



PUBLIC NOTICE

US Army Corps
of Engineers
New York District
Jacob K. Javits Federal Building
New York, N.Y. 10278-0090
ATTN: Regulatory Branch

In replying refer to:

Public Notice Number: NAN-2019-00596-EME
Issue Date: December 4, 2019
Expiration Date: January 4, 2020

To Whom It May Concern:

The New York District, Corps of Engineers has received an application for a Department of the Army permit pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (33 U.S.C. 1344).

APPLICANT: New York City Department of Design and Construction
Attn: Jean M. Jean-Louis, Assistant Commissioner
30-30 Thomson Avenue
Long Island City, NY 11101

ACTIVITY: East Side Coastal Resiliency Project – construct a flood protection system and attendant features.

WATERWAY: East River

LOCATION: East River waterfront, from Montgomery Street to East 25th Street, in the Borough of Manhattan, City of New York, New York County, New York.

A detailed description and plans of the applicant's activity are enclosed to assist in your review.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

ALL COMMENTS REGARDING THE PERMIT APPLICATION MUST BE PREPARED IN WRITING AND MAILED TO REACH THIS OFFICE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

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Comments submitted in response to this notice will be fully considered during the public interest review for this permit application. Comments provided will become part of the public record for this permit application. All written comments, including contact information, will be made a part of the administrative record, available to the public under the Freedom of Information Act. The Administrative Record, or portions thereof, may also be posted on a Corps of Engineers internet web site. Due to resource limitations, this office will normally not acknowledge the receipt of comments or respond to individual letters of comment.

Any person may request, in writing, before this public notice expires, that a public hearing be held to collect information necessary to consider this application. Requests for public hearings shall state, with particularity, the reasons why a public hearing should be held. It should be noted that information submitted by mail is considered just as carefully in the permit decision process and bears the same weight as that furnished at a public hearing.

The activity for which authorization is sought herein is not likely to affect any Federally endangered or threatened species or their critical habitat, including shortnose sturgeon and Atlantic sturgeon. Pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the New York City Office of Management and Budget, acting on behalf of the Department of Housing and Urban Development, as the lead Federal agency for the project, completed consultation with the National Marine Fisheries Service – Greater Atlantic Regional Fisheries Office on May 21, 2019.

The Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), as amended by the Sustainable Fisheries Act (Public Law 104-267), requires all Federal agencies to consult with the National Oceanic and Atmospheric Administration Fisheries Service (NOAA/FS) on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). Pursuant to Section 305 of the MSFCMA, the New York City Office of Management and Budget, acting on behalf of the Department of Housing and Urban Development, as the lead Federal agency for the project, completed EFH consultation with the NOAA/FS on September 9, 2019.

The proposed work may result in Adverse Effects to seventeen (17) properties listed or eligible for listing in the National Register of Historic Places (NRHP) within the permit area. Pursuant to Section 106 of the Historic Preservation Act, the New York City Office of Management and Budget, acting on behalf of the Department of Housing and Urban Development, as the lead Federal agency for the project, consulted with the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) for the project's potential effects on the historic properties. As a result of the consultation, a programmatic agreement was developed titled "PROGRAMMATIC AGREEMENT Among The New York City Office of Management and Budget, The New York State Historic Preservation Office, and The Advisory Council on Historic Preservation Regarding The East Side Coastal Resiliency Project New York City, New York", dated November 25, 2019. The Programmatic Agreement, requires signature from the Advisory Council on Historic Preservation to be considered fully executed. Presently unknown archeological, scientific, pre-historical, or historical data may be lost by work accomplished under the required permit.

Reviews of activities pursuant to Section 404 of the Clean Water Act will include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 (b) of the Clean Water Act and the applicant will obtain a water quality certificate or waiver from the appropriate state agency in accordance with Section 401 of the Clean Water Act prior to a permit decision.

Pursuant to Section 307 (c) of the Coastal Zone Management Act of 1972 as amended [16 U.S.C. 1456 (c)], for activities under consideration that are located within the coastal zone of a state which

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has a federally approved coastal zone management program, the applicant has certified in the permit application that the activity complies with, and will be conducted in a manner that is consistent with, the approved state coastal zone management program. By this public notice, we are requesting the state's concurrence with, objection to, or waiver of the applicant's certification. No permit decision will be made until one of these actions occur. For activities within the coastal zone of New York State, the applicant's certification and accompanying information is available from the Consistency Coordinator, New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, Coastal Zone Management Program, One Commerce Plaza, 99 Washington Avenue, Albany, New York 12231, Telephone (518) 474-6000. Comments regarding the applicant's certification, and copies of any letters to this office commenting upon this proposal, should be so addressed.

In addition to any required water quality certificate and coastal zone management program concurrence, the applicant has obtained or requested the following governmental authorization for the activity under consideration:

- New York State Department of Environmental Conservation Tidal Wetlands Permit, Excavation in Navigable Waters Permit

The applicant has stated that they have avoided, minimized and mitigated for impacts proposed to the maximum extent practicable by placing the new cut-off wall within the footprint or landward of the existing bulkhead, utilizing Best Management Practices, and installing turbidity curtains and cofferdams during construction. The applicant has proposed compensatory mitigation in the form of constructing new embayments of similar size as the existing embayments to be filled, and by including additional aquatic habitat features. The new embayments would be located within the project area, on the East River. The applicant has proposed to provide any additional compensatory mitigation, if required, through either the purchase of credits from the Saw Mill Creek Wetland Mitigation Bank located on Staten Island, or through the successful establishment of wetlands at an off-site location.

It is requested that you communicate the foregoing information concerning the activity to any persons known by you to be interested and who did not receive a copy of this notice. If you have any questions concerning this application, you may contact this office at (917) 790-8428 and ask for Lisa Grudzinski.

In order for us to better serve you, please complete our Customer Service Survey located at <http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx>.

For more information on New York District Corps of Engineers programs, visit our website at <http://www.nan.usace.army.mil>.



Stephan A. Ryba
Chief, Regulatory Branch

Enclosures

WORK DESCRIPTION

The applicant, New York City Department of Design and Construction (applicant), has requested Department of the Army authorization to construct a flood protection system and attendant features in the East River, from Montgomery Street to East 25th Street, in the Borough of Manhattan, City of New York, New York County, New York.

The overall proposed project would construct an integrated flood protection system along a total of approximately 2.4-linear miles (83-acres) of Manhattan's East River waterfront, primarily within City parks and streets, from Montgomery Street to East 25th Street, in order to protect lands within the Federal Emergency Management Agency 100-year special flood hazard area on Manhattan's Lower East Side. The flood protection system would include a combination of floodwalls, levees, closure structures (e.g., floodgates), and other infrastructure, and would place a total of approximately 775,000 cubic yards of fill material onto existing grades within the East River Park in order to elevate and reconstruct the shoreline to accommodate the proposed flood protection.

The proposed work requiring a Department of the Army authorization, specifically, would replace the East River Park Esplanade deck, relocate the two existing embayments, construct concrete piers for the proposed flyover bridge, relocate ten sewer outfalls, replace deteriorating piles and fill a portion of the area underneath the existing Fireboat House platform, and dewater sewer outfall work areas using cofferdams. The project work is estimated to take approximately five years to complete. The proposed work would result in a total of up to approximately 0.41-acre of permanent impacts to Waters of the United States (WOTUS), including open water, and a total of approximately 1.07-acres of temporary disturbances to WOTUS, including open water.

The details of each proposed project element in WOTUS are described as follows:

Existing Bulkhead and East River Esplanade (see sheets 5-29)

Remove approximately 6,327-linear feet (1.2-miles) of the existing bulkhead, East River Park Esplanade concrete deck, varying from approximately 21-feet to 32-feet wide, and select formwork, located seaward of the plane of Mean High Water (MHW). Install a new sheet pile cut-off wall in-place or landward of the existing bulkhead alignment. Reconstruct the esplanade deck to structurally support proposed fill. The existing East River bulkhead, running underneath the esplanade for the length of the project area, would be removed and replaced, in-place or landward of existing, with a new steel sheetpile "cut-off wall". New sections of the cut-off wall would be installed in the locations of the two existing embayments (see description below). Existing timber and/or steel support piles underneath the existing esplanade would remain.

Embayments

Relocate two existing embayments, including the North Embayment and the South Embayment, within the project area. The two new proposed embayments are comparable in size to the two existing embayments, which would be filled.

Existing South Embayment (see sheets 8, 17, 18 and 33)

Demolish the existing South Embayment, approximately 5,042 square feet (0.116-acre) in size within WOTUS, and the pedestrian bridge and piles, approximately 3,130 square feet (0.072-acre). Install a new cut-off wall, approximately 174-feet long, across the face of the existing South Embayment in alignment with the existing bulkhead on the north and south ends. Backfill the area (0.116-acre) behind the new wall with approximately 960-cubic yards of manufactured lightweight ceramic aggregate fill below the plane of Spring High Water (SHW). Redesign the existing pedestrian bridge as a continuation of the proposed esplanade, supported by approximately eighteen (18) new two-foot diameter steel piles filled with a total of approximately 118 cubic yards of cast-in-place concrete below SHW, resulting in permanent impacts to

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approximately 0.001-acre of WOTUS.

New South Embayment (see sheets 6, 14, 31 and 38)

Demolish approximately 270-linear feet of the existing esplanade and formwork. Excavate the existing upland shoreline to create a new South Embayment, approximately 7,923 square feet (0.182-acres) in size. Install a total of approximately 20-linear feet of new cut-off wall seaward of the plane of SHW, including 10-feet on the north and south end, in order to tie the new shoreline to the existing sheet pile wall. Two triangular over-water platforms, each totaling approximately 225 square feet and supported by up to 10 concrete-filled steel piles, would be placed on the north and south ends of the new embayment to transition the esplanade to the inland walkway and provided access compliant with the requirements of the Americans with Disabilities Act (ADA). Existing piles would be cut off at or above the mud line. Approximately 21 existing piles cut off above the mud line would be fitted with jackets to provide habitat structure. Place up to 400 cubic yards of new riprap in an area approximately 25-feet wide and 180-feet long, on the shoreline below the SHW, to stabilize the new bank slope. Construct a breakwater below Mean Low Water (MLW), approximately 12-feet wide and 190-feet long, install approximately eighty-five square concrete blocks, each approximately four feet in size on each side (200 cubic yards total). Install up to a total of twenty-five pre-cast concrete tidal pools, each approximately four-feet wide by three and one-half feet long, at the plane of MHW to provide habitat structure in the intertidal zone.

Existing North Embayment (see sheets 10, 21 and 36)

Demolish the existing North Embayment, approximately 7,484 square feet (0.172-acre) in size within WOTUS, and associated over-water pedestrian walkway and piles, approximately 4,280 square feet (0.098-acre). Install a new cut-off wall, approximately 238-linear feet long, across the face of the existing North Embayment in alignment with the existing cut-off wall on the north and south ends. Backfill behind the new wall (0.172-acre) with approximately 1,286-cubic yards of manufactured lightweight ceramic aggregate fill below the plane of SHW. Redesign the existing pedestrian bridge as a continuation of the proposed esplanade, supported by approximately thirty-five (35) new two-foot diameter steel piles filled with a total of approximately 228 cubic yards of cast-in-place concrete below SHW, resulting in permanent impacts to approximately 0.003-acre of WOTUS.

New North Embayment (see sheets 20, 26, 35, and 39)

Demolish approximately 265-linear feet of the existing esplanade and formwork. Excavate the existing upland shoreline to create a new North Embayment, approximately 4,854 square feet (0.111-acres) in size. Install a total of approximately 20-linear feet of new cut-off wall seaward of the plane of SHW, including 10-feet on the north and south end, in order to tie the new shoreline to the existing sheet pile wall. Two triangular over-water platforms, each totaling approximately 350 square feet and supported by ten concrete-filled steel piles, would be placed on the north and south ends of the new embayment to transition the esplanade to the inland walkway and provided ADA access. Existing piles would be cut off at or above the mud line. Approximately 11 existing piles cut off above the mud line would be fitted with jackets to provide habitat structure. Place up to 200 cubic yards of new riprap in an area approximately 25-feet wide and 135-feet long, on the shoreline below the SHW, to stabilize the new bank slope. Construct a breakwater below the plane of MLW, approximately 12-feet wide and 170-feet long, from approximately seventy square concrete blocks, each approximately four feet in size on each side (165 cubic yards total). Install up to a total of ten pre-cast concrete tidal pools, each approximately four-feet wide by three and one-half feet long, at the plane of MHW to provide habitat structure in the intertidal zone.

Flyover Bridge (see sheets 4, and 52-55)

Construct two new bridge piers seaward of the SHW (piers 5 and 6), each consisting of two (2) five-

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feet diameter steel support shafts filled with approximately 12 cubic yards of cast-in-place concrete below SHW. Install two (2) five foot diameter steel support shafts filled with approximately 7 cubic yards of cast-in-place concrete below SHW and twenty (20) three-foot diameter steel support shafts each filled with approximately 4 cubic yards of cast-in-place concrete to support the north bridge approach. The new flyover bridge shafts would be installed through and connect to the existing concrete promenade deck and bulkhead using barge mounted drill rigs, and result in total impacts to approximately 260-square feet, with up to 1,008 cubic yards of fill placed below the plane of SHW. The new flyover bridge structure would be placed seaward of the plane of MHW; however, would not extend seaward of the existing promenade deck.

Sewer Outfalls and Cofferdams (see sheets 42-51)

Relocate and reconstruct ten (10) existing sewer outfalls at different locations along the length of the project area. The new outfalls would be installed through the face of the new cut-off wall and vary in size, with openings between five-feet and 12-feet wide. Temporary cofferdams would be installed during construction at each new outfall location, landward of the pierhead line, and result in temporary impacts to approximately 1,000 square feet of WOTUS. Existing outfalls would be removed and covered by the new cut-off wall.

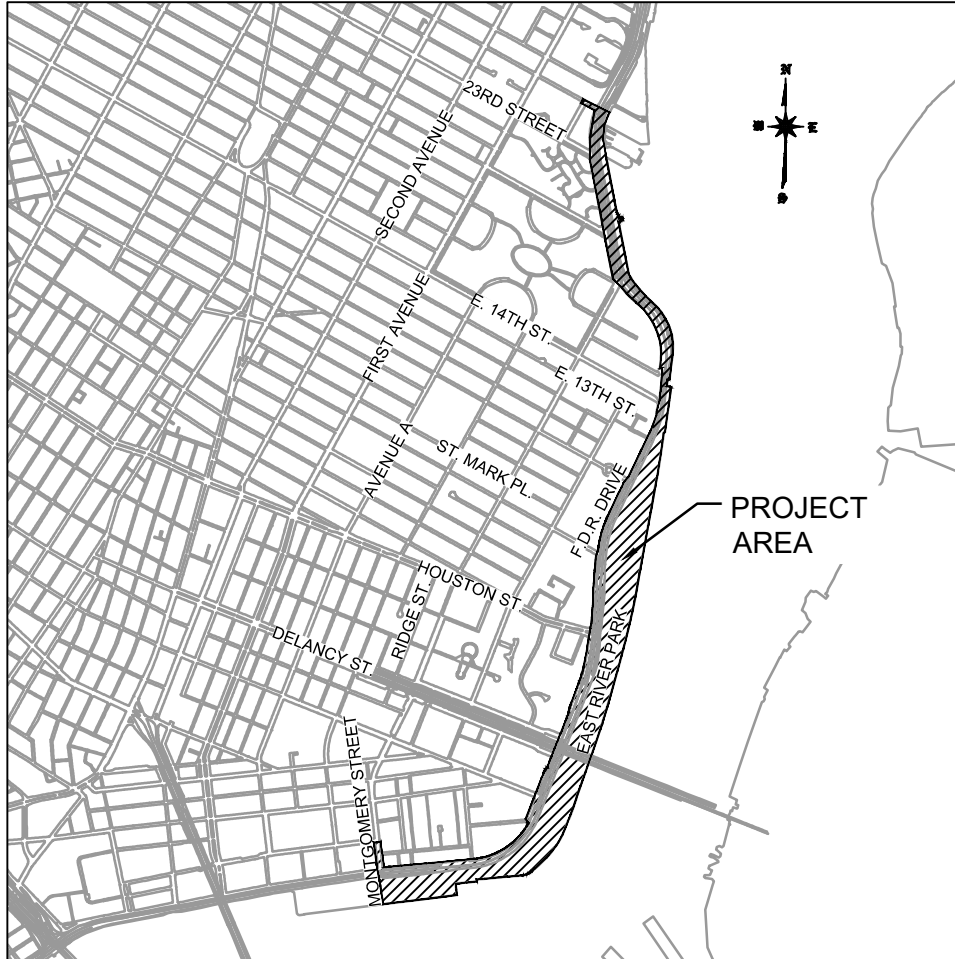
Fireboat House/Platform (see sheets 6, 23, and 59-62)

Using divers, install approximately 120-linear feet of new stay-in-place formwork into a two-feet deep trench underneath the existing platform, extending approximately 20-feet seaward of the existing bulkhead, to form a closed, irregularly shaped rectangular cell. Backfill the newly enclosed area between the new formwork and the existing bulkhead, approximately 20-feet wide and 70-feet long (1,600 square feet), with approximately 235 cubic yards of lean concrete. Encase a total of 35 existing, degraded, 12-inch diameter timber piles underneath the existing platform seaward of the proposed fill area, with a composite jacket filled with epoxy grout in order to stabilize the existing platform.

Temporary Dewatering

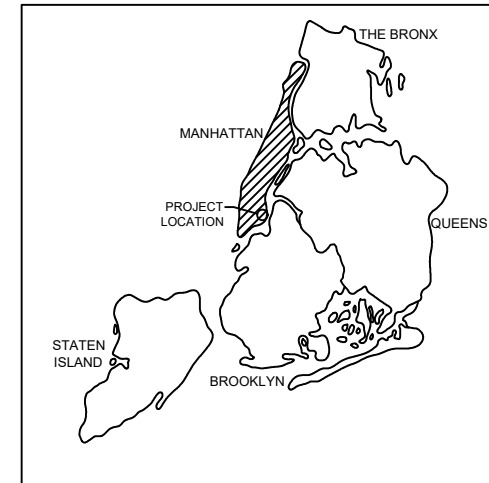
Cofferdams would be installed to dewater the work areas during construction of each new outfall. Turbidity curtains would be installed in the East River prior to demolition of the existing East River bulkhead and esplanade in order to contain debris and turbidity.

The applicant's stated purpose of this project is to provide a reliable coastal flood protection system against the design storm event (FEMA 100-year flood event with 90th percentile 2050s sea level rise assumptions), while improving access to and enhancing open space resources along the waterfront, including East River Park and Stuyvesant Cove Park, and making related improvements to City infrastructure.



VICINITY MAP
NOT TO SCALE


LEGEND



NEW YORK CITY MAP
NOT TO SCALE



NEW YORK STATE MAP
NOT TO SCALE

OWNER(S):		
		
CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368		
IN:	EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK
TOWN:	NEW YORK	STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION		
WATERWAY: EAST RIVER		DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT		
DATE: 11/15/2019	REV.: 1	SHEET NO 1 OF 66
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OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
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FLUSHING MEADOWS CORONA PARK
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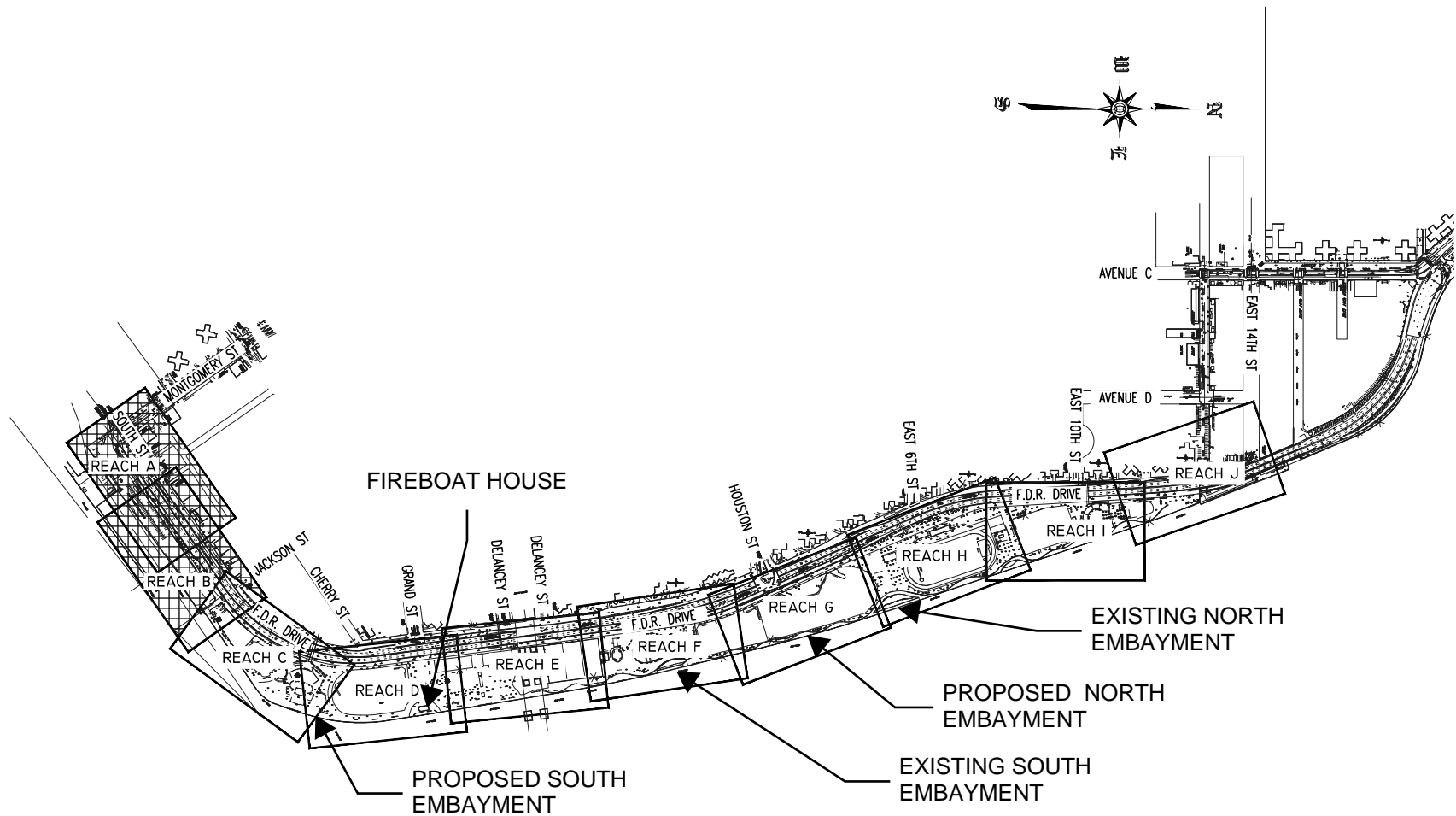
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EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 2 OF 66

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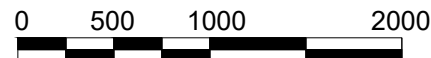
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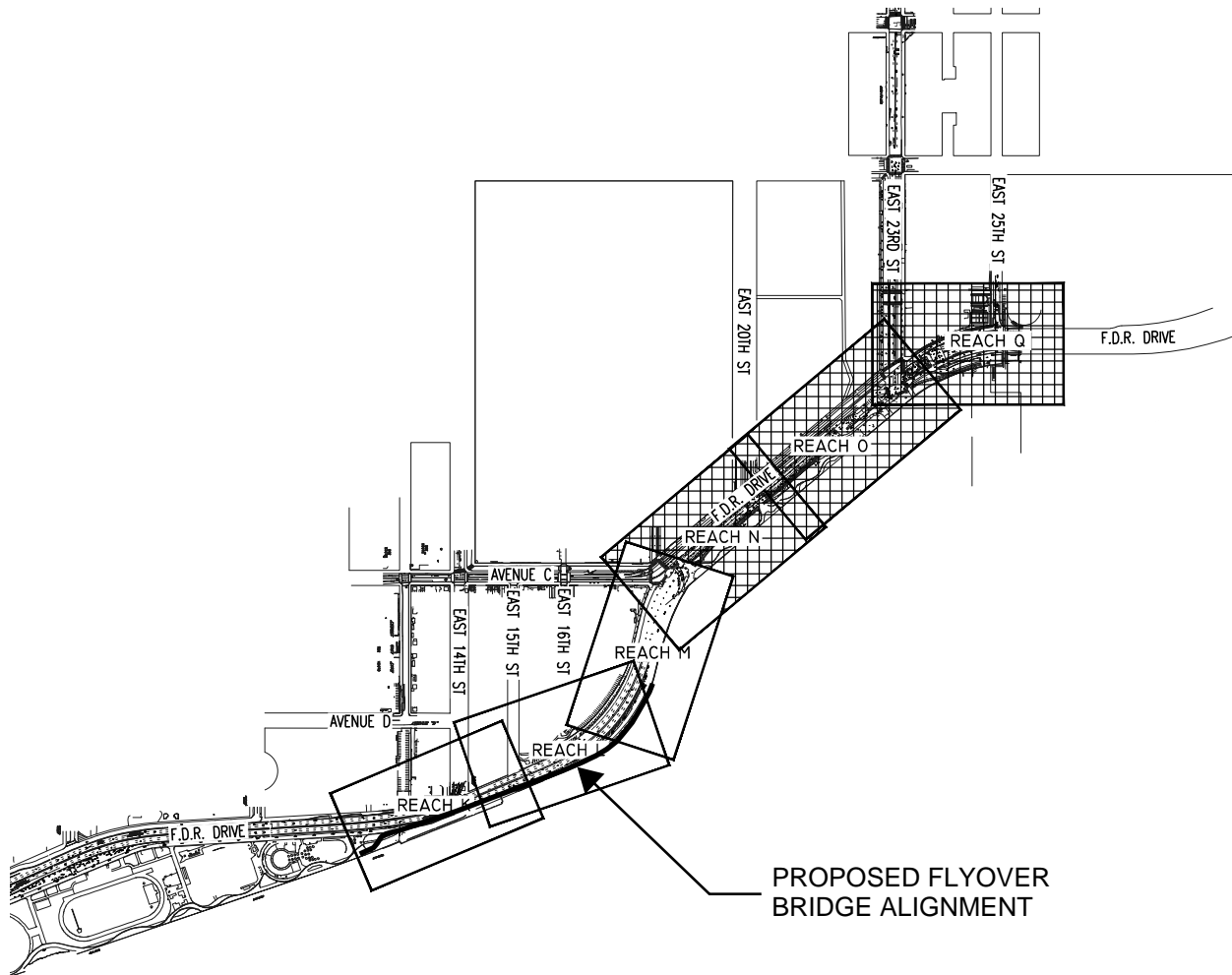
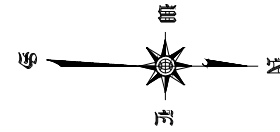
REACH A AND REACH B DO NOT INCLUDE ANY PROPOSED WORK IN JURISDICTIONAL AREAS.

NOTES:

1. SEE SHEETS 63-66 FOR SUMMARY OF PROPOSED WORK.



OWNER(S):	
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KEYMAP SHEET 1	



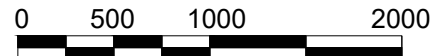
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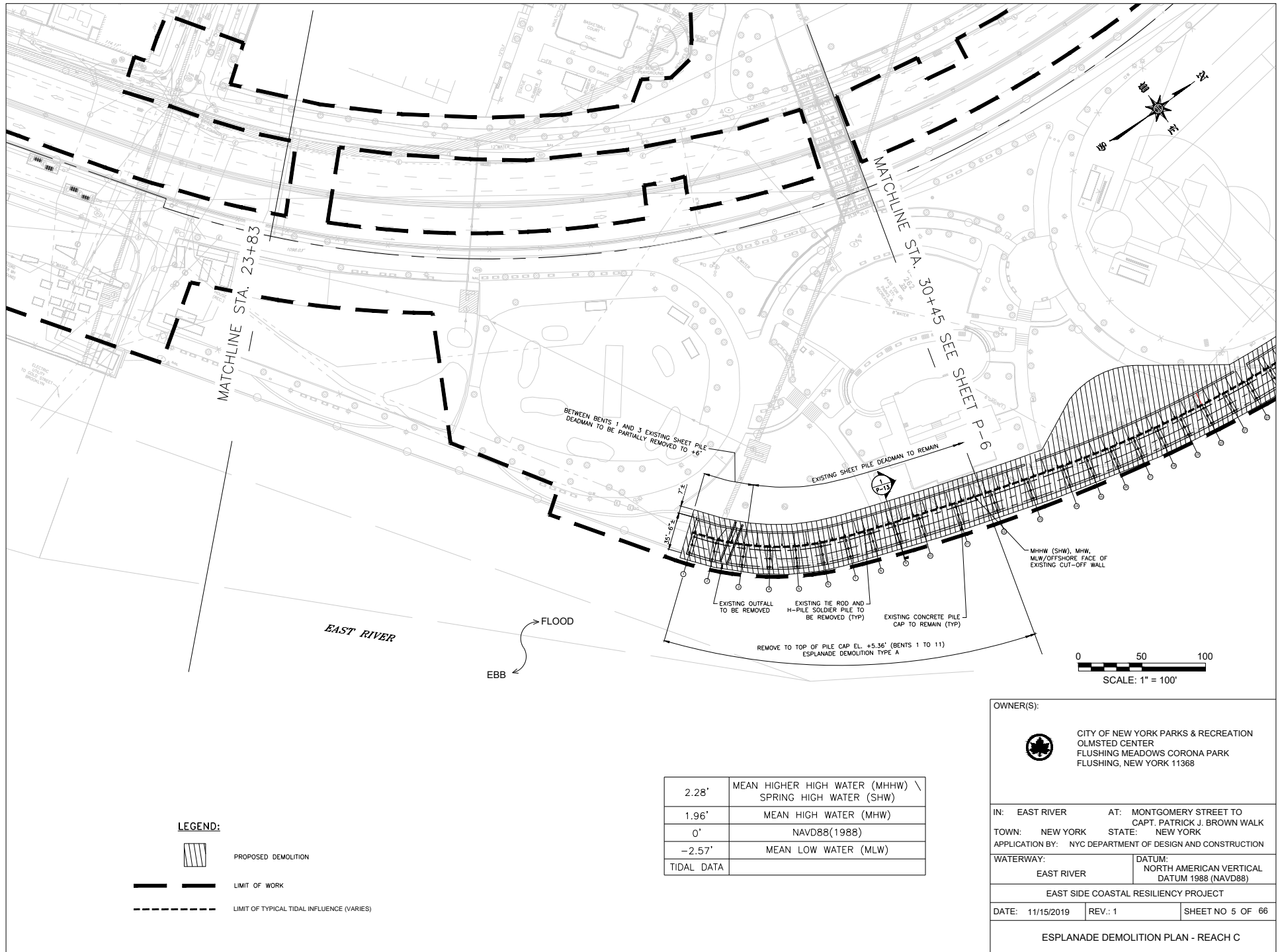
REACH K, REACH N AND REACH Q DO NOT INCLUDE ANY PROPOSED WORK IN JURISDICTIONAL AREAS.

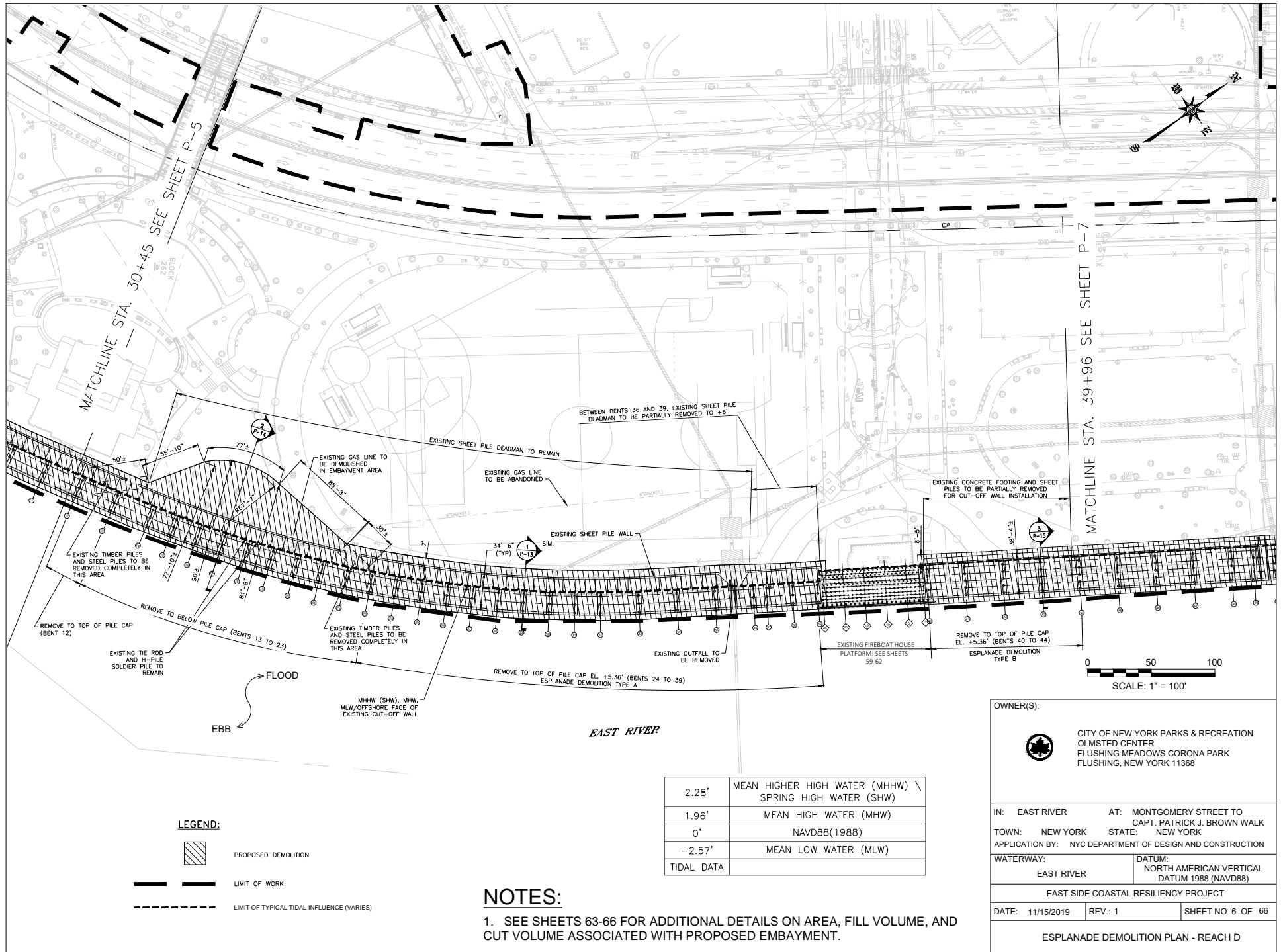
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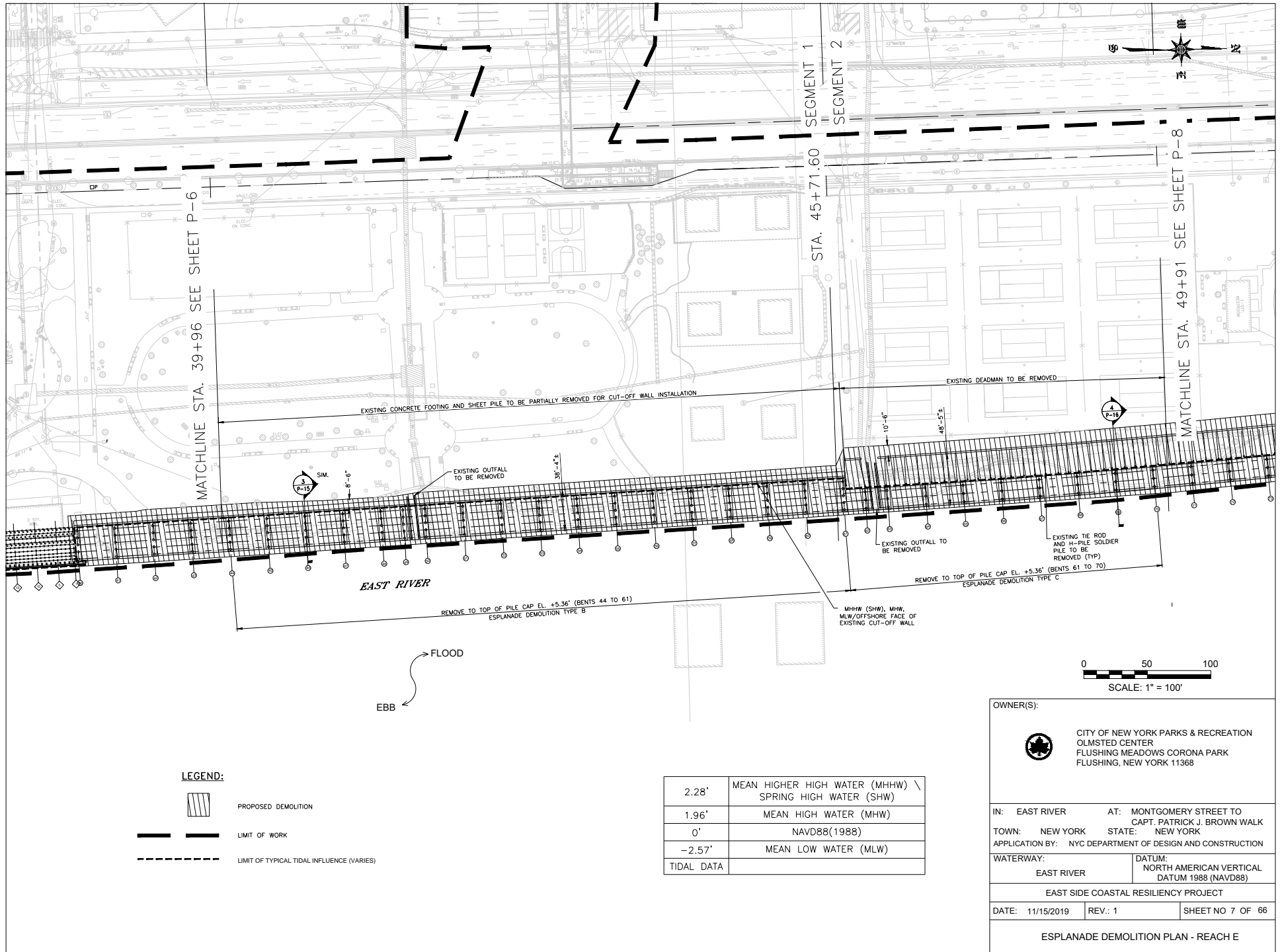
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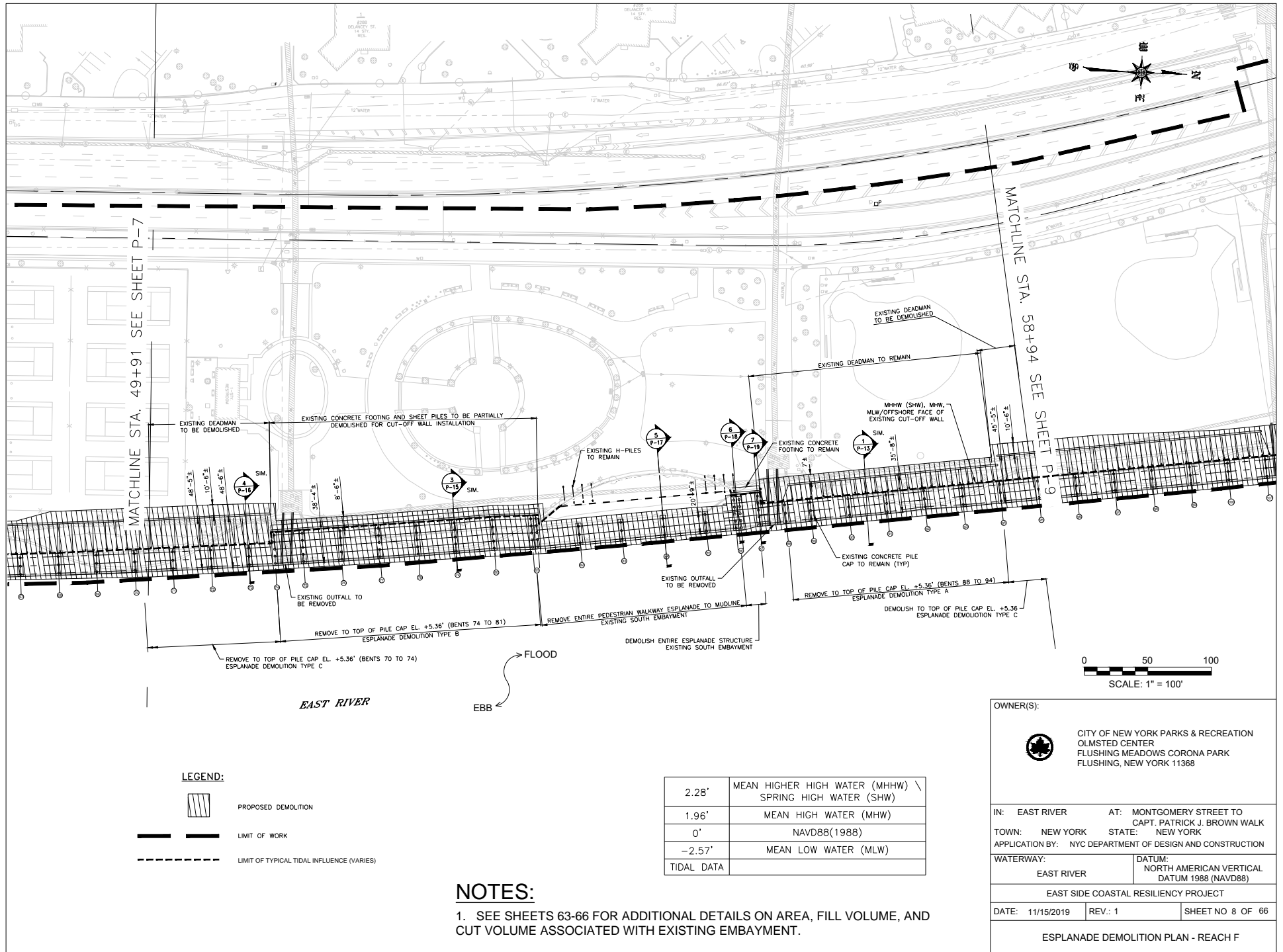


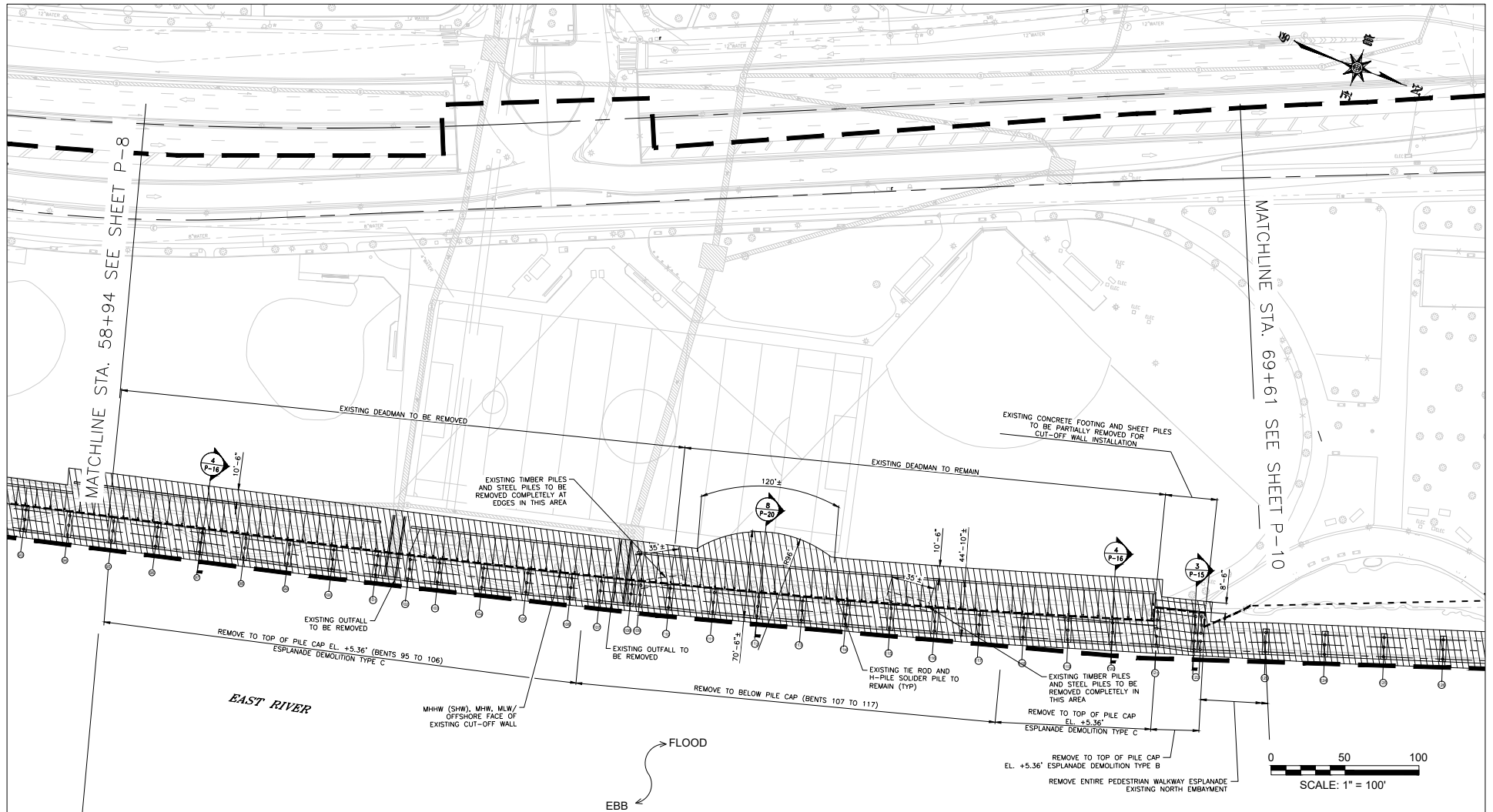
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LEGEND:

	PROPOSED DEMOLITION
	LIMIT OF WORK
	LIMIT OF TYPICAL TIDAL INFLUENCE (VARIES)

NOTES:

1. SEE SHEETS 63-66 FOR ADDITIONAL DETAILS ON AREA, FILL VOLUME, AND CUT VOLUME ASSOCIATED WITH PROPOSED EMBAYMENT.

2.28'	MEAN HIGHER HIGH WATER (MHHW) \ SPRING HIGH WATER (SHW)
1.96'	MEAN HIGH WATER (MHW)
0'	NAVD88(1988)
-2.57'	MEAN LOW WATER (MLW)
TIDAL DATA	

OWNER(S):



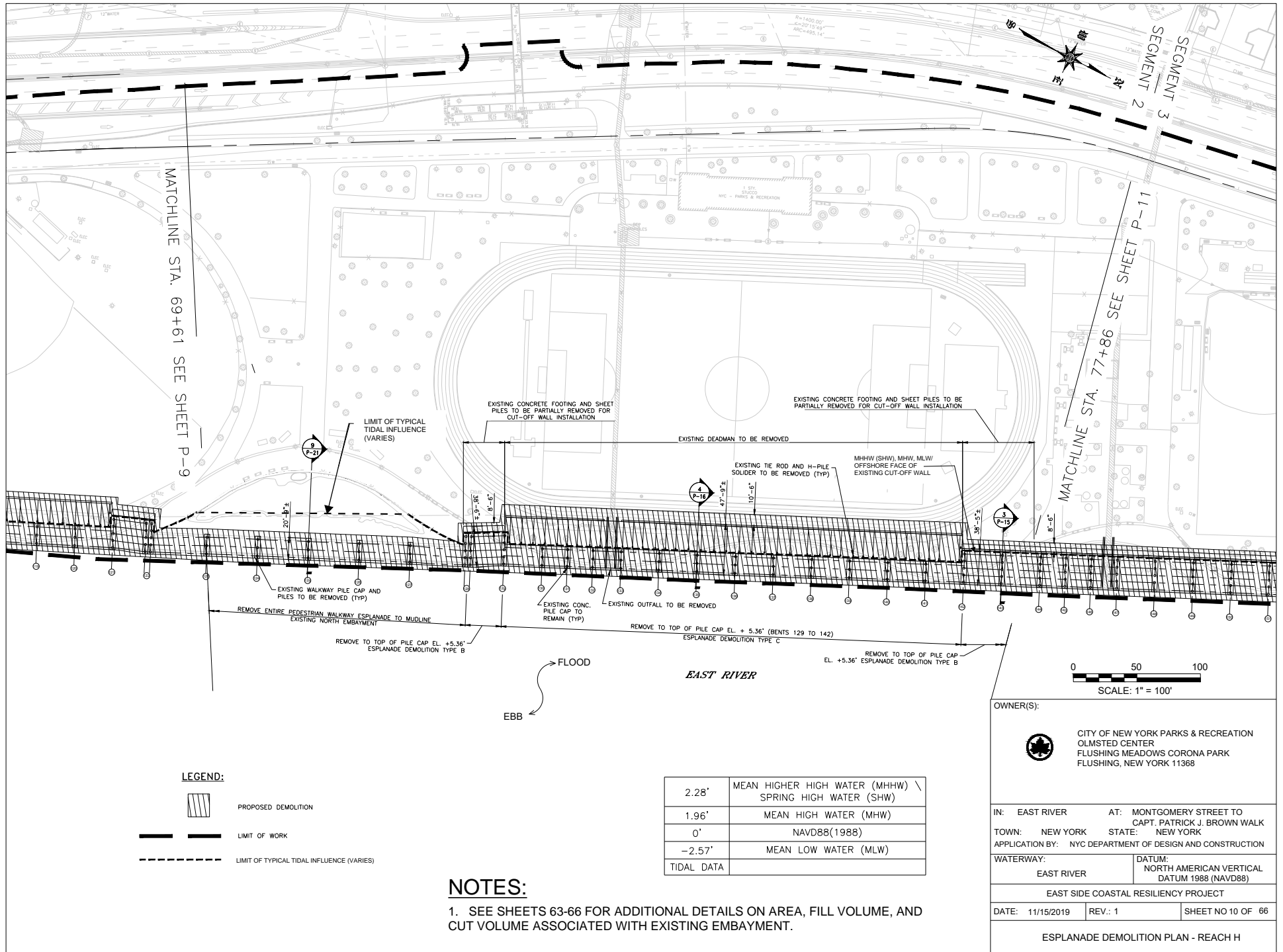
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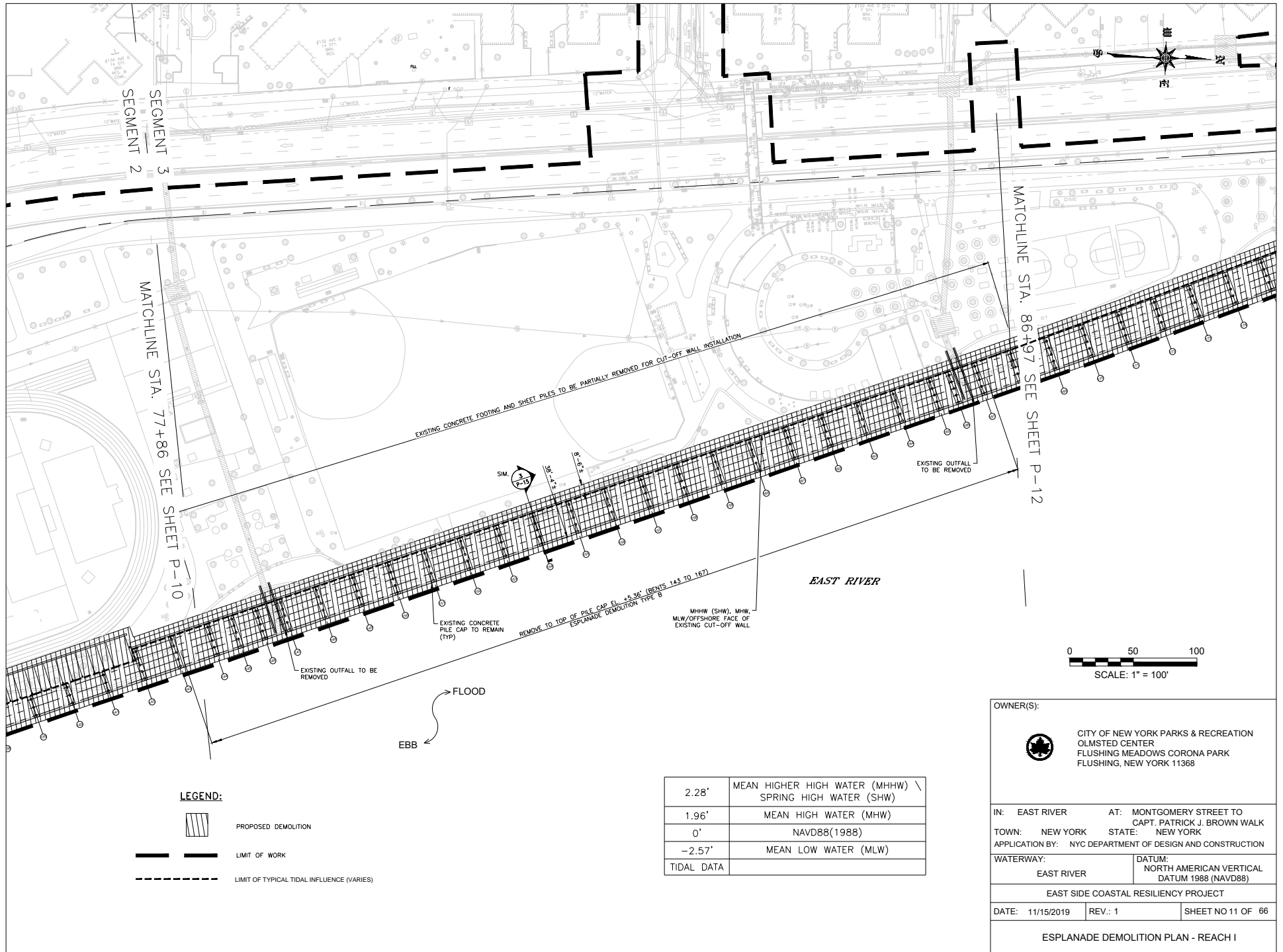
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TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

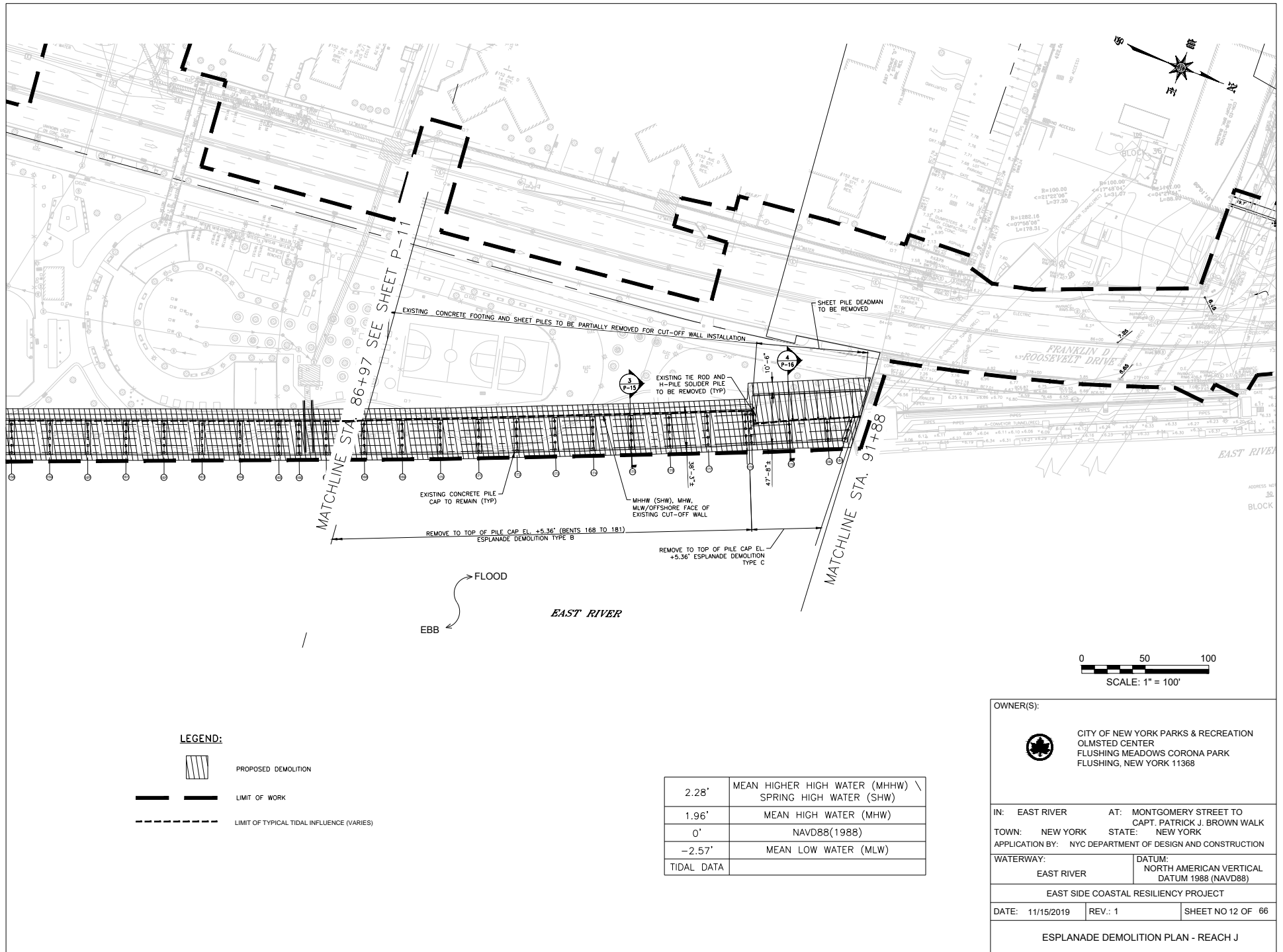
WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

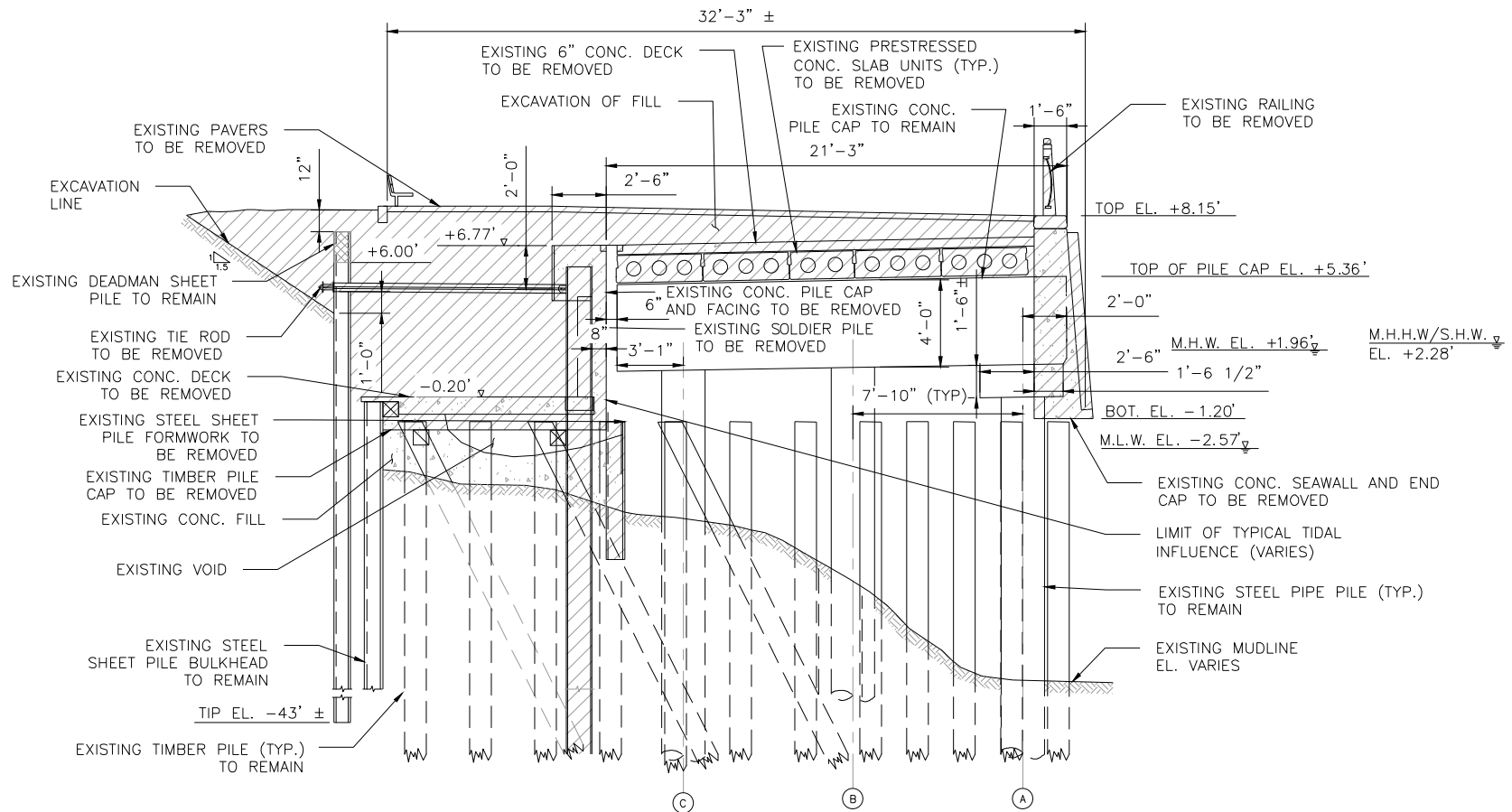
EAST SIDE COASTAL RESILIENCY PROJECT
DATE: 11/15/2019 REV.: 1 SHEET NO 9 OF 66

ESPLANADE DEMOLITION PLAN - REACH G









DEMOLITION TO PILE CAP LEVEL - ESPLANADE DEMOLITION TYPE A
 SCALE 1/8"=1'-0"
 P-5
 P-6
 P-8

1/8"=1'-0" 0 5 10 15 FT.

LEGEND



PROPOSED DEMOLITION

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
 OLMSTED CENTER
 FLUSHING MEADOWS CORONA PARK
 FLUSHING, NEW YORK 11368

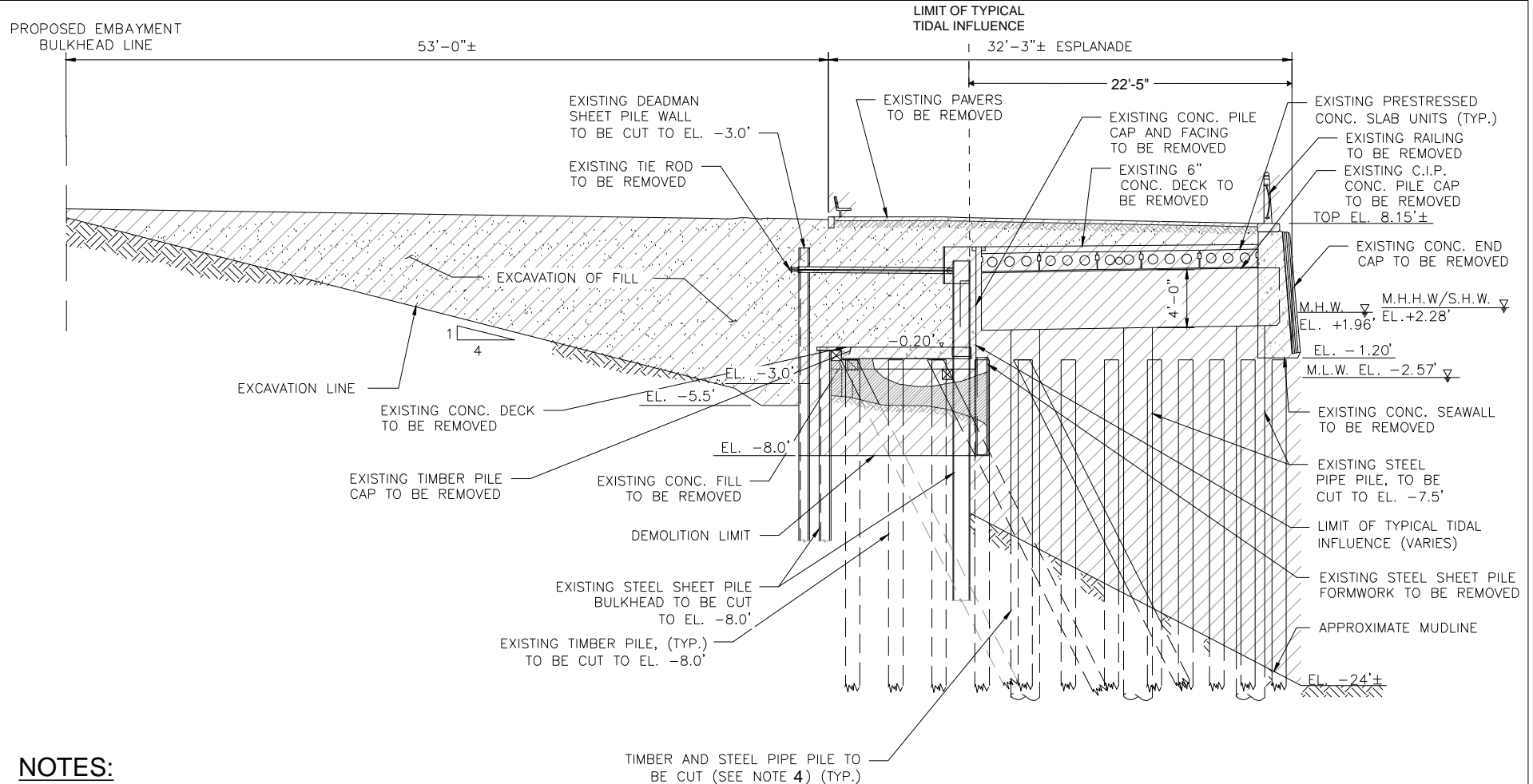
IN: EAST RIVER AT: MONTGOMERY STREET TO
 CAPT. PATRICK J. BROWN WALK
 TOWN: NEW YORK STATE: NEW YORK
 APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
 DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 13 OF 66

DEMOLITION CROSS SECTION



NOTES:

1. SEE SHEETS 63-66 FOR ADDITIONAL DETAILS ON AREA, FILL VOLUME, AND CUT VOLUME ASSOCIATED WITH PROPOSED EMBAYMENT.
2. REMOVE ALL TIMBER DEBRIS, CONCRETE, AND ANY OTHER OBSTRUCTIONS FROM MUDLINE WITHIN WORK AREA.
3. CONTRACTOR SHALL ENSURE STABLE SLOPES DURING AND AFTER DEMOLITION.
4. EXISTING TIMBER PILES AROUND PROPOSED ECO-CONC ARMOR AND EXISTING STEEL PIPE PILES SHALL BE CUT-OFF ABOVE THE MUDLINE, APPROXIMATELY 5FT BELOW MLW.

PROPOSED SOUTH EMBAYMENT SECTION - DEMOLITION

2 P-6 SCALE 3/32" = 1'-0"

LEGEND



PROPOSED DEMOLITION



EXCAVATION OF FILL



OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

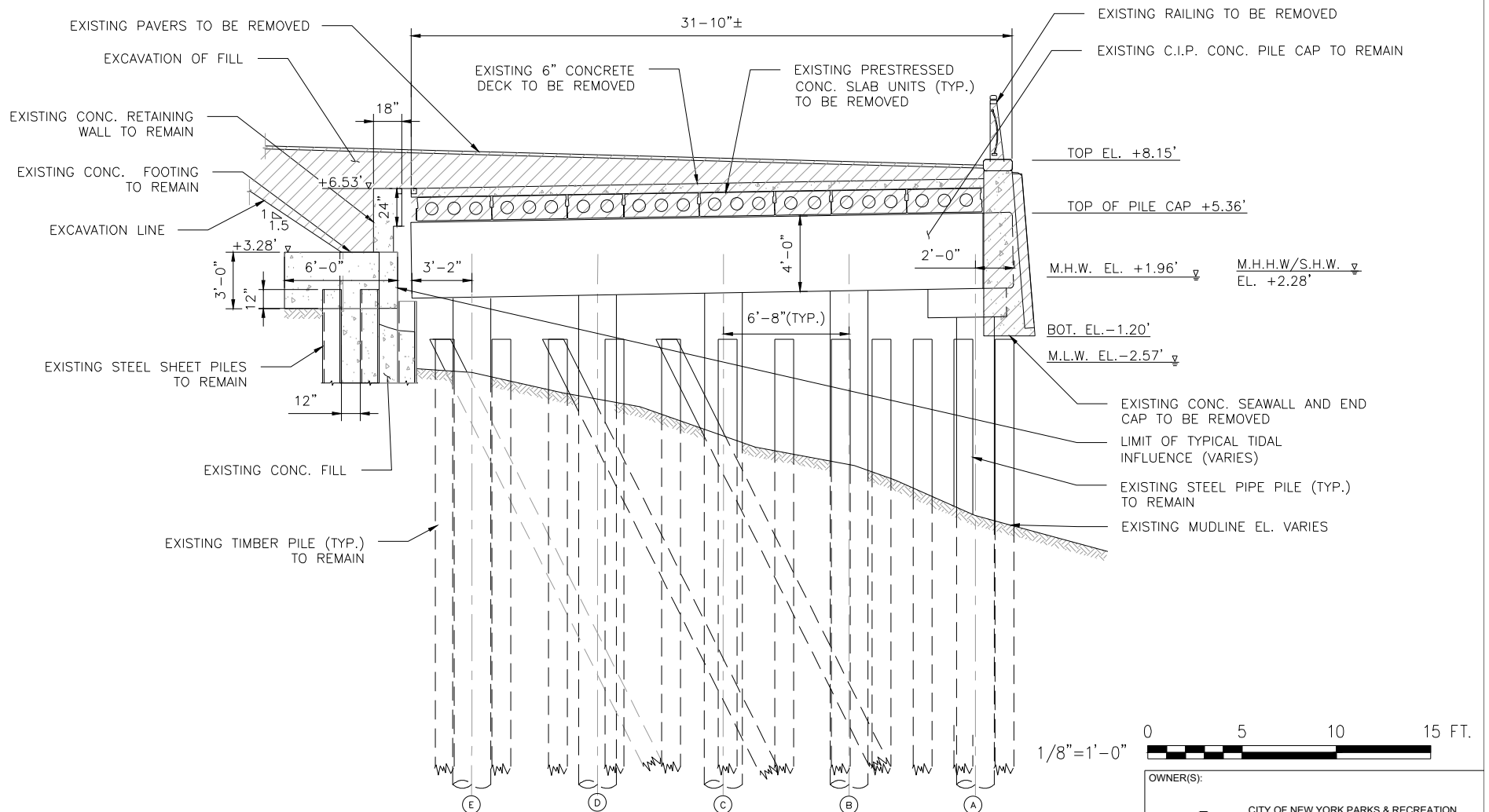
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 14 OF 66

DEMOLITION CROSS SECTION -
PROPOSED SOUTH EMBAYMENT



3 DEMOLITION TO PILE CAP LEVEL - ESPLANADE DEMOLITION TYPE B

P-6
P-7
P-8
P-9
P-10
P-11
P-12

LEGEND



PROPOSED DEMOLITION

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

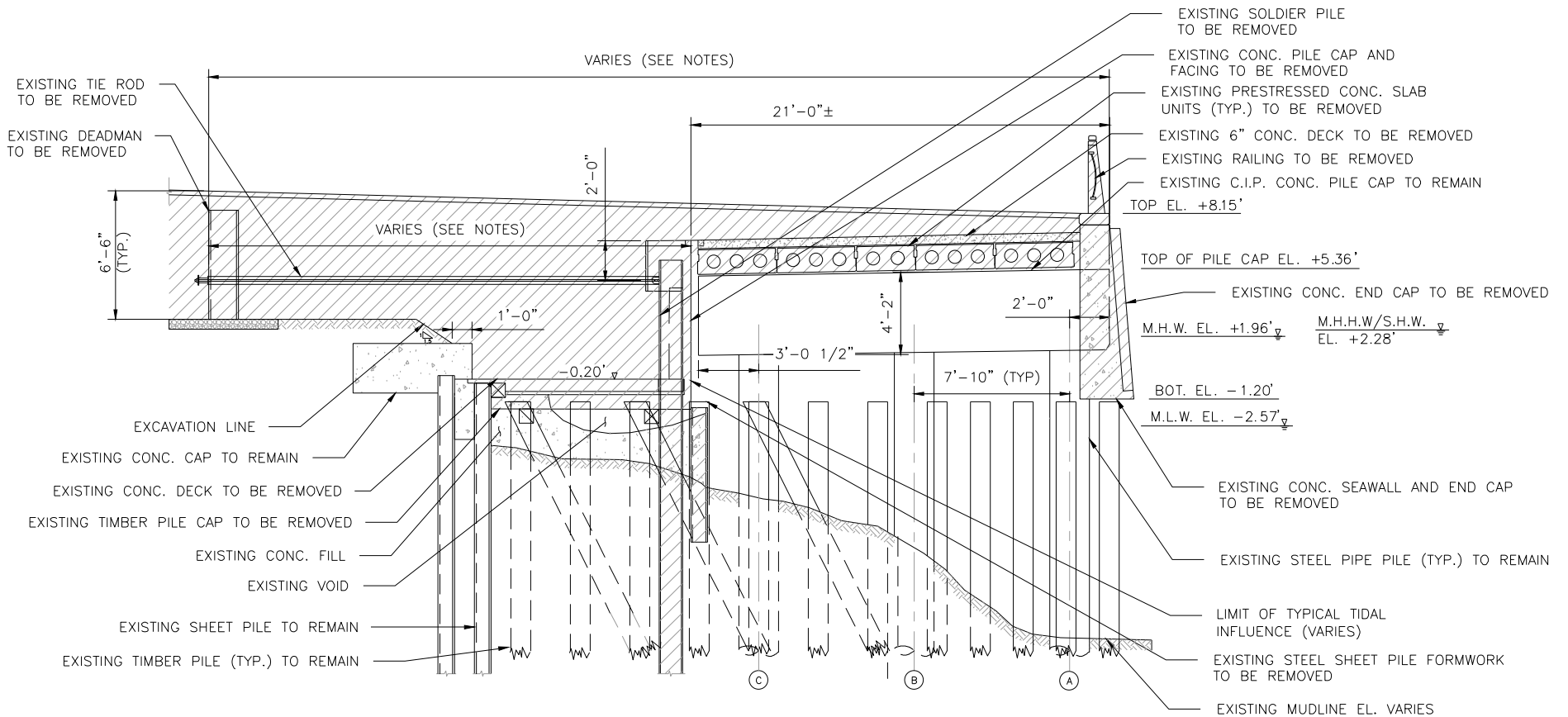
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

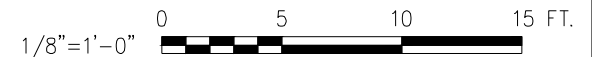
DATE: 11/15/2019 REV.: 1 SHEET NO 15 OF 66

DEMOLITION CROSS SECTION



DEMOLITION TO PILE CAP LEVEL — ESPLANADE DEMOLITION TYPE C

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



NOTES:

- THE DISTANCE BETWEEN THE WATERSIDE OF THE EXISTING CONC. PILE CAP TO THE LANDSIDE OF THE DEADPAN VARIES DEPENDING ON BENTS, AS FOLLOWS:
 - BETWEEN BENTS 61 AND 74 = 48'-5"
 - BETWEEN BENTS 94 AND 121 = 45'-5"
 - BETWEEN BENTS 129 AND 142 = 48'-5"
- DEADPAN IS 6" DEEPER BETWEEN BENTS 94 AND 121.

LEGEND



PROPOSED DEMOLITION

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

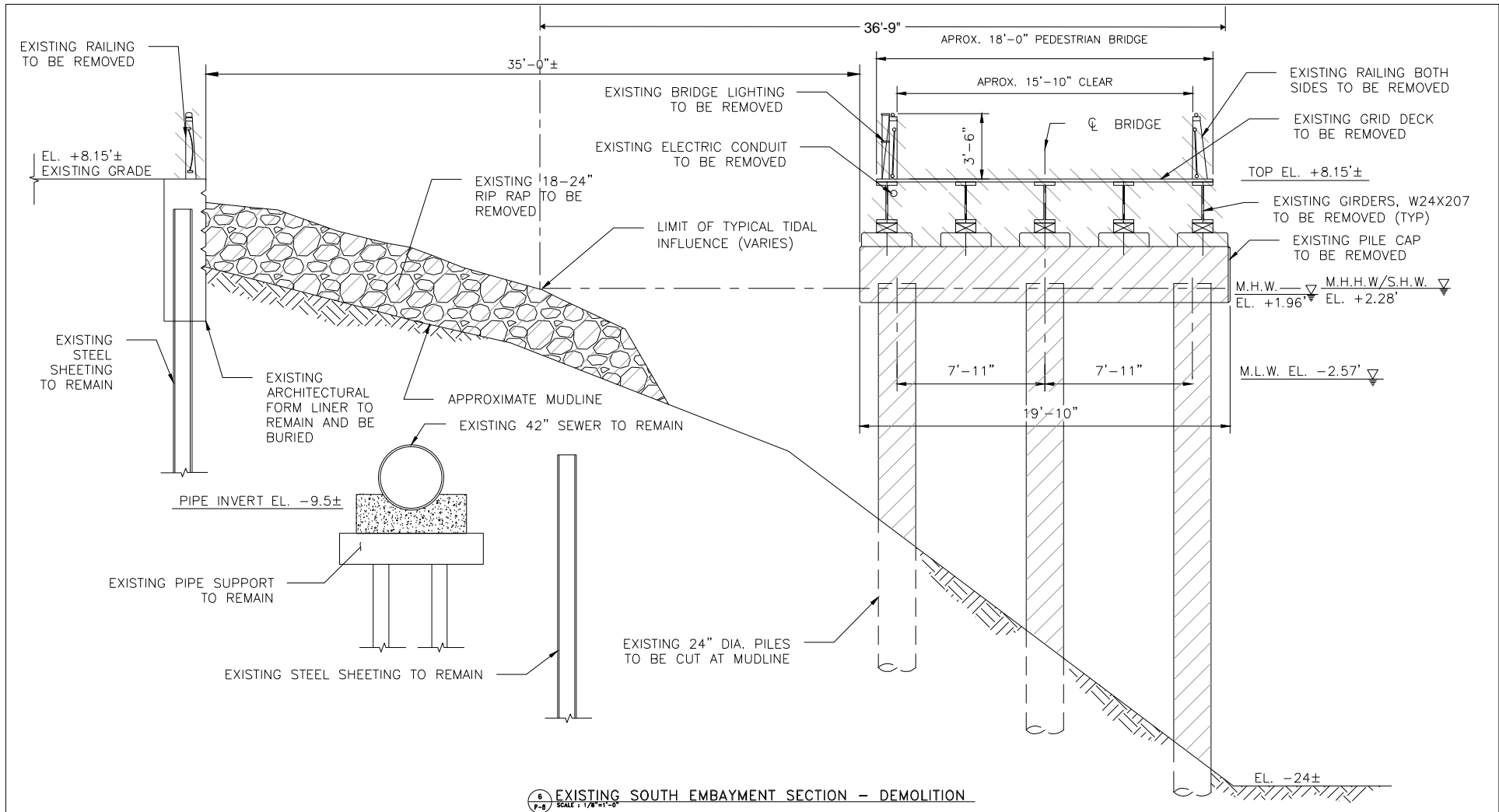
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 16 OF 66

DEMOLITION CROSS SECTION



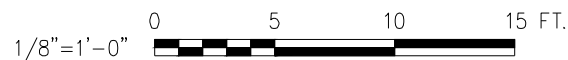
NOTES:

1. SEE SHEETS 63-66 FOR ADDITIONAL DETAILS ON AREA, FILL VOLUME, AND CUT VOLUME ASSOCIATED WITH EXISTING EMBAYMENT.
2. REMOVE ALL EXISTING TIMBER DEBRIS FROM MUDLINE WITHIN WORK AREA.
3. CONTRACTOR SHALL ENSURE STABLE SLOPES DURING AND AFTER DEMOLITION.

LEGEND



PROPOSED DEMOLITION



OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

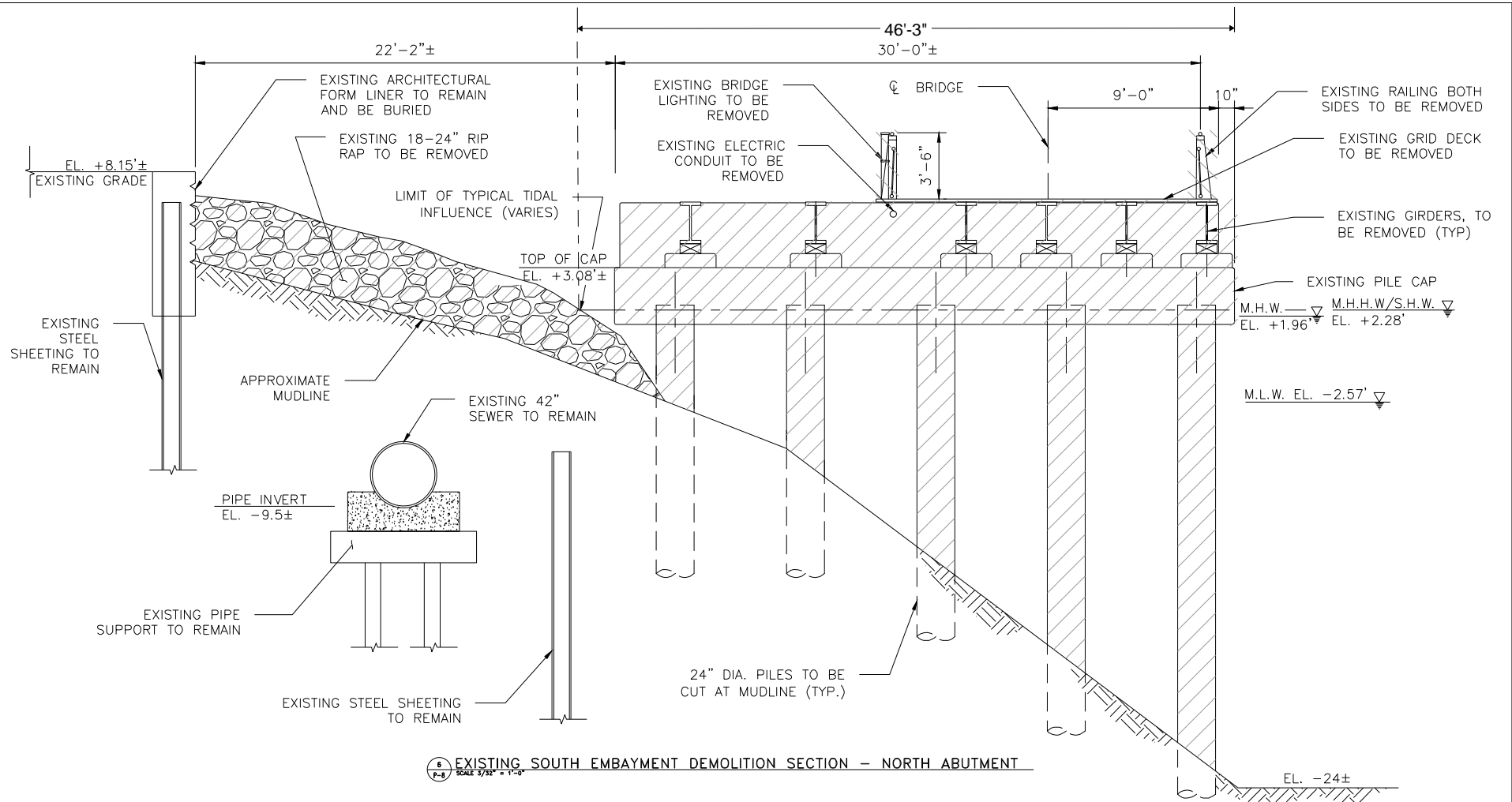
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 17 OF 66

DEMOLITION CROSS SECTION -
EXISTING SOUTH EMBAYMENT



6
P-8
SCALE 3/32" = 1'-0"

EXISTING SOUTH EMBAYMENT DEMOLITION SECTION - NORTH ABUTMENT

NOTES:

1. SEE SHEETS 63-66 FOR ADDITIONAL DETAILS ON AREA, FILL VOLUME, AND CUT VOLUME ASSOCIATED WITH EXISTING EMBAYMENT.
2. REMOVE ALL EXISTING TIMBER DEBRIS FROM MUDLINE WITHIN WORK AREA.
3. CONTRACTOR SHALL ENSURE STABLE SLOPES DURING AND AFTER DEMOLITION.

LEGEND



PROPOSED DEMOLITION

1/8" = 1'-0"



OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

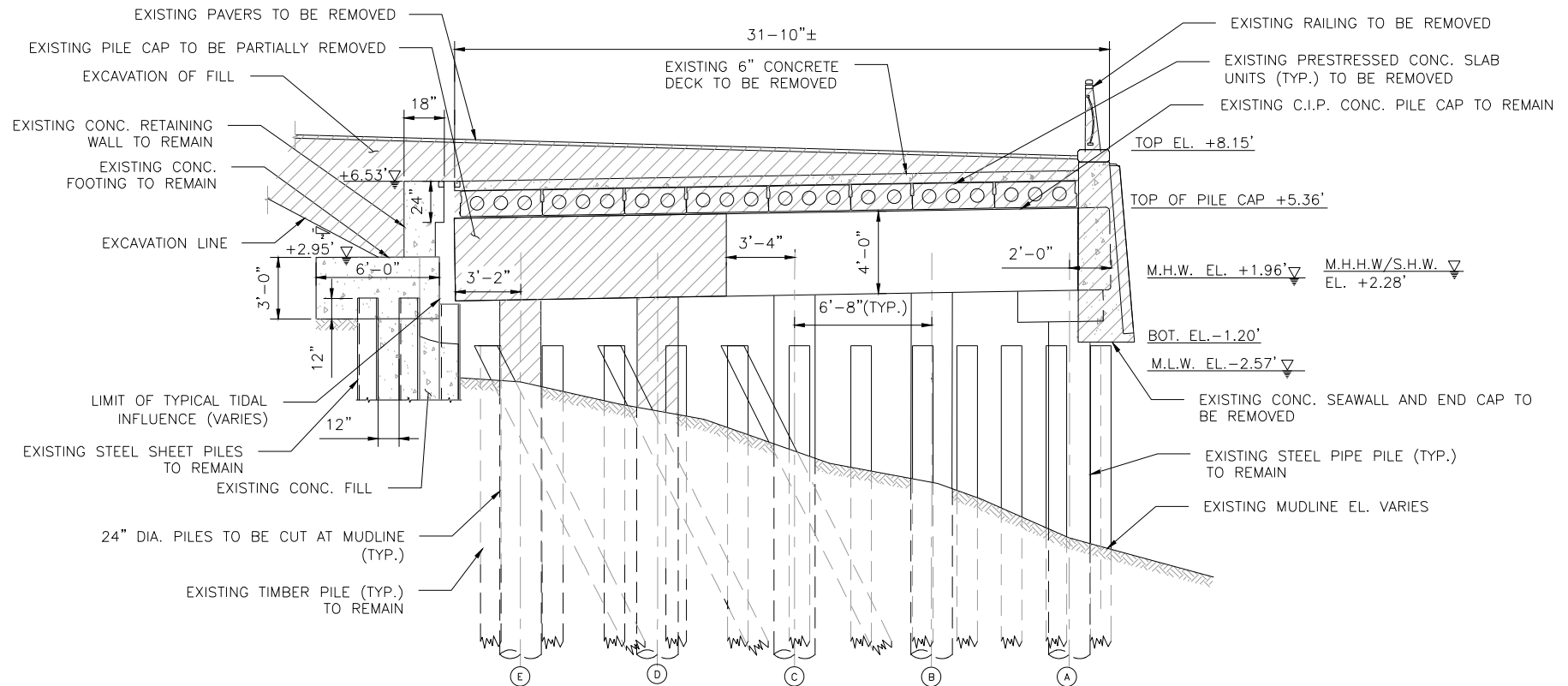
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 18 OF 66

DEMOLITION CROSS SECTION -
EXISTING SOUTH EMBAYMENT



7
P-8 DEMOLITION TO PILE CAP LEVEL — ESPLANADE DEMOLITION TYPE D
SCALE 1/8" = 1'-0"

1/8" = 1'-0" 0 5 10 15 FT.

LEGEND

 PROPOSED DEMOLITION

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

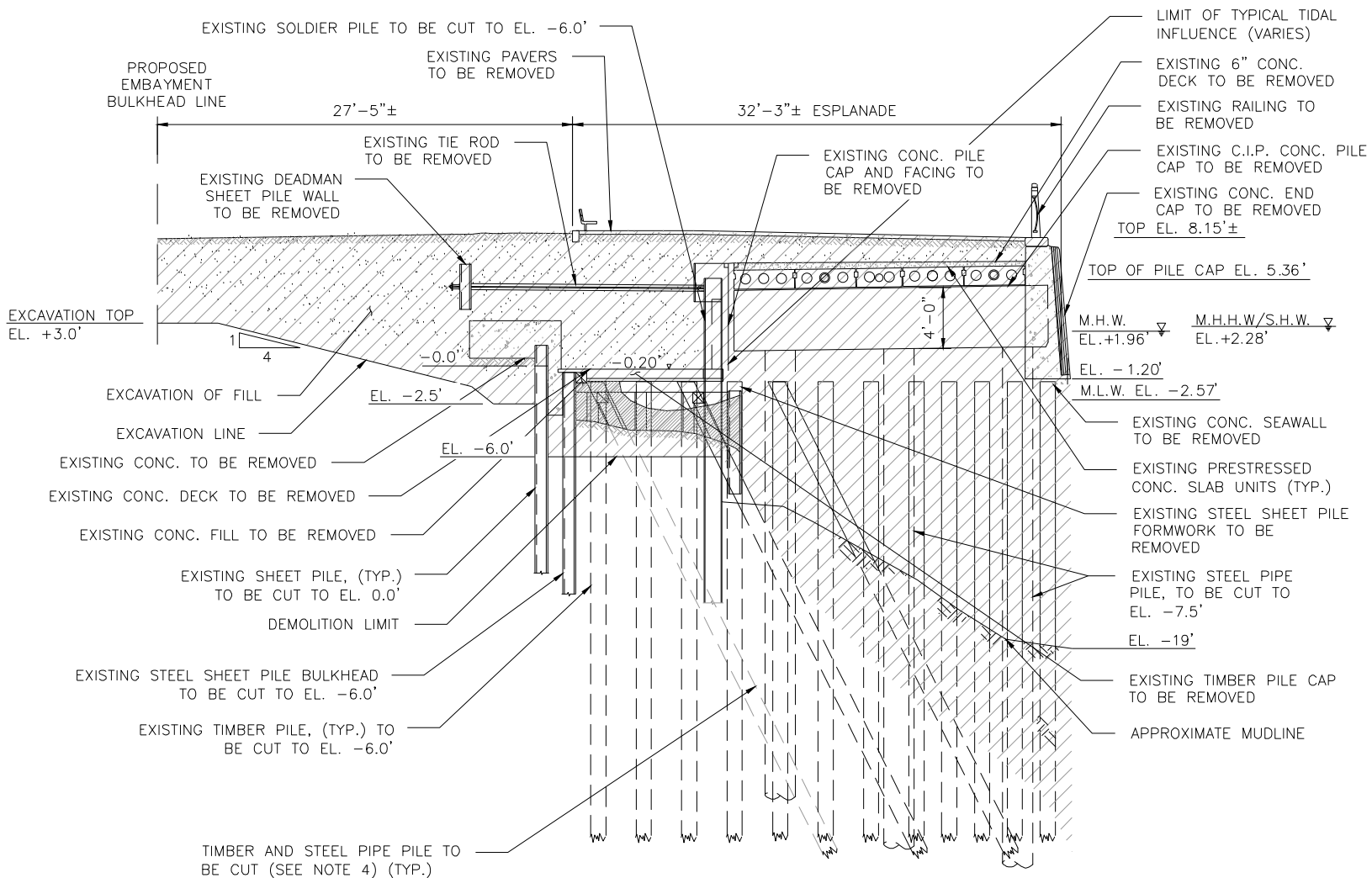
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 19 OF 66



DEMOLITION CROSS SECTION



NOTES:

1. SEE SHEETS 63-66 FOR ADDITIONAL DETAILS ON AREA, FILL VOLUME, AND CUT VOLUME ASSOCIATED WITH PROPOSED EMBAYMENT.
2. REMOVE ALL TIMBER DEBRIS FROM MUDLINE WITHIN WORK AREA.
3. CONTRACTOR SHALL ENSURE STABLE SLOPES DURING AND AFTER DEMOLITION.
4. EXISTING TIMBER PILES AROUND PROPOSED ECO-CONC ARMOR AND EXISTING STEEL PIPE PILES SHALL BE CUT-OFF ABOVE THE MUDLINE, APPROXIMATELY 5FT BELOW MLW.

LEGEND

-  PROPOSED DEMOLITION
-  EXCAVATION OF FILL

3/32"=1'-0" 0 5 20 FT.

PROPOSED NORTH EMBAYMENT SECTION - DEMOLITION

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

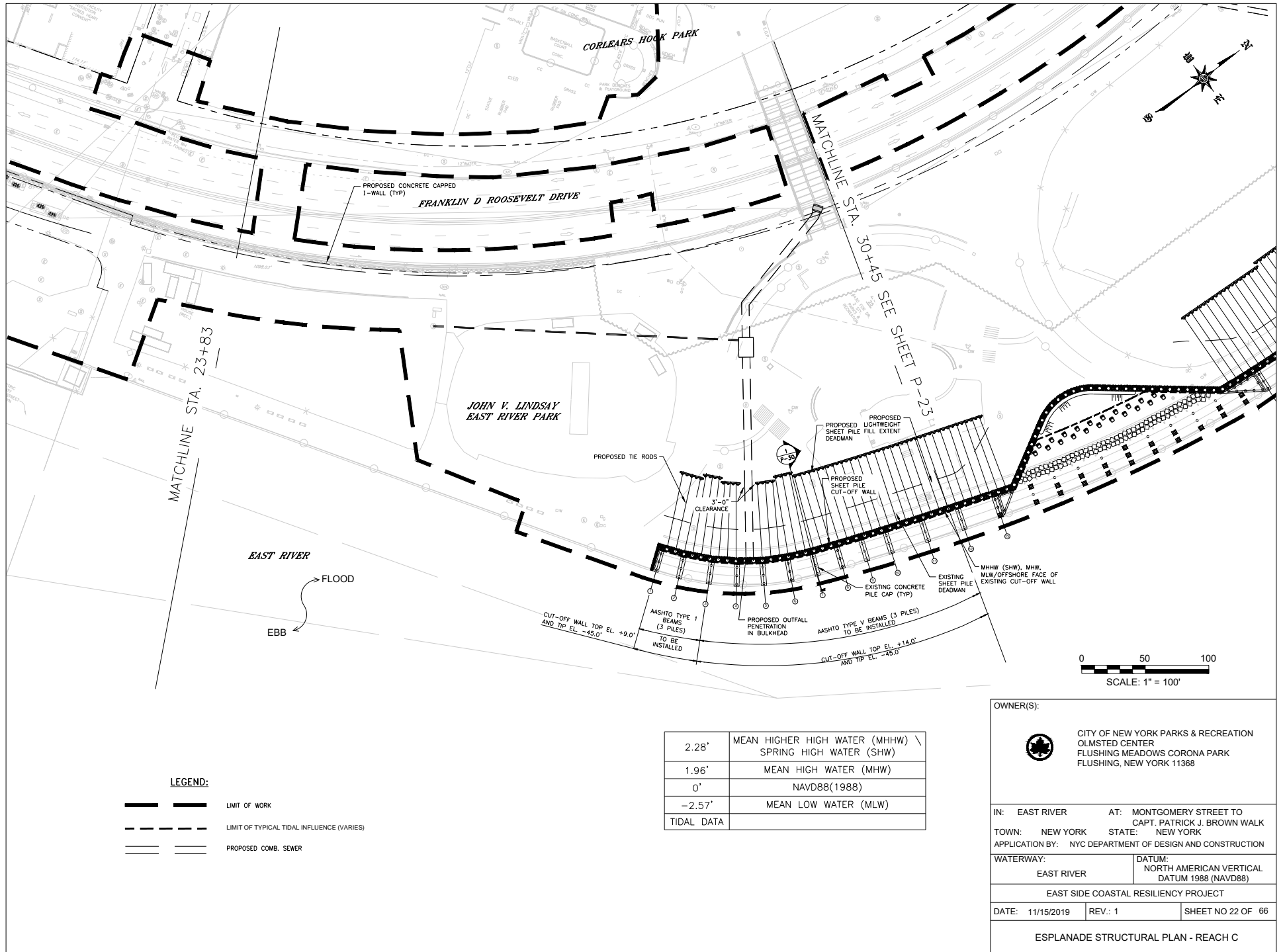
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

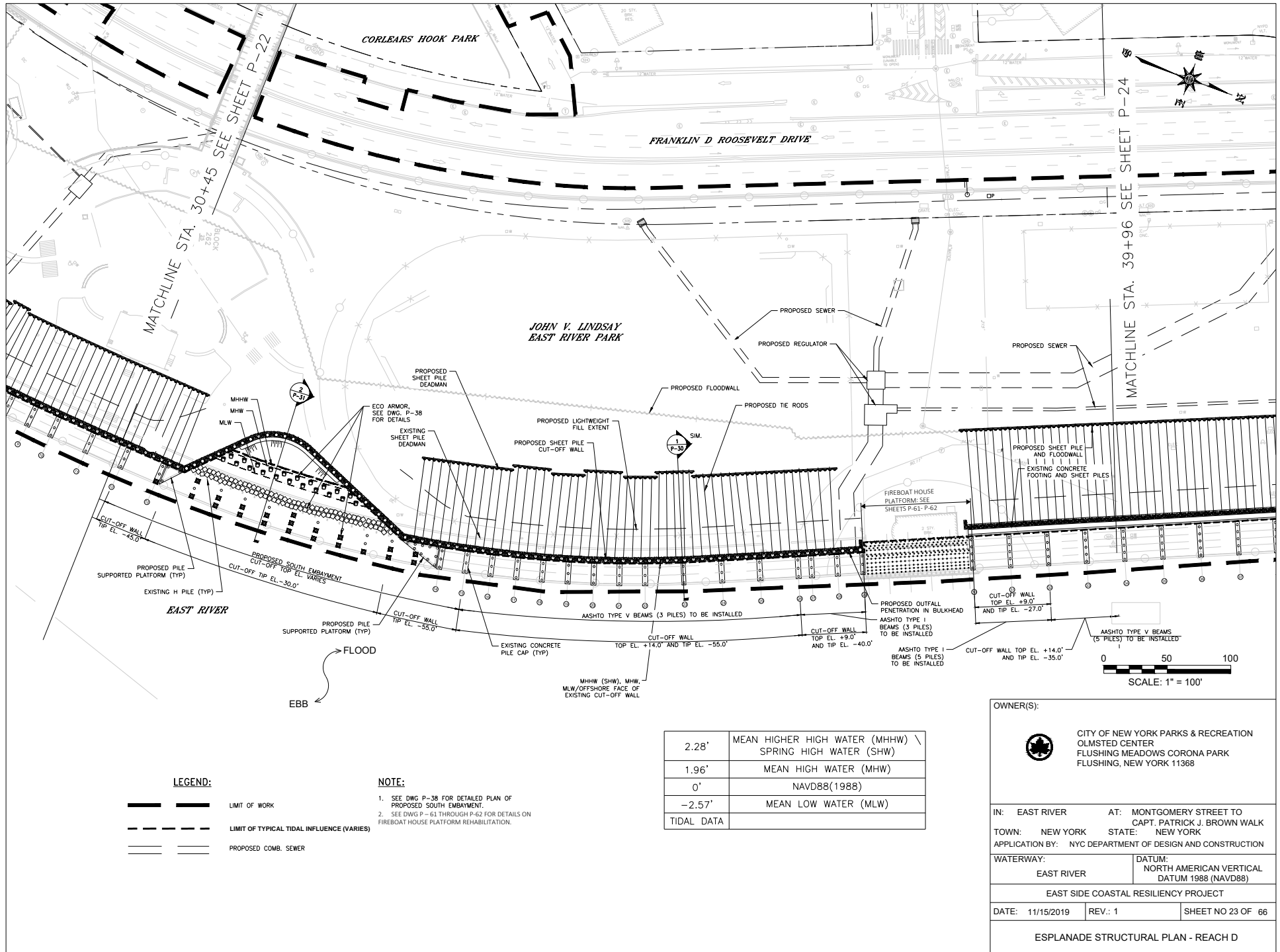
WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

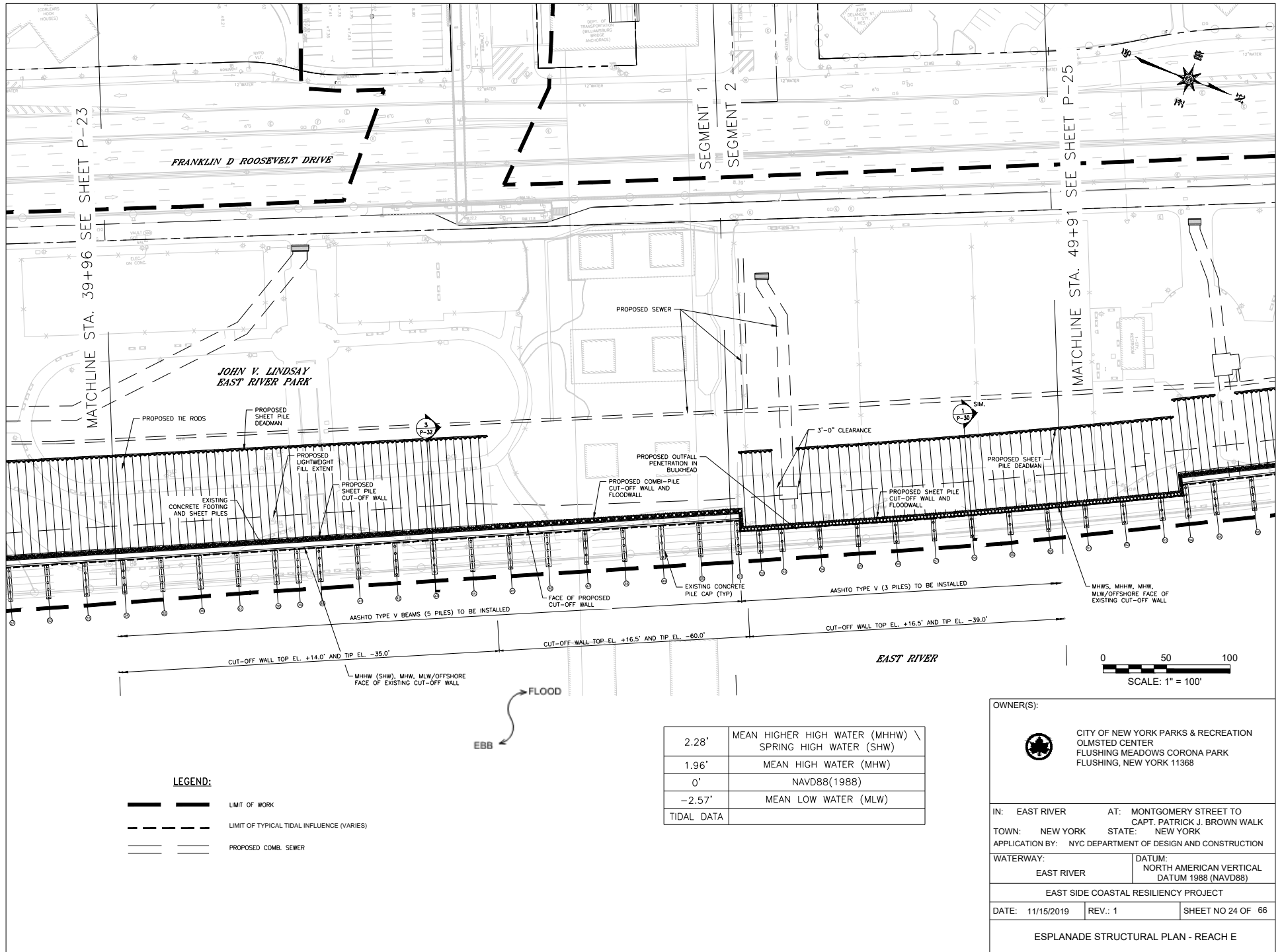
EAST SIDE COASTAL RESILIENCY PROJECT

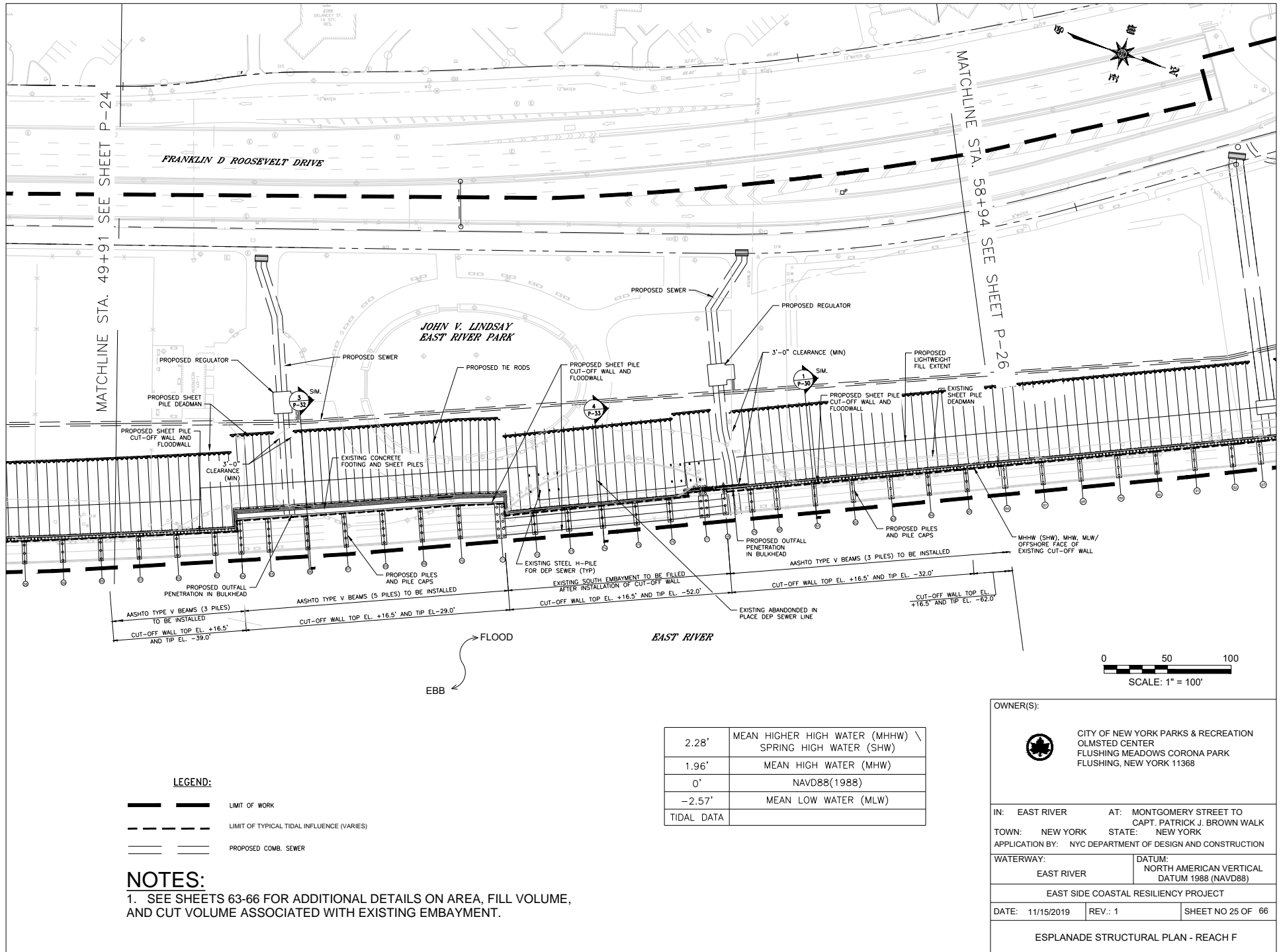
DATE: 11/15/2019 REV.: 1 SHEET NO 20 OF 66

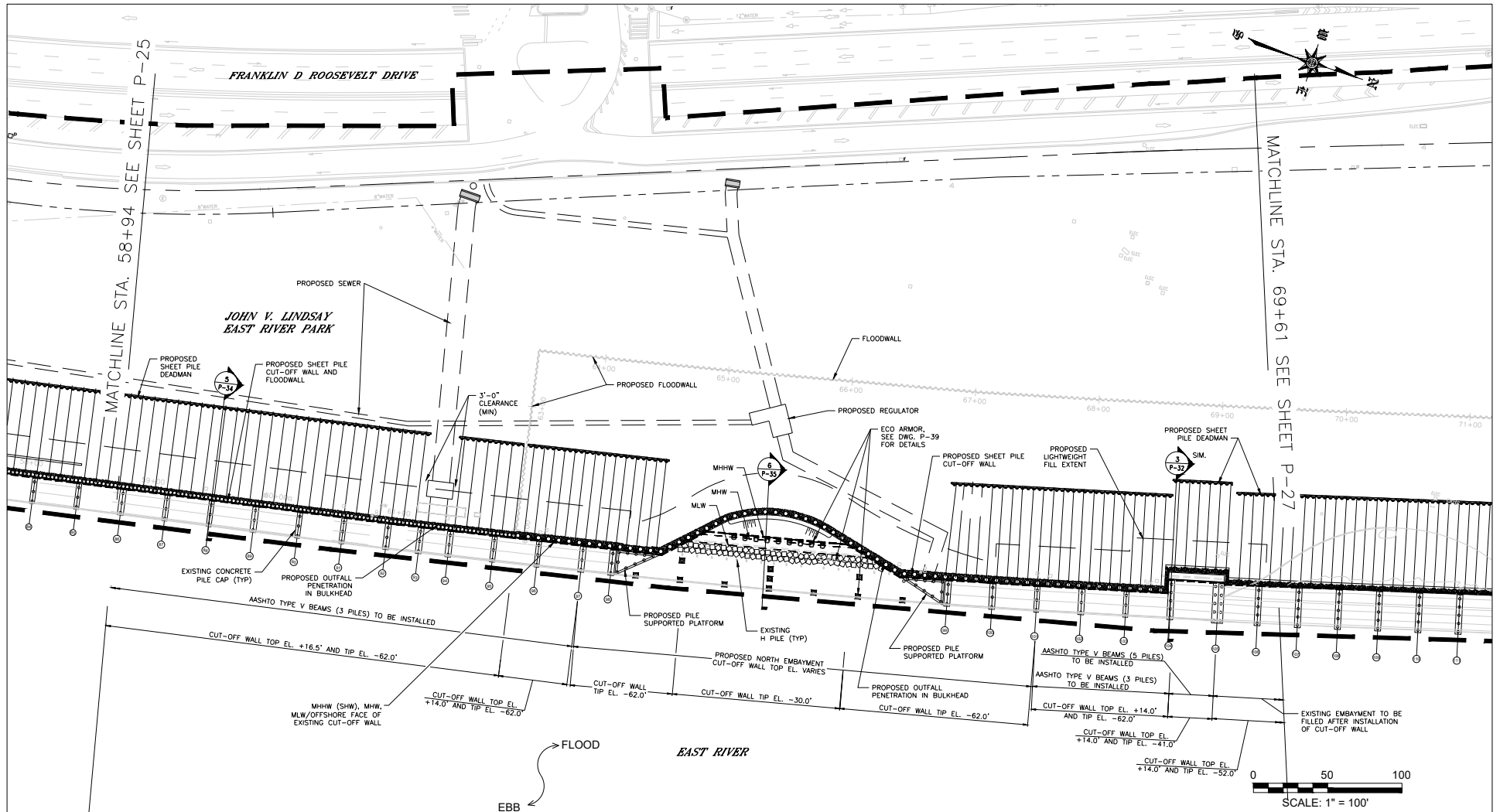
DEMOLITION CROSS SECTION -
PROPOSED NORTH EMBAYMENT









**LEGEND:**

	LIMIT OF WORK
	LIMIT OF TYPICAL TIDAL INFLUENCE (VARIES)
	PROPOSED COMB. SEWER

NOTES:

1. SEE SHEET 39 FOR DETAILED PLAN OF PROPOSED NORTH EMBAYMENT.
2. SEE SHEETS 63-66 FOR ADDITIONAL DETAILS ON AREA, FILL VOLUME, AND CUT VOLUME ASSOCIATED WITH PROPOSED EMBAYMENT.

2.28'	MEAN HIGHER HIGH WATER (MHHW) \ SPRING HIGH WATER (SHW)
1.96'	MEAN HIGH WATER (MHW)
0'	NAVD88(1988)
-2.57'	MEAN LOW WATER (MLW)
TIDAL DATA	

OWNER(S):

CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

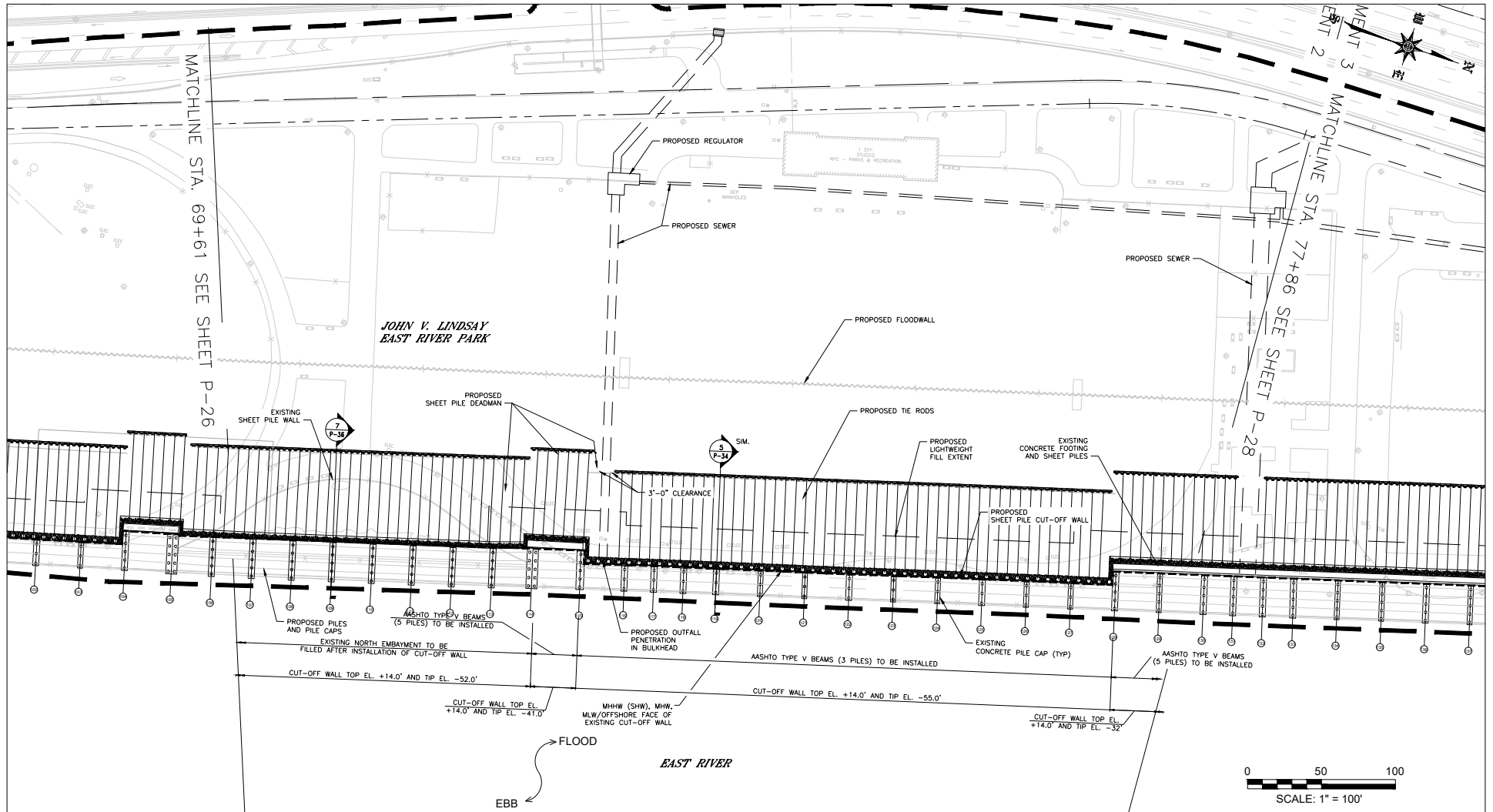
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 26 OF 66

ESPLANADE STRUCTURAL PLAN - REACH G



2.28'	MEAN HIGHER HIGH WATER (MHHW) \ SPRING HIGH WATER (SHW)
1.96'	MEAN HIGH WATER (MHW)
0'	NAVD88(1988)
-2.57'	MEAN LOW WATER (MLW)
TIDAL DATA	

OWNER(S):



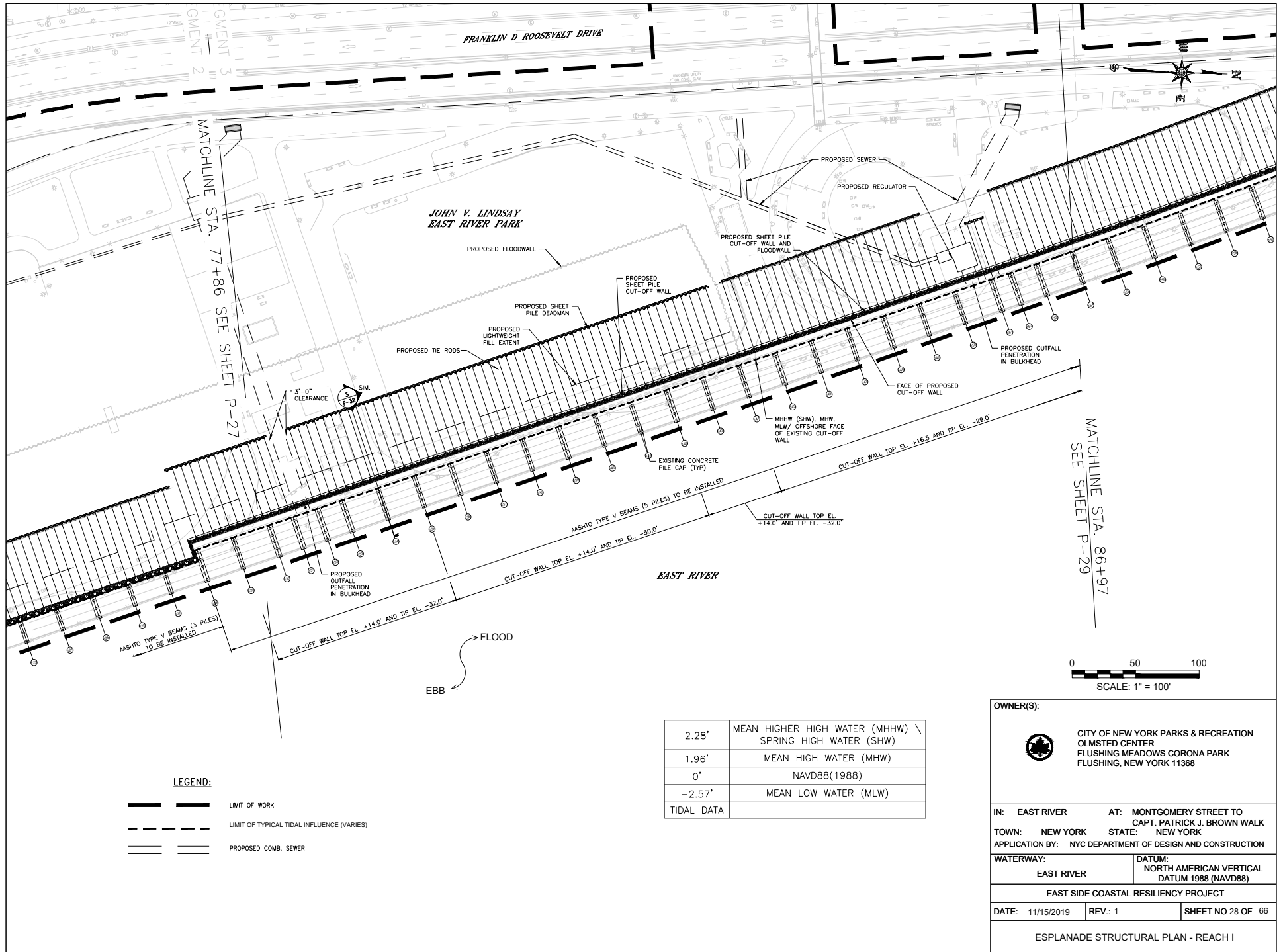
CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

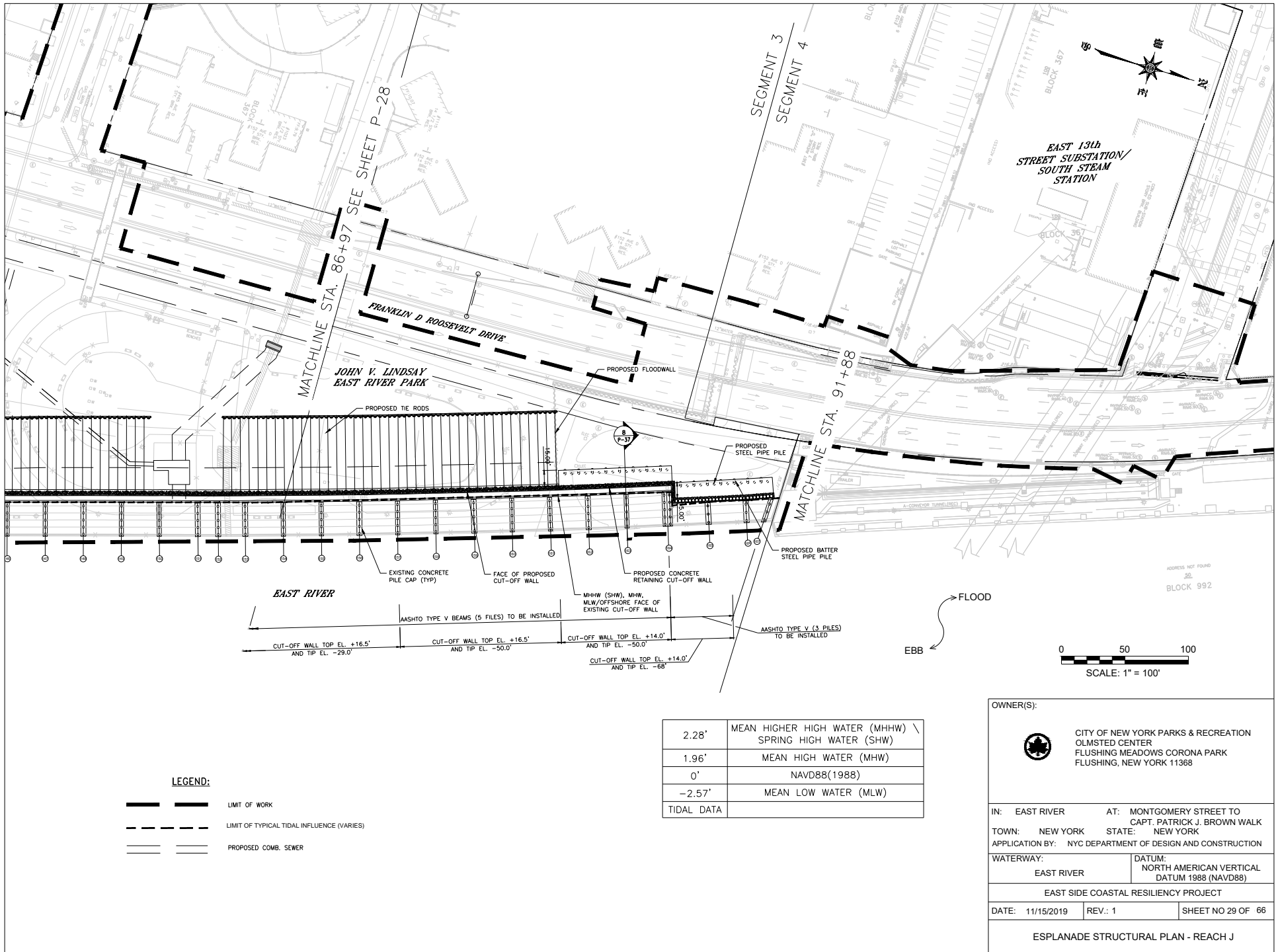
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

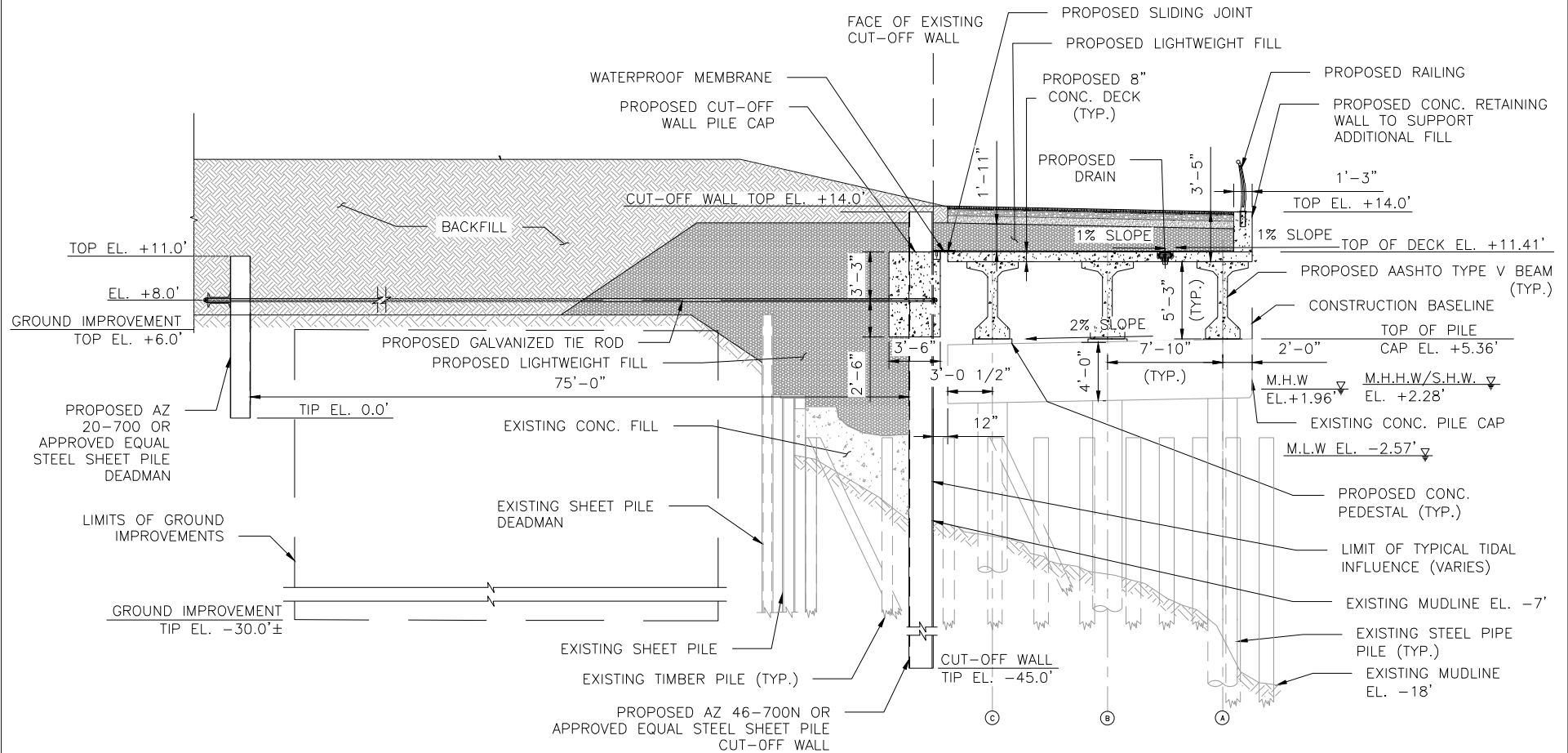
WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT
DATE: 11/15/2019 REV.: 1 SHEET NO 27 OF 66

ESPLANADE STRUCTURAL PLAN - REACH H







PROPOSED ESPLANADE PLATFORM, PRESTRESSED CONCRETE
TYPE V BEAMS ON EXISTING STRUCTURE (3 PILES)

1
P-23 SCALE 3/32" = 1'-0"
P-23
P-25

3/32" = 1'-0"



OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

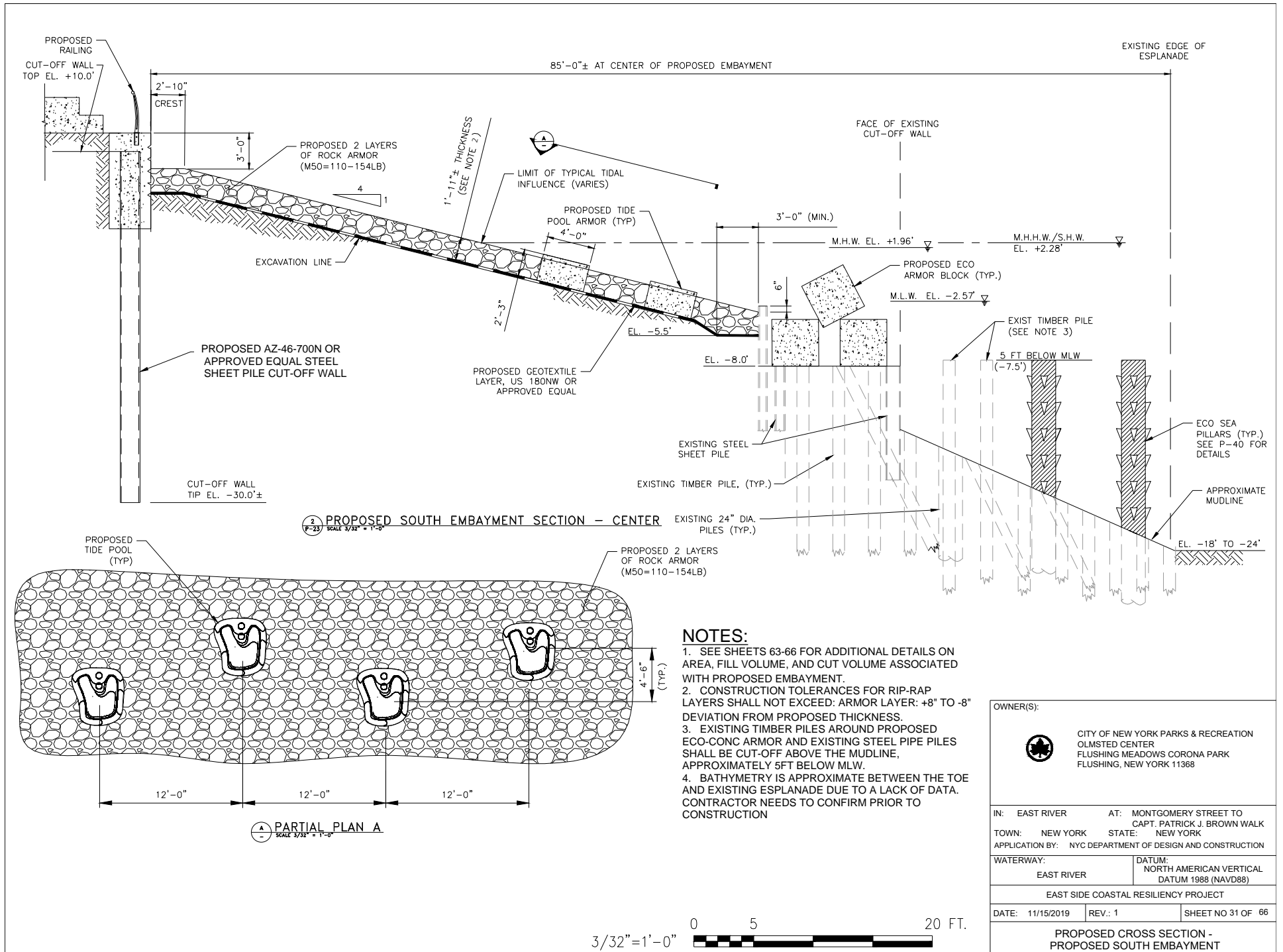
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

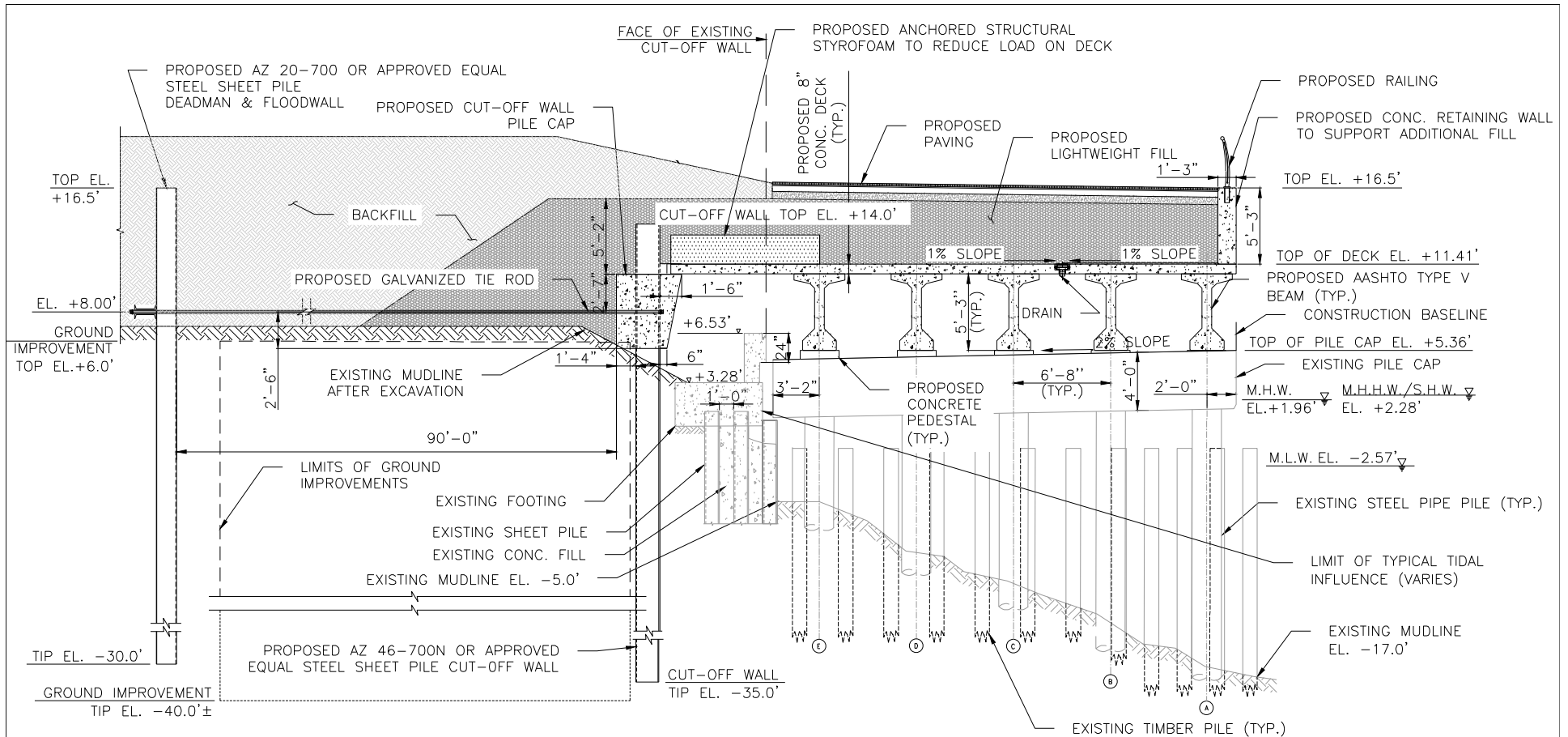
WATERWAY: EAST RIVER DATUM:
NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 30 OF 66

PROPOSED CROSS SECTION






PROPOSED ESPLANADE PLATFORM,
PRESTRESSED CONCRETE TYPE V BEAMS ON EXISTING STRUCTURE - (3 PILES)

5
P-23
SCALE: 3/32"=1'-0"

3/32"=1'-0" 0 5 20 FT.

OWNER(S):	
 CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368	
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK	STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION	
WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT	
DATE: 11/15/2019	REV.: 1
SHEET NO 32 OF 66	
PROPOSED CROSS SECTION	

1/16"=1'-0" 0 10 20 30 FT.

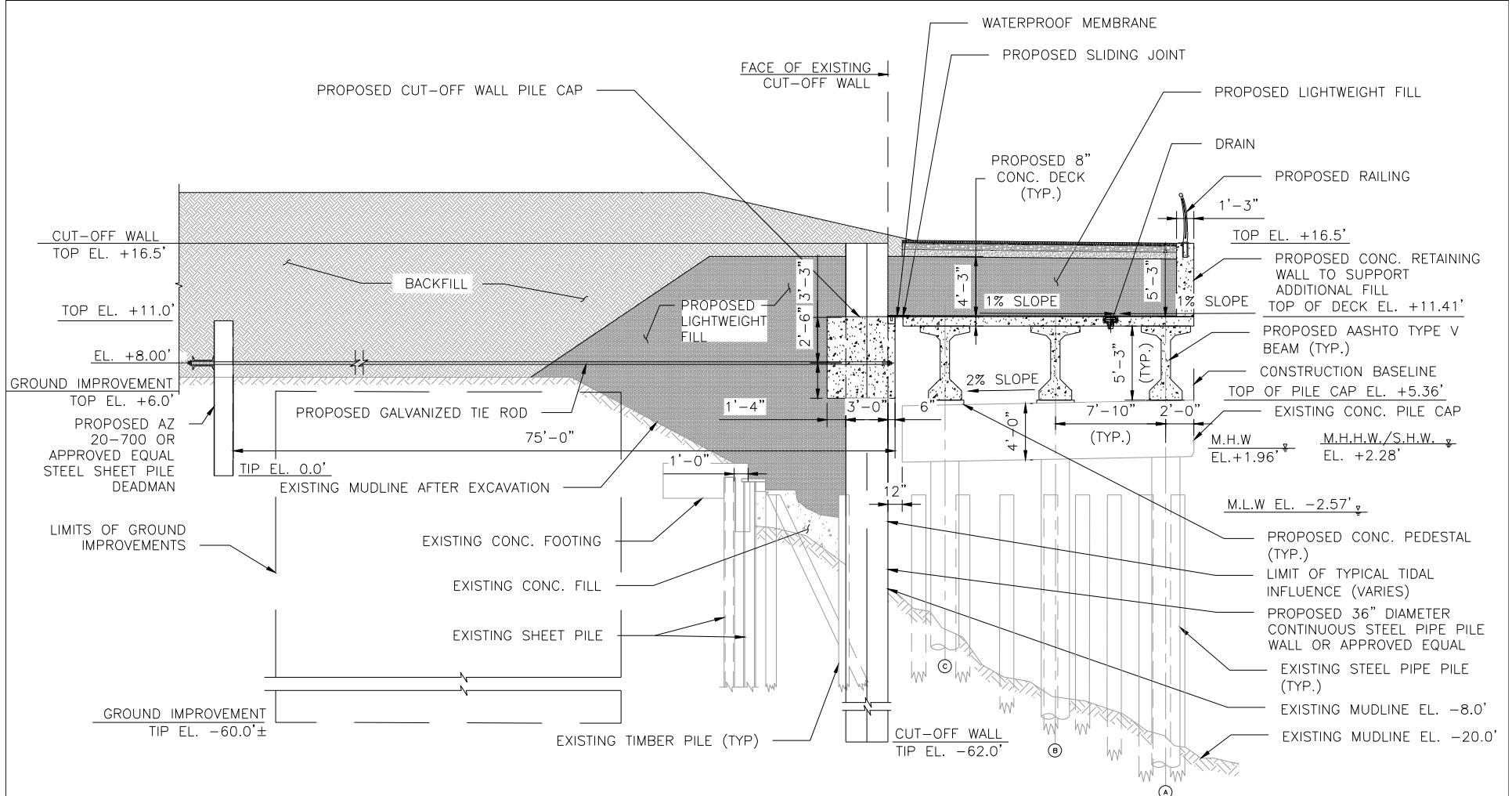
1. SEE SHEETS 63-66 FOR ADDITIONAL DETAILS ON AREA, FILL VOLUME, AND CUT VOLUME ASSOCIATED WITH EXISTING EMBAYMENT.

CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
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DATE: 11/15/2019	REV.: 1	SHEET NO 33 OF 66
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PROPOSED CROSS SECTION - FILLING OF SOUTH EMBAYMENT



3/32"=1'-0" 0 5 20 FT.

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

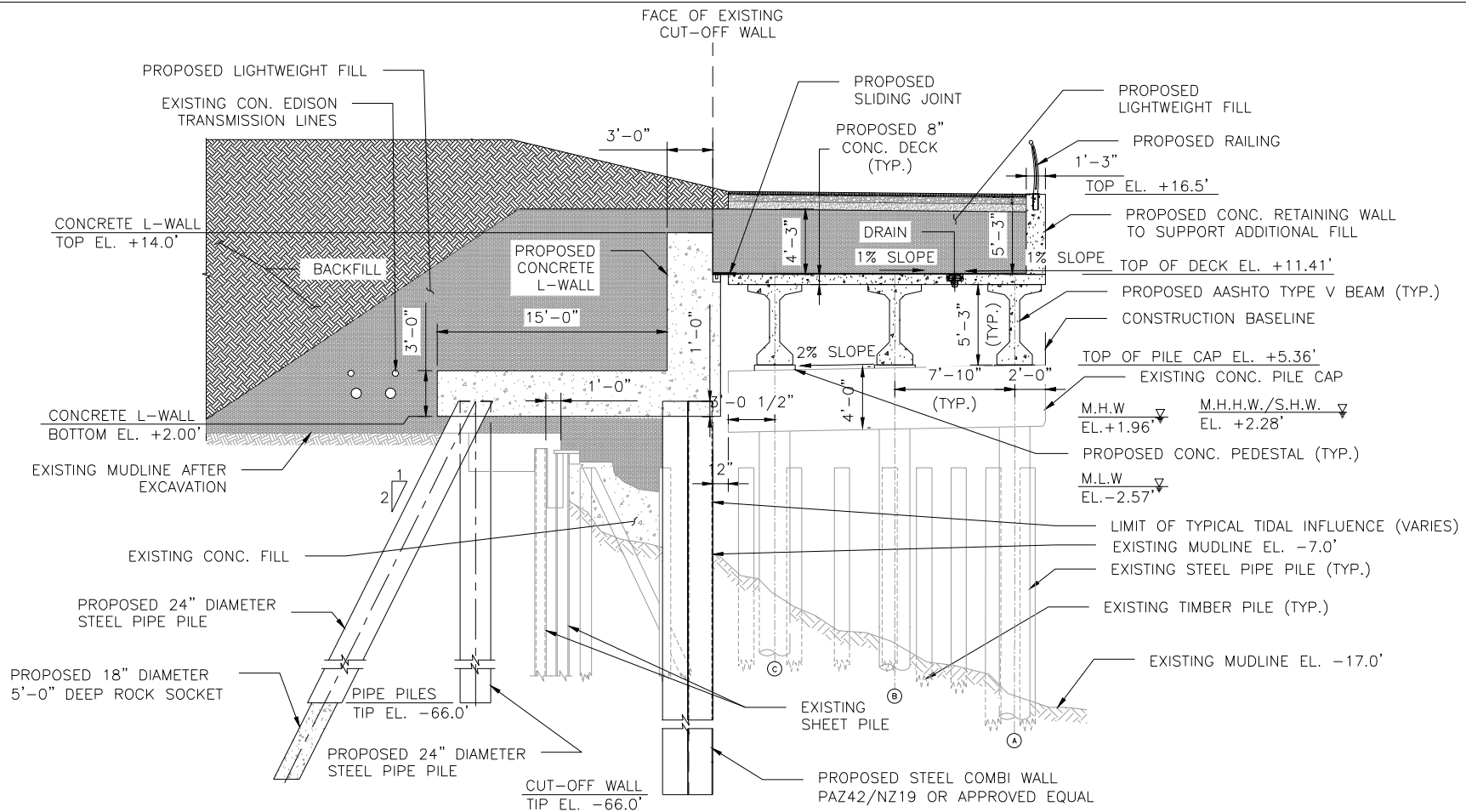
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 34 OF 66

PROPOSED CROSS SECTION



PROPOSED WATERFRONT PLATFORM
ALTERNATE SECTION,
PRESTRESSED CONCRETE TYPE V BEAMS ON EXISTING STRUCTURE (3 PILES)

0 5 20 FT.
3/32"=1'-0"

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

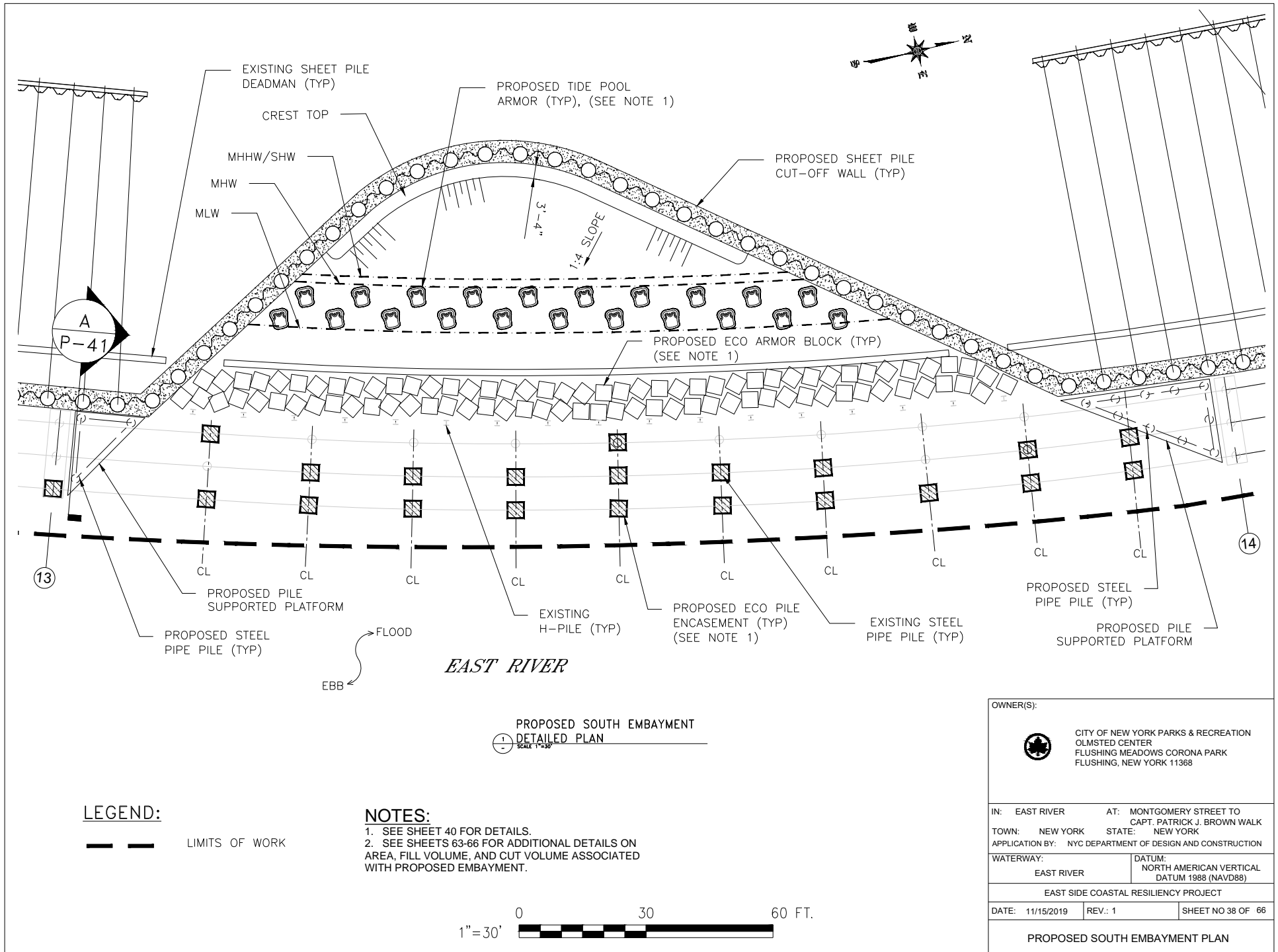
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK	STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION	

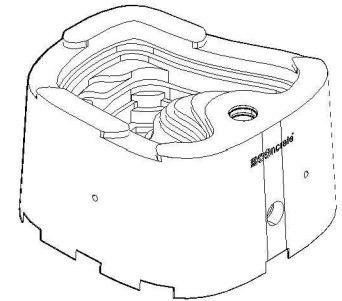
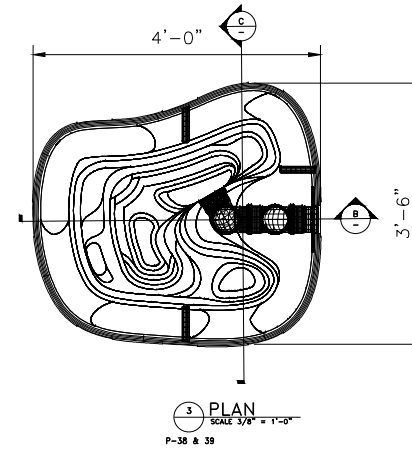
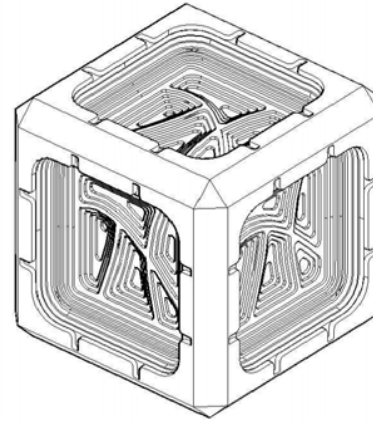
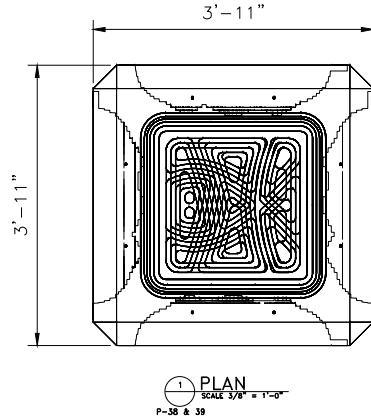
WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
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EAST SIDE COASTAL RESILIENCY PROJECT

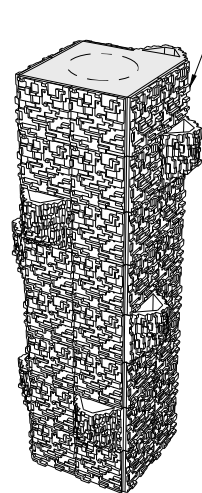
DATE: 11/15/2019	REV.: 1	SHEET NO 37 OF 66
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PROPOSED CROSS SECTION



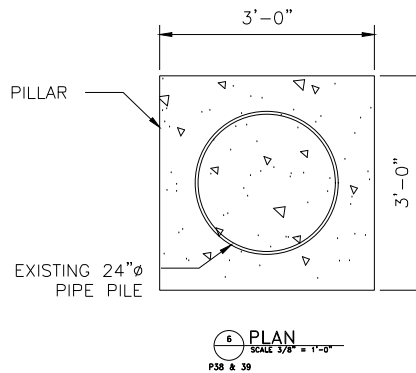


ECO ARMOR BLOCKS



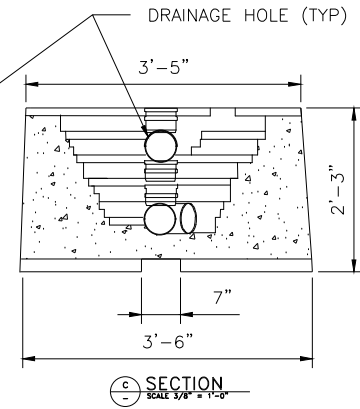
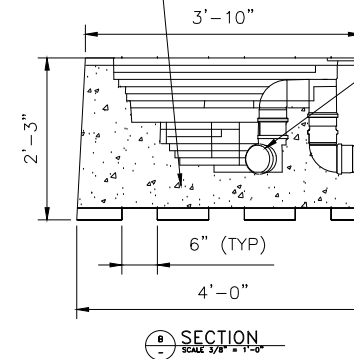
ECO SEA PILLAR

ECO SEA PILLAR



EXISTING 24"Ø
PIPE PILE

PRECAST CONCRETE



TIDAL POOL

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

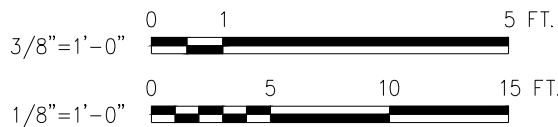
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

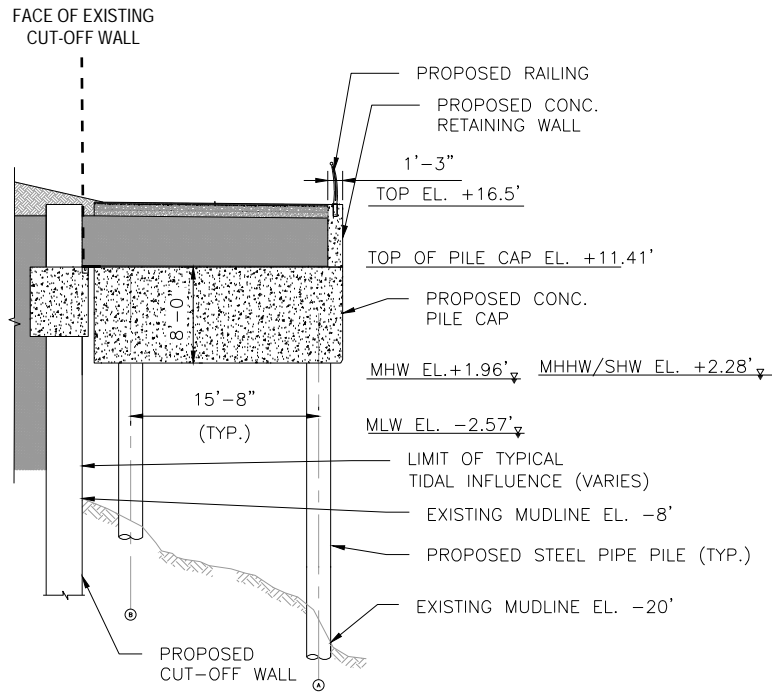
WATERWAY: EAST RIVER DATUM:
NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

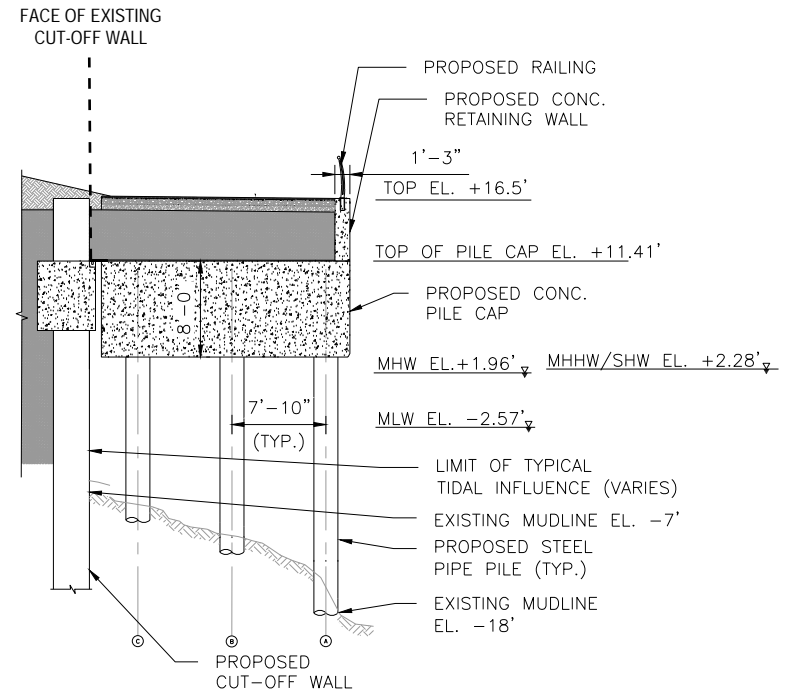
DATE: 11/15/2019 REV.: 1 SHEET NO 40 OF 66

EMBAYMENT TYPICAL DETAILS

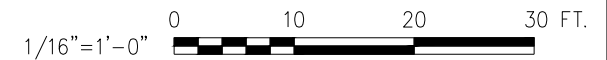





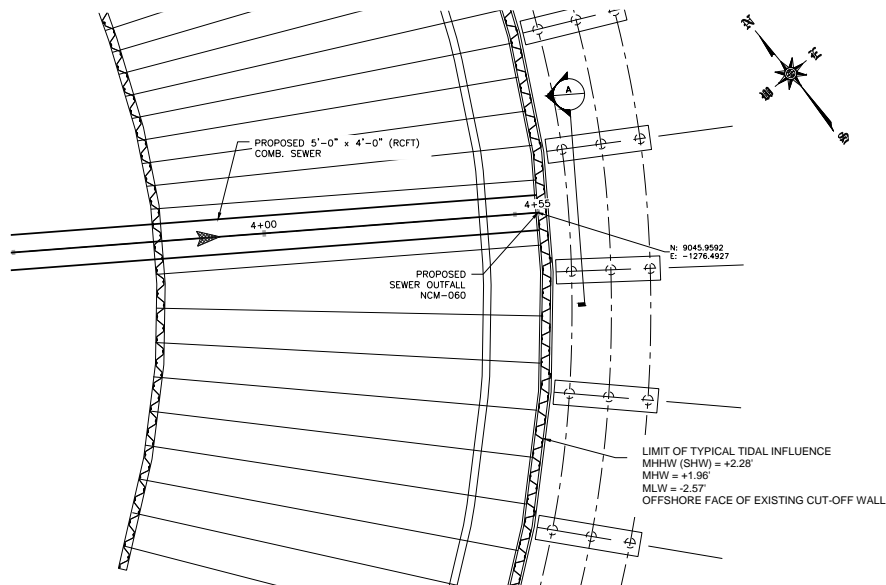
**PILE-SUPPORTED PLATFORM
TYPICAL SECTION (2 PILES)**
A
P-38 SCALE 1/16" = 1'-0"



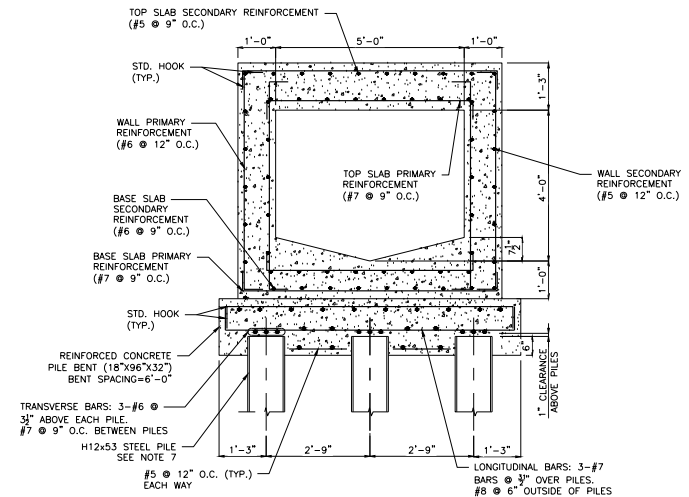
**PILE-SUPPORTED PLATFORM
TYPICAL SECTION (3 PILES)**
B
P-39 SCALE 1/16" = 1'-0"



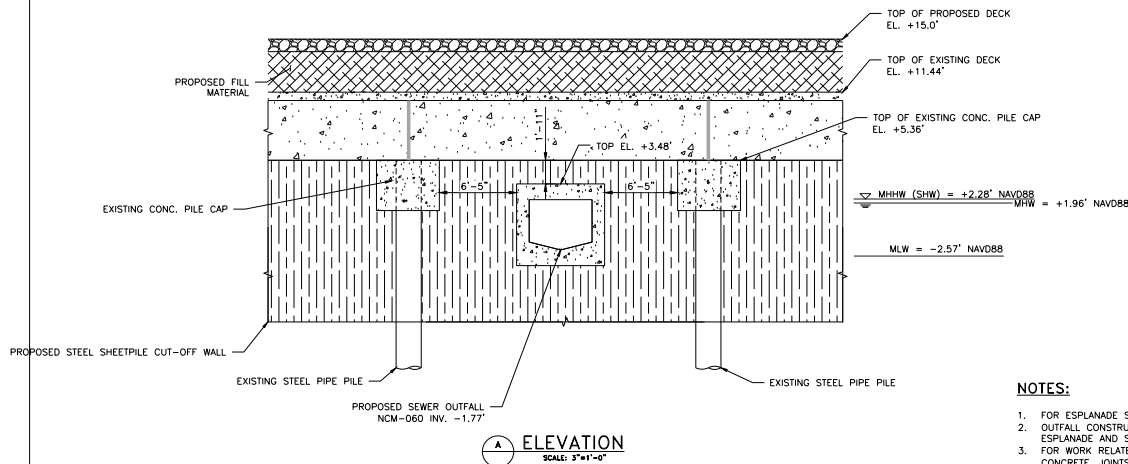
OWNER(S):	
 CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368	
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK	STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION	
WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT	
DATE: 11/15/2019	REV.: 1
SHEET NO 41 OF 66	
TYPICAL SECTIONS	



PARTIAL PLAN
SCALE: 1"=10'



5'-0"W x 4'-0"H COMB. SEWER
CROSS SECTION
SCALE: 3/4" = 1'-0"



ELEVATION
SCALE: 3/4"=1'-0"

NOTES:

- FOR ESPALADE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
- OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPALADE AND SHEET PILE CUT-OFF WALL.
- FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.11C5050040.
- FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE USE ITEM 51.61F053.
- FOR WORK RELATED THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
- FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.11SH. STEEL PILES SHALL BE DRIVEN TO ROCK. ROCK DEPTHS ARE SHOWN IN SEWER PROFILE DRAWINGS AND ARE BASED ON DATA COLLECTED DURING THE GEOTECHNICAL EXPLORATION PROGRAM CONDUCTED IN 2019, SUPPLEMENTED WITH HISTORIC SOILS DATA. PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPALADE.

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

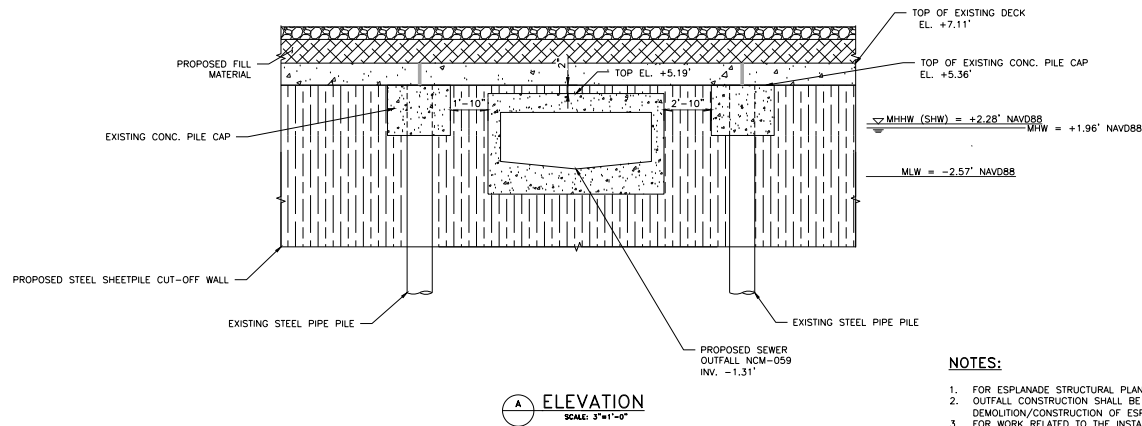
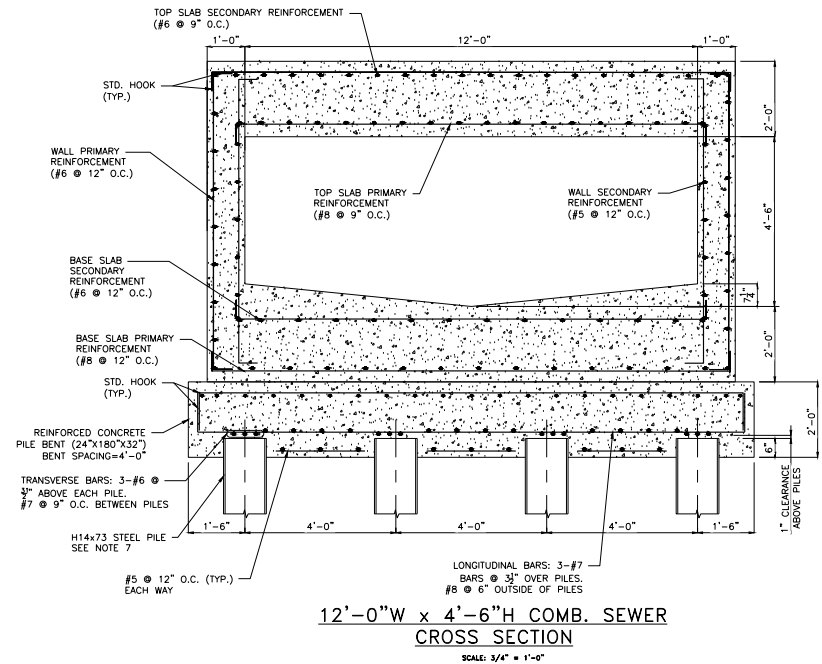
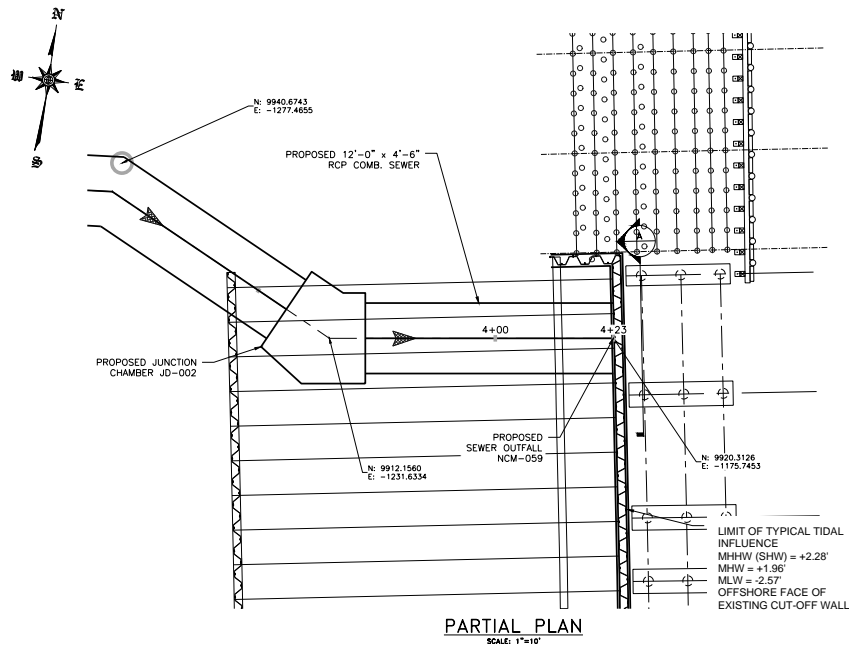
IN: EAST RIVER AT: MONTGOMERY STREET TO
TOWN: NEW YORK STATE: NEW YORK
CAPT. PATRICK J. BROWN WALK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 42 OF 66

OUTFALL NCM-060 (REACH C)



NOTES:

1. FOR ESPRANDE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
2. OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPRANDE AND SHEET PILE CUT-OFF WALL.
3. FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.11CS120046.
4. FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE USE ITEM 51.61F053.
5. FOR WORK RELATED THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
6. FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.11SH. STEEL PILES SHALL BE DRIVEN TO ROCK. ROCK DEPTHS ARE SHOWN IN SEWER PROFILE DRAWINGS AND ARE BASED ON DATA COLLECTED DURING THE GEOTECHNICAL EXPLORATION PROGRAM CONDUCTED IN 2019, SUPPLEMENTED WITH HISTORIC SOILS DATA.
7. PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPRANDE.

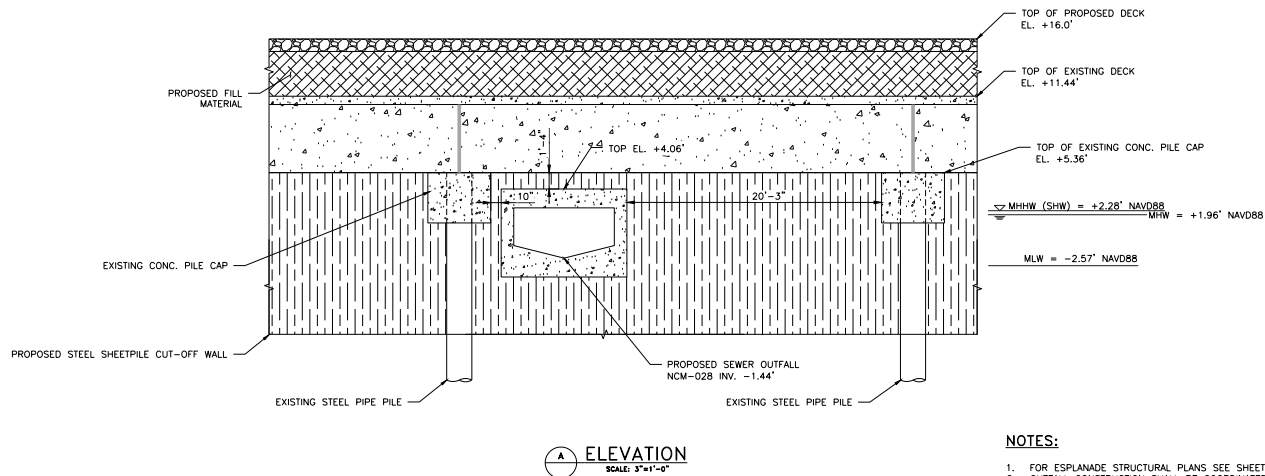
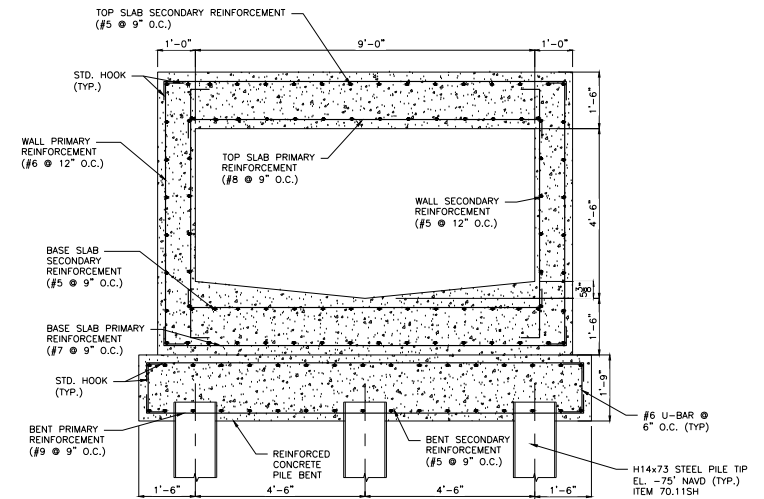
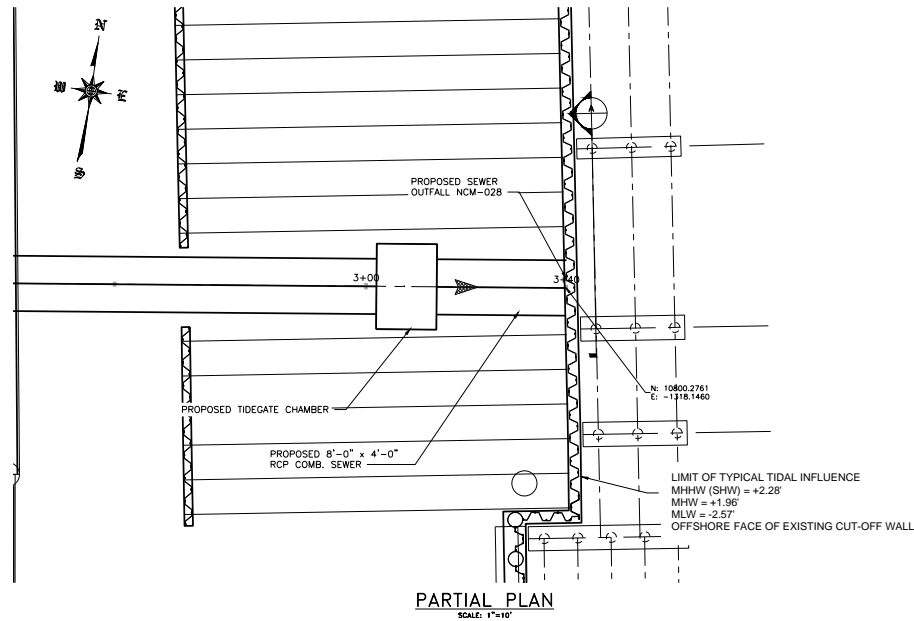
OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK	STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION	
WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT	
DATE: 11/15/2019	REV.: 1
SHEET NO 43 OF 66	

OUTFALL NCM-059 (REACH D)



NOTES:

- FOR ESPLANADE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
- OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPLANADE AND SHEET PILE CUT-OFF WALL.
- FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.11CS080040.
- FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE USE ITEM 51.61F053.
- FOR WORK RELATED TO THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
- FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.11SH.
- PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPLANADE.

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

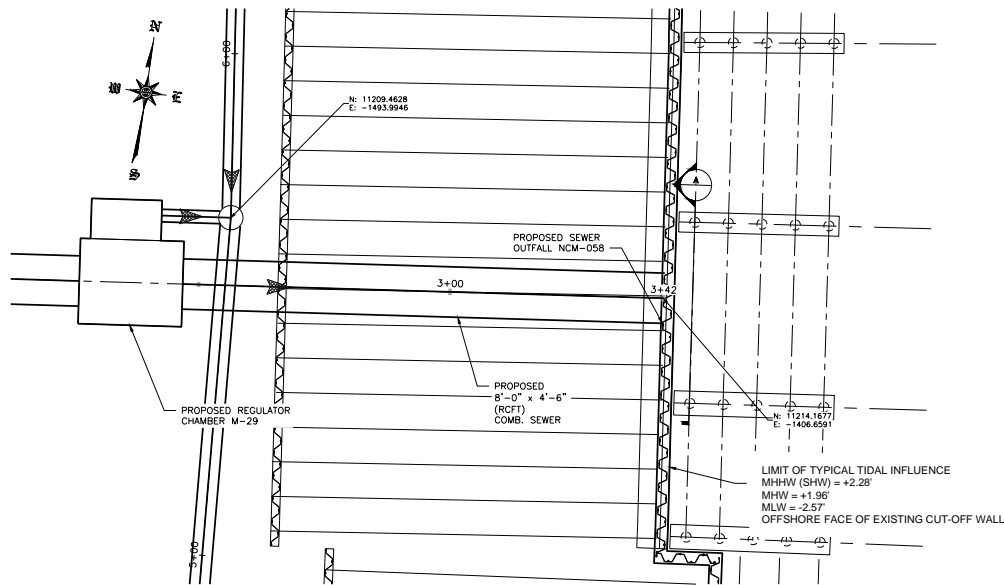
IN: EAST RIVER AT: MONTGOMERY STREET TO
TOWN: NEW YORK STATE: NEW YORK
CAPT. PATRICK J. BROWN WALK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

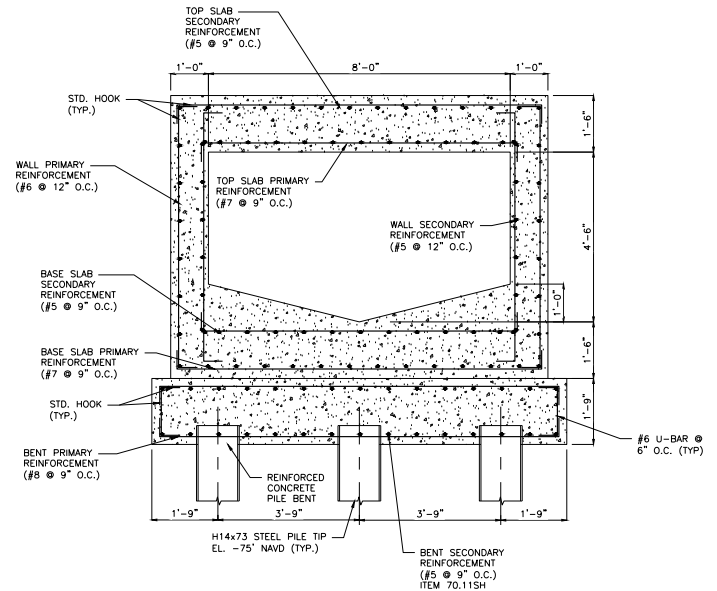
EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 44 OF 66

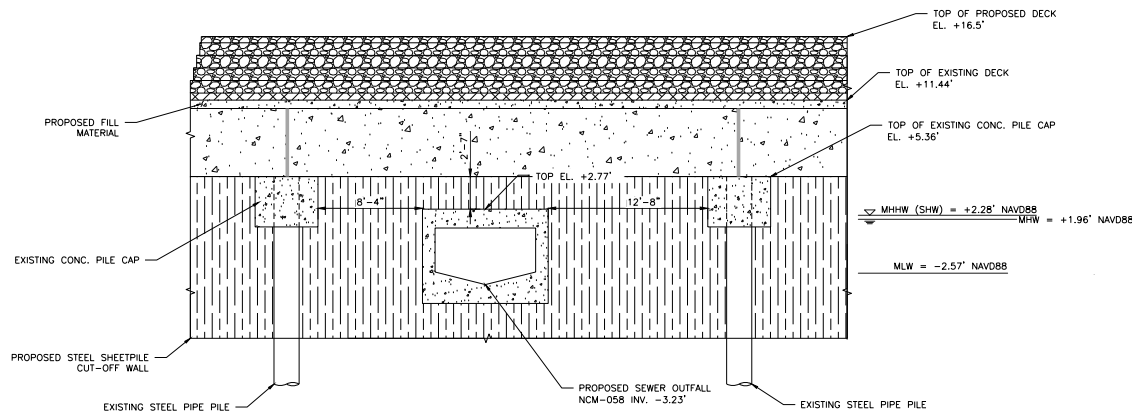
OUTFALL NCM-028 (REACH E)



PARTIAL PLAN
SCALE: 1"=10'



8'-0"W x 4'-6"H COMB. SEWER
CROSS SECTION
SCALE: 3/4" = 1'-0"



ELEVATION
SCALE: 3/4"=1'-0"

NOTES:

1. FOR ESPALADE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
2. OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPALADE AND SHEET PILE CUT-OFF WALL.
3. FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.11CS080046.
4. FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE USE ITEM 51.61F053.
5. FOR WORK RELATED THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
6. FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.11SH.
7. PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPALADE.

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

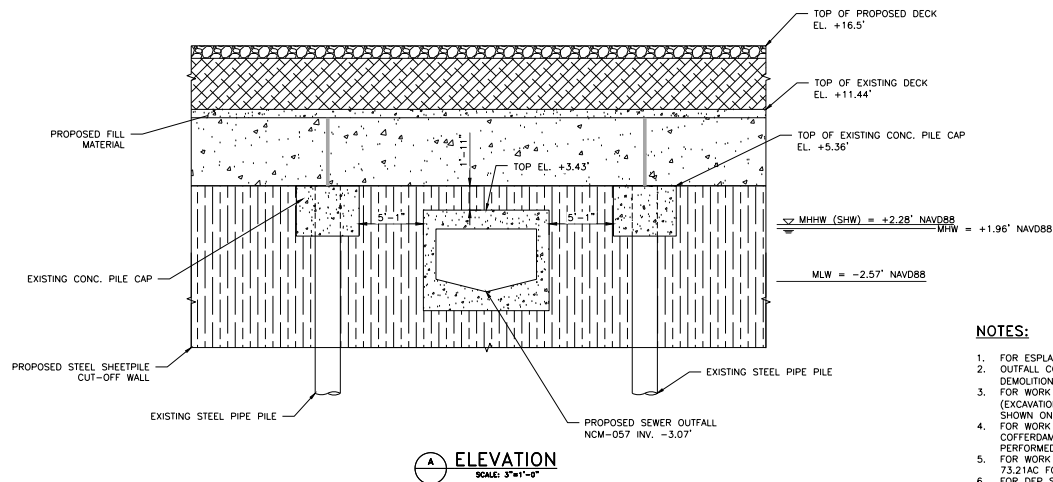
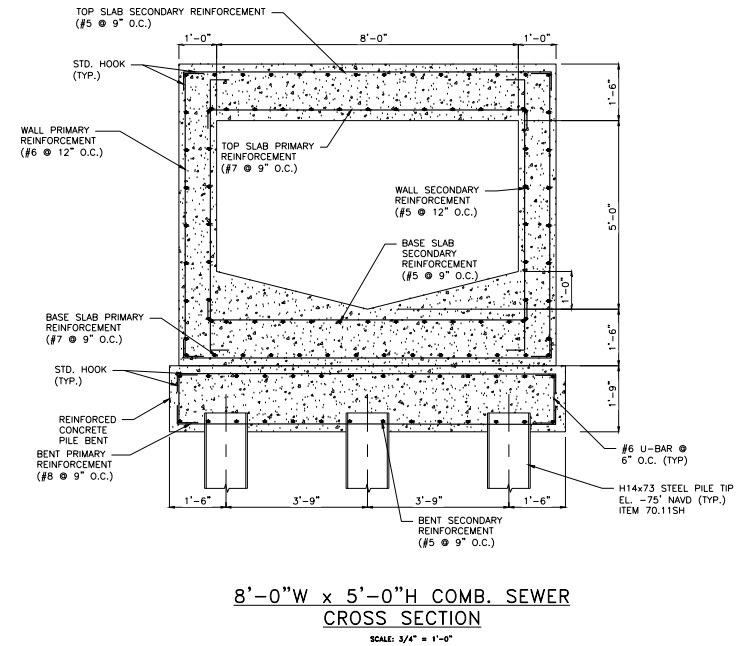
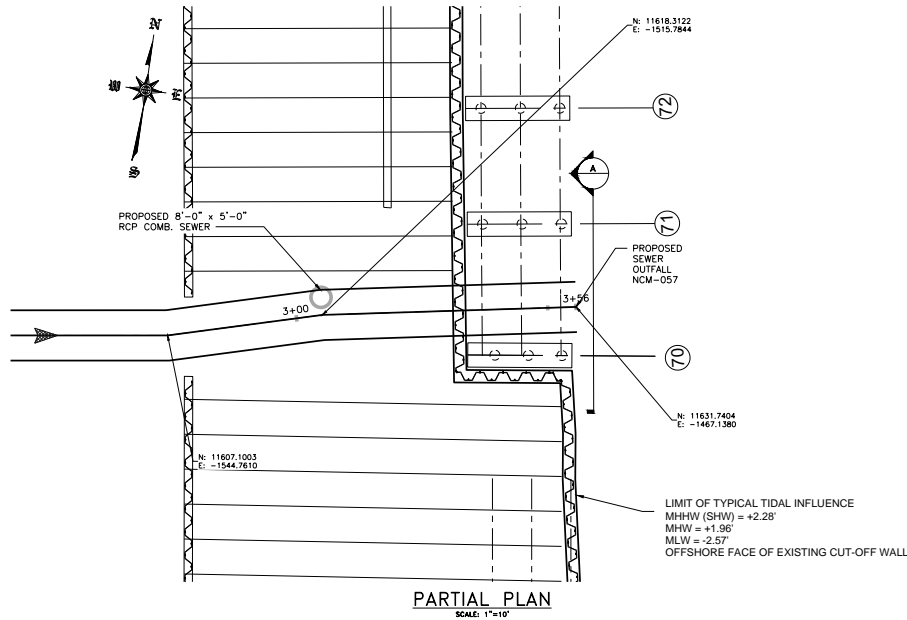
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT


DATE: 11/15/2019 REV.: 1 SHEET NO 45 OF 66

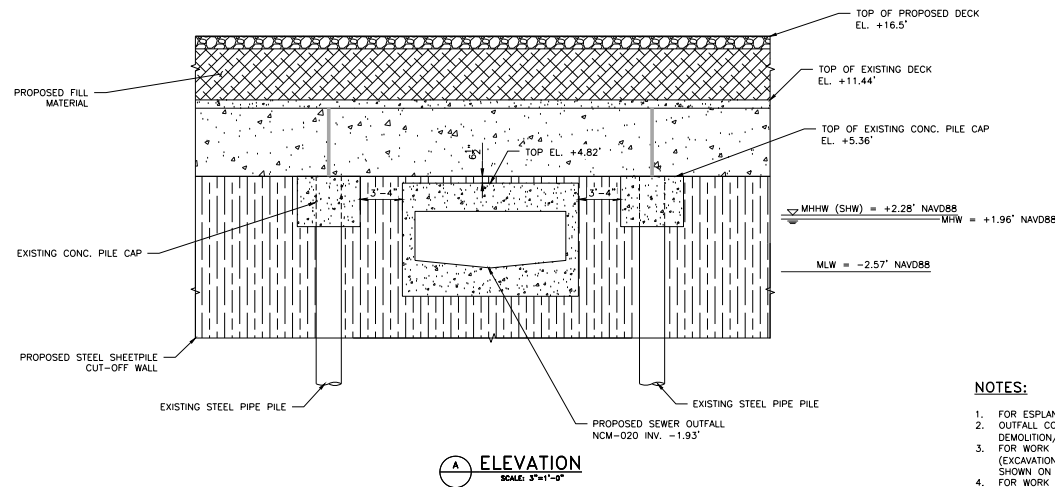
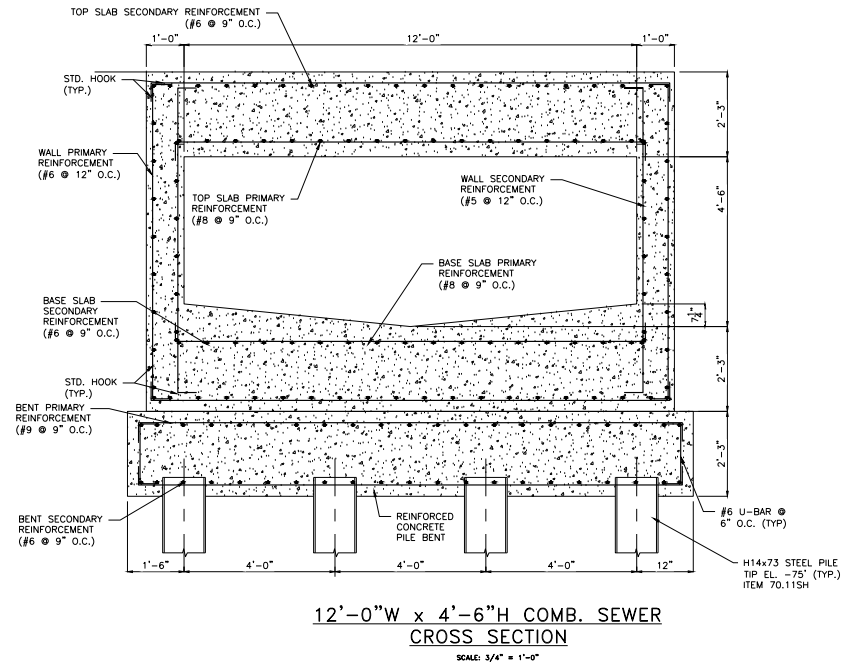
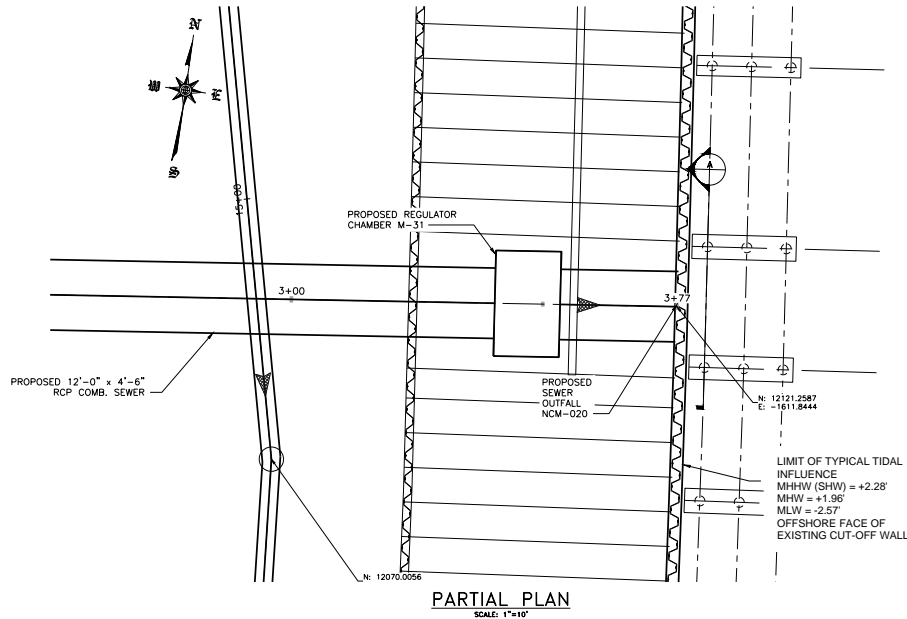
OUTFALL NCM-058 (REACH F)



NOTES:

1. FOR ESPLANADE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
2. OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPLANADE AND SHEET PILE CUT-OFF WALL.
3. FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.11CS080050.
4. FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE USE ITEM 51.61F053.
5. FOR WORK RELATED TO THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
6. FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.11SH.
7. PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPLANADE.

OWNER(S):		
 CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368		
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK	
TOWN: NEW YORK	STATE: NEW YORK	
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION		
WATERWAY: EAST RIVER		DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT		
DATE: 11/15/2019	REV.: 1	SHEET NO 46 OF 66
OUTFALL NCM-057 (REACH F)		



NOTES:

1. FOR ESPRANDE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
2. OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPRANDE AND SHEET PILE CUT-OFF WALL.
3. FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.11C5120046.
4. FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE USE ITEM 51.61F053.
5. FOR WORK RELATED THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
6. FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.115H.
7. PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPRANDE.

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

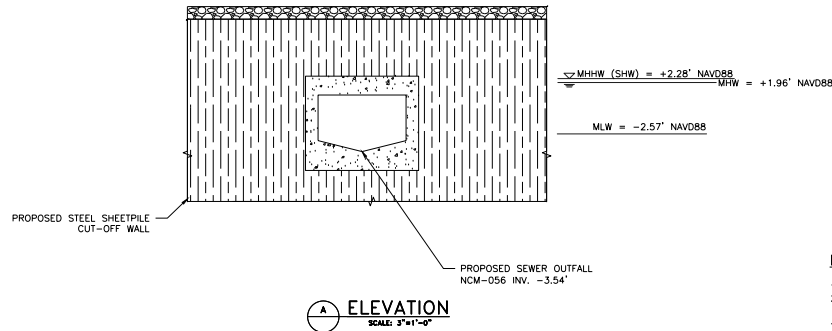
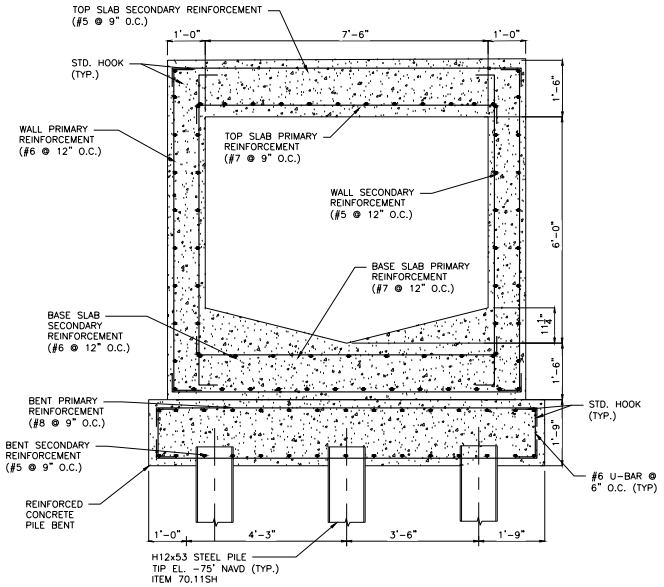
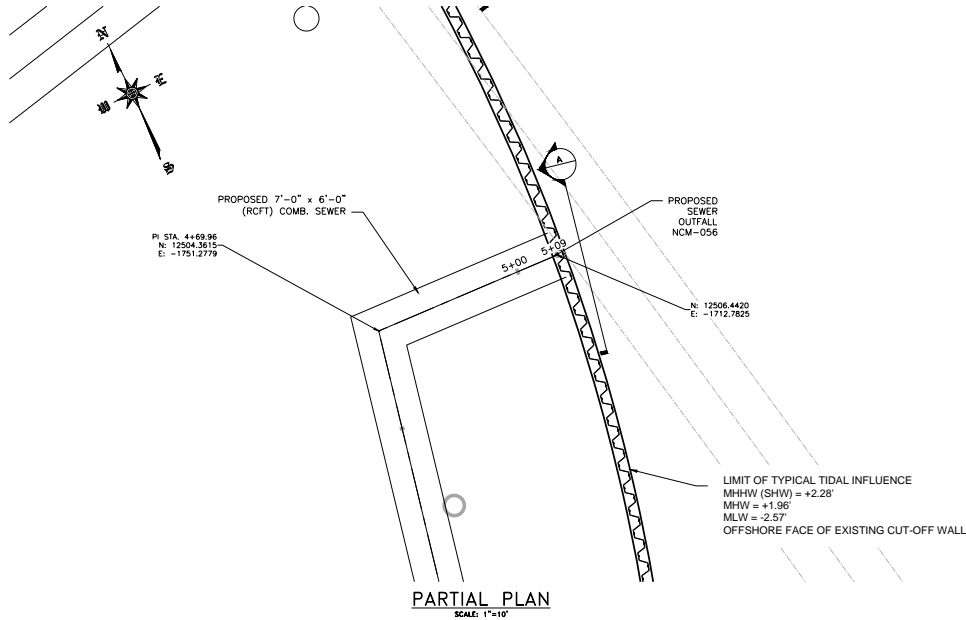
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 47 OF 66

OUTFALL NCM-020 (REACH G)



NOTES:

1. FOR ESPRANDE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
2. OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPRANDE AND SHEET PILE CUT-OFF WALL.
3. FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.11CS070060.
4. FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE USE ITEM 51.61F053.
5. FOR WORK RELATED TO THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
6. FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.11SH.
7. PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPRANDE.

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

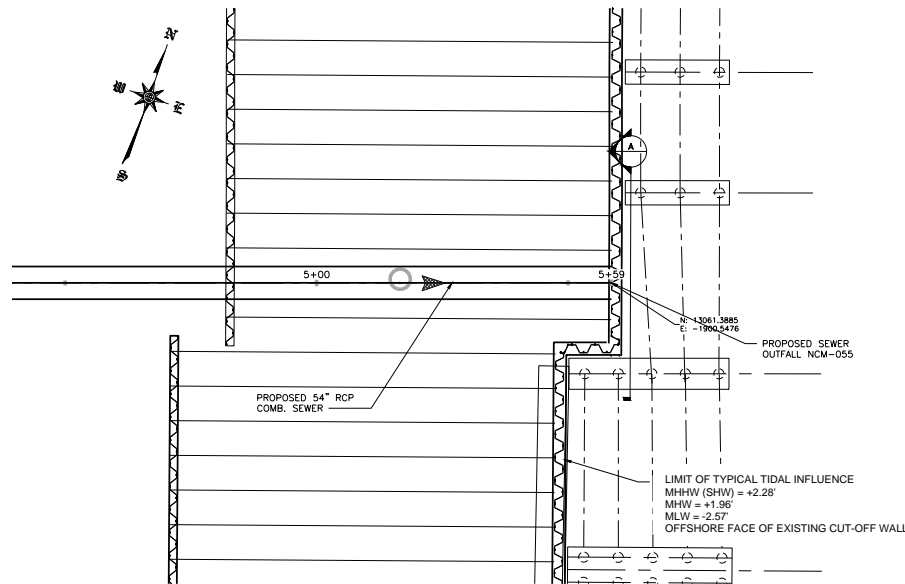
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

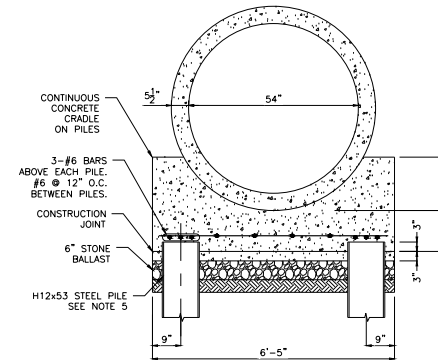
EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 48 OF 66

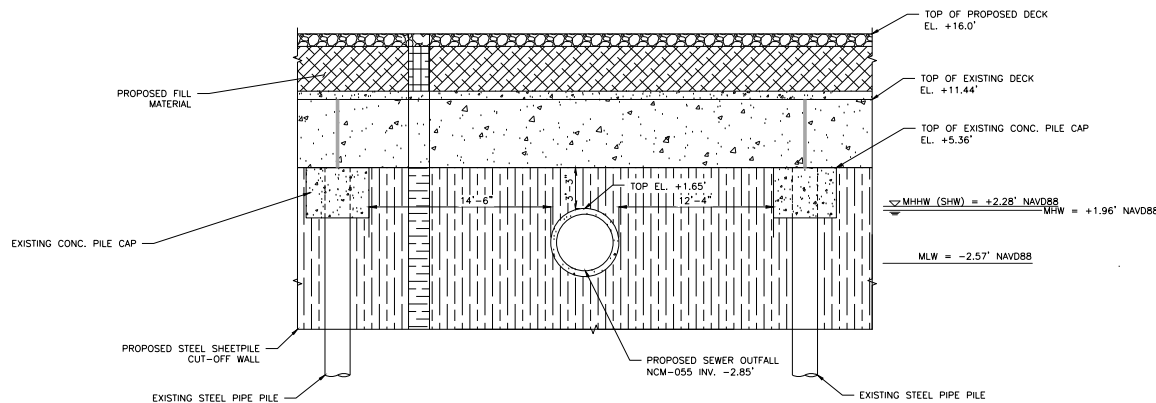
OUTFALL NCM-056 (REACH G)



PARTIAL PLAN
SCALE: 1"=10'




**54" COMB. SEWER
CROSS SECTION**
SCALE: 3/4" = 1'-0"

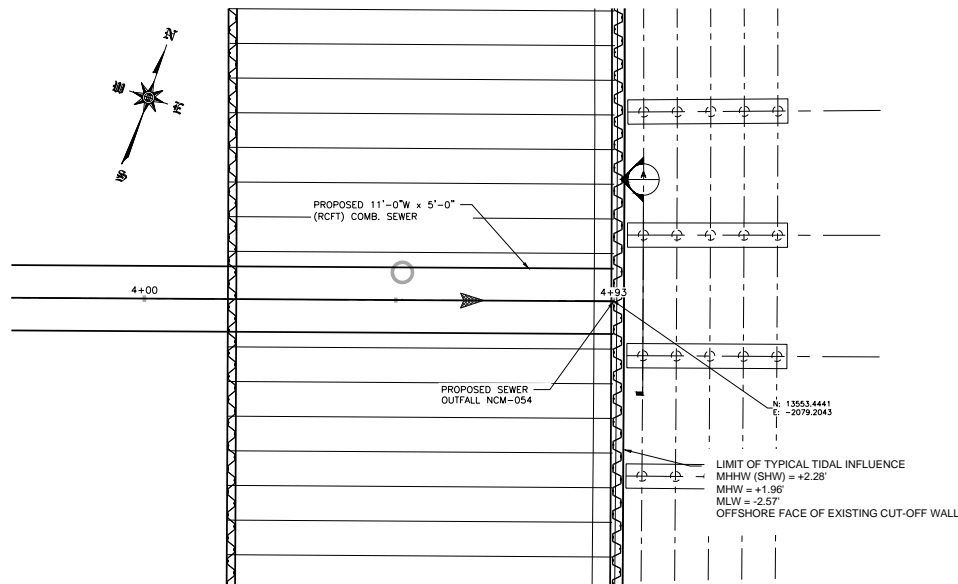


ELEVATION
SCALE: 3/4"=1'-0"

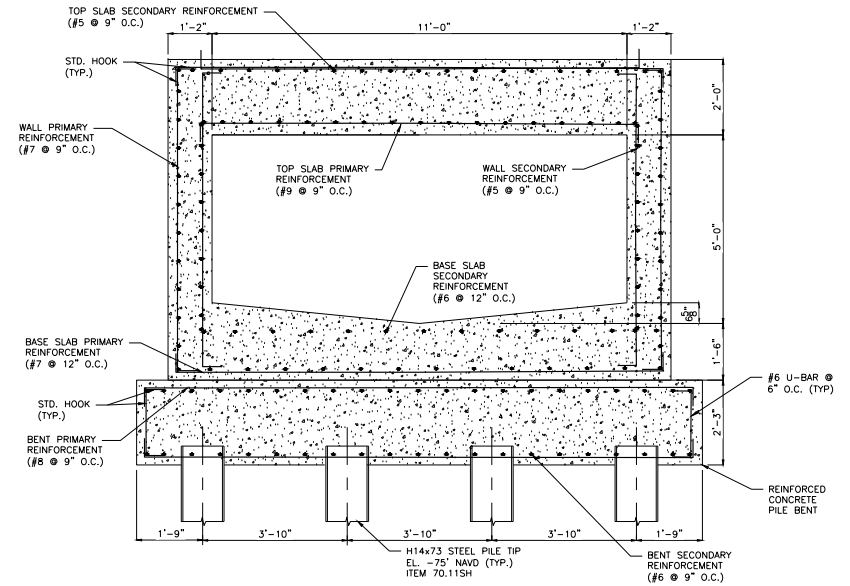
NOTES:

1. FOR ESPRANDE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
2. OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPRANDE AND SHEET PILE CUT-OFF WALL.
3. FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.21C4C054D.
4. FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE USE ITEM 51.61F053.
5. FOR WORK RELATED THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
6. FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.11SH.
7. PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPRANDE.

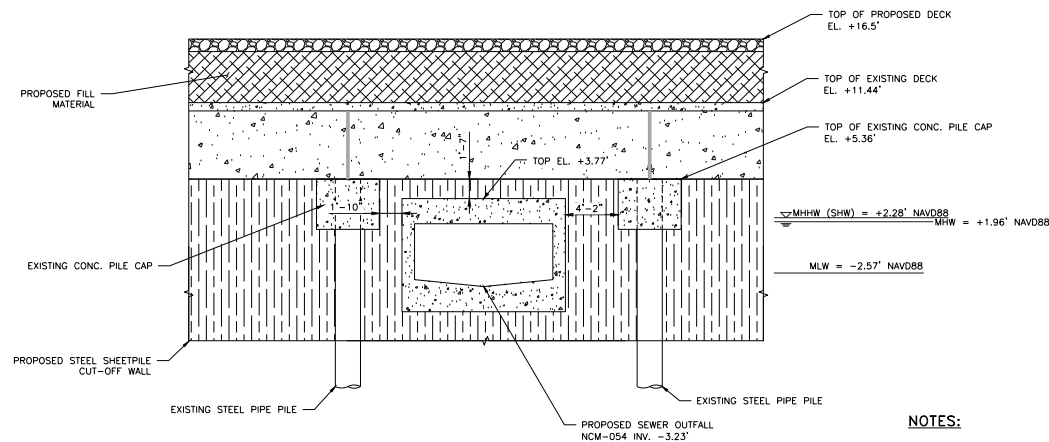
OWNER(S):		
<div></div> <div>CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368</div>		
IN: EAST RIVER		
AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK		
TOWN: NEW YORK		
STATE: NEW YORK		
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION		
WATERWAY: EAST RIVER		DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT		
DATE: 11/15/2019	REV.: 1	SHEET NO 49 OF 66
OUTFALL NCM-055 (REACH H)		



PARTIAL PLAN
SCALE: 1"=10'



11'-0"W x 5'-0"H COMB. SEWER
CROSS SECTION



ELEVATION
SCALE: 3"=1'-0"

NOTES:

1. FOR ESPRANADE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
2. OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPRANADE AND SHEET PILE CUT-OFF WALL.
3. FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.11CS110050.
4. FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE USE ITEM 51.61F053.
5. FOR WORK RELATED THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
6. FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.11SH.
7. PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPRANADE.

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

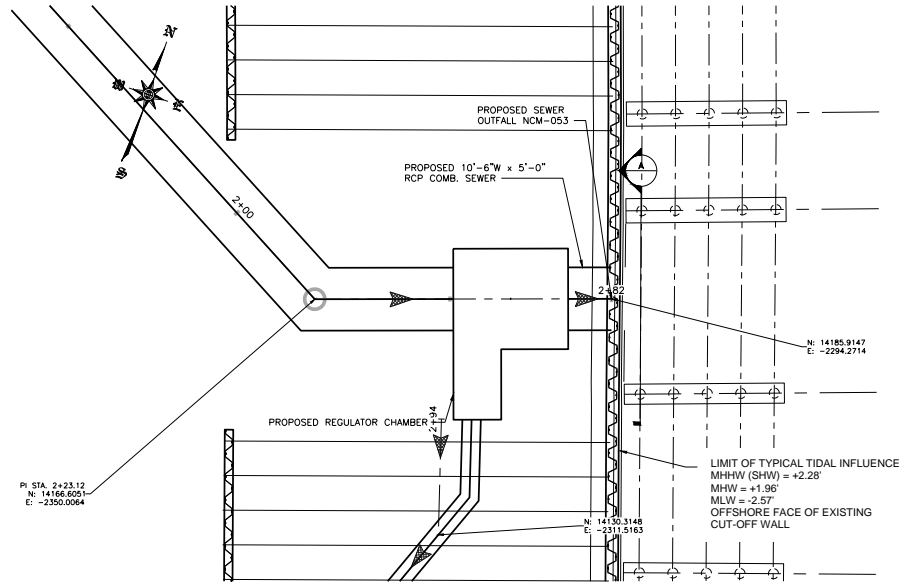
IN: EAST RIVER AT: MONTGOMERY STREET TO
TOWN: NEW YORK STATE: NEW YORK
CAPT. PATRICK J. BROWN WALK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)

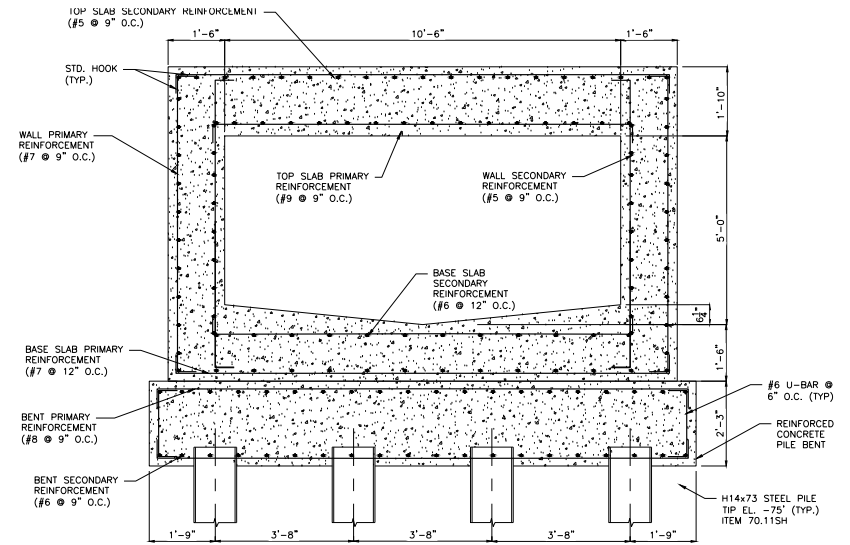
EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 50 OF 66

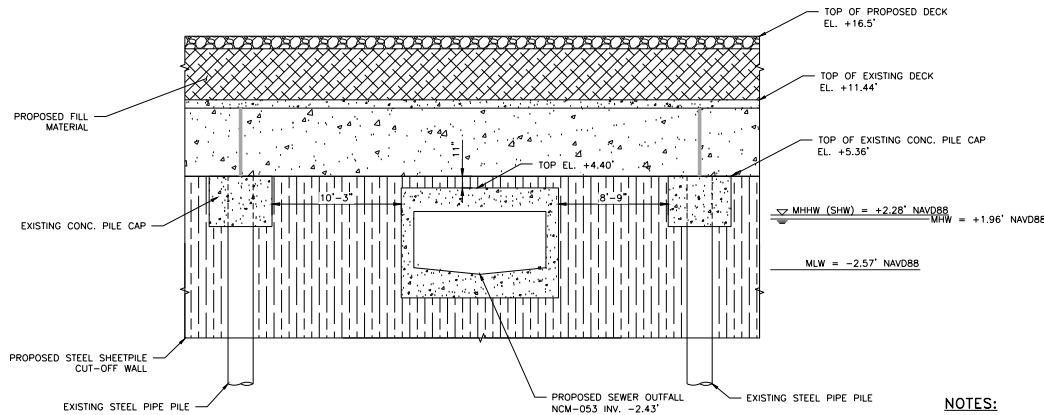
OUTFALL NCM-054 (REACH H)



PARTIAL PLAN
SCALE: 1"=10'



**10'-6"W x 5'-0"H COMB. SEWER
CROSS SECTION**
SCALE: 3/4"=1'



ELEVATION
SCALE: 3/4"=1'-0"

NOTES:

1. FOR ESPRANDE STRUCTURAL PLANS SEE SHEETS 22 THROUGH 37.
2. OUTFALL CONSTRUCTION SHALL BE COORDINATED WITH DEMOLITION/CONSTRUCTION OF ESPRANDE AND SHEET PILE CUT-OFF WALL.
3. FOR WORK RELATED TO THE INSTALLATION OF THE DEP SEWER LINE (EXCAVATION, CONCRETE, JOINTS, REBAR, AND BACKFILL TO EXISTING GRADE) SHOWN ON THIS DRAWING, USE ITEM NO. 50.11CS106050.
4. FOR WORK RELATED TO THE END TREATMENTS OF THE SEWER LINE, COFFERDAMS AND OTHER RELATED WORK TO THE SEWER LINE INSTALLATION PERFORMED AT THE SHEET PILE INTERFACE, USE ITEM 51.61F053.
5. FOR WORK RELATED TO THE REINFORCED CONCRETE PILE BENT USE ITEM 73.21AC FOR CONCRETE AND ITEM 73.51AS FOR REINFORCEMENT.
6. FOR DEP SEWER PILES SHOWN ON THIS DRAWING, USE ITEM 70.11SH.
7. PLACEMENT OF ANY REQUIRED COFFERDAMS SHALL BE LIMITED TO BELOW THE EXISTING SHADE LINE OF THE ESPRANDE.

OWNER(S):



CITY OF NEW YORK PARKS & RECREATION
OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

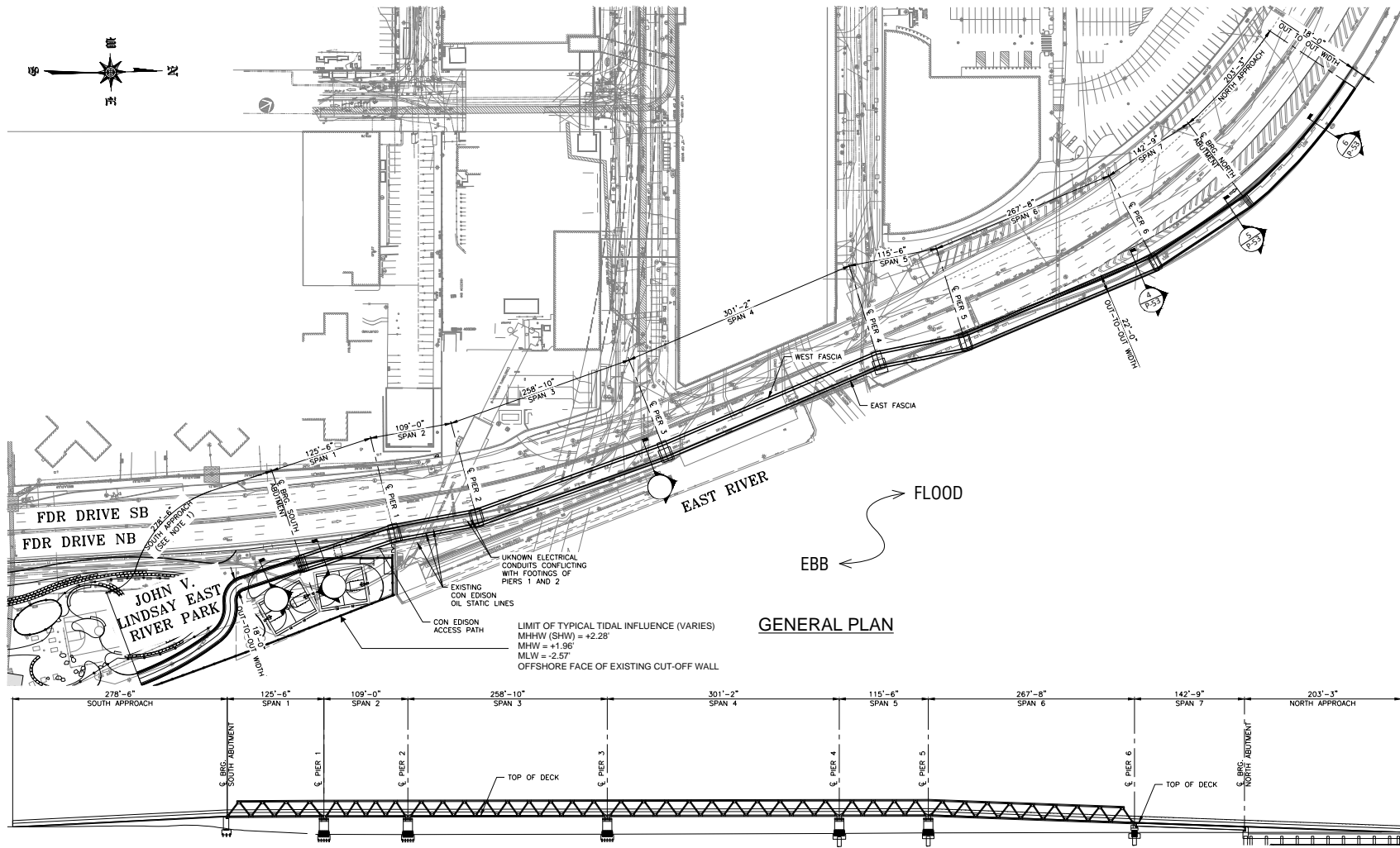
IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/15/2019 REV.: 1 SHEET NO 51 OF 66

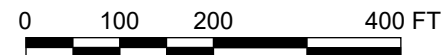
OUTFALL NCM-053 (REACH I)



NOTES:

1. FINAL ALIGNMENT IS UNDER DEVELOPMENT.
2. SOUTH ABUTMENT AND PIERS 1, 2, 3 AND 4 ARE ANTICIPATED TO BE LOCATED UPLAND OF TYPICAL LIMIT OF TIDAL INFLUENCE. PIERS 5, 6 AND NORTH ABUTMENT ARE ANTICIPATED TO BE LOCATED IN WATER.

GENERAL ELEVATION

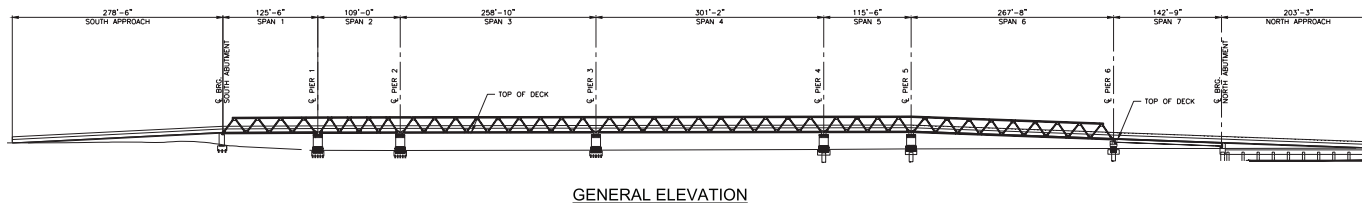
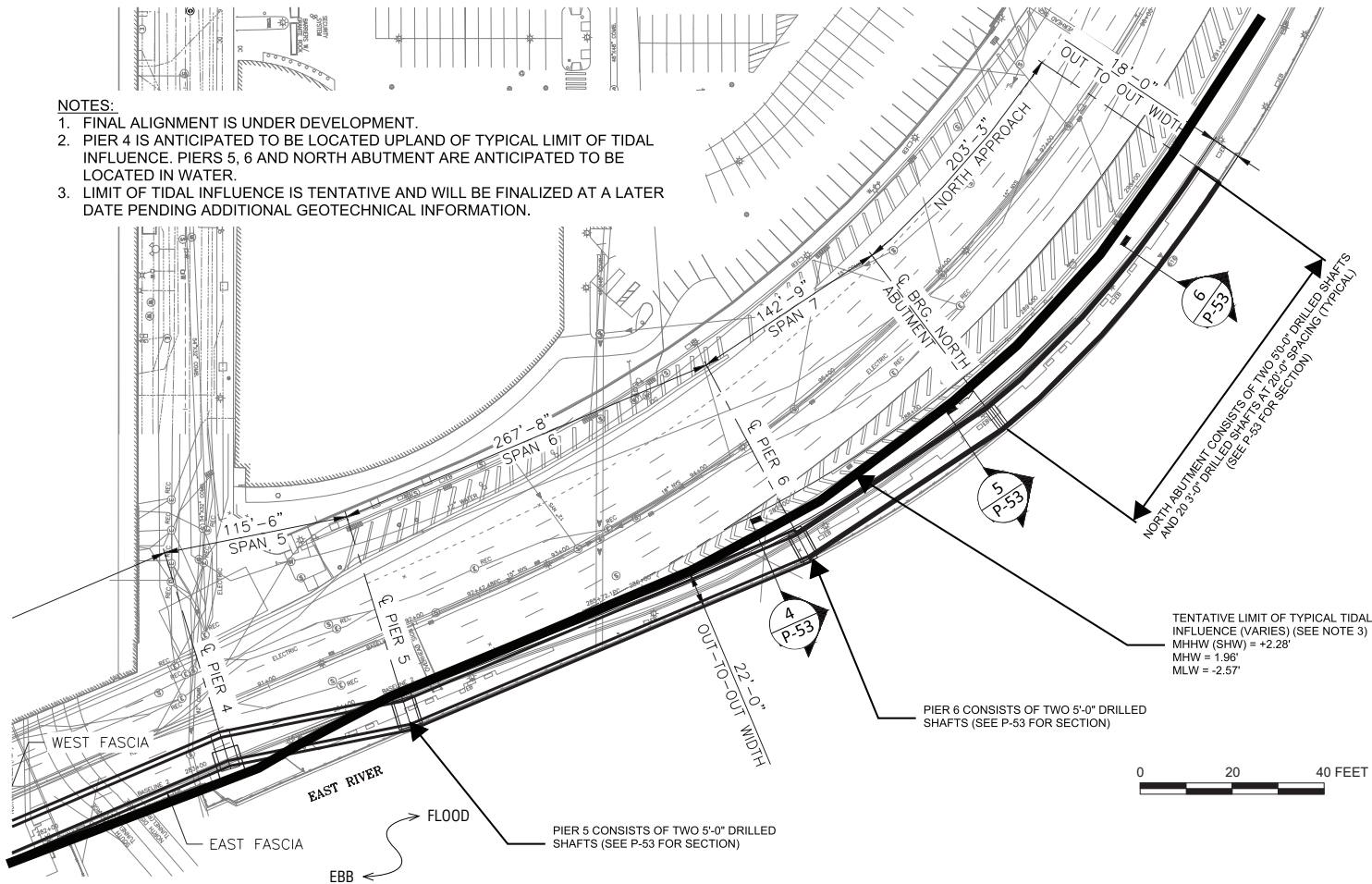


CONCEPT DESIGN

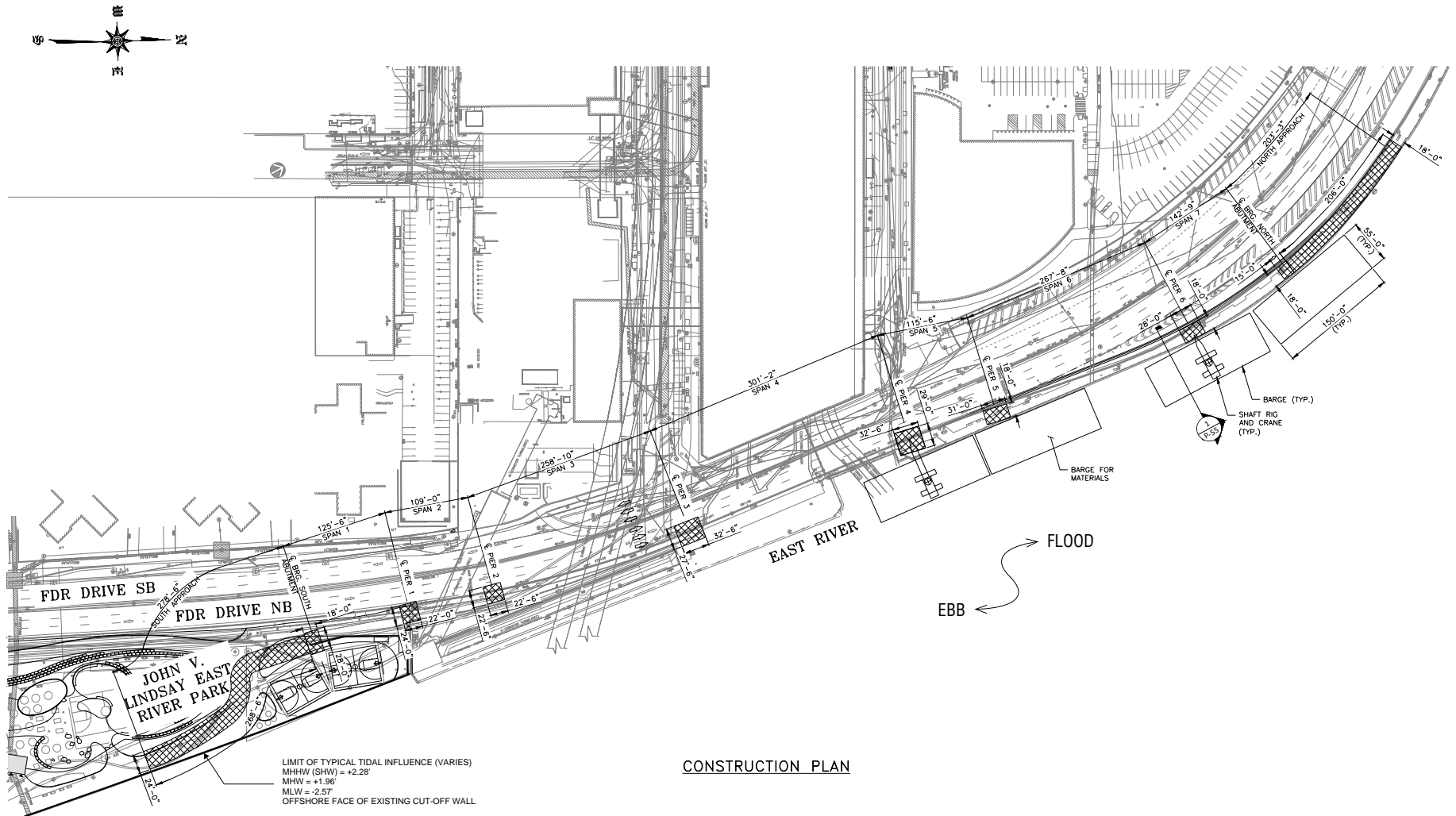
OWNER(S):	
 CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368	
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK	STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION	
WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT	
DATE: 11/15/2019	REV.: 1
SHEET NO 52 OF 66	
FLYOVER BRIDGE PLAN	


NOTES:

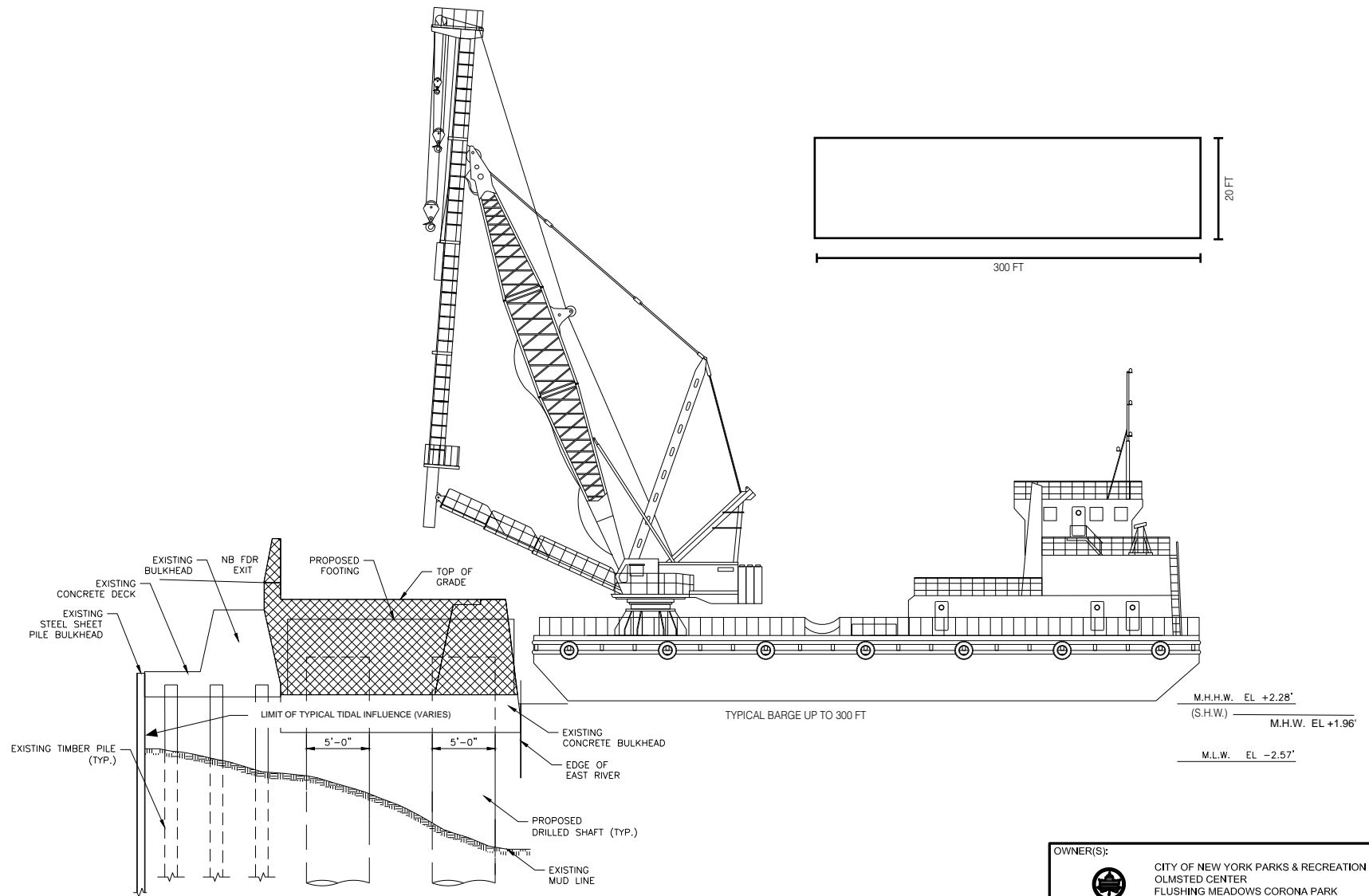
1. FINAL ALIGNMENT IS UNDER DEVELOPMENT.
2. PIER 4 IS ANTICIPATED TO BE LOCATED UPLAND OF TYPICAL LIMIT OF TIDAL INFLUENCE. PIERS 5, 6 AND NORTH ABUTMENT ARE ANTICIPATED TO BE LOCATED IN WATER.
3. LIMIT OF TIDAL INFLUENCE IS TENTATIVE AND WILL BE FINALIZED AT A LATER DATE PENDING ADDITIONAL GEOTECHNICAL INFORMATION.



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TOWN: NEW YORK	STATE: NEW YORK	
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION		
WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)	
EAST SIDE COASTAL RESILIENCY PROJECT		
DATE: 11/26/2019	REV.:	SHEET NO 52a OF 66
FLYOVER BRIDGE PLAN - DETAIL		

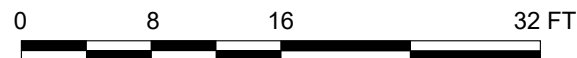



OWNER(S):		
 CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368		
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK	
TOWN: NEW YORK	STATE: NEW YORK	
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION		
WATERWAY: EAST RIVER		DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT		
DATE: 11/15/2019	REV.: 1	SHEET NO 54 OF 66
FLYOVER BRIDGE CONSTRUCTION DETAILS - PLAN		

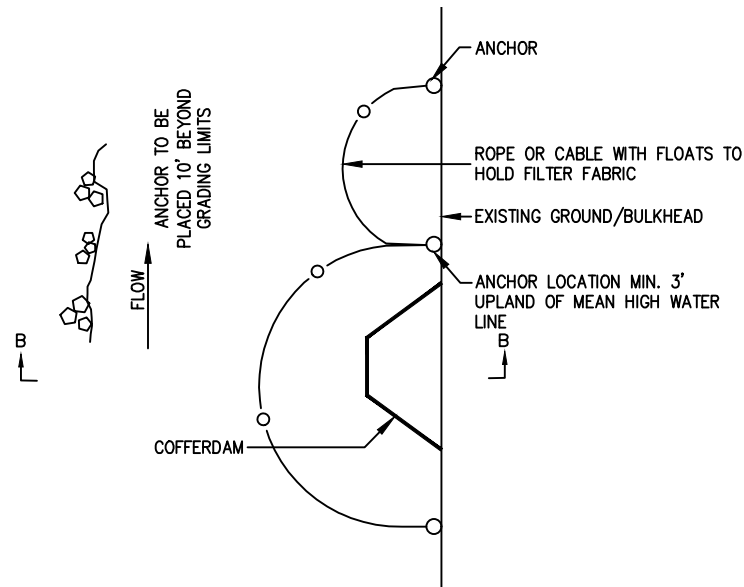


1 CROSS SECTION
P-54

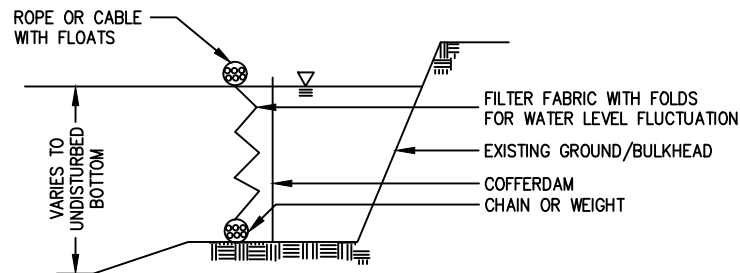
CONCEPT DESIGN



OWNER(S):  CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368		
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK	
TOWN: NEW YORK	STATE: NEW YORK	
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION		
WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)	
EAST SIDE COASTAL RESILIENCY PROJECT		
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FLYOVER BRIDGE CONSTRUCTION DETAILS - SECTION		



PLAN VIEW
NOT TO SCALE



SECTION B-B
NOT TO SCALE


NOTES:

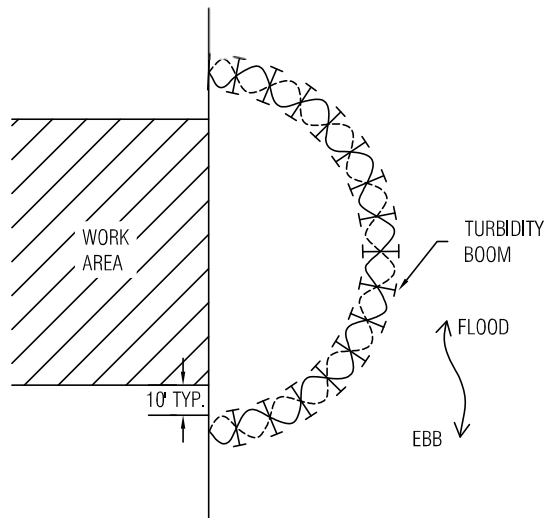
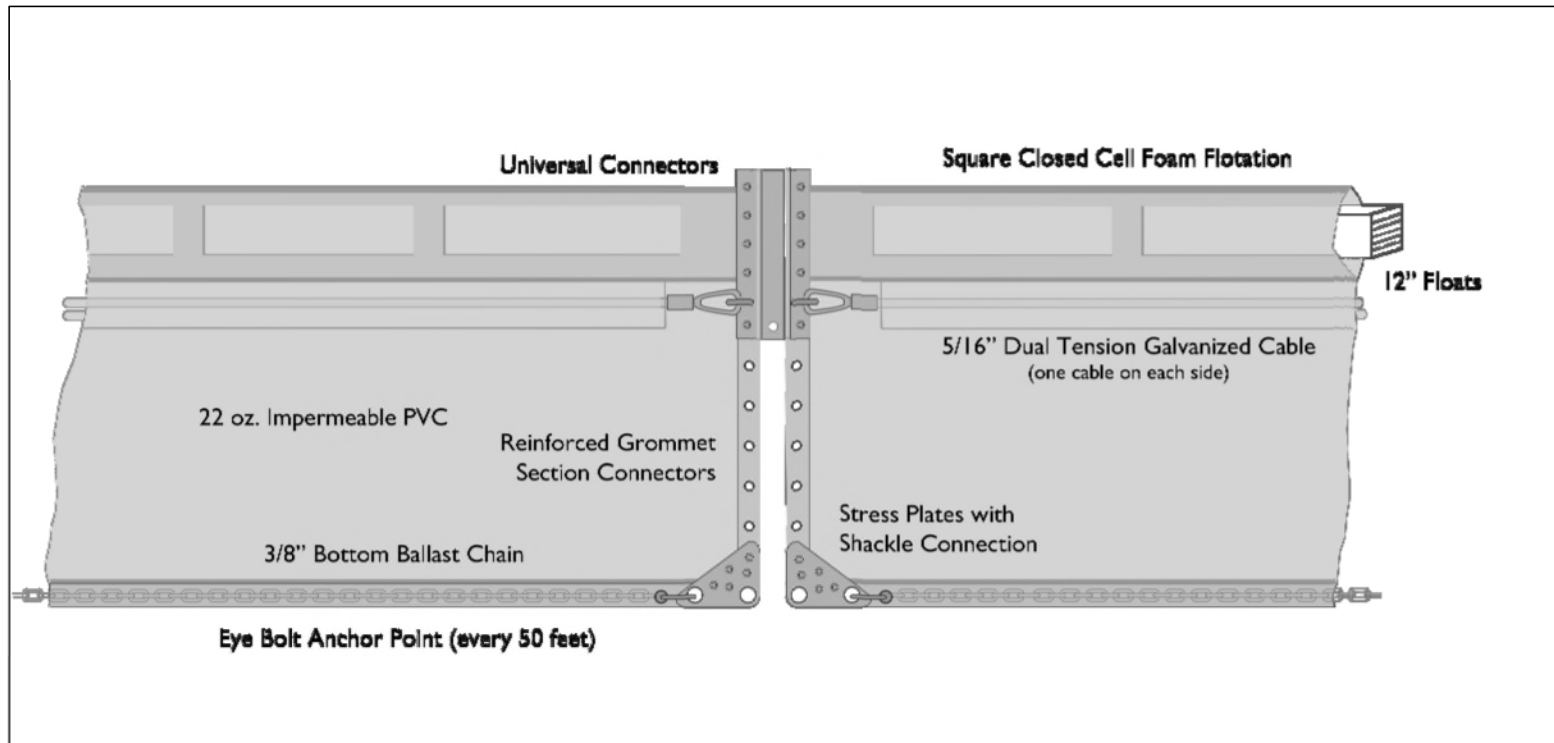
TURBIDITY CURTAIN

1. APPLICATION: TURBIDITY CURTAINS ARE NOT ALLOWED TO BE INSTALLED ACROSS FLOWING WATER COURSES.
2. DESIGN CRITERIA: THE TURBIDITY CURTAIN SHALL BE FIRMLY ANCHORED IN PLACE. THE HEIGHT OF THE CURTAIN SHALL BE 20 PERCENT GREATER THAN THE DEPTH OF THE WATER TO ALLOW FOR WATER LEVEL FLUCTUATIONS. IF WATER DEPTHS AT THE DESIGN ALIGNMENT ARE MINIMAL, THE TOE CAN BE ANCHORED IN PLACE BY STAKING.
3. CONSTRUCTION SPECIFICATIONS: THE AREA OF PROPOSED INSTALLATION OF THE CURTAIN SHALL BE INSPECTED FOR OBSTACLES AND IMPEDIMENTS THAT COULD DAMAGE THE CURTAIN OR IMPAIR ITS EFFECTIVENESS TO RETAIN SEDIMENT. ALL MATERIALS SHALL BE REMOVED SO THEY CANNOT ENTER THE WATERBODY.
4. MAINTENANCE: THE TURBIDITY CURTAIN SHALL BE INSPECTED DAILY. ANY DAMAGED SECTIONS SHALL BE REPAIRED OR REPLACED IMMEDIATELY. IT IS NOT NORMALLY NECESSARY TO REMOVE SEDIMENT DEPOSITED BEHIND THE CURTAIN; HOWEVER, WHEN DETERMINED BY THE ENGINEER TO BE NECESSARY, REMOVAL SHALL BE DONE BY HAND PRIOR TO REMOVAL OF THE BARRIER. ALL REMOVED SILT SHALL BE STABILIZED IN UPLAND AREAS AWAY FROM THE WATERBODY. THE BARRIER SHALL BE REMOVED SLOWLY AND BY CAREFULLY PULLING IT TOWARD THE CONSTRUCTION SITE TO MINIMIZE THE RELEASE OF ATTACHED SEDIMENT.


COFFERDAM

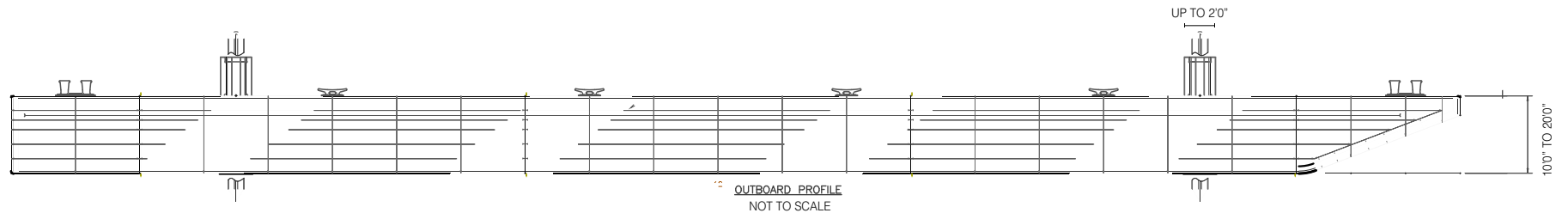
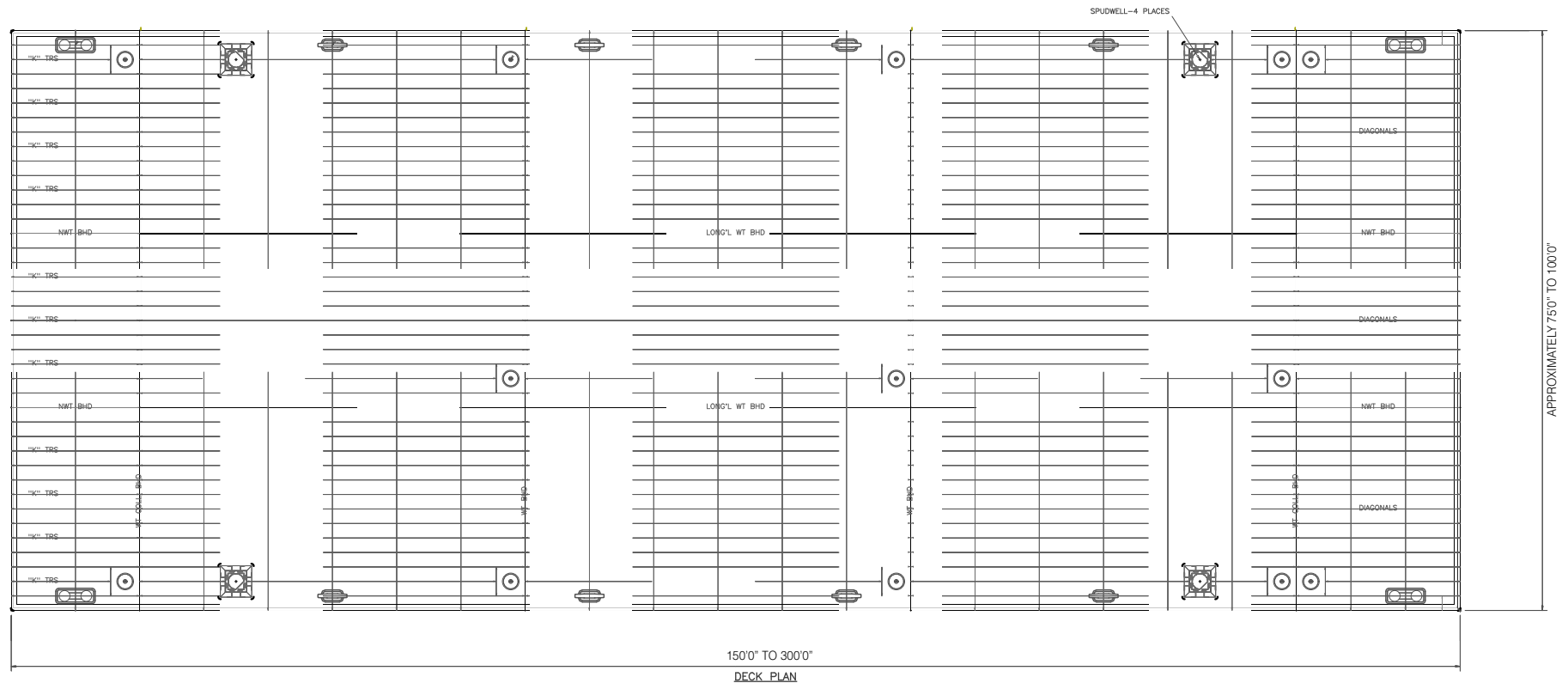
1. DESIGN CRITERIA: NO CONSTRUCTION ACTIVITY SHALL COMMENCE IN THE AREA OF THE COFFERDAM UNTIL IT IS COMPLETED AND STABILIZED. COFFERDAM STRUCTURES SHALL BE SIZED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. TOP OF COFFERDAM SHOULD BE CONSTRUCTED TO ALIGN WITH TOP OF EXISTING PILE CAP.
2. MAINTENANCE AND INSPECTION: ALL COFFERDAMS WILL BE INSPECTED DAILY TO ASSURE PROPER PERFORMANCE AND STABILITY. ANY UNDERMINED OR SETTLED AREAS SHALL BE RESTORED IMMEDIATELY. ANY HOLES, LEAKS, OR TORN AREAS IN THE GEO-MEMBRANES OR FABRIC SHALL BE REPAIRED IMMEDIATELY. ANY SHIFTING, MOVEMENT, OR SETTLING OF THE COFFER DAM SHALL BE ADDRESSED IMMEDIATELY. INSPECT THE INTERIOR DEWATERING SYSTEM AND ENSURE THAT THE SYSTEM IS DISCHARGING CLEAN WATER, OR IS BEING PUMPED TO APPROPRIATE SEDIMENT CONTROL FACILITY PRIOR TO RETURNING TO THE WATER RESOURCE. REPAIR OR REPLACE ANY LOSS OF ROCK RIPRAP OR FILL THAT MAY OCCUR AND ASSURE THE TOP OF THE COFFER DAM IS LEVEL WITHOUT ANY LOW SPOTS DUE TO SETTLING.
3. UPON COMPLETION OF THE CONSTRUCTION WORK, REMOVE ALL EXCESS MATERIAL, ACCUMULATED SEDIMENT AND DEBRIS FROM THE WORK AREA, AND REMOVE THE COFFERDAM IN ACCORDANCE WITH THE SITE STABILIZATION PLAN.


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TOWN: NEW YORK	STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION	
WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT	
DATE: 11/15/2019	REV.: 1
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COFFERDAM AND TURBIDITY CURTAIN - TYPICAL DETAILS	

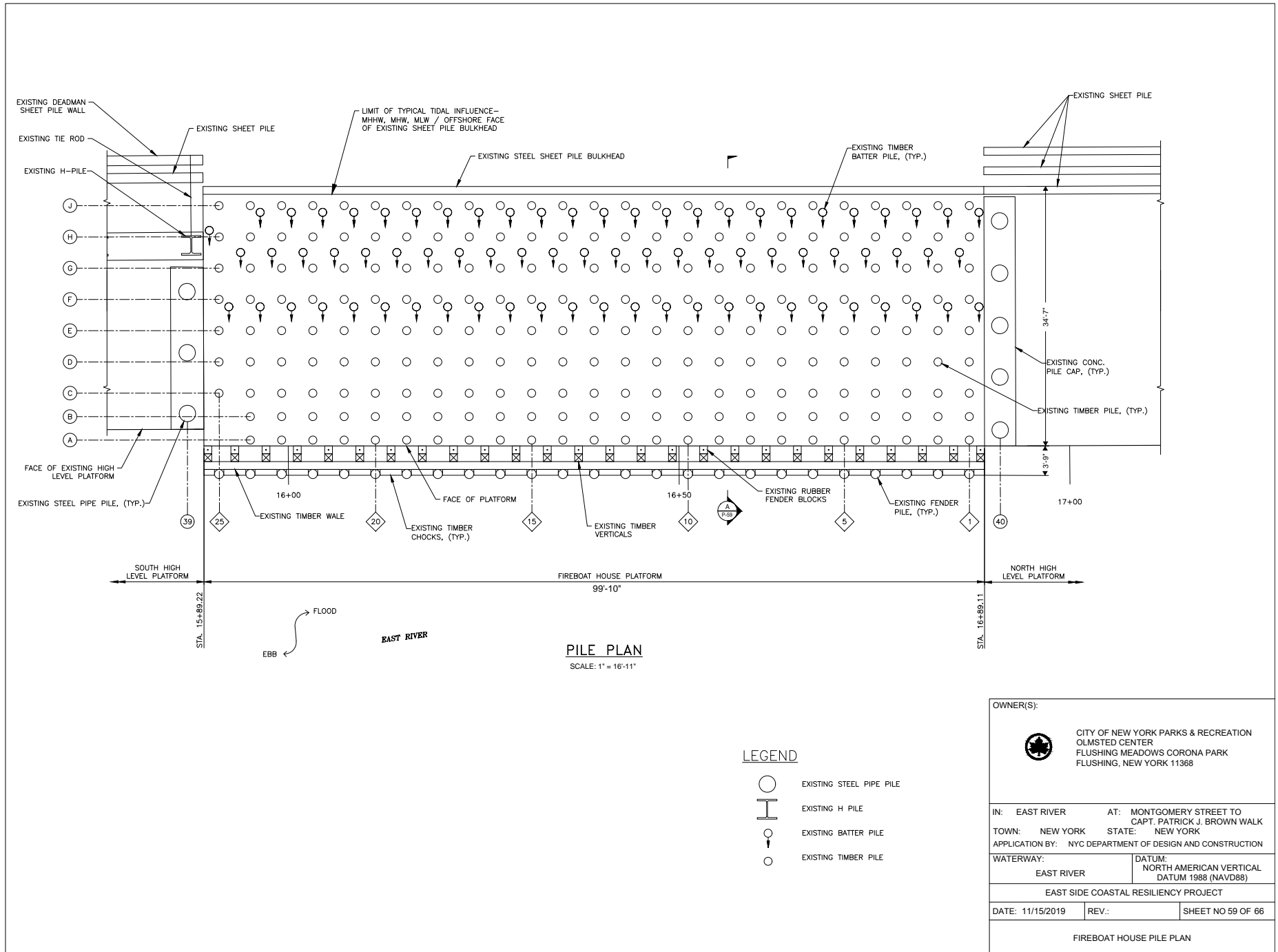


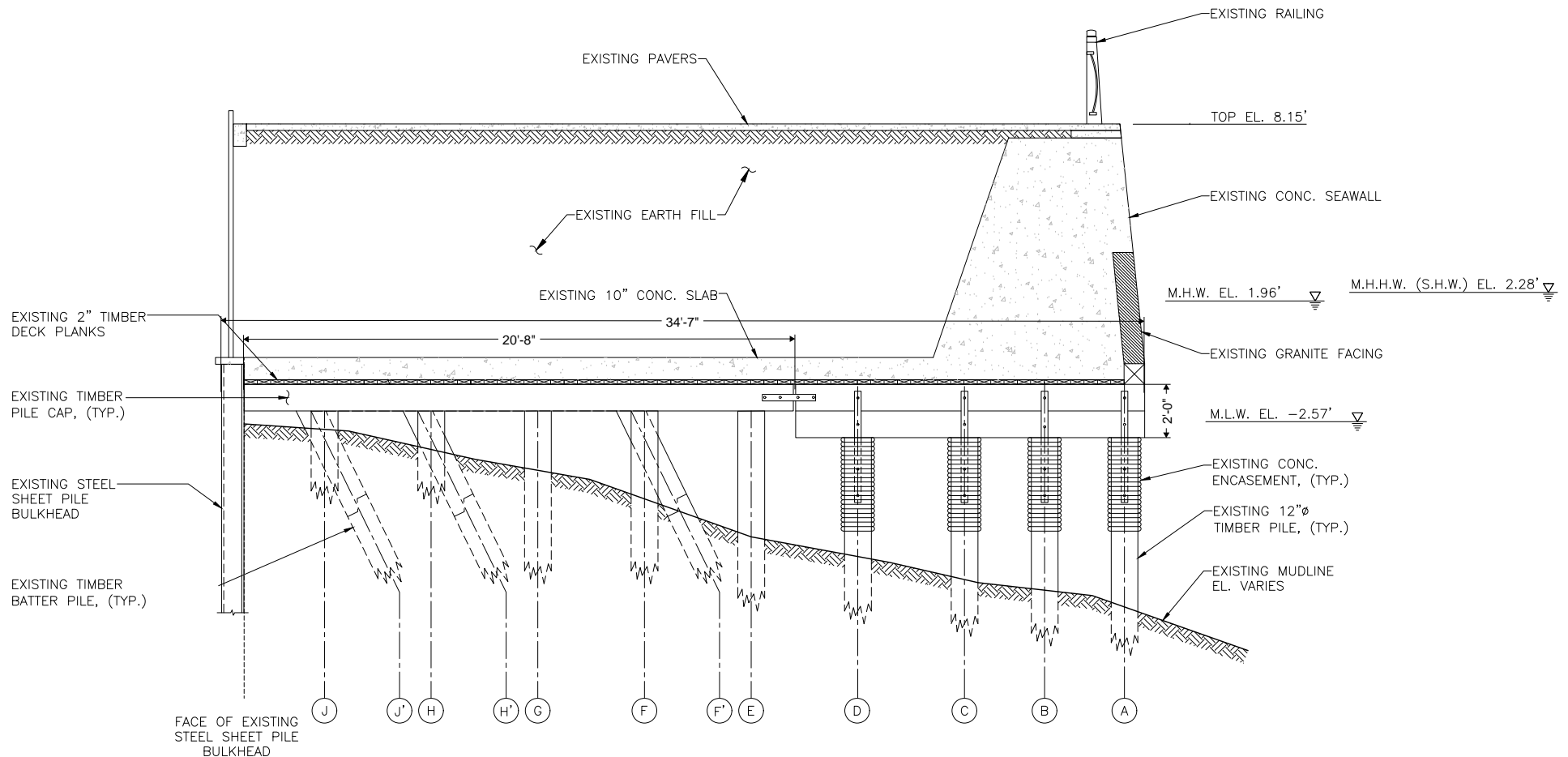
TYPICAL TURBIDITY BOOM LAYOUT

OWNER(S):		
<div></div> <div>CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368</div>		
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK	
TOWN: NEW YORK	STATE: NEW YORK	
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION		
WATERWAY: EAST RIVER		DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT		
DATE: 11/15/2019	REV.:	SHEET NO 57 OF 66
TURBIDITY BOOM DETAIL		




OWNER(S):		
 CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368		
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK	
TOWN: NEW YORK	STATE: NEW YORK	
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION		
WATERWAY: EAST RIVER		DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)
EAST SIDE COASTAL RESILIENCY PROJECT		
DATE: 11/15/2019	REV.: 1	SHEET NO 58 OF 66
SPUD BARGE TYPICAL DETAIL		

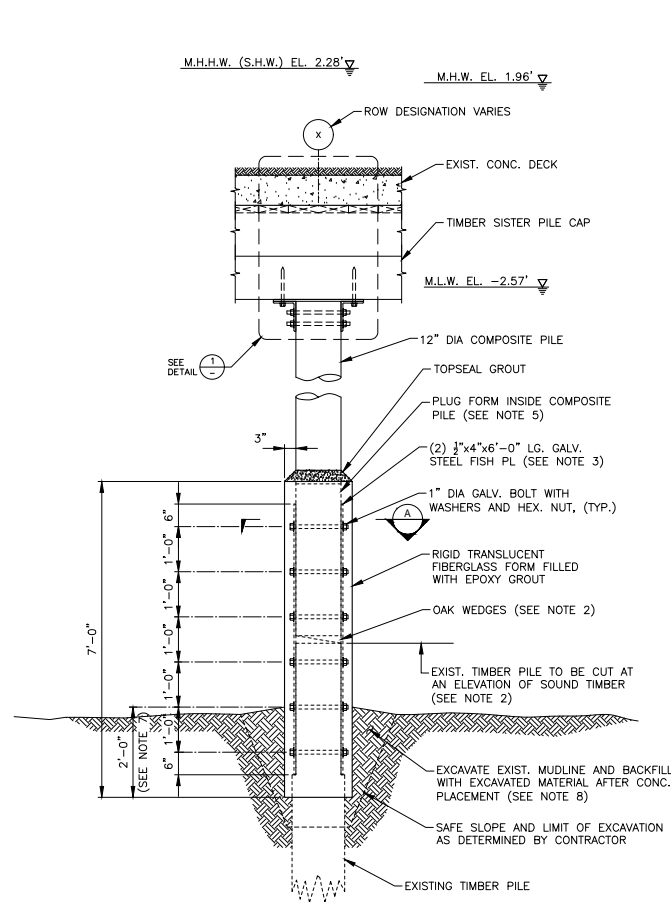




A
P-58 EXISTING FIREBOAT HOUSE PLATFORM
SCALE: 1" = 5'-7/8"

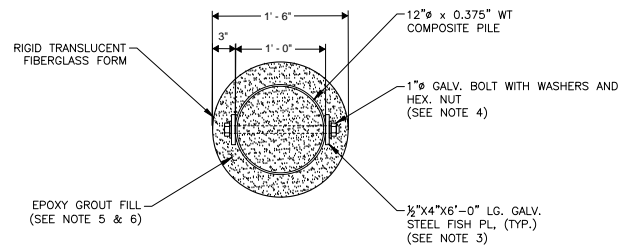
NOTE: TIMBER FENDERS AND FIREBOAT HOUSE FOUNDATION
NOT SHOWN FOR CLARITY

OWNER(S):		
<div></div> <div>CITY OF NEW YORK PARKS & RECREATION OLMSTED CENTER FLUSHING MEADOWS CORONA PARK FLUSHING, NEW YORK 11368</div>		
IN: EAST RIVER	AT: MONTGOMERY STREET TO CAPT. PATRICK J. BROWN WALK	
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APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION		
WATERWAY: EAST RIVER	DATUM: NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88)	
EAST SIDE COASTAL RESILIENCY PROJECT		
DATE: 11/15/2019	REV.:	SHEET NO 60 OF 66
FIREBOAT HOUSE TYPICAL SECTION		

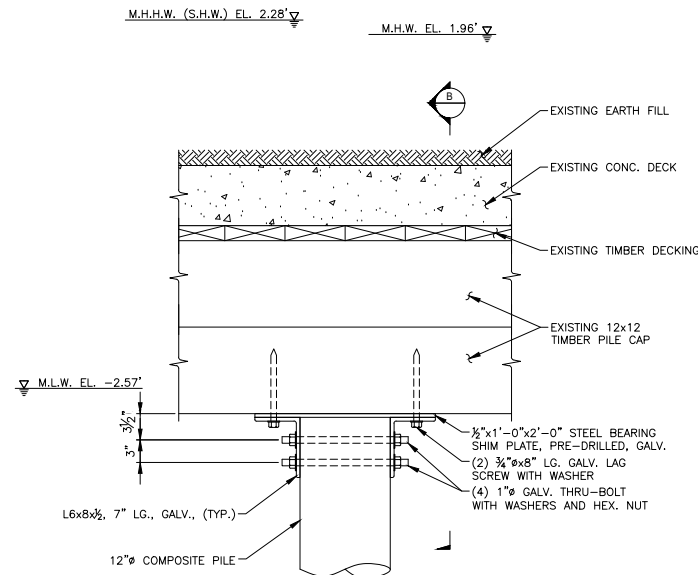


COMPOSITE POST REPLACEMENT

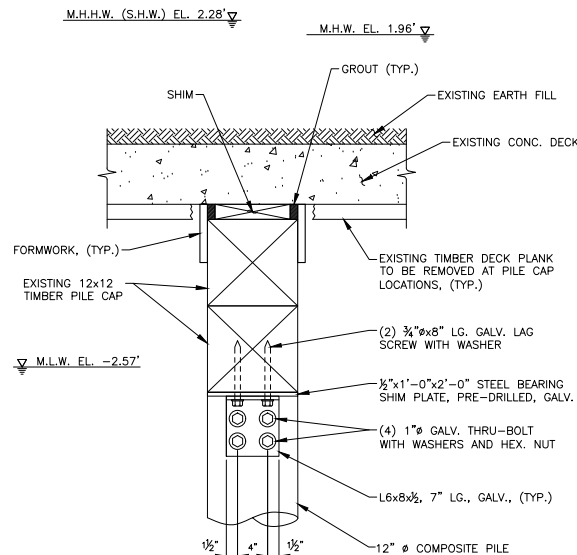
NTS



A SECTION
NTS



1 DETAIL
NTS



B SECTION
NTS

NOTES:

- ADJACENT PILES NOT SHOWN FOR CLARITY.
- CUT LENGTH OF THE EXISTING TIMBER PILES SHALL BE THE GREATER OF A DISTANCE 18" ABOVE THE EXISTING MUDLINE OR THE DISTANCE TO SOUND TIMBER. SOUND TIMBER SHALL BE WHERE MINIMUM 10" PILE DIAMETER EXISTS AND GREATER THAN 90% CROSS-SECTION REMAINS, OR WHERE 8" PILE DIAMETER EXISTS WITH 100% REMAINING CROSS-SECTION (TO BE VERIFIED BY OWNER'S REPRESENTATIVE). TRIM OAK WEDGES AS NEEDED TO MAINTAIN MINIMUM CLEARANCE OF 1-1/2" FROM INSIDE OF FIBERGLASS FORM.
- CONTRACTOR TO TRIM EXISTING PILE AS NECESSARY TO INSTALL GALVANIZED STEEL FISH PLATES FLUSH BETWEEN THE COMPOSITE PILE AND THE EXISTING TIMBER PILE. WHERE THE EXISTING PILE IS SMALLER THAN THE COMPOSITE PILE, OAK SPACER BLOCKS SHALL BE PLACED BETWEEN THE EXISTING PILE AND FISH PLATES TO MAINTAIN A FLUSH CONNECTION WITH THE COMPOSITE PILE.
- CONTRACTOR TO TRIM EXCESS PROJECTING PORTION OF GALVANIZED BOLTS, IF NECESSARY, TO ACCOMMODATE THE RIGID FIBERGLASS FORMWORK WITH A MAXIMUM ANNULUS OF 3 INCHES.
- CONTRACTOR SHALL PRE-INSTALL A PLUG FORM INSIDE THE COMPOSITE PILE AND FILL THE COMPOSITE PILE WITH CEMENTITIOUS GROUT, TO A MINIMUM ELEVATION OF 1 FOOT ABOVE THE HIGHEST THRU-BOLT. CONTRACTOR IS RESPONSIBLE FOR PROVIDING MEANS AND METHODS TO PLACE FILL AND ALLOW EXCESS WATER TO FLOW OUT FROM INSIDE THE COMPOSITE PILE.
- PUMP PORTS MUST BE CAPPED AFTER EPOXY PLACEMENT. CONTRACTOR TO PROVIDE MEANS AND METHODS FOR MATERIAL PLACEMENT.
- THE BOTTOM ELEVATION OF THE FIBERGLASS FORMWORK AND EPOXY GROUT FILL SHALL EXTEND 1 FT BELOW THE BOTTOM BOLT OF THE SPLICE CONNECTION. THE FORMWORK AND EPOXY GROUT FILL SHALL ALSO EXTEND NO LESS THAN 2 FT BELOW THE EXISTING MUDLINE ELEVATION. THE DEPTH OF EXCAVATION MAY VARY IN ACCORDANCE WITH THE ELEVATION OF SOUND TIMBER AT EACH REPAIR LOCATION.
- PER UNDERWATER INSPECTION, SOILS NEAR THE MUDLINE ARE COMPOSED OF A MIX OF HARD SOILS AND STONE WHICH VARY FROM 4" COBBLES TO 24" BOULDERS. THE CONTRACTOR SHALL EXCAVATE AND BACKFILL THE SITE TO THE ELEVATIONS AND LIMITS SHOWN AND AS NEEDED TO MEET THE REQUIREMENTS OF CONSTRUCTION.
- EXISTING TIMBER DECKING DIRECTLY ABOVE THE EXISTING TIMBER PIER CAP IS TO REMAIN. TIMBER DECKING IN LOCATIONS WHERE TIMBER PILE CAPS ARE TO BE INSTALLED IS TO BE REMOVED.

OWNER(S):



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OLMSTED CENTER
FLUSHING MEADOWS CORONA PARK
FLUSHING, NEW YORK 11368

IN: EAST RIVER AT: MONTGOMERY STREET TO
CAPT. PATRICK J. BROWN WALK
TOWN: NEW YORK STATE: NEW YORK
APPLICATION BY: NYC DEPARTMENT OF DESIGN AND CONSTRUCTION

WATERWAY: EAST RIVER DATUM: NORTH AMERICAN VERTICAL
DATUM 1988 (NAVD88)

EAST SIDE COASTAL RESILIENCY PROJECT

DATE: 11/11/19 REV.: SHEET NO 61 OF 65

FIREBOAT HOUSE PROPOSED REPAIRS (1 OF 2)

