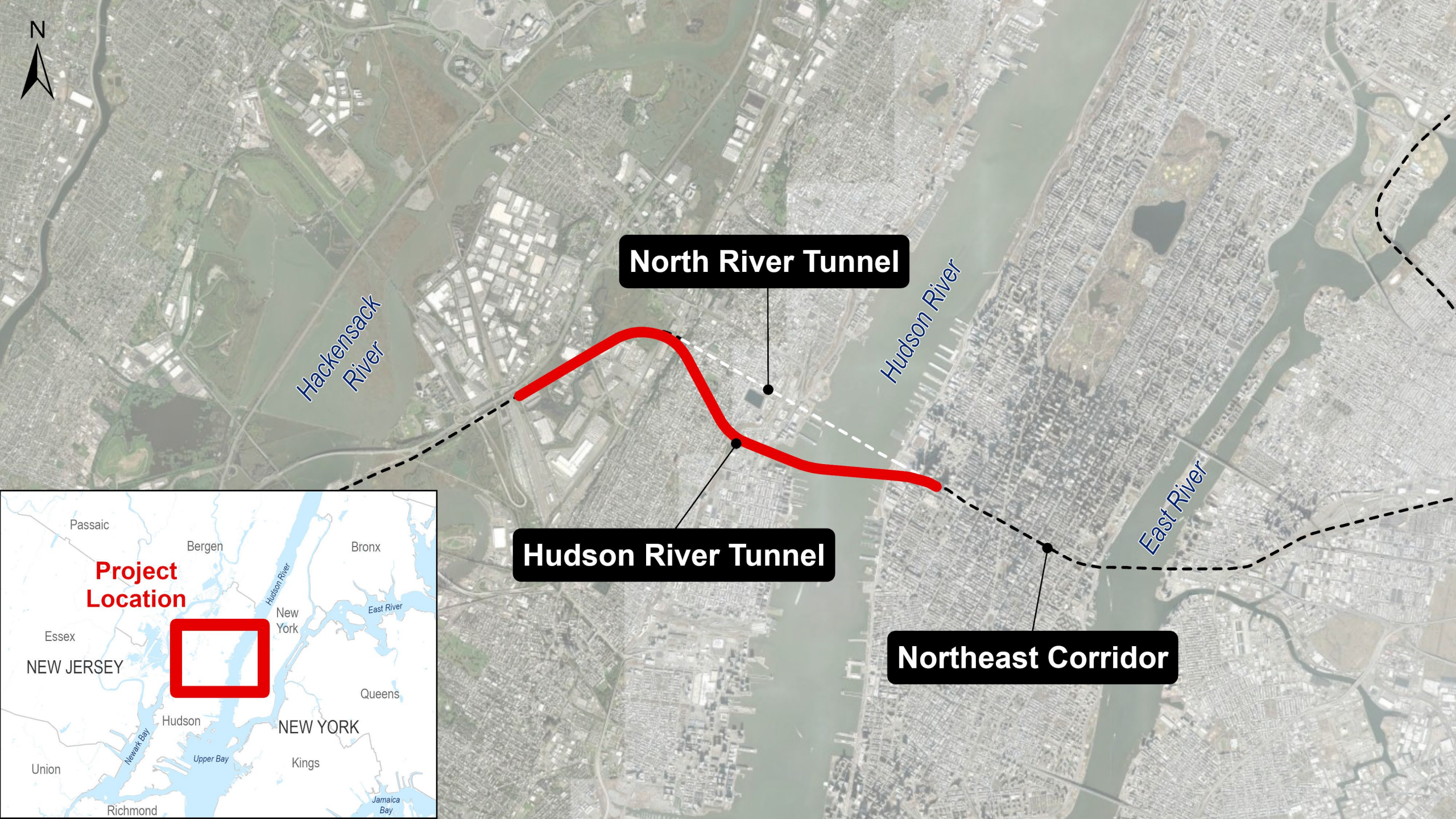
- Project Overview
- Environmental Review & Section 4(f) Process
 - U.S. DOT Act Section 4(f)
 - Environmental Impact Statement
 - Proposed Project Modifications
 - Section 4(f) Properties
- Proposed Project Modifications
- Currently Contemplated Project Activities in Hudson River Park
- New Anticipated Construction Schedule
- National Historic Preservation Act Section 106
- Section 4(f) Use
- Safety Measures & Best Management Practices
 - Navigating Around In-Water Construction
 - Safety Protections
 - Best Management Practices
- Stakeholder Outreach & Public Engagement Opportunities
 - Ongoing Coordination
 - Section 4(f)-Related Comments

Project Overview



NEED FOR THE PROJECT

- Existing Amtrak / NJ TRANSIT rail tunnel beneath Hudson River must be closed for full reconstruction to repair damage from Superstorm Sandy
- Need for repair is urgent: storm damage continues to degrade tunnel
- Existing train service (450 trains per day) must be maintained
- New tunnel will provide train capacity during reconstruction of existing tunnel and ongoing stability and redundancy once both tunnels are operating



North River Tunnel

Hudson River

East River

Hudson River Tunnel

Northeast Corridor



Project Location

Environmental Review & Section 4(f) Process



ENVIRONMENTAL REVIEW

- National Environmental Policy Act (NEPA): Before providing funds or issuing a permit, Federal agencies must consider the environmental effects of projects; this was achieved by preparing an Environmental Impact Statement (EIS) for the Hudson Tunnel Project (issued together with the Record of Decision (ROD) in May 2021)
- The Federal Railroad Administration (FRA) was the lead Federal agency for the Project's environmental review, in accordance with NEPA
- The Federal Transit Administration (FTA) was a Cooperating Agency for the Final EIS (FEIS)/ROD and issued the ROD jointly with FRA
- The Gateway Development Commission (GDC) is the NEPA Project Sponsor for the Hudson Tunnel Project

U.S. DEPARTMENT OF TRANSPORTATION ACT OF 1966 - SECTION 4(f)

- Section 4(f) refers to the original section within the U.S. Department of Transportation Act of 1966, which established the requirement to consider alternatives which would avoid the use of park and recreational lands, wildlife and waterfowl refuges, and historic sites in transportation project development
- Section 4(f) applies to projects that receive funding from or require approval by an agency of the U.S. Department of Transportation
- Before approving a project that “uses” Section 4(f) property, FTA/FRA must either (1) determine that the impacts are *de minimis*, or (2) undertake a Section 4(f) Evaluation to determine whether use of the property can be avoided
- Section 4(f) properties include publicly owned public parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places

Proposed Project Modifications



PROPOSED PROJECT MODIFICATIONS

- Following the issuance of the NEPA FEIS/ROD, potential changes to the project have been contemplated as design is advanced and construction methods are refined
- GDC proposes modifications to the project particular to the Hudson River and Manhattan waterfront portions of the Project Area that had not been contemplated as part of the previously completed NEPA FEIS/ROD or Section 4(f) Evaluation
- These changes to the project warrant reconsideration of potential uses of Section 4(f) properties

SECTION 4(f) PROPERTIES AFFECTED BY THE PROJECT – HUDSON RIVER BULKHEAD

- Extends from the Battery (i.e., an approximately 25-acre public park located at the southern tip of Manhattan) to West 59th Street
- Constructed between 1871 and 1936 by the New York City Department of Docks
- Eligible for listing on the National Register of Historic Places

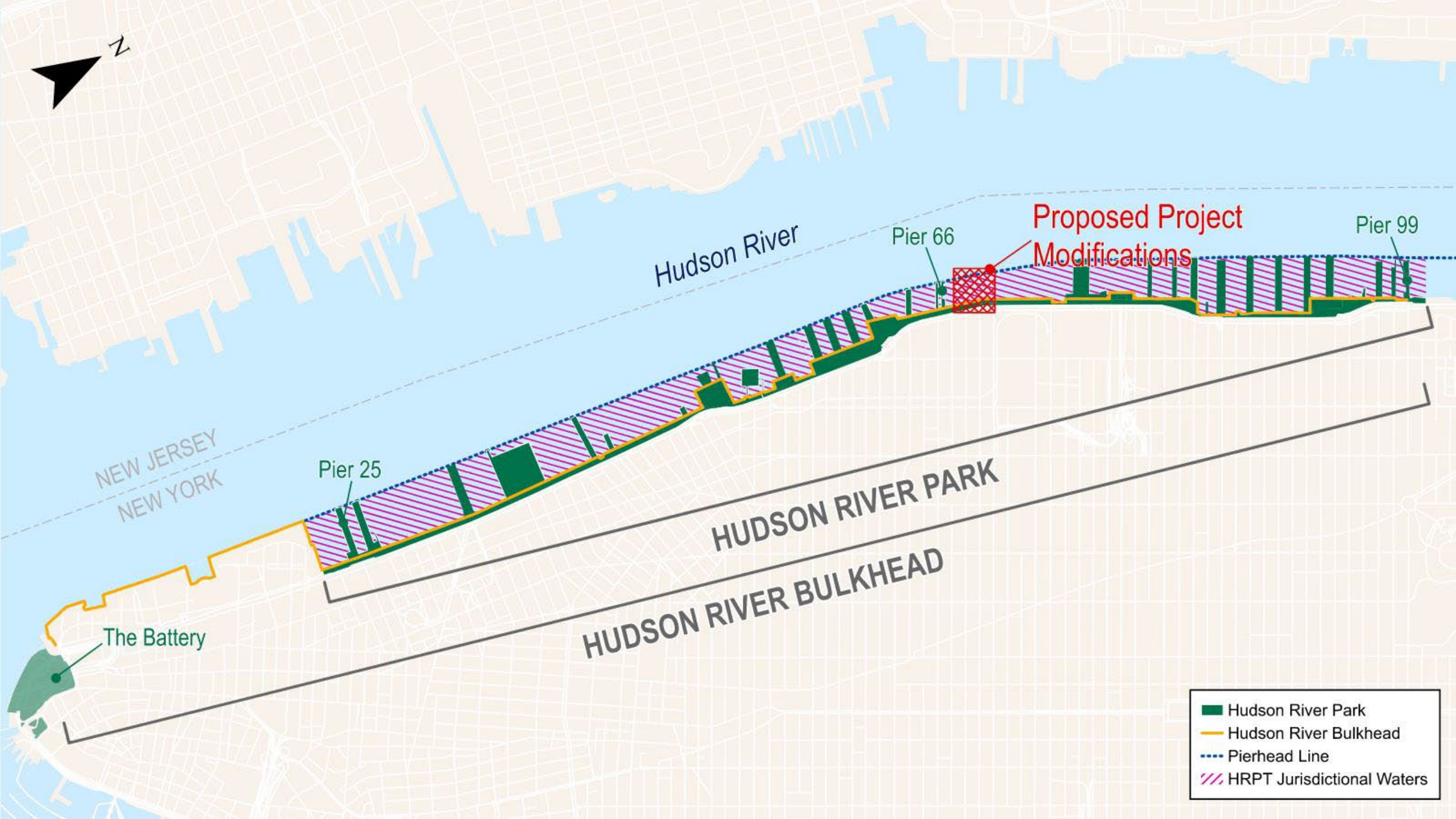


View north of the Hudson River Bulkhead from the foot of West 29th Street

SECTION 4(f) PROPERTIES AFFECTED BY THE PROJECT – HUDSON RIVER PARK

- 550-acre public park maintained by the Hudson River Park Trust (HRPT) that runs along 4+ miles of western Manhattan waterfront
 - Inclusive of the Hudson River Park Estuarine Sanctuary
- Hudson River Park Facilities in the vicinity of Project construction activities:
 - Pier 66 boathouse: operated by Hudson River Community Sailing and New York Kayak Polo
 - West 30th Street Heliport: operated by Air Pegasus





Currently Contemplated Project Activities in Hudson River Park

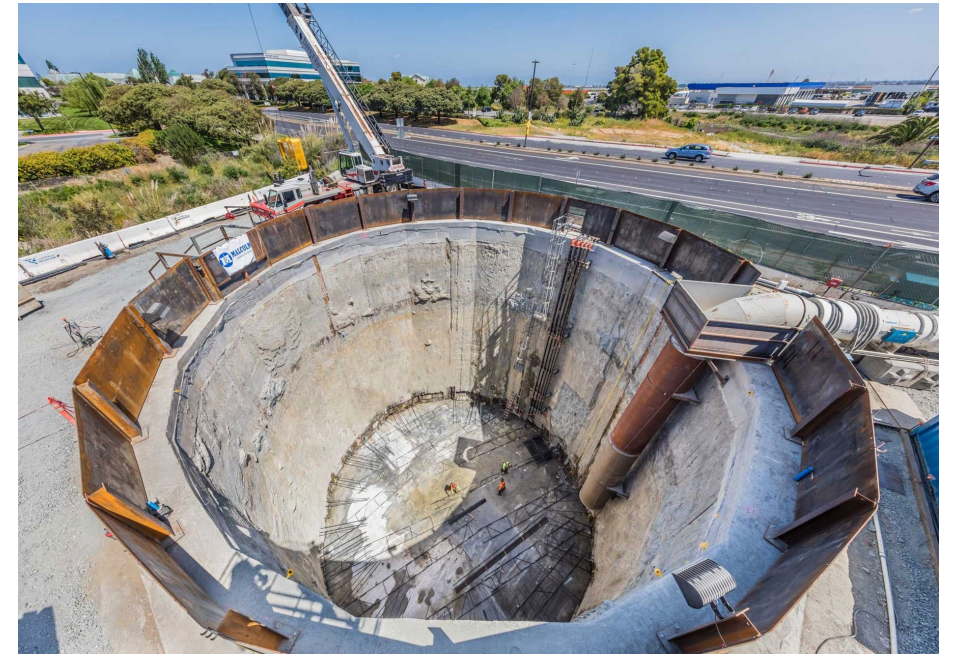
KEY TERMS IN THIS SECTION



Clamshell bucket



Vibratory Hammer



Temporary Shaft

What's Different Since We Last Spoke?

PROJECT MODIFICATIONS

Timber piles associated with former Piers 68 and 69 and other obstructions between the pierhead line and the Hudson River Bulkhead must be removed prior to tunneling activities (*area under jurisdiction of HRPT*)

Stabilizing the ground:

- At the bulkhead – from both the landside and the waterside (*not just landside, as assumed in the FEIS*)
- In HRP & across Twelfth Ave:
 - From temporary shaft (as assumed in the FEIS), though potentially reconfigured as two shafts; **OR**
 - From the surface (requiring temporary lane shifts into HRP)



WATERSIDE

LANDSIDE

Hudson River

West 30th
Street Heliport

FORMER PIER 69

FORMER PIER 68

TWELFTH AVE

HRP Construction
Staging Area

Hudson River
Bulkhead

Hudson River Park

High Line

W 30 ST

W 29 ST

W 28 ST

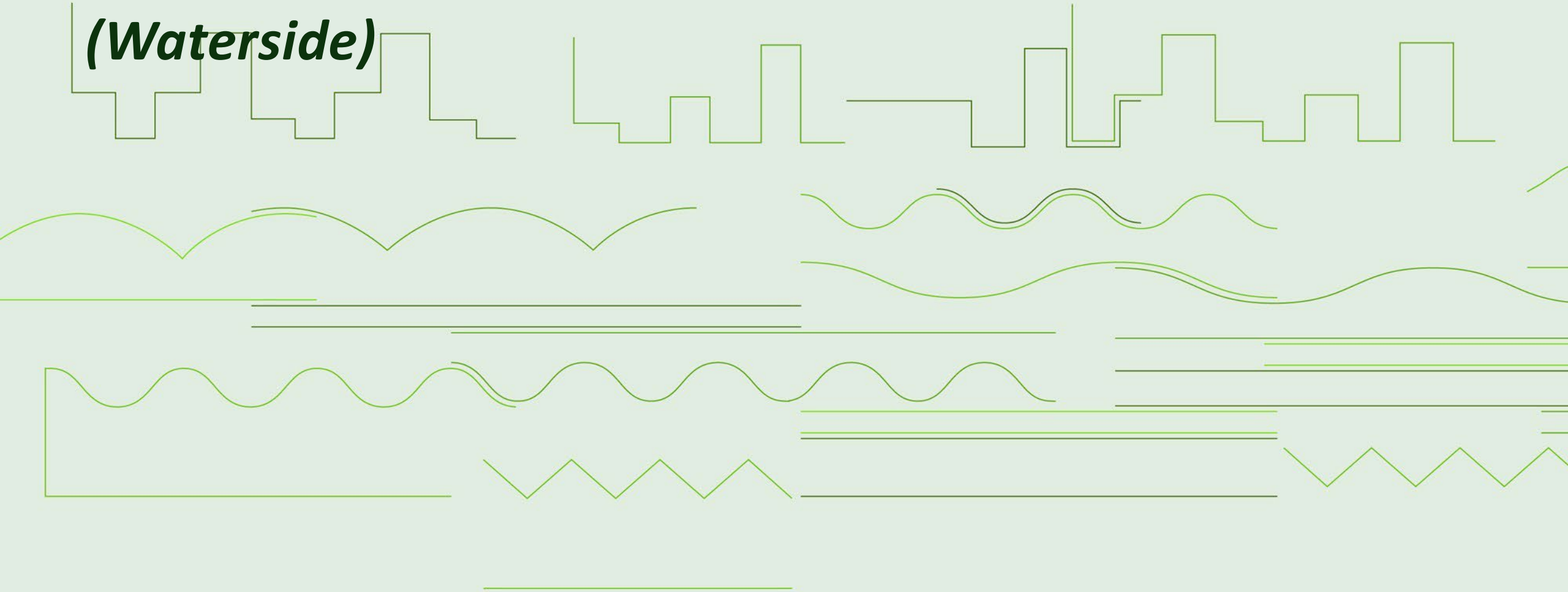
W 27 ST

ELEVENTH AVE

PIER 66

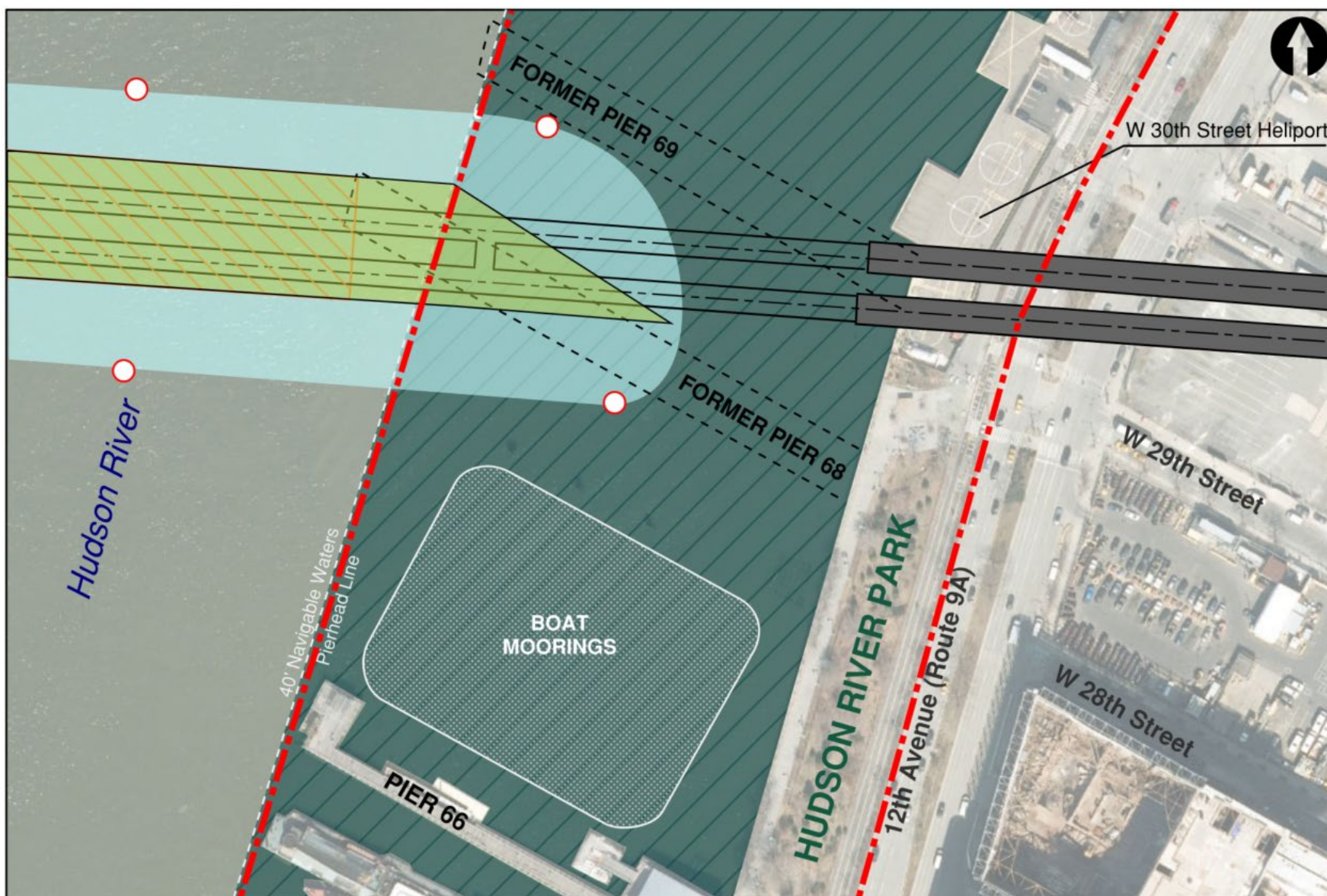
40' Navigable Waters
Pierhead Line

Hudson River Obstruction Removal (*Waterside*)

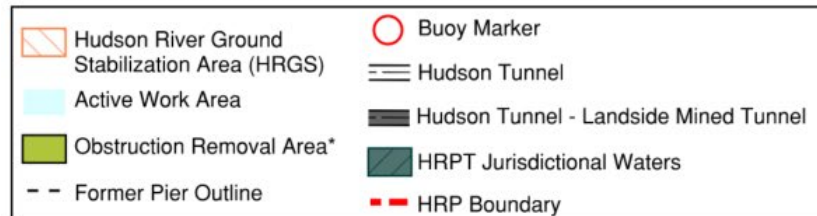


EQUIPMENT & ACTIVITIES

- Activities would be conducted from barges stationed in defined work areas within the river
 - Extraction techniques: vibratory hammer, direct pull, clamshell or mechanical bucket, and, if needed, pile cutting
 - Excavation or vacuum suction dredging to access obstructions located below the riverbed mudline
- In-water construction activities would be regulated by U.S. Army Corps of Engineers (USACE), U.S. Coast Guard, National Oceanic and Atmospheric Administration (NOAA), and the New York State Department of Environmental Conservation (NYSDEC)



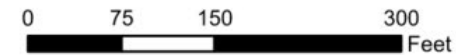
Source: ESRI, Maxar, Earthstar Geographics; Gateway Trans-Hudson Partnership (GTHP), 2024; Gateway Development Commission, 2024.

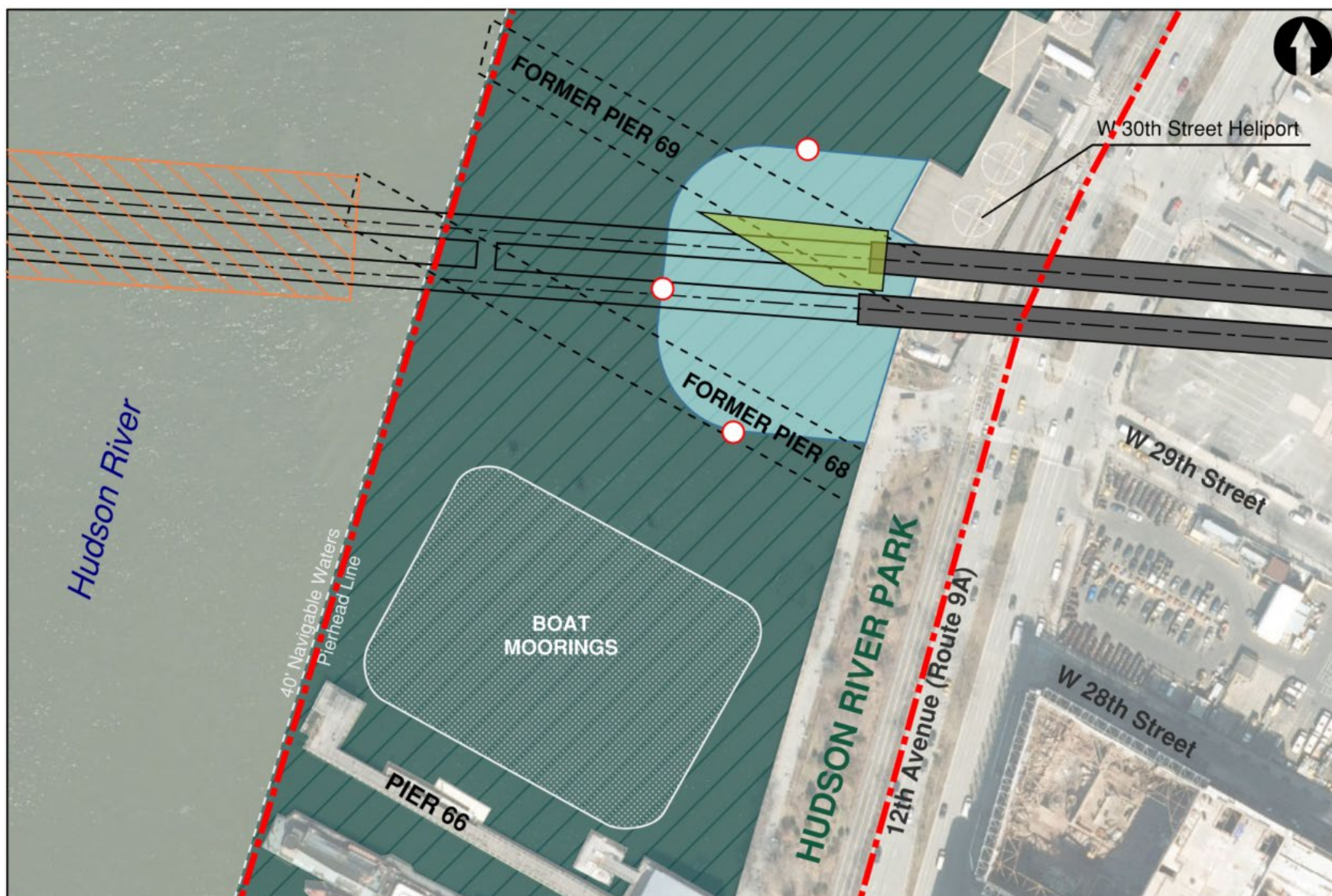


FORMER PIER 68

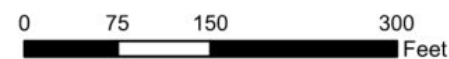
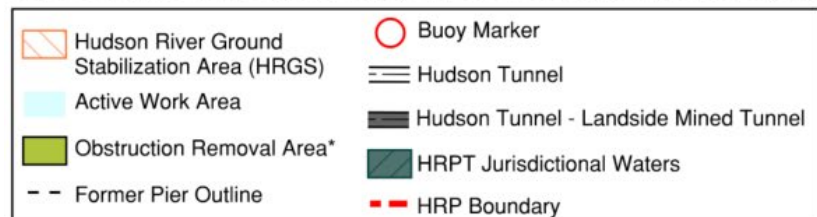
CONCEPTUAL IN-WATER CONSTRUCTION STAGING PLAN

Subject to further refinement





Source: ESRI, Maxar, Earthstar Geographics; Gateway Trans-Hudson Partnership (GTHP), 2024; Gateway Development Commission, 2024.



FORMER PIER 69

CONCEPTUAL IN-WATER CONSTRUCTION STAGING PLAN

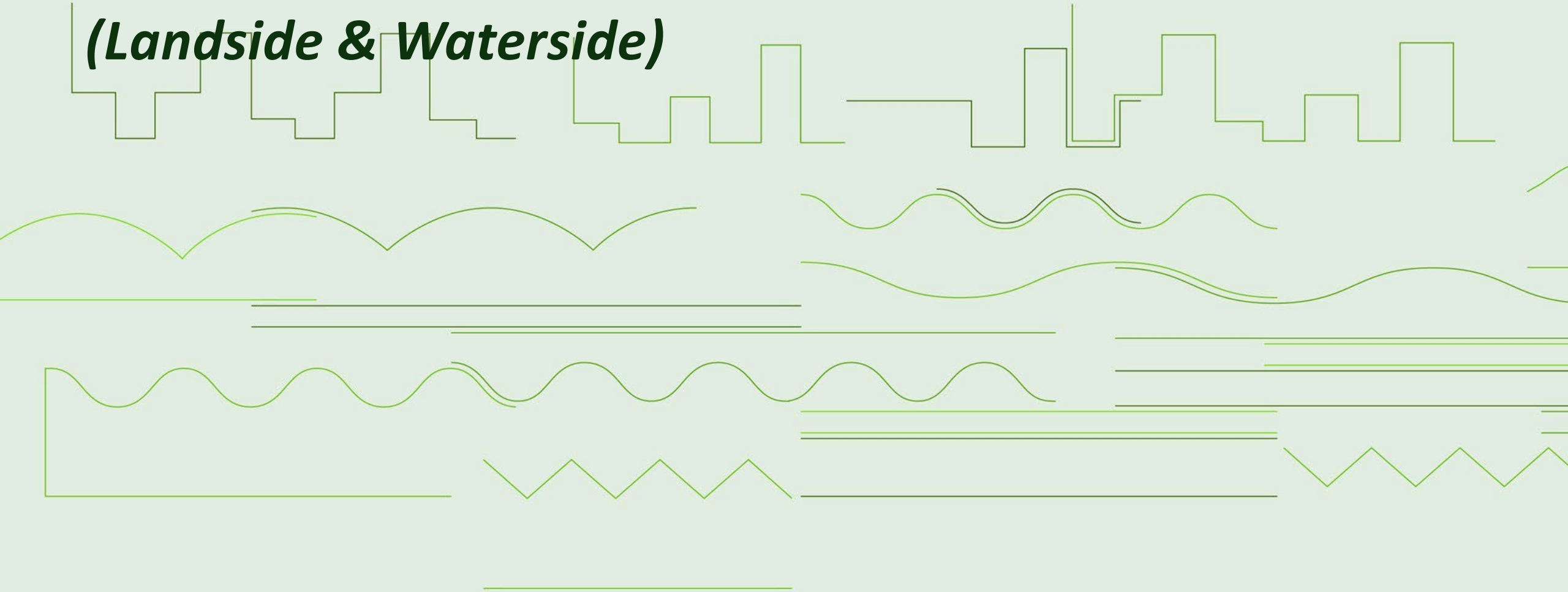
Subject to further refinement

OBSTRUCTION REMOVAL SCHEDULE

- Work activities would not be performed between January 21 and June 30, in accordance with the seasonal work restriction set forth in the FEIS/ROD.
- As currently contemplated, obstruction removal in the Hudson River would occur in two approximately six-months-long “seasons”
 - Season 1 – July 1, 2025, to January 20, 2026*
 - Season 2 – July 1, 2026, to January 20, 2027
- Obstructions would be removed on weekdays 7AM – 11PM; no weekend or overnight obstruction removal work is currently anticipated

*Start of obstruction removal in HRPT jurisdictional waters in Season 1 subject to applicable approvals.

Ground Stabilization at the Bulkhead (*Landside & Waterside*)



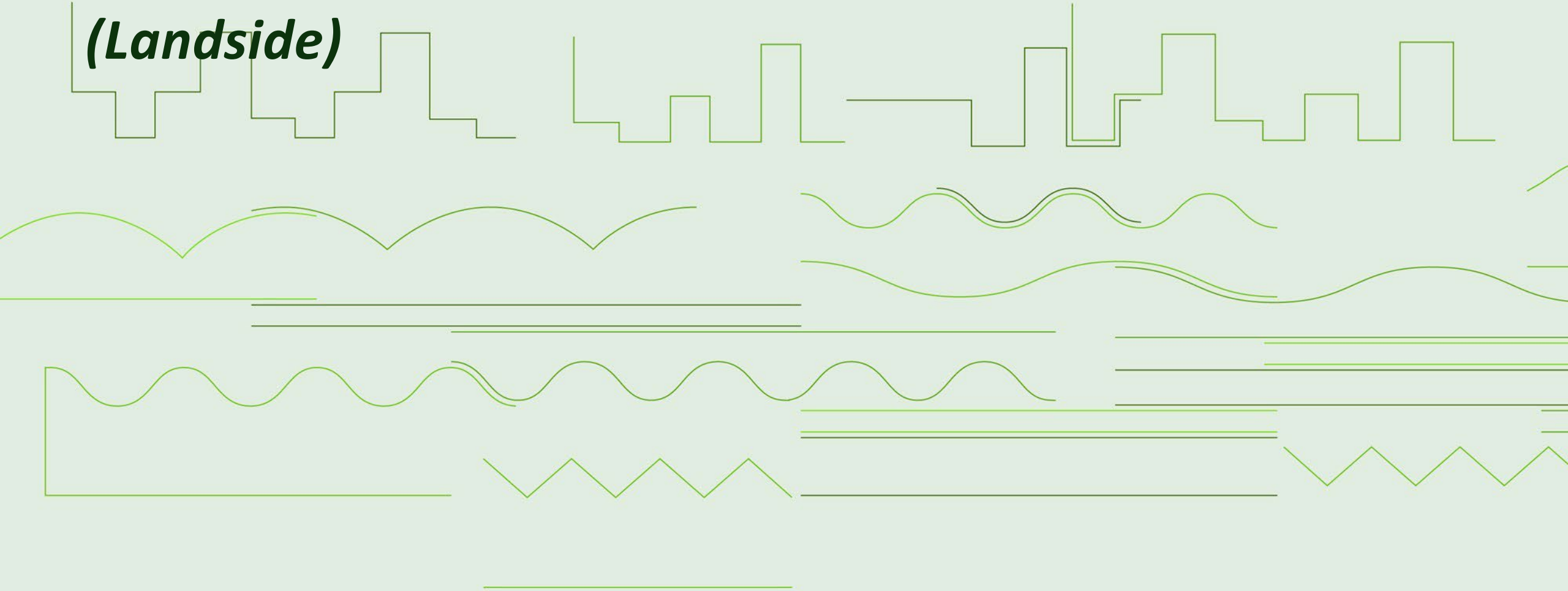
What's Different Since We Last Spoke?

GROUND STABILIZATION AT THE BULKHEAD

Ground stabilization at the bulkhead (grouting/freezing) would be conducted from both the landside and the Hudson River

Would require temporary barge(s) in the river adjacent to the bulkhead, and/or platform(s) straddling the bulkhead

Ground Stabilization in HRP & Across Twelfth Avenue (*Landside*)



What's Different Since We Last Spoke?

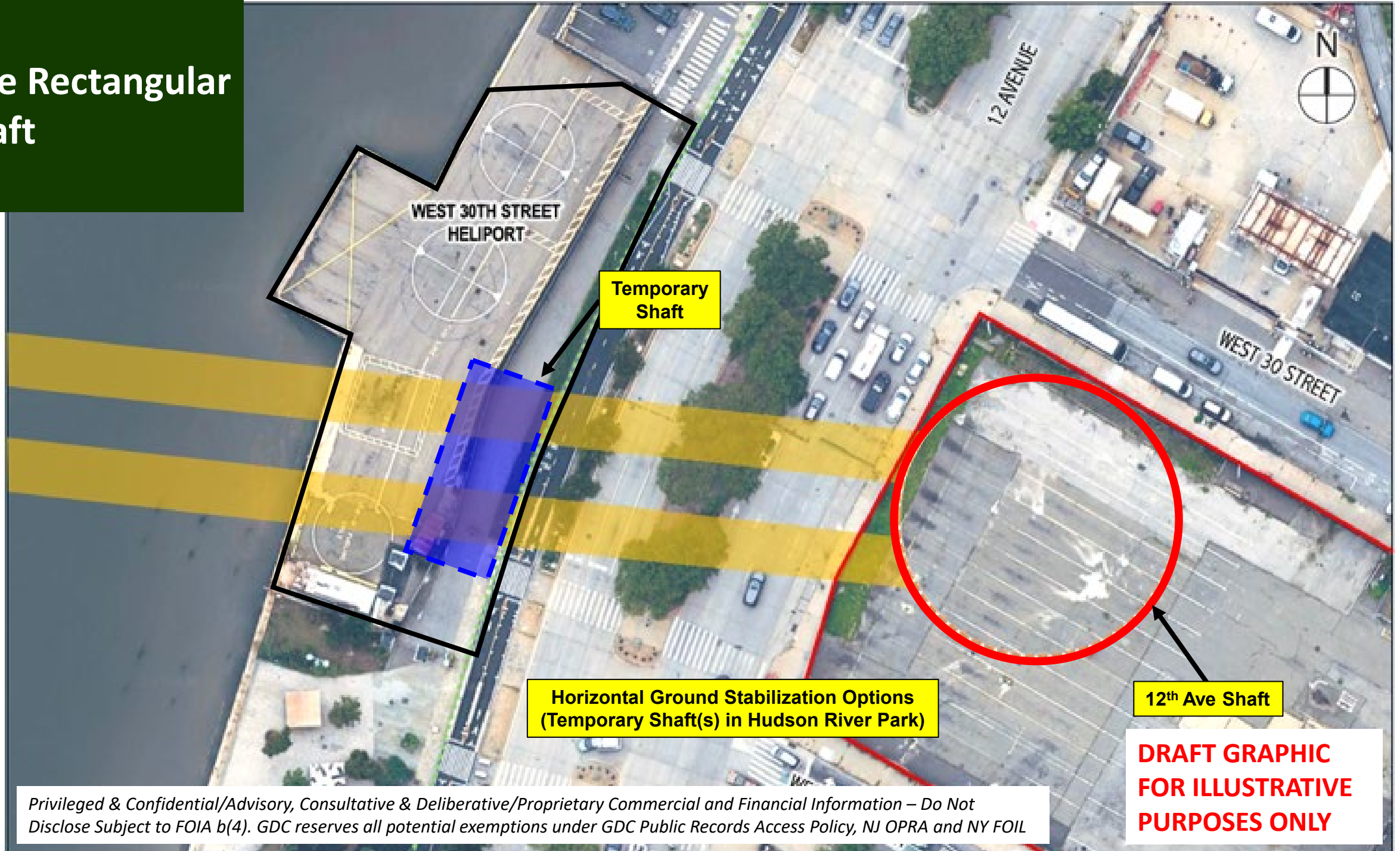
GROUND STABILIZATION IN HRP & ACROSS 12TH AVE – POTENTIAL APPROACH 1 (TEMPORARY SHAFT(S))

Horizontal ground stabilization would require temporary shaft(s) in HRP (West 30th Street Heliport):

- One rectangular shaft (*already approved in FEIS & discussed previously*), **OR**
- Two circular shafts, **OR**
- One 'peanut-shaped' shaft

A 12-foot-wide pedestrian walkway & a 15-foot-wide bikeway would be provided (*as discussed previously*)

One Rectangular Shaft



WEST 30TH STREET
HELIPORT

Temporary
Shaft

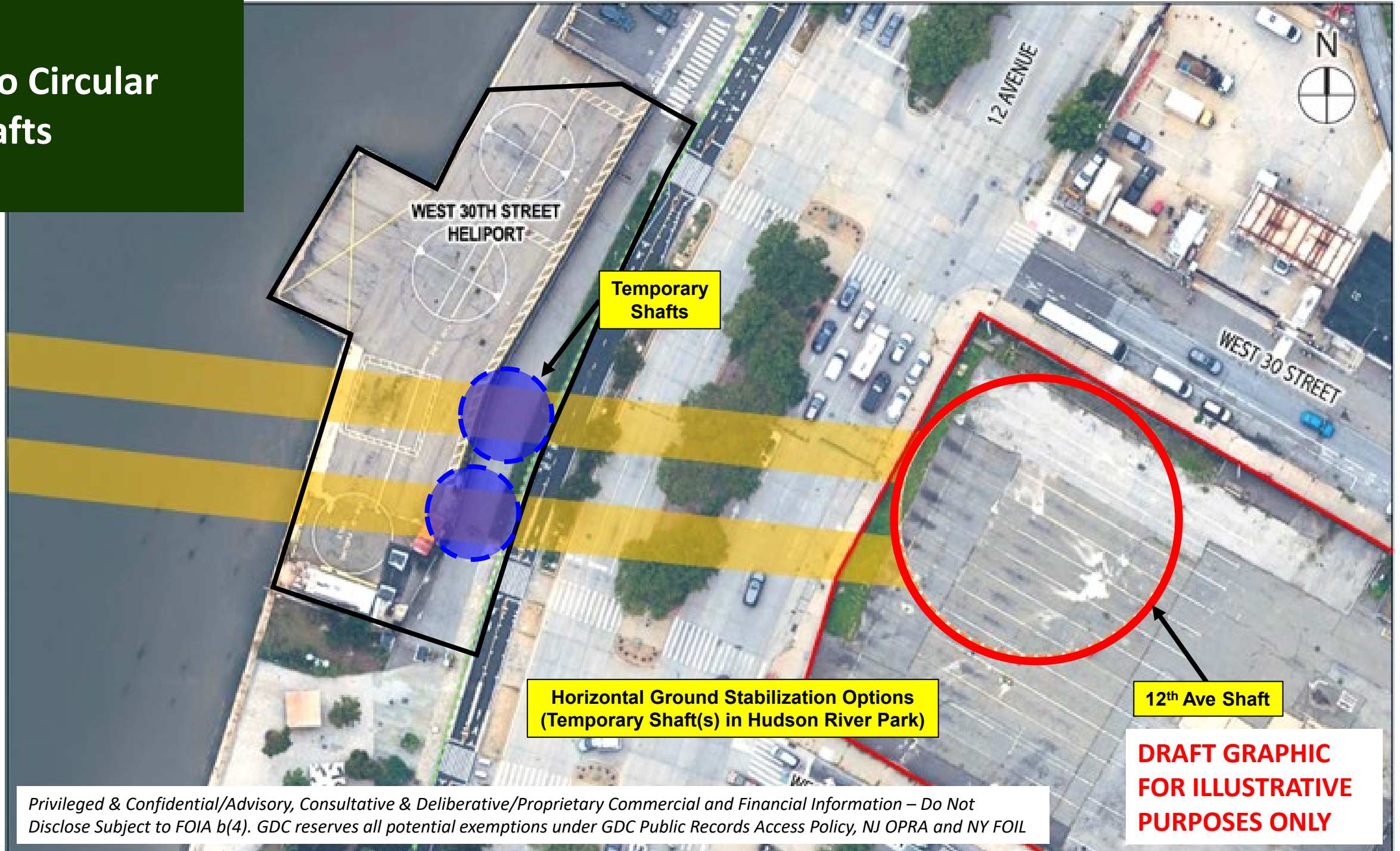
Horizontal Ground Stabilization Options
(Temporary Shaft(s) in Hudson River Park)

12th Ave Shaft

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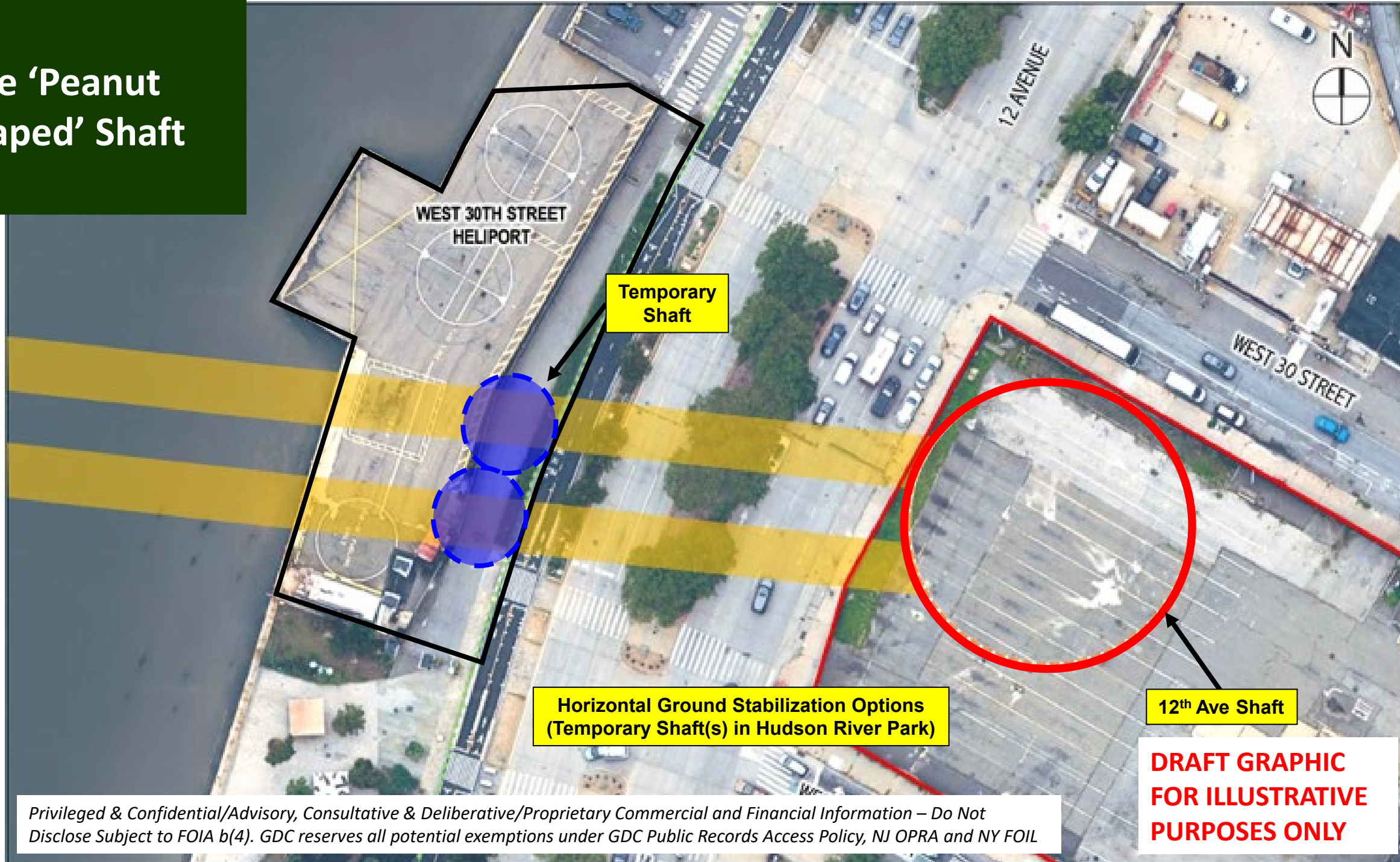
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Two Circular Shafts



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One 'Peanut Shaped' Shaft



WEST 30TH STREET
HELIPORT

Temporary
Shaft

Horizontal Ground Stabilization Options
(Temporary Shaft(s) in Hudson River Park)

12th Ave Shaft

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What's Different Since We Last Spoke?

GROUND STABILIZATION IN HRP & ACROSS 12TH AVE – POTENTIAL APPROACH 2 (LANE SHIFTING)

This approach would NOT require temporary shaft(s)

Vertical ground stabilization (from the surface) would require:

- Twelfth Ave lanes – sequentially shifted into HRP (West 30th Street Heliport)
- One crosswalk at W 29th St and one crosswalk at W 30th St would be open at all times

A 12-foot-wide pedestrian walkway & a 15-foot-wide bikeway would be provided (*as discussed previously*)

GDC is continuing to consult with NYSDOT and NYCDOT to coordinate these proposed activities

Existing Conditions



Hudson River

W 30TH STREET
HELIPORT

HUDSON RIVER PARK

PEDESTRIAN PATH

BIKE PATH

SOUTHBOUND ROUTE 9A (3 LANES)

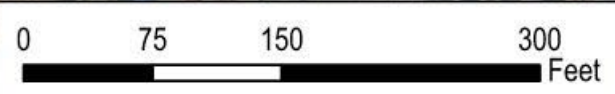
NORTHBOUND ROUTE 9A (4 LANES)

W 28th St

W 29th St

W 30th St

HIGH LINE



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Construction-Period

Possible sequence of construction staging and activities shown for demonstrative purposes only. Precise sequence of construction activities is subject to final means and methods selected and approval by NYSDOT. The public will be notified in advance of activities shown below (anticipated Fall 2025).

Delineators would separate the pedestrian and bike paths

Flaggers and pedestrian managers would be provided

Hudson River

Pedestrian & bike paths would be shifted/configured as needed to support construction

Signage would be posted prior to bike path shift to alert cyclists

Bollards & concrete barriers/blocks would prevent vehicle access

W 30TH STREET
HELIPORT

HUDSON RIVER PARK

SOUTHBOUND ROUTE 9A (3 LANES)

GROUND
STABILIZATION

NORTHBOUND ROUTE 9A (4 LANES)

W 29th St
closed to
through traffic

W 29th St

TWELFTH AVENUE
SHAFT

W 30th St

HIGH LINE

0 75 150 300 Feet

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Restoration



Hudson River

W 30TH STREET
HELIPORT

HUDSON RIVER PARK

PEDESTRIAN PATH

BIKE PATH

SOUTHBOUND ROUTE 9A (3 LANES)

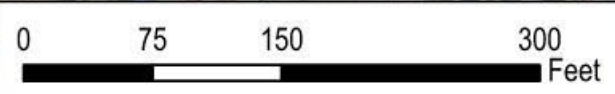
NORTHBOUND ROUTE 9A (4 LANES)

W 28th St

W 29th St

W 30th St

HIGH LINE



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What's Different Since We Last Spoke?

UTILITY PROVISION ACROSS 12TH AVE

A temporary utility bridge across Twelfth Avenue would *not* be required for ground stabilization, whether it is conducted from the surface (vertical ground stabilization) or from temporary excavated shaft(s) within HRP (horizontal ground stabilization)

New Anticipated Construction Schedule



What's Different Since We Last Spoke?

CONSTRUCTION DURATION AND SCHEDULE

Waterside: In-water work (i.e., associated with obstruction removal activities and ground stabilization at the bulkhead) for up to 36 continuous months, with 24/7 operations

(Previously discussed in-water work being limited to obstruction removal activities in two approximately six-month seasons, with operations on weekdays 7AM - 11PM)

Landside: Landside construction for 42 months within HRP, as well as 24/7 mining to support tunneling operations

(Previously discussed 36 months of work in landside HRP, as well as 24/5 mining, per the FEIS)

National Historic Preservation Act Section 106



NATIONAL HISTORIC PRESERVATION ACT SECTION 106

- Section 106 refers to the original section within the National Historic Preservation Act of 1966, which established the national policy on the preservation of historic and cultural places
- Section 106 requires a Federal agency to 1) take into account the effects of its actions on properties listed in or eligible for listing in the National Register of Historic Places, and 2) provide the Advisory Council on Historic Preservation an opportunity to comment on the agency's actions
- The focus of this process is consultation with State Historic Preservation Officers, Federally recognized Tribes, applicants for Federal funding or approvals, local governments, the public, and others with a demonstrated interest
- Section 106 review encourages, but does not mandate, preservation

SECTION 106 DETERMINATION – FORMER PIER PILES & HUDSON RIVER BULKHEAD

- **Waterside**: In a letter dated January 11, 2024, the New York State Historic Preservation Office provided concurrence with FRA's determination that the remnants of former Piers 68 and 69 are not eligible for listing in the National Register of Historic Places and indicated that they have no concerns regarding the project's effects on these resources
- **Landside**: Section 106 consultation with the New York State Historic Preservation Office is ongoing and expected to result in a finding of no additional adverse effects to historic and archaeological resources (i.e., the Hudson River Bulkhead)

Section 4(f) Use



SECTION 4(F) USE (CFR § 774.17)

- A project uses a Section 4(f) property when:
 - Land from the Section 4(f) property is permanently incorporated into a transportation facility;
 - There is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose (e.g., when all or part of the Section 4(f) property is required for project construction-related activities); or
 - There is a “constructive” use of a Section 4(f) property (i.e., the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired)

What's Different Since We Last Spoke?

SECTION 4(F) DETERMINATION

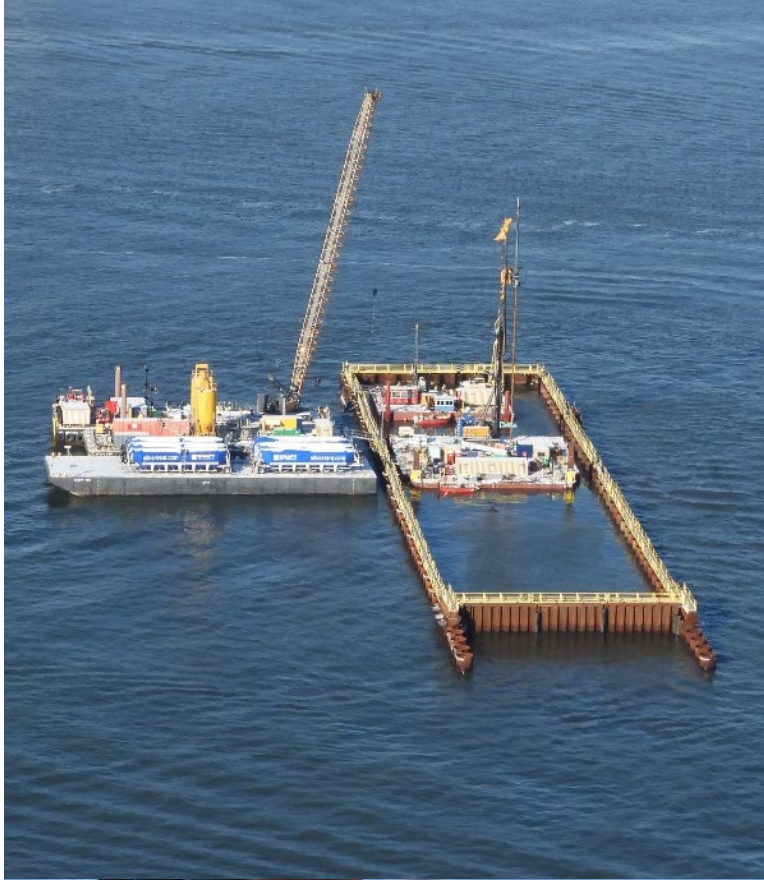
Based on coordination with FTA and FRA, GDC anticipates the proposed project modifications will not require a separate Section 4(f) approval for the Hudson River Bulkhead or HRP:

- There would be no new adverse effects to historic and archaeological resources, including the Hudson River Bulkhead
- Access to the Hudson River pierhead line and navigation channel would be maintained and recreational features of the Pier 66 boathouse and moorings would not be substantially impaired

Safety Measures & Best Management Practices

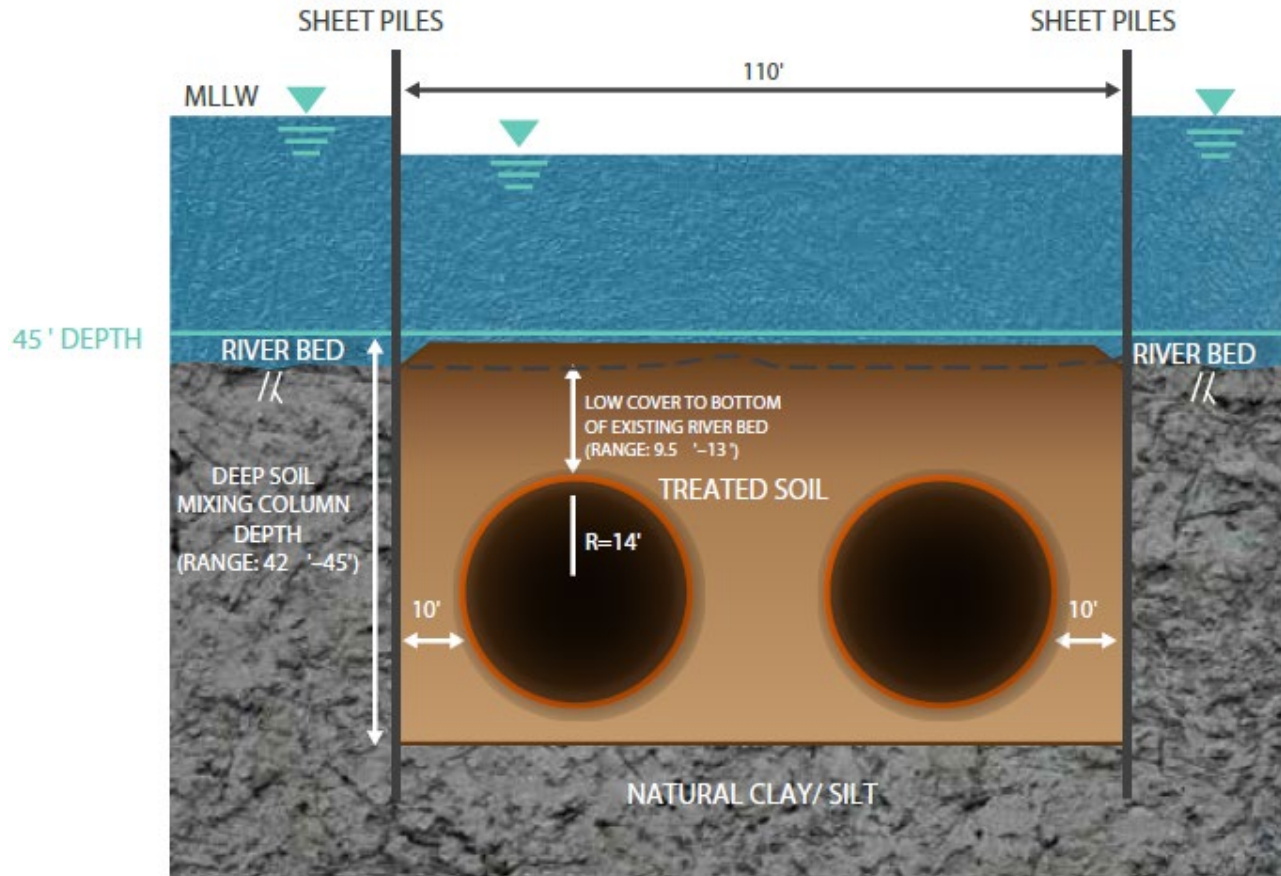


KEY TERMS IN THIS SECTION



Cofferdam

(a watertight structure designed to facilitate construction projects in areas that are normally submerged)



Hudson River ground stabilization (typical cross-section)

NAVIGATING AROUND IN-WATER CONSTRUCTION

- Obstruction removal activities would occur simultaneously with Hudson River Ground Stabilization (HRGS) work, which would be located west of the pierhead line (see FEIS/ROD Chapter 3, “Construction Methods and Activities”)
- Given the proximity of the HRGS work to the obstruction removal activities, boaters traveling north from the Pier 66 boathouse and moorings would likely first travel directly west into the 45’-deep navigation channel, moving around the western edge of the HRGS cofferdam and continuing north along the pierhead line
- As the HRGS cofferdam progresses west to east (i.e., toward former Piers 68 and 69), the distance that boaters would have to travel to maneuver around the cofferdam would gradually decrease
- Boaters would continue to be able to travel south along the pierhead line and between the navigation channel and the Pier 66 boathouse and nearby moorings

What's Different Since We Last Spoke?

CONSTRUCTION STAGING

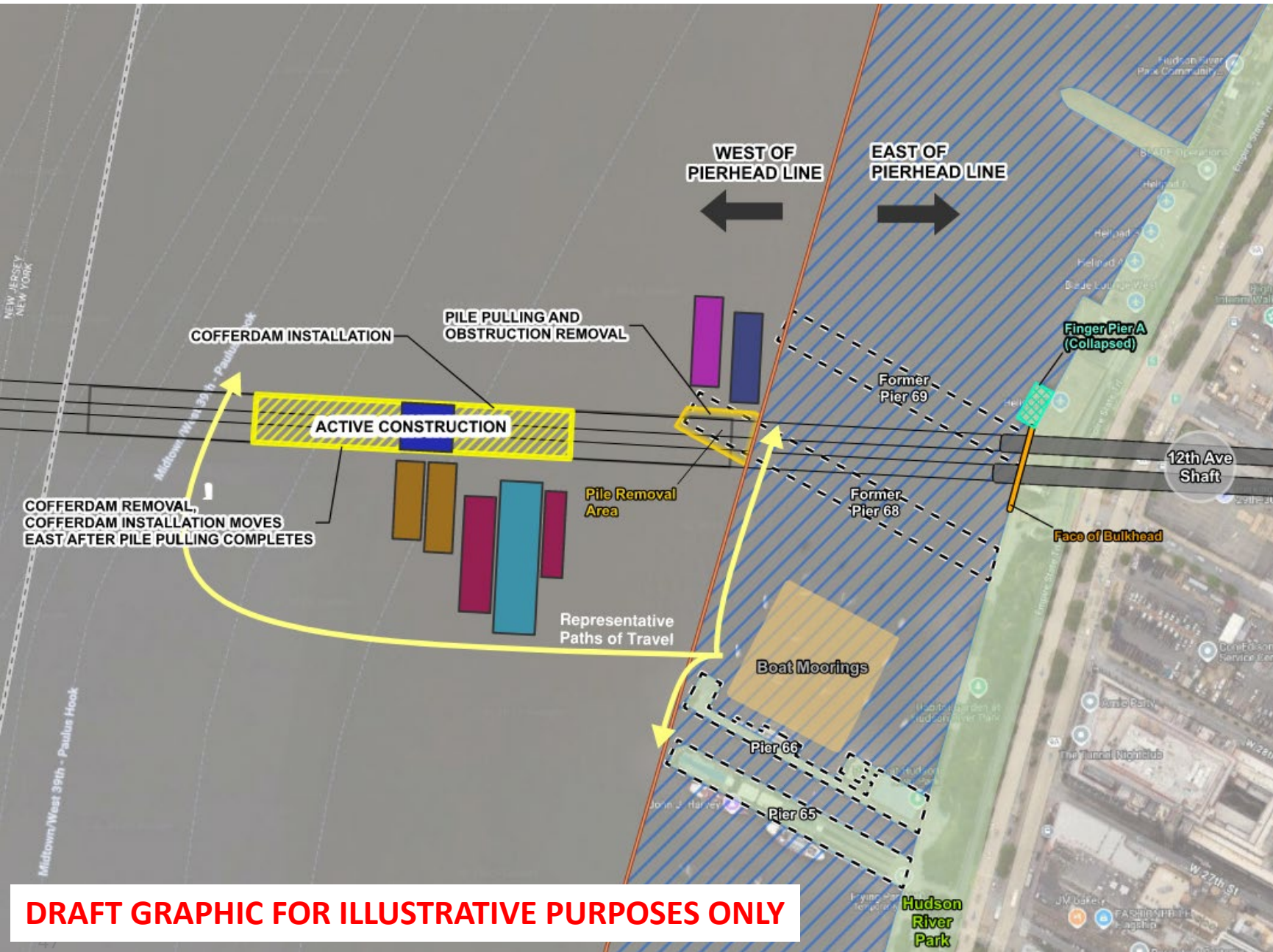
The following graphics represent a refined understanding of how boaters might navigate the proposed in-water construction activities, both east of the pierhead line (within HRPT jurisdictional waters) and west of the pierhead line

Though construction staging plans are still conceptual and subject to further refinement, these updated graphics account for the construction activities associated with ground stabilization at the bulkhead

These graphics also display the currently contemplated barge staging plan, with barges stationed to facilitate cofferdam installation and removal, obstruction removal activities, and ground stabilization at the bulkhead

EXAMPLE SNAPSHOT OF POTENTIAL BOATER PATHS OF TRAVEL

JUL 2025 – SEP 2025
Subject to further refinement



Legend

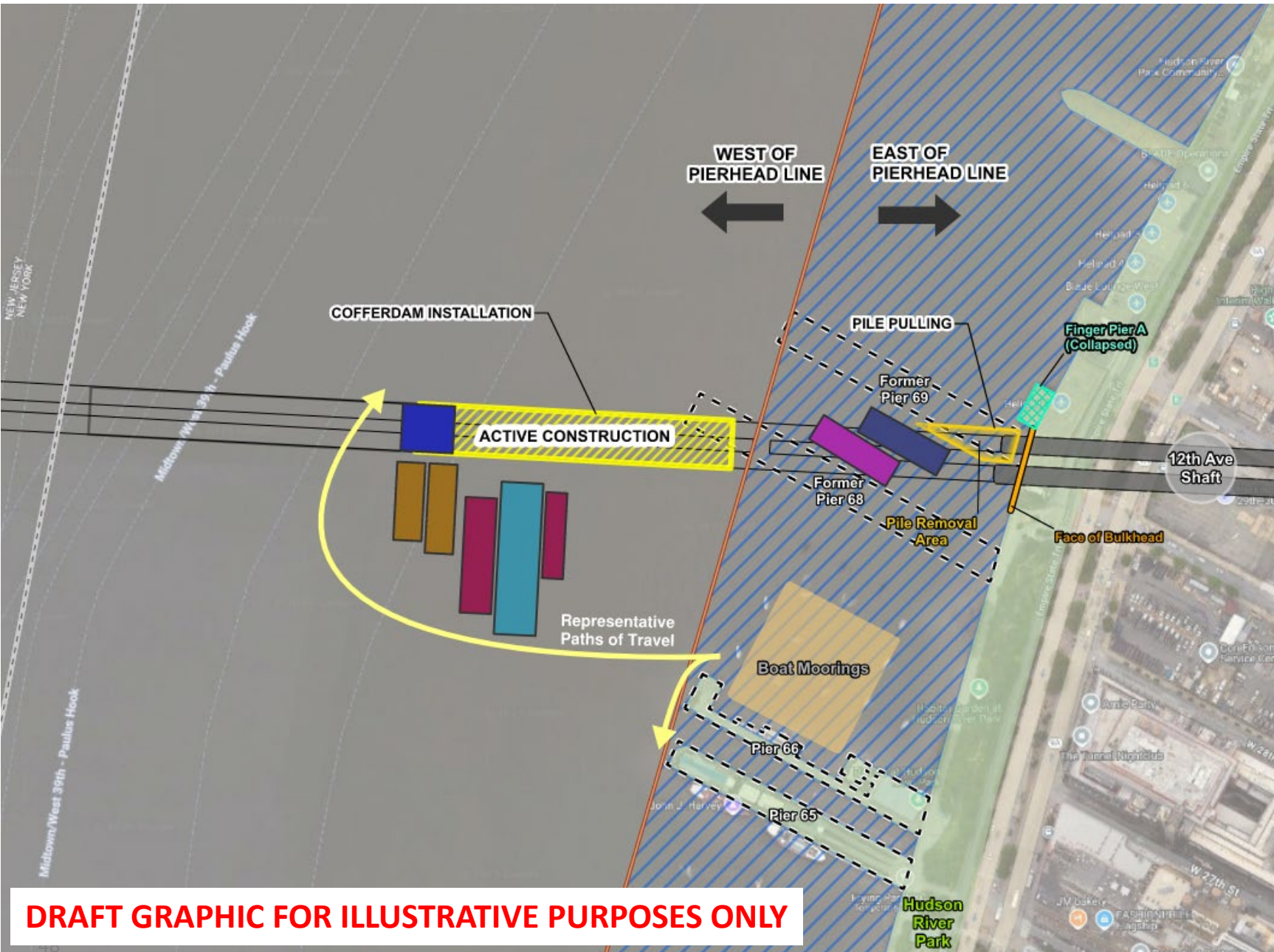
- State line
- Pierhead Line
- Bulkhead
- Inactive Construction
- Active Construction
- Pile Removal Area
- South Finger Pier
- Cofferdam Install Barge
- Crane Barge
- Deep Soil Mixing Barge
- Support Barge
- Equipment Barge
- Dredge Barge
- 12th Avenue Shaft
- Landside Mined Tunnel
- Hudson Tunnel Underwater Segment
- Boat Mooring
- Pier Footprint
- Hudson River Park
- HRPT Jurisdictional Waters

EXAMPLE SNAPSHOT OF POTENTIAL BOATER PATHS OF TRAVEL

SEP 2025 – NOV 2025
Subject to further refinement

Legend

- State line
- Pierhead Line
- Bulkhead
- Inactive Construction
- Active Construction
- Pile Removal Area
- South Finger Pier
- Cofferdam Install Barge
- Crane Barge
- Deep Soil Mixing Barge
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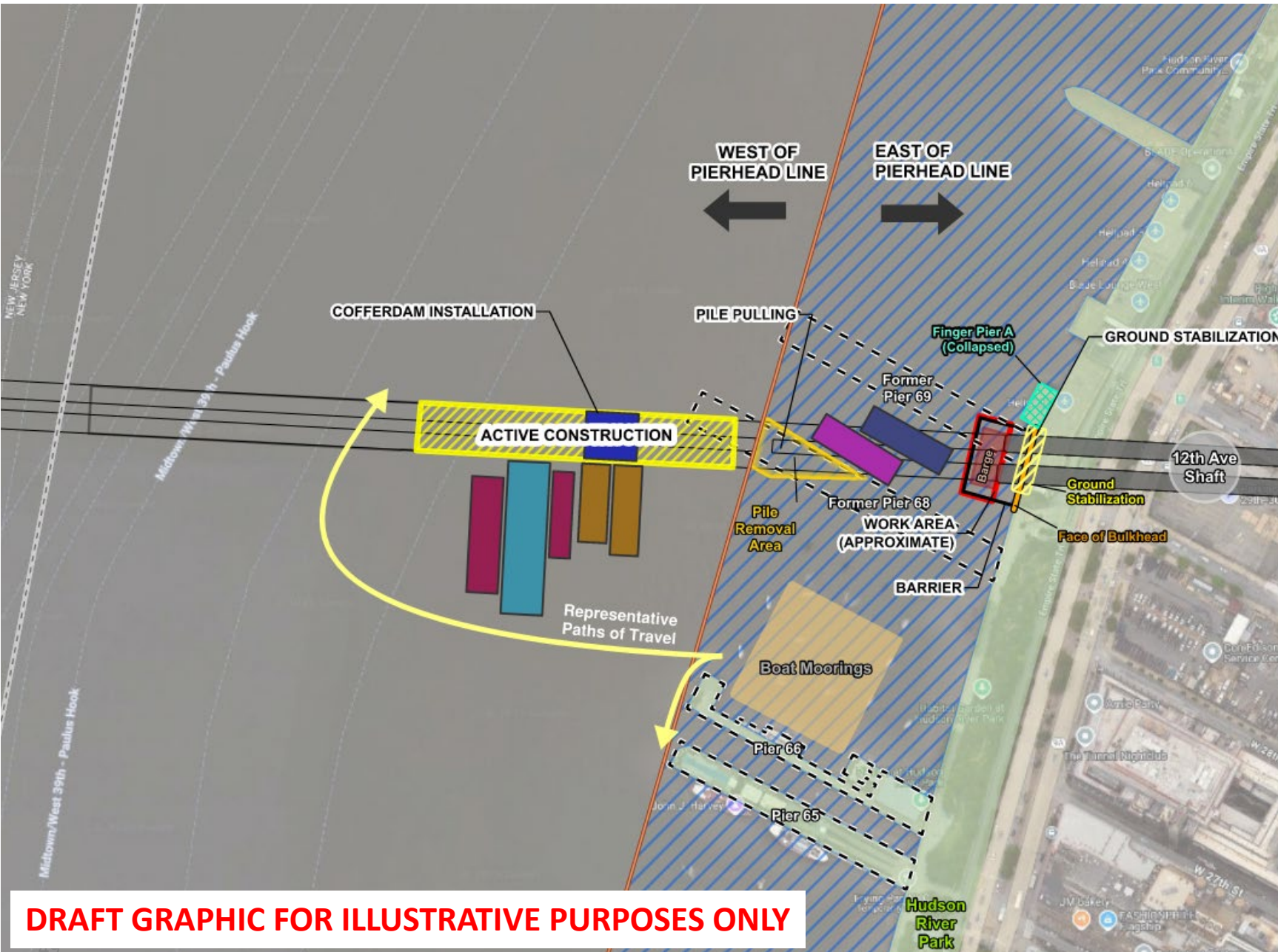


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EXAMPLE SNAPSHOT OF POTENTIAL BOATER PATHS OF TRAVEL

NOV 2025 – JAN 2026

Subject to further refinement



Legend

- State line
- Pierhead Line
- Bulkhead
- Barrier
- Inactive Construction
- Active Construction
- Pile Removal Area
- South Finger Pier
- Cofferdam Install Barge
- Crane Barge
- Deep Soil Mixing Barge
- Support Barge
- Equipment Barge
- Dredge Barge
- 12th Avenue Shaft
- Ground Stabilization
- Barge
- Landside Mined Tunnel
- Hudson Tunnel Underwater Segment
- Boat Mooring
- Pier Footprint
- Hudson River Park
- Work Area (Approximate)
- HRPT Jurisdictional Waters

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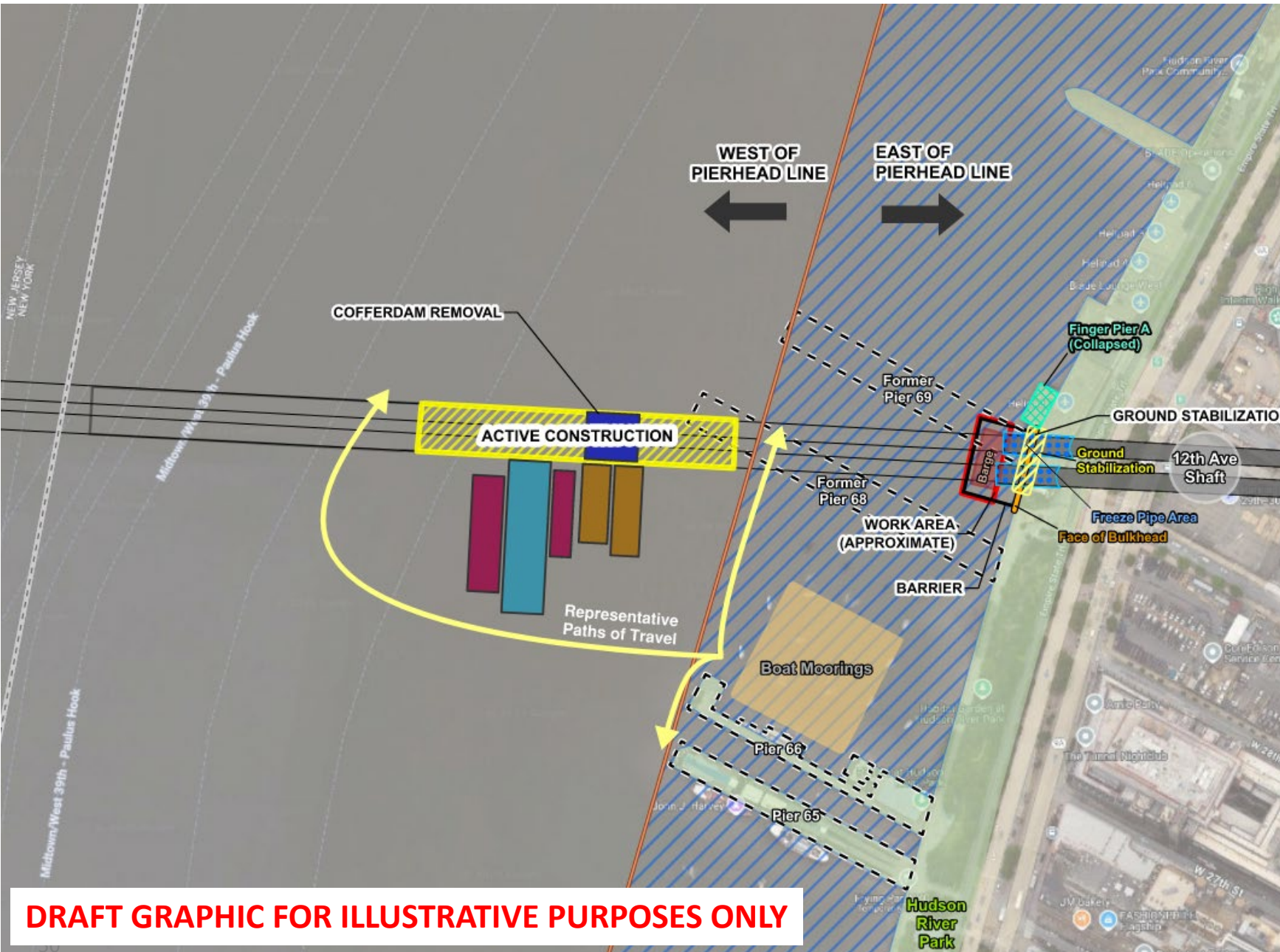
EXAMPLE SNAPSHOT OF POTENTIAL BOATER PATHS OF TRAVEL

JUL 2026 – JAN 2027

Subject to further refinement

Legend

- State line
- Pierhead Line
- Bulkhead
- Barrier
- Inactive Construction
- Active Construction
- South Finger Pier
- Cofferdam Install Barge
- Crane Barge
- Deep Soil Mixing Barge
- Support Barge
- 12th Avenue Shaft
- Ground Stabilization
- Freeze Pipe Area
- Barge
- Landside Mined Tunnel
- Hudson Tunnel Underwater Segment
- Boat Mooring
- Pier Footprint
- Hudson River Park
- Work Area (Approximate)
- HRPT Jurisdictional Waters



PROPOSED WATERSIDE SAFETY PROTECTIONS

- Measures to provide for the safety of Hudson River users (i.e., sailors, boaters) during obstruction removal activities include:
 - Marker buoys with solar lighting to delineate restricted work zones for obstruction removal in the Hudson River
 - Lighting on barges used for obstruction removal activities
 - Notification to mariners via the USCG
 - Hudson River park water safety coordination
- With the implementation of these measures, boaters would continue to safely navigate the Hudson River



Marker buoys



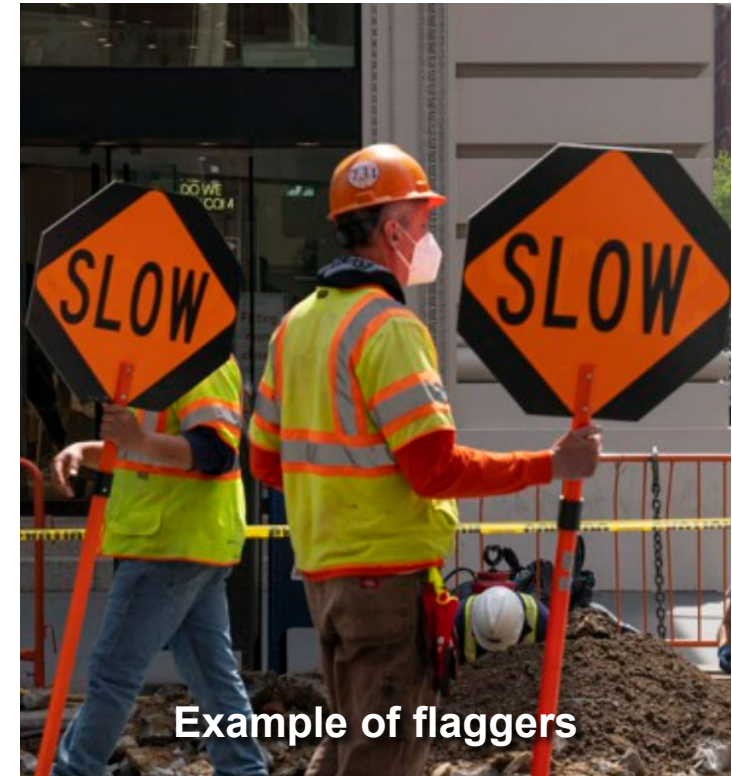
IMPLEMENTATION OF BEST MANAGEMENT PRACTICES FOR IN-WATER WORK

- Best management practices implemented in coordination with Federal and State agencies, such as:
 - Use of turbidity curtains and monitoring
 - Placement of piles in barges with a basin to contain sediment and runoff
 - Operational modifications to minimize turbidity and sedimentation (e.g., reducing lift speed)
 - Implementation of a Water Quality Monitoring Plan



LANDSIDE SAFETY PROTECTIONS (APPLICABLE WITH EITHER GROUND STABILIZATION APPROACH)

- Safety measures within the landside portion of HRP would be implemented to prevent unauthorized access to work zones, and provide for safe pedestrian and bicycle passage in HRP:
 - Flaggers & pedestrian managers at staging area access points
 - Bollards, concrete barriers, and concrete blocks to prevent vehicle access to temporarily relocated pedestrian and bicycle paths
 - Delineators to separate pedestrian & bicycle paths
 - Pedestrian guide rails and chain link fencing to preclude public access to construction staging area and Hudson River
 - Posted signage in advance of bicycle path shifting



Example of flaggers

Stakeholder Outreach & Public Engagement Opportunities

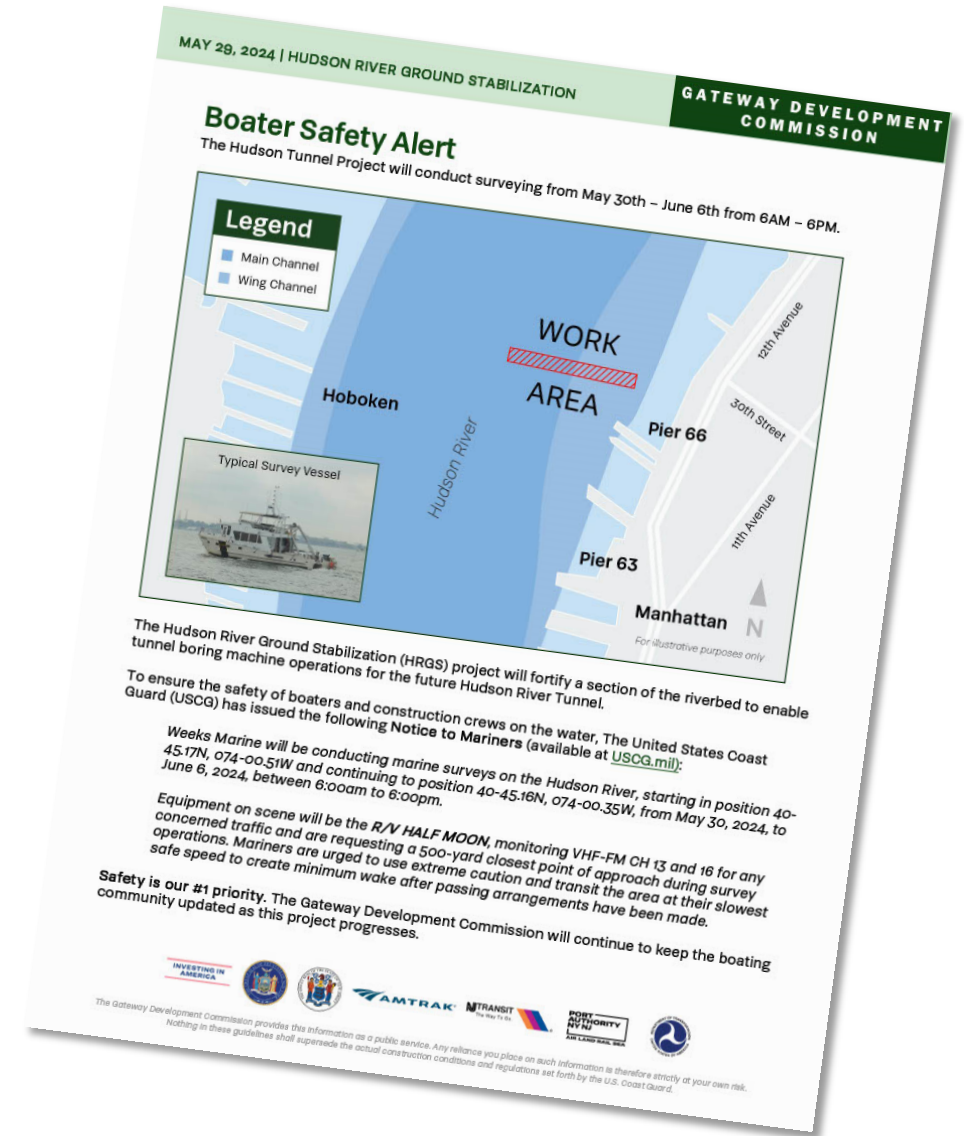


ONGOING COORDINATION

- The Project Team commits to continued coordination with the following stakeholders to minimize disruption at Hudson River Park:
 - HRPT
 - HRPT Advisory Council
 - Hudson River Community Sailing and New York Kayak Polo
 - Air Pegasus
 - United States Coast Guard
 - U.S. Army Corps of Engineers (USACE)
 - National Oceanic and Atmospheric Administration (NOAA)
 - New York State Department of Environmental Conservation (NYSDEC)
 - Elected Officials
 - General public (Manhattan Community Board 4)

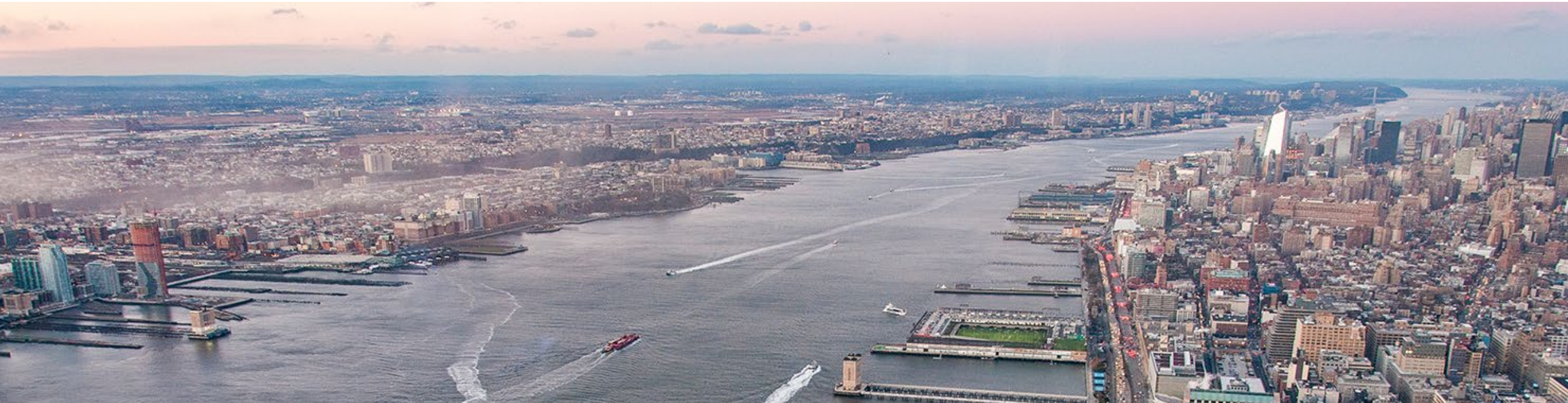
ONGOING COORDINATION CONT.

- The Project team will continue to send regular Boater Safety Alerts to the boating community on both sides of the river in coordination with the United States Coast Guard
- A drop-in Manhattan Public Information Center for community education and feedback is expected to open this year
- GDC has hired a full-time Manhattan Community Coordinator who will staff the Public Information Center
- GDC will establish a construction task force with local representatives with a specific focus on the Manhattan Tunnel Project



SECTION 4(f)-RELATED COMMENTS

- Comments on the proposed construction activities in Hudson River Park may be submitted on or before 5:00 p.m. on **May 12, 2025**, by emailing both ky.woltering@dot.gov and james.goveia@dot.gov.
- Please visit *hudsontunnelproject.com* for additional project information



Gateway Development Commission



Thank you