

February 10, 2025

Kyle W. Buelow, CERP, CPESC, CPSWQ
Senior Project Scientist, Biodiversity & Ecology
Environment & Health
Ramboll
333 West Washington Street
Syracuse, NY 13202

Re: **F-2024-0835** (Previously F-2024-0346)
U.S. Army Corps of Engineers Application – New York
State Office of Resilient Homes and Communities.
Proposing to incorporate oyster restoration on and adjacent
to several breakwater segments, to be conducted by Billion
Oyster Project. BOP would establish multiple oyster
restoration techniques on and around the Living
Breakwaters, including bay balls installed on the floor of
Raritan Bay adjacent to the breakwaters on the lee side,
placement of disks within the ECO-enhanced concrete units
on the breakwaters, and in-situ oyster larvae setting
treatments. Raritan Bay, Tottenville Shoreline Project,
Tottenville, NY, 10301
Modification of a Previously Reviewed Activity

Dear Kyle Buelow:

The Department of State (DOS) received your proposed modification of the above-referenced activity on 12/19/2024. The DOS previously reviewed the original proposal and concurred with a consistency certification for it, or otherwise indicated it had no objection to authorization of the proposed activity (F-2024-0346).

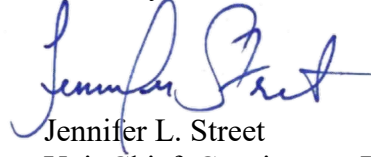
The proposed modification involves the removal of the Bay Balls from the project, reduction in the seeded DropLock units, and the contingency seeded DropLock units would be placed on the landward side scour apron of breakwaters G and H, as shown on the attached plans for the submitted modification.

The Department of State has determined the proposed modification would not result in coastal zone effects that would be substantially different than those originally reviewed. Therefore, the Department has no objection to the proposed modification.

This determination is without prejudice to and does not obviate the need to obtain all other applicable licenses, permits, and other forms of authorization or approvals which may be required pursuant to existing New York State statutes.

When communicating with us regarding this matter, please contact us at (518) 474-6000 or (e-mail: CR@dos.ny.gov) and refer to our file #F-2024-0835.

Sincerely,

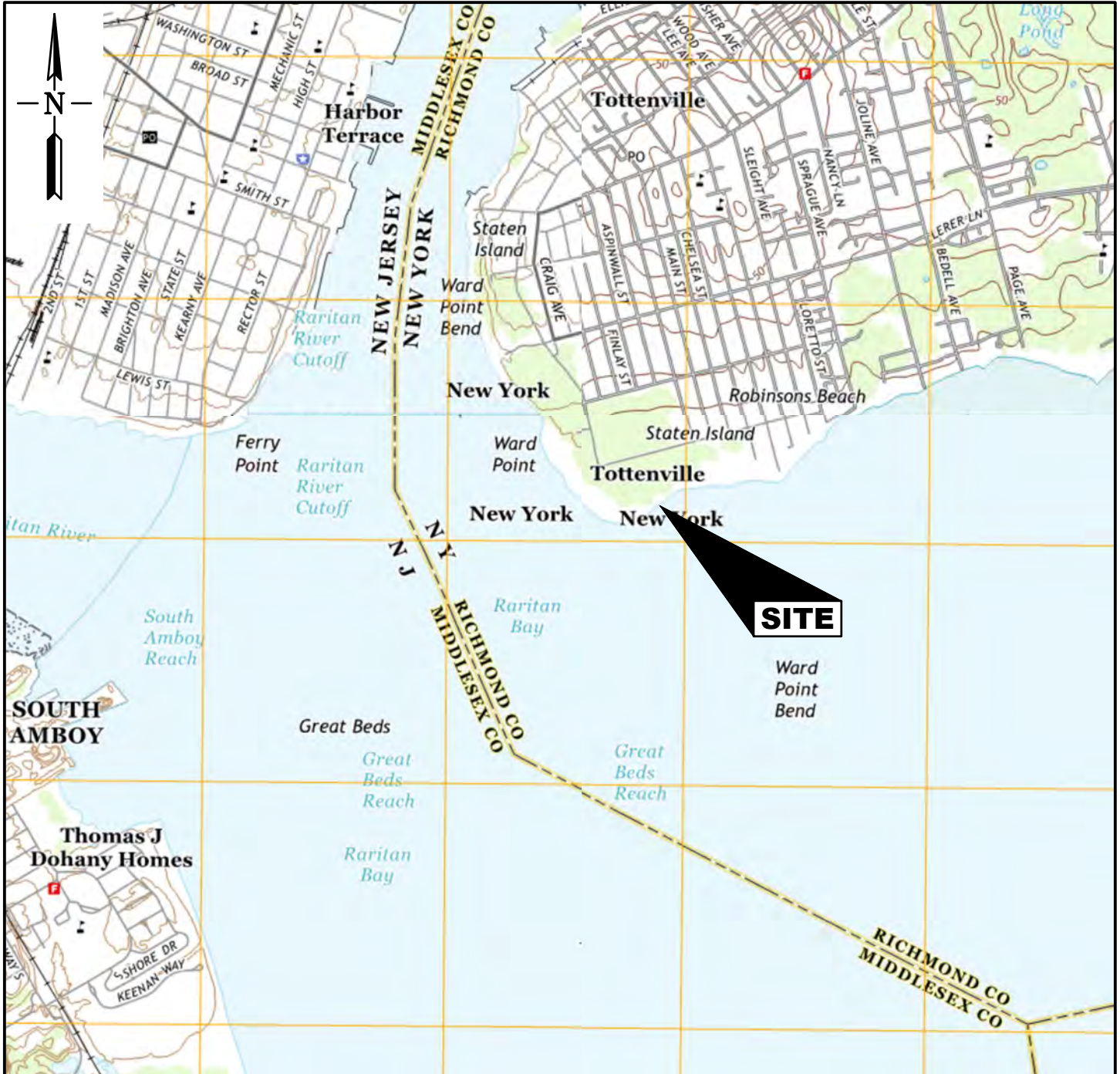


Jennifer L. Street
Unit Chief, Consistency Review Unit
Office of Planning, Development and
Community Infrastructure

JLS/pb

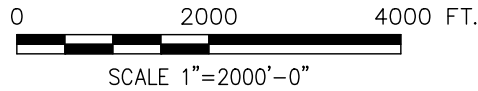
Encl. 16 page plan set dated 12/08/2024

ecc: ACOE - NY District - Arlene Tirado (NAN-2017-00296-M4)
DEC Region 2 (2-6405-00610/00007)
NYSDEC Marine Resources - Jennifer O'Dwyer, Wade Carden
NYC Department of City Planning - Dan Chibbaro (WRP# 24-189)



TAKEN FROM MULTIPLE USGS MAPS:
 ARTHUR KILL, PERTH AMBOY, SOUTH
 AMBOY, & KEYPORT QUADRANGLE
 NEW JERSEY-NEW YORK
 7.5 MINUTE SERIES

VICINITY MAP



FOR PERMIT USE ONLY
 NOT FOR CONSTRUCTION
 05/24/2024 JOINT APPLICATION

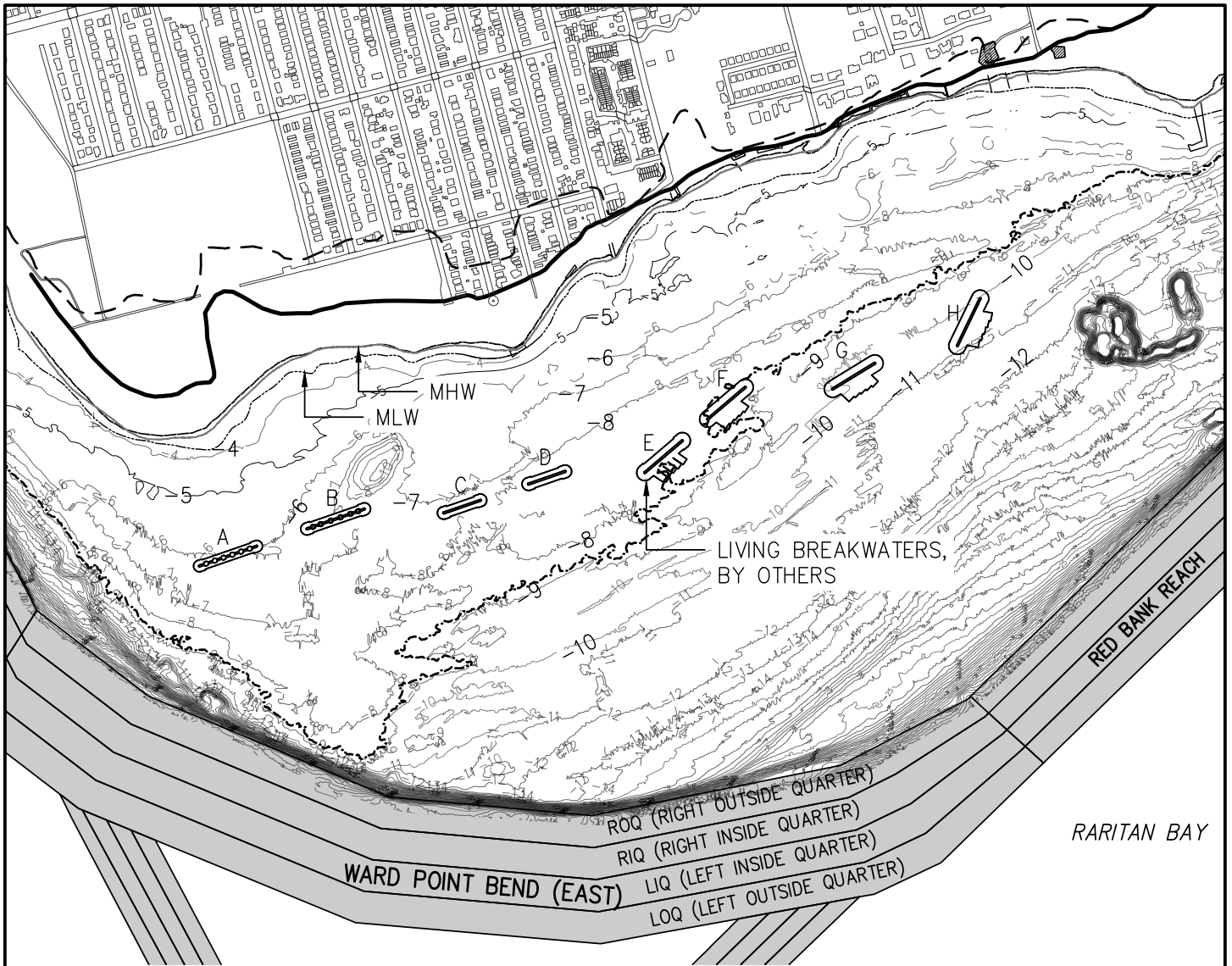
DATUM: N.A.V.D. 88
 APPLICATION NO.:
 AGENT: NEW YORK OFFICE OF RESILIENT
 HOMES AND COMMUNITIES, FORMERLY KNOWN
 AS GOVERNOR'S OFFICE OF STORM
 RECOVERY.

SUPPORTED BY: BILLION OYSTER PROJECT

PROPOSED OYSTER RESTORATION ON THE LIVING
 BREAKWATERS
 WARD POINT BEND, RARITAN BAY
 TOTTEVILLE, STATEN ISLAND
 COUNTY OF RICHMOND
 STATE OF NEW YORK

DATE: 12/09/2024

SHEET 1 OF 16



LEGEND

- MEAN HIGH WATER
- - - - MEAN LOW WATER
- FEMA V-ZONE
- - - - LiMWA
- - - -6' MLW (NAVD88 EL. -8.62)
- ▭ FEDERAL NAVIGATION CHANNEL

TIDAL ELEVATIONS NAVD88	
MEAN HIGHER HIGH WATER	2.41
MEAN HIGH WATER	2.08
MEAN LOW WATER	-2.62
MEAN LOWER LOW WATER	-2.82

*ALL ELEVATIONS ARE IN NAVD88

EXISTING OVERALL SITE PLAN

0 1200 2400 FT.

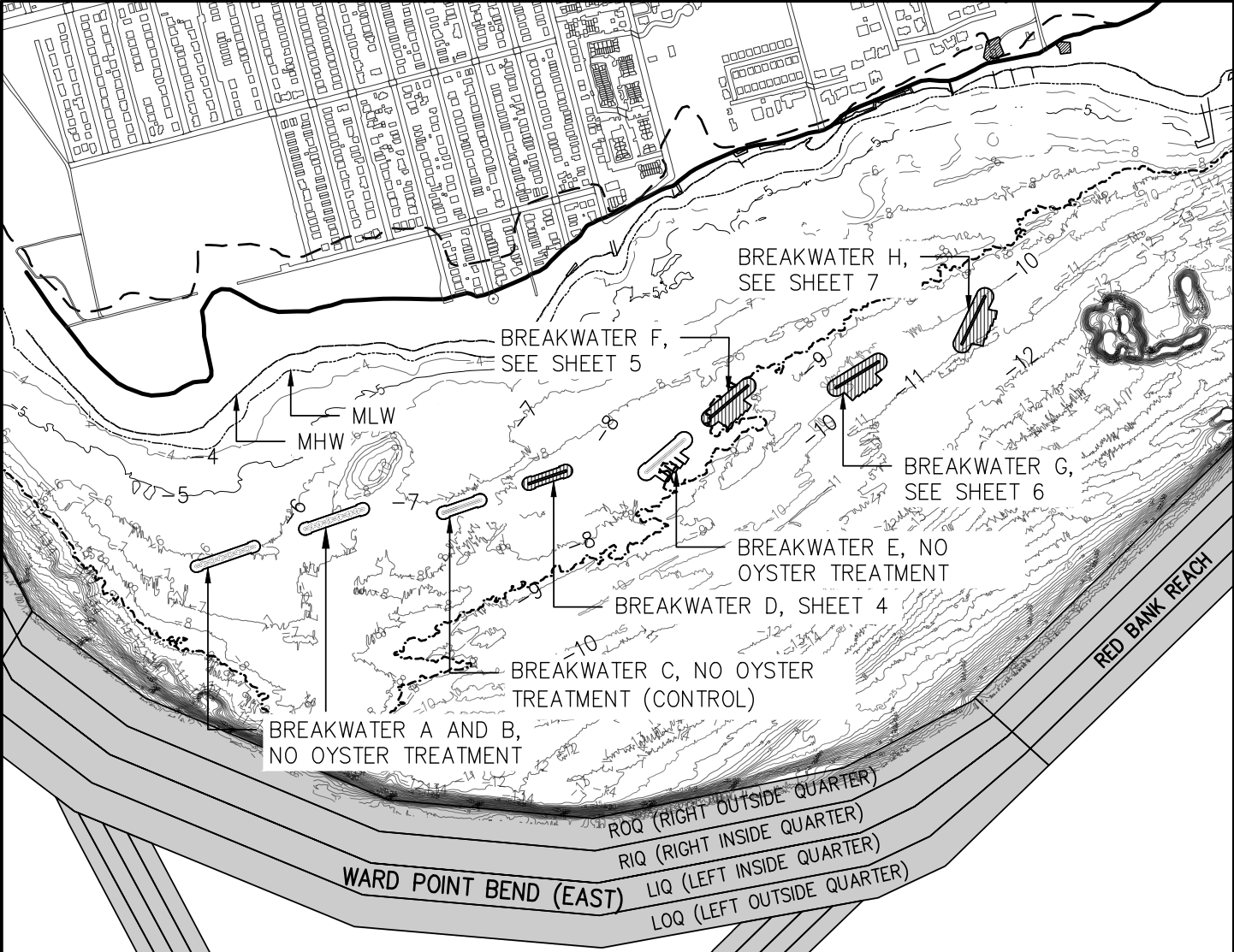


SCALE 1"=1200'-0"

FOR PERMIT USE ONLY
NOT FOR CONSTRUCTION
05/24/2024 JOINT APPLICATION

DATUM: N.A.V.D. 88
APPLICATION NO.:
AGENT: NEW YORK OFFICE OF RESILIENT HOMES AND COMMUNITIES, FORMERLY KNOWN AS GOVERNOR'S OFFICE OF STORM RECOVERY.
SUPPORTED BY: BILLION OYSTER PROJECT

PROPOSED OYSTER RESTORATION ON THE LIVING BREAKWATERS
WARD POINT BEND, RARITAN BAY
TOTTENVILLE, STATEN ISLAND
COUNTY OF RICHMOND
STATE OF NEW YORK
DATE: 12/09/2024 SHEET 2 OF 16



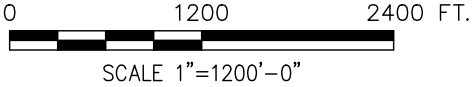
LEGEND

- BREAKWATERS WITH POTENTIAL OYSTER RESTORATION
- EXISTING BREAKWATERS
- FEDERAL NAVIGATION CHANNEL
- MEAN HIGH WATER
- MEAN LOW WATER
- FEMA V-ZONE
- LIMWA
- 6' MLW (NAVD88 EL. -8.62)

TIDAL ELEVATIONS NAVD88	
MEAN HIGHER HIGH WATER	2.41
MEAN HIGH WATER	2.08
MEAN LOW WATER	-2.62
MEAN LOWER LOW WATER	-2.82

*ALL ELEVATIONS ARE IN NAVD88

PROPOSED OVERALL SITE PLAN



FOR PERMIT USE ONLY
NOT FOR CONSTRUCTION
05/24/2024 JOINT APPLICATION

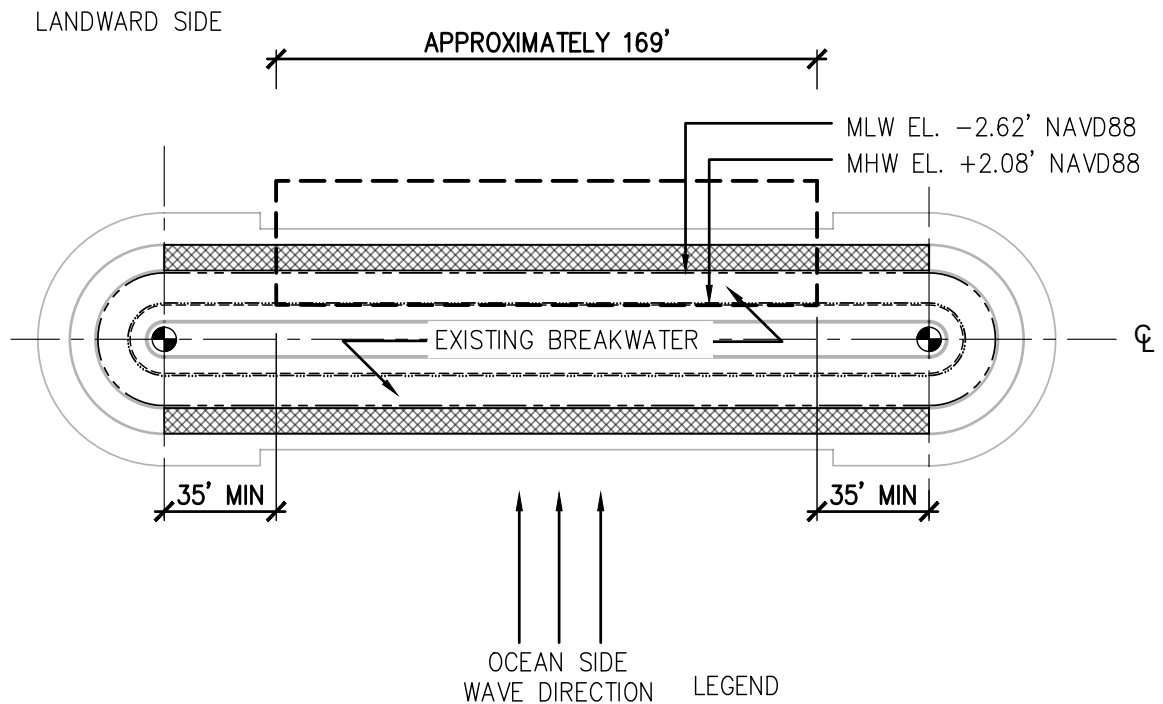
DATUM: N.A.V.D. 88
APPLICATION NO.:
AGENT: NEW YORK OFFICE OF RESILIENT HOMES AND COMMUNITIES, FORMERLY KNOWN AS GOVERNOR'S OFFICE OF STORM RECOVERY.
SUPPORTED BY: BILLION OYSTER PROJECT

PROPOSED OYSTER RESTORATION ON THE LIVING BREAKWATERS
WARD POINT BEND, RARITAN BAY
TOTTENVILLE, STATEN ISLAND
COUNTY OF RICHMOND
STATE OF NEW YORK
DATE: 12/09/2024
SHEET 3 OF 16

FOR PERMIT USE ONLY
 NOT FOR CONSTRUCTION
 05/24/2024 JOINT APPLICATION
 09/19/2024 REV 1

DATUM: N.A.V.D. 88
 APPLICATION NO.:
 AGENT: NEW YORK OFFICE OF RESILIENT
 HOMES AND COMMUNITIES, FORMERLY KNOWN
 AS GOVERNOR'S OFFICE OF STORM
 RECOVERY.
 SUPPORTED BY: BILLION OYSTER PROJECT

PROPOSED OYSTER RESTORATION ON THE LIVING
 BREAKWATERS
 WARD POINT BEND, RARITAN BAY
 TOTTEVILLE, STATEN ISLAND
 COUNTY OF RICHMOND
 STATE OF NEW YORK
 DATE: 12/09/2024
 SHEET 4 OF 16

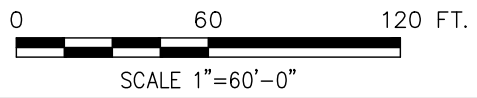


PROPOSED OYSTER DISK TREATMENTS	980
IN-SITU OYSTER LARVAE SETTING TREATMENT	1

TIDAL ELEVATIONS NAVD88	
MEAN HIGHER HIGH WATER	2.41
MEAN HIGH WATER	2.08
MEAN LOW WATER	-2.62
MEAN LOWER LOW WATER	-2.82

- LEGEND
- MHW
 - MLW
 - MHW SPRING
 - PROPOSED IN-SITU OYSTER LARVAE SETTING, SEE SHEET 13
 - PROPOSED OYSTER TREATMENTS ON ECOLOGICAL CONCRETE UNITS, SEE SHEET 8, 9, AND 14

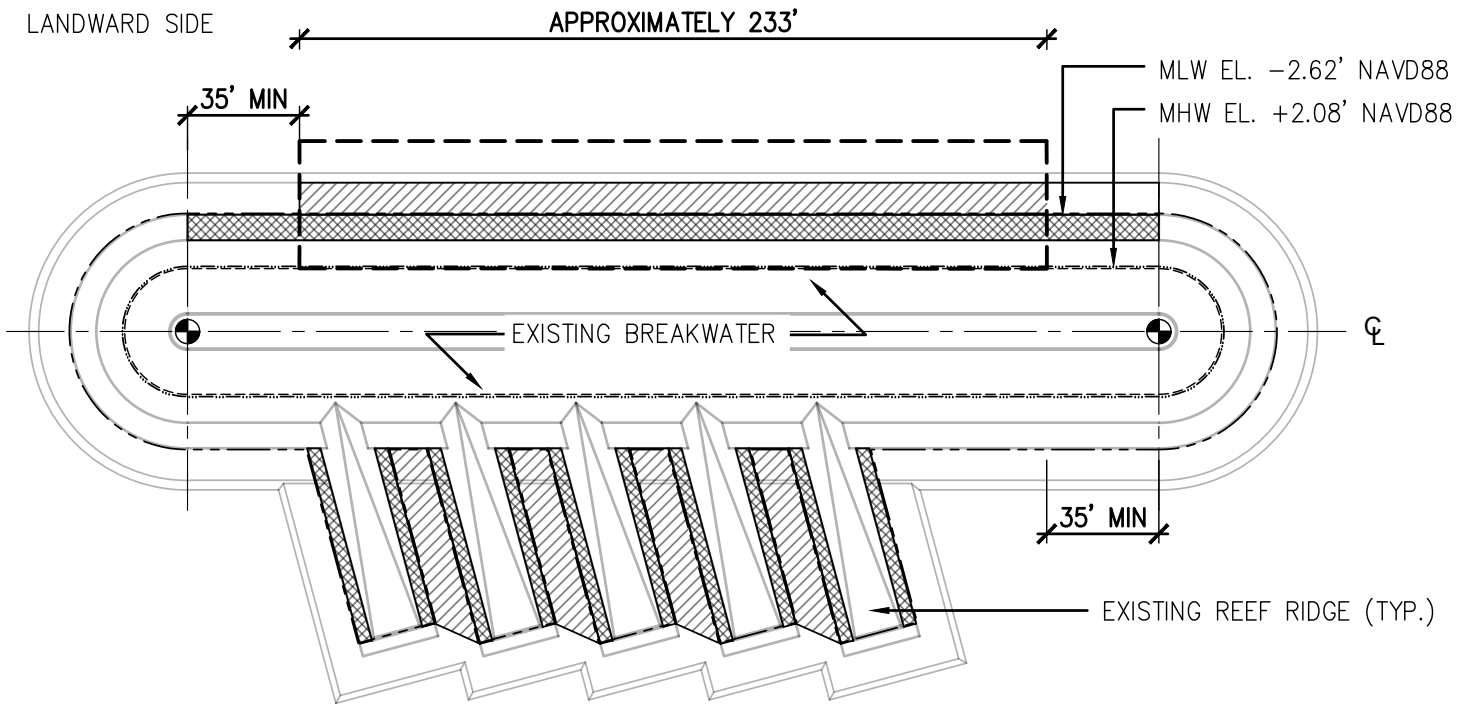
PROPOSED RESTORATION – BREAKWATER D



FOR PERMIT USE ONLY
 NOT FOR CONSTRUCTION
 05/24/2024 JOINT APPLICATION
 09/19/2024 REV 1
 12/09/2024 NOIA #2 REVISION

DATUM: N.A.V.D. 88
 APPLICATION NO.:
 AGENT: NEW YORK OFFICE OF RESILIENT
 HOMES AND COMMUNITIES, FORMERLY KNOWN
 AS GOVERNOR'S OFFICE OF STORM
 RECOVERY.
 SUPPORTED BY: BILLION OYSTER PROJECT

PROPOSED OYSTER RESTORATION ON THE LIVING
 BREAKWATERS
 WARD POINT BEND, RARITAN BAY
 TOTTEVILLE, STATEN ISLAND
 COUNTY OF RICHMOND
 STATE OF NEW YORK
 DATE: 12/09/2024
 SHEET 5 OF 16

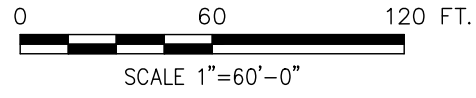


PROPOSED DROPLOCK WITH OYSTER SPATS	685
PROPOSED OYSTER DISK TREATMENTS	1,582
IN-SITU OYSTER LARVAE SETTING TREATMENT	1

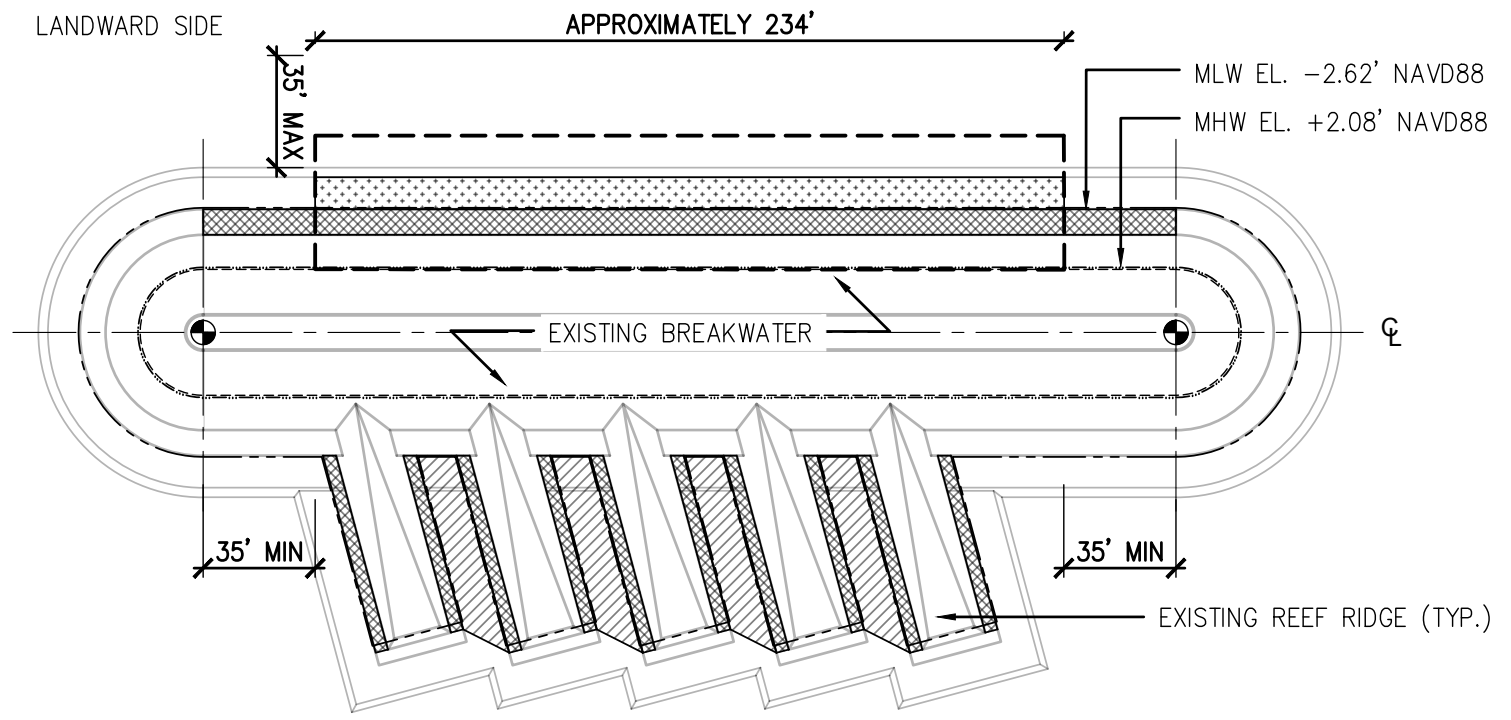
TIDAL ELEVATIONS NAVD88	
MEAN HIGHER HIGH WATER	2.41
MEAN HIGH WATER	2.08
MEAN LOW WATER	-2.62
MEAN LOWER LOW WATER	-2.82

- LEGEND
- MHW
 - - - MLW
 - - - MHW SPRING
 - ▭ PROPOSED IN-SITU OYSTER LARVAE SETTING, SEE SHEET 13
 - ▨ PROPOSED DROPLOCK PLACEMENT AREA, SEE SHEET 10, 11, AND 12
 - ▩ PROPOSED OYSTER TREATMENTS ON ECOLOGICAL CONCRETE UNITS, SEE SHEET 8, 9, AND 14

PROPOSED RESTORATION – BREAKWATER F

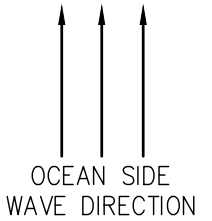


FOR PERMIT USE ONLY
 NOT FOR CONSTRUCTION
 05/24/2024 JOINT APPLICATION
 09/19/2024 REV 1
 12/09/2024 NOIA #2 REVISION



DATUM: N.A.V.D. 88
 APPLICATION NO.:
 AGENT: NEW YORK OFFICE OF RESILIENT
 HOMES AND COMMUNITIES, FORMERLY KNOWN
 AS GOVERNOR'S OFFICE OF STORM
 RECOVERY.
 SUPPORTED BY: BILLION OYSTER PROJECT

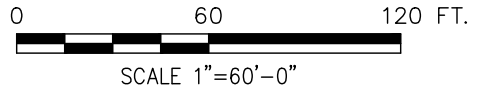
PROPOSED DROPLOCK WITH OYSTER SPATS	371
CONTINGENCY DROPLOCK WITH OYSTER SPATS (IF NEEDED, SEE SHEET 16)	0 TO 675
PROPOSED OYSTER DISK TREATMENTS	938
IN-SITU OYSTER LARVAE SETTING TREATMENT	1



- LEGEND
- MHW
 - MLW
 - MHW SPRING
 - PROPOSED IN-SITU OYSTER LARVAE SETTING, SEE SHEET 13
 - ▨ PROPOSED DROPLOCK PLACEMENT AREA, SEE SHEET 10, 11, AND 12
 - ▤ PROPOSED CONTINGENCY DROPLOCK PLACEMENT AREA, SEE SHEET 10 AND 11
 - ▩ PROPOSED OYSTER TREATMENTS ON ECOLOGICAL CONCRETE UNITS, SEE SHEET 8, 9, AND 14

TIDAL ELEVATIONS NAVD88	
MEAN HIGHER HIGH WATER	2.41
MEAN HIGH WATER	2.08
MEAN LOW WATER	-2.62
MEAN LOWER LOW WATER	-2.82

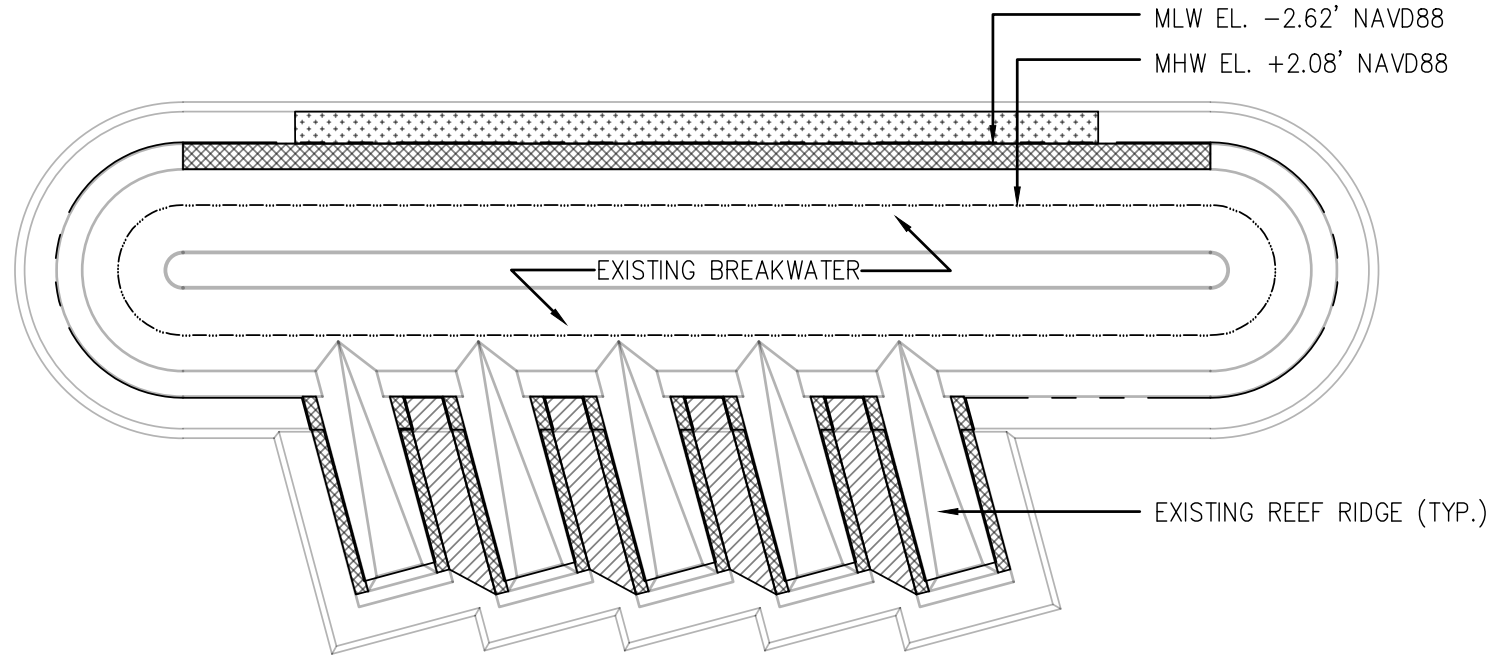
PROPOSED RESTORATION – BREAKWATER G



PROPOSED OYSTER RESTORATION ON THE LIVING
 BREAKWATERS
 WARD POINT BEND, RARITAN BAY
 TOTTEVILLE, STATEN ISLAND
 COUNTY OF RICHMOND
 STATE OF NEW YORK
 DATE: 12/09/2024
 SHEET 6 OF 16

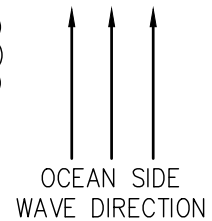
FOR PERMIT USE ONLY
 NOT FOR CONSTRUCTION
 05/24/2024 JOINT APPLICATION
 09/19/2024 REV 1
 12/09/2024 NOIA #2 REVISION

LANDWARD SIDE



DATUM: N.A.V.D. 88
 APPLICATION NO.:
 AGENT: NEW YORK OFFICE OF RESILIENT
 HOMES AND COMMUNITIES, FORMERLY KNOWN
 AS GOVERNOR'S OFFICE OF STORM
 RECOVERY.
 SUPPORTED BY: BILLION OYSTER PROJECT

PROPOSED DROPLOCK WITH OYSTER SPATS	370
CONTINGENCY DROPLOCK WITH OYSTER SPATS (IF NEEDED, SEE SHEET 16)	0 TO 675
PROPOSED OYSTER DISK TREATMENTS	994
IN-SITU OYSTER LARVAE SETTING TREATMENT	0



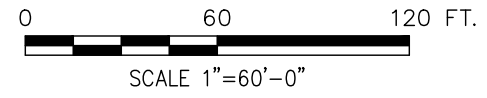
LEGEND
 - - - MHW
 - - - MLW
 - - - MHW SPRING

- PROPOSED DROPLOCK PLACEMENT AREA, SEE SHEET (10, 11, AND 12)
- PROPOSED CONTINGENCY DROPLOCK PLACEMENT AREA, SEE SHEET 10 AND 11
- PROPOSED OYSTER TREATMENTS ON ECOLOGICAL CONCRETE UNITS, SEE SHEET 8, 9, AND (14)

TIDAL ELEVATIONS NAVD88	
MEAN HIGHER HIGH WATER	2.41
MEAN HIGH WATER	2.08
MEAN LOW WATER	-2.62
MEAN LOWER LOW WATER	-2.82

PROPOSED OYSTER RESTORATION ON THE LIVING
 BREAKWATERS
 WARD POINT BEND, RARITAN BAY
 TOTENVILLE, STATEN ISLAND
 COUNTY OF RICHMOND
 STATE OF NEW YORK
 DATE: 12/09/2024
 SHEET 7 OF 16

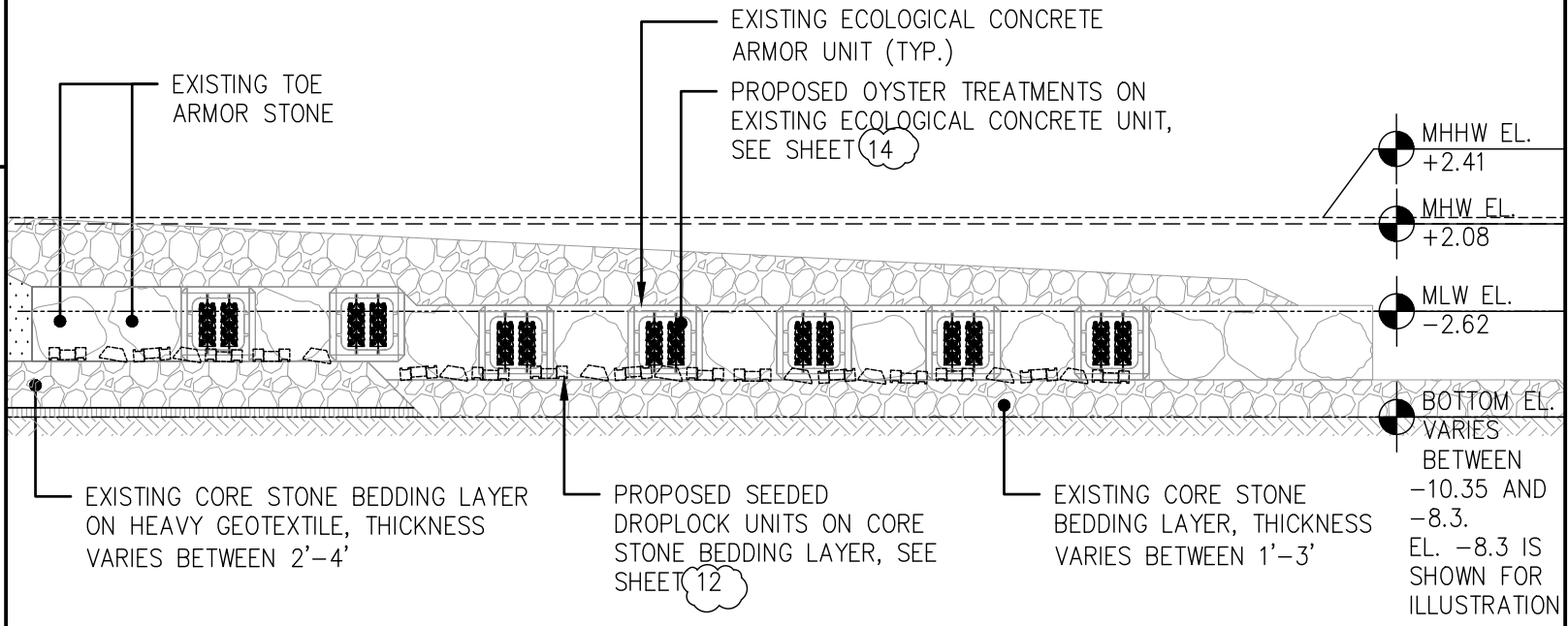
PROPOSED RESTORATION – BREAKWATER H



FOR PERMIT USE ONLY
 NOT FOR CONSTRUCTION
 05/24/2024 JOINT APPLICATION
 09/19/2024 REV 1
 12/09/2024 NOIA #2 REVISION

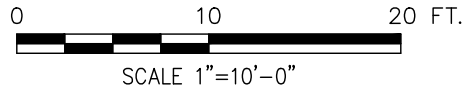
DATUM: N.A.V.D. 88
 APPLICATION NO.:
 AGENT: NEW YORK OFFICE OF RESILIENT
 HOMES AND COMMUNITIES, FORMERLY KNOWN
 AS GOVERNOR'S OFFICE OF STORM
 RECOVERY.
 SUPPORTED BY: BILLION OYSTER PROJECT

PROPOSED OYSTER RESTORATION ON THE LIVING
 BREAKWATERS
 WARD POINT BEND, RARITAN BAY
 TOTTEVILLE, STATEN ISLAND
 COUNTY OF RICHMOND
 STATE OF NEW YORK
 DATE: 12/09/2024
 SHEET 8 OF 16



- NOTE:**
1. LOCATION OF OYSTER TREATMENTS IN ECOLOGICAL CONCRETE UNITS IS REPRESENTATIVE, SPECIFIC UNITS RECEIVING TREATMENT MAY VARY.
 2. ELEVATION OF PROPOSED OYSTER TREATMENTS VARIES BASED ON SEABED DEPTH AND BUILT CONDITION OF BREAKWATERS, BUT THE TREATMENTS ARE ALWAYS LOCATED BELOW -0.2 NAVD88

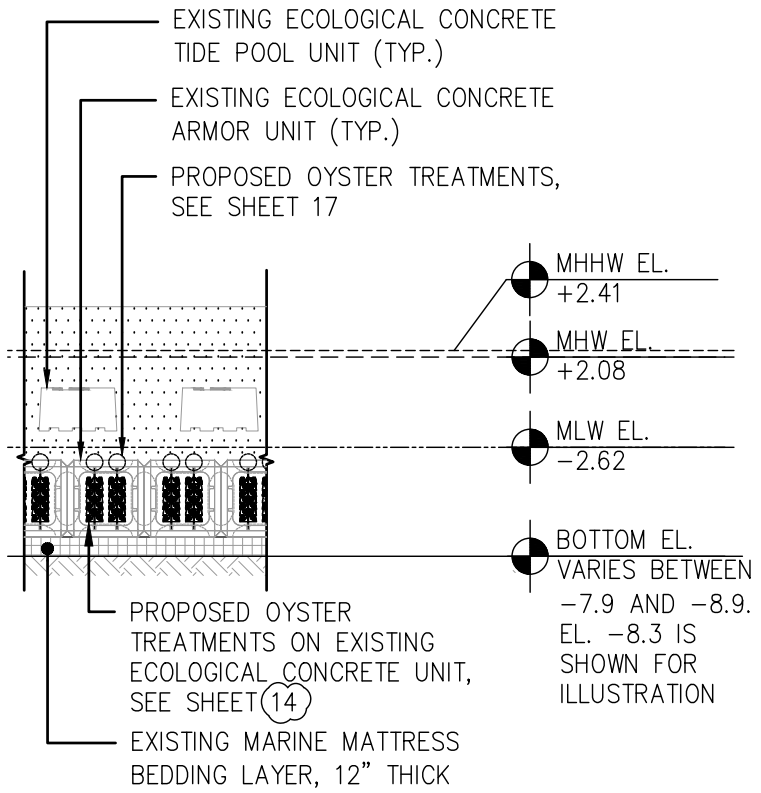
TYPICAL REEF RIDGE ELEVATION WITH OYSTER TREATMENTS



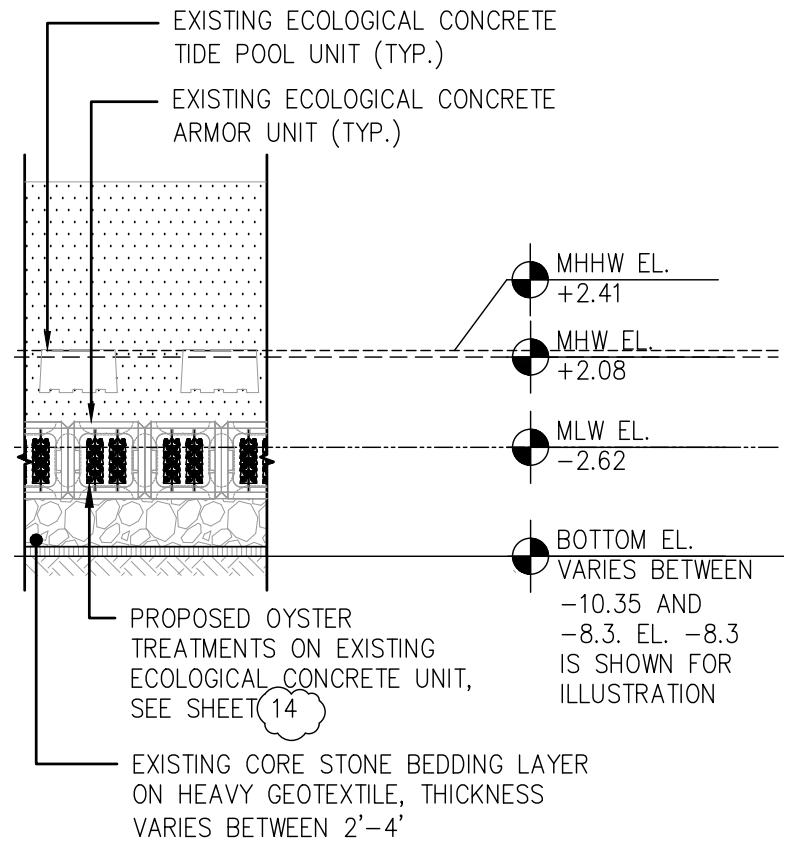
FOR PERMIT USE ONLY
NOT FOR CONSTRUCTION
05/24/2024 JOINT APPLICATION
12/09/2024 NOIA #2 REVISION

DATUM: N.A.V.D. 88
APPLICATION NO.:
AGENT: NEW YORK OFFICE OF RESILIENT
HOMES AND COMMUNITIES, FORMERLY KNOWN
AS GOVERNOR'S OFFICE OF STORM
RECOVERY.
SUPPORTED BY: BILLION OYSTER PROJECT

PROPOSED OYSTER RESTORATION ON THE LIVING
BREAKWATERS
WARD POINT BEND, RARITAN BAY
TOTTENVILLE, STATEN ISLAND
COUNTY OF RICHMOND
STATE OF NEW YORK
DATE: 12/09/2024
SHEET 9 OF 16



CONDITION 1: ARMOR UNITS ON MARINE MATTRESS (BW 'D')

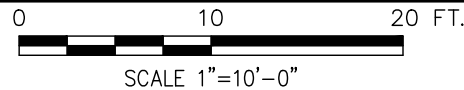


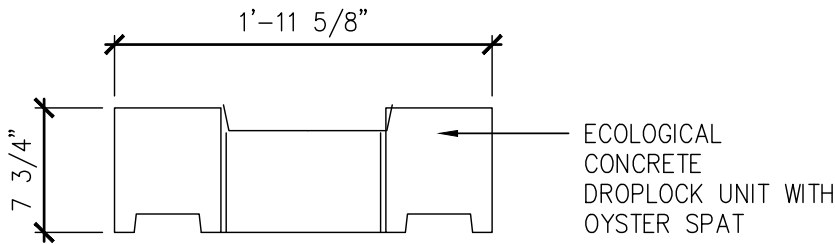
CONDITION 2: ARMOR UNITS ON CORE STONE BEDDING LAYER (BW 'F', 'G', AND 'H')

NOTE:

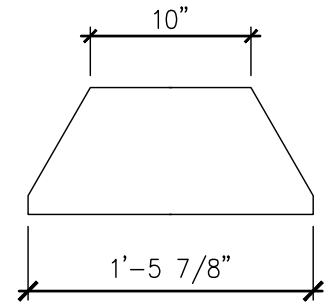
1. LOCATION OF OYSTER TREATMENTS IN ECOLOGICAL CONCRETE UNITS IS REPRESENTATIVE, SPECIFIC UNITS RECEIVING TREATMENT MAY VARY.
2. ELEVATION OF PROPOSED OYSTER TREATMENTS VARIES BASED ON SEABED DEPTH AND BUILT CONDITION OF BREAKWATERS, BUT THE TREATMENTS ARE ALWAYS LOCATED BELOW -0.2 NAVD88
3. WHERE ECOLOGICAL CONCRETE ARMOR UNITS SIT ENTIRELY UNDER MLW, OYSTER DISK TREATMENT WILL BE INSTALLED ON TOP FACE OF THE UNITS.

TYPICAL BREAKWATER LANDWARD SIDE ELEVATION WITH OYSTER TREATMENTS

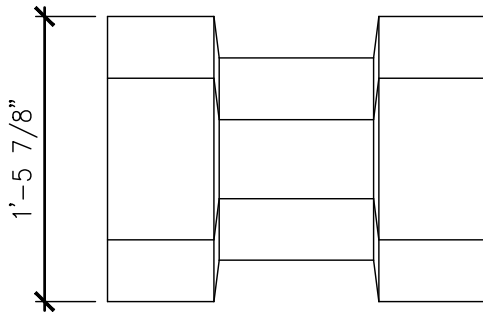




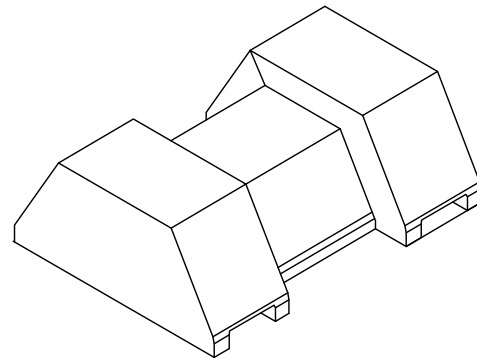
FRONT ELEVATION



SIDE ELEVATION



PLAN



AXON

ECOLOGICAL
CONCRETE
DROPLOCK UNIT WITH
OYSTER SPAT

NOTES: DROPLOCK UNIT PROPERTIES (INFORMATION IS APPROXIMATE):
 WEIGHT: 64-70 KG (140-155 LBS)
 VOLUME: 0.033 M³ (0.043 YD³)

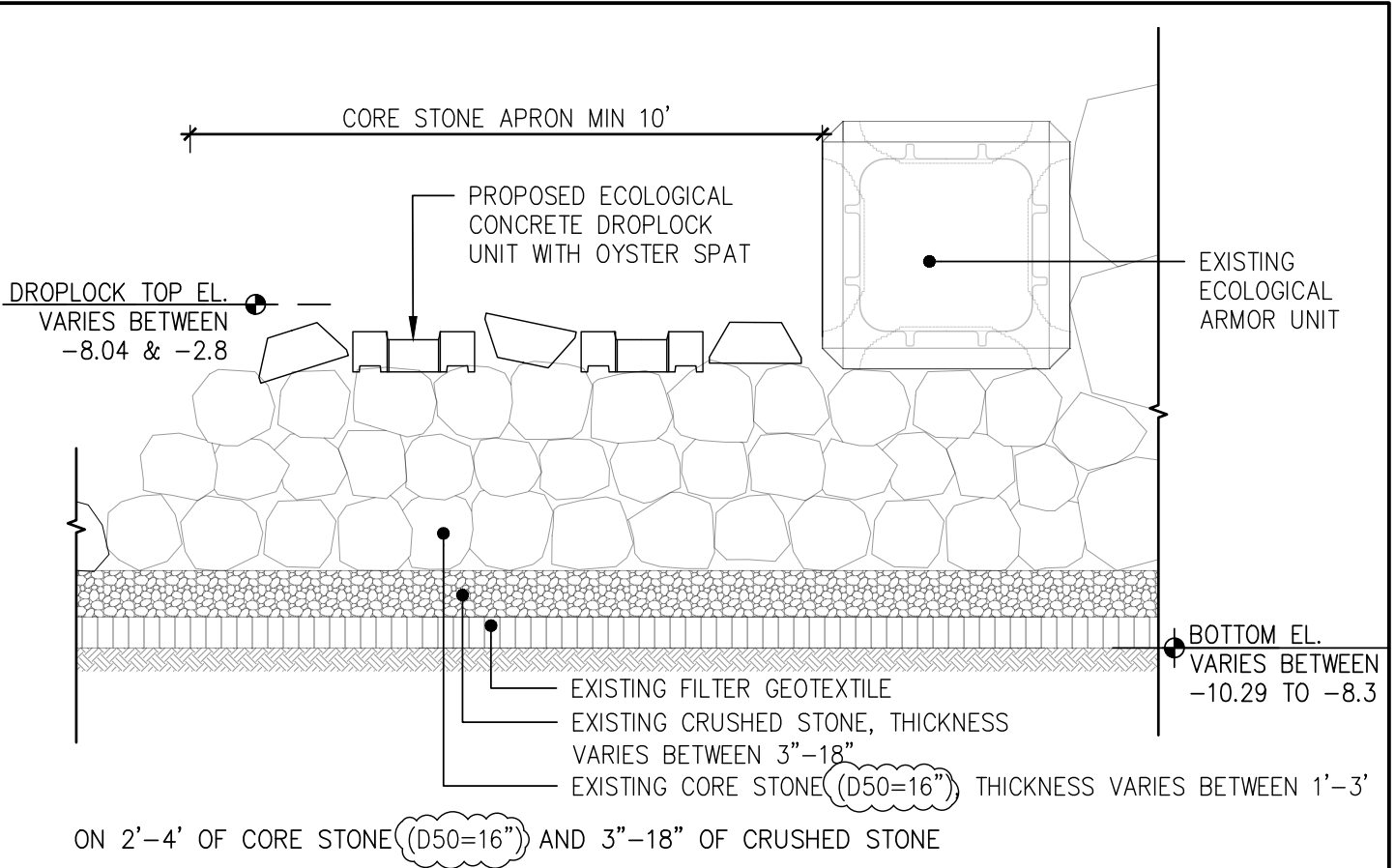
PROPOSED DROPLOCK ECOLOGICAL CONCRETE UNIT

SCALE: 1" = 1'

FOR PERMIT USE ONLY NOT FOR CONSTRUCTION
05/24/2024 JOINT APPLICATION
09/19/2024 REV 1
12/09/2024 NOIA #2 REVISION

DATUM: N.A.V.D. 88
 APPLICATION NO.:
 AGENT: NEW YORK OFFICE OF RESILIENT
 HOMES AND COMMUNITIES, FORMERLY KNOWN
 AS GOVERNOR'S OFFICE OF STORM
 RECOVERY.
 SUPPORTED BY: BILLION OYSTER PROJECT

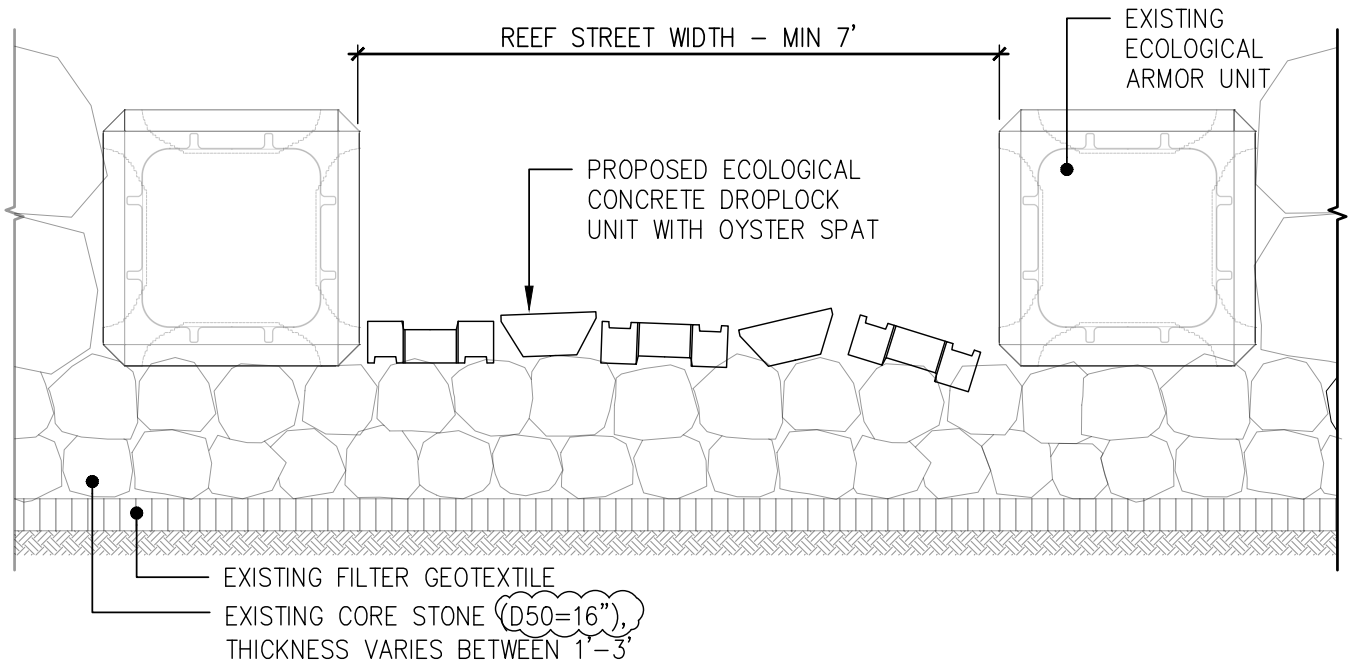
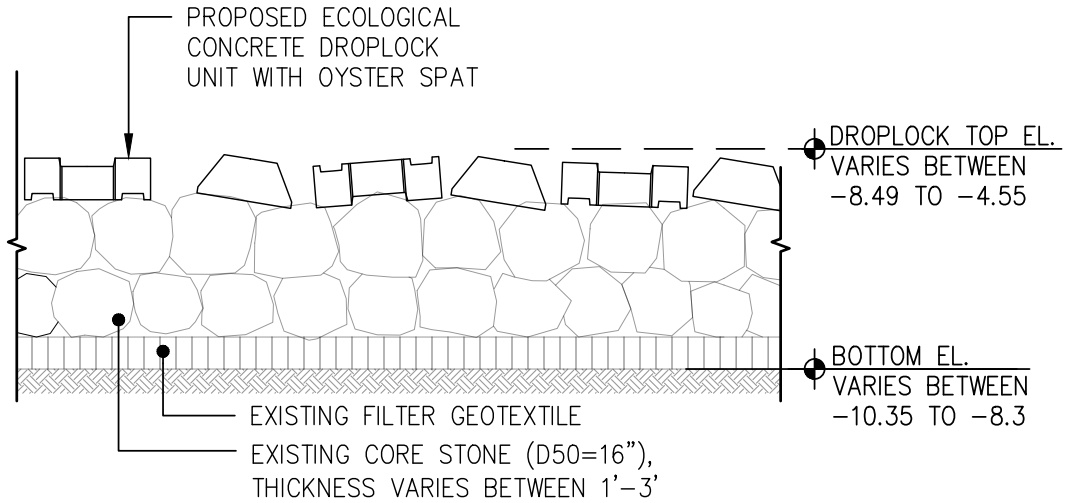
PROPOSED OYSTER RESTORATION ON THE LIVING
 BREAKWATERS
 WARD POINT BEND, RARITAN BAY
 TOTTEVILLE, STATEN ISLAND
 COUNTY OF RICHMOND
 STATE OF NEW YORK
 DATE: 12/09/2024 SHEET 10 OF 15



PROPOSED DROPOCK ECOLOGICAL CONCRETE UNIT

SCALE: 1" = 3'

<p>FOR PERMIT USE ONLY NOT FOR CONSTRUCTION</p> <p>05/24/2024 JOINT APPLICATION</p> <p>09/19/2024 REV 1</p> <p>12/09/2024 NOIA #2 REVISION</p>	<p>DATUM: N.A.V.D. 88</p> <p>APPLICATION NO.:</p> <p>AGENT: NEW YORK OFFICE OF RESILIENT HOMES AND COMMUNITIES, FORMERLY KNOWN AS GOVERNOR'S OFFICE OF STORM RECOVERY.</p> <p>SUPPORTED BY: BILLION OYSTER PROJECT</p>	<p>PROPOSED OYSTER RESTORATION ON THE LIVING BREAKWATERS</p> <p>WARD POINT BEND, RARITAN BAY</p> <p>TOTTENVILLE, STATEN ISLAND</p> <p>COUNTY OF RICHMOND</p> <p>STATE OF NEW YORK</p> <p>DATE: 12/09/2024</p> <p>SHEET 11 OF 16</p>
--	--	---

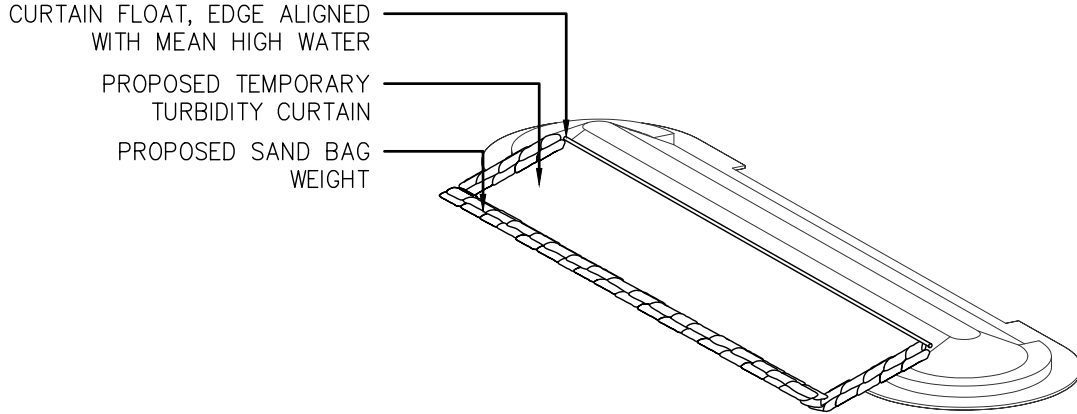


ON BW 'F', 'G', AND 'H'
 BETWEEN REEF RIDGES, OCEAN SIDE ON 1'-3' OF CORE STONE (D50=16")

PROPOSED DROPLOCK ECOLOGICAL CONCRETE UNIT

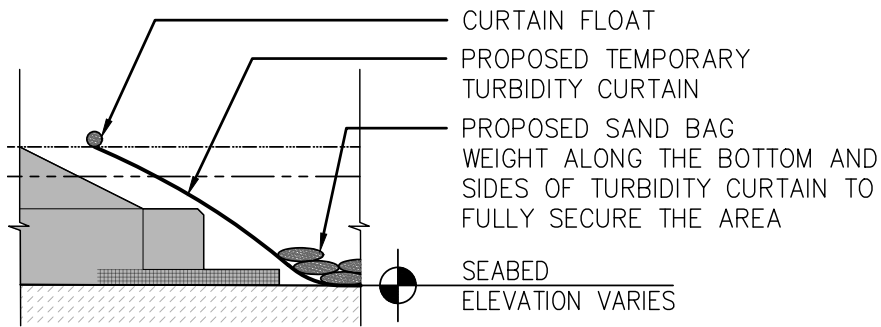
SCALE: 1" = 3'

<p>FOR PERMIT USE ONLY NOT FOR CONSTRUCTION</p>	<p>DATUM: N.A.V.D. 88</p>	<p>PROPOSED OYSTER RESTORATION ON THE LIVING BREAKWATERS</p>
<p>05/24/2024 JOINT APPLICATION</p>	<p>APPLICATION NO.:</p>	<p>WARD POINT BEND, RARITAN BAY</p>
<p>09/19/2024 REV 1</p>	<p>AGENT: NEW YORK OFFICE OF RESILIENT HOMES AND COMMUNITIES, FORMERLY KNOWN AS GOVERNOR'S OFFICE OF STORM RECOVERY.</p>	<p>TOTTENVILLE, STATEN ISLAND</p>
<p>12/09/2024 NOIA #2 REVISION</p>	<p>SUPPORTED BY: BILLION OYSTER PROJECT</p>	<p>COUNTY OF RICHMOND STATE OF NEW YORK</p>
<p>DATE: 12/09/2024</p>		<p>SHEET 12 OF 15</p>



PROPOSED IN-SITU OYSTER LARVAE SETTING TREATMENT

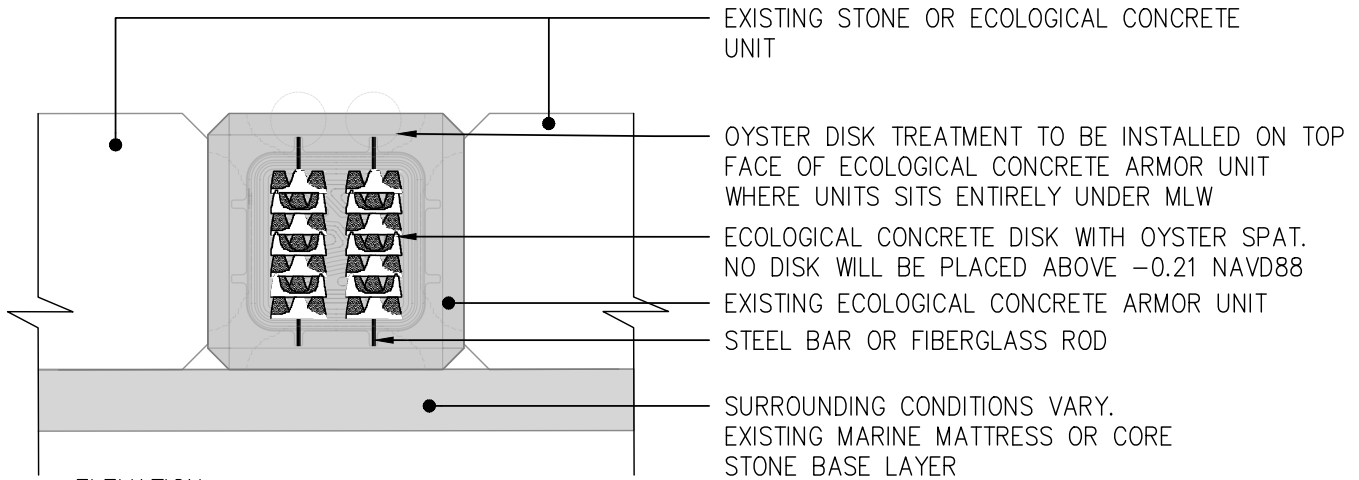
NOT TO SCALE



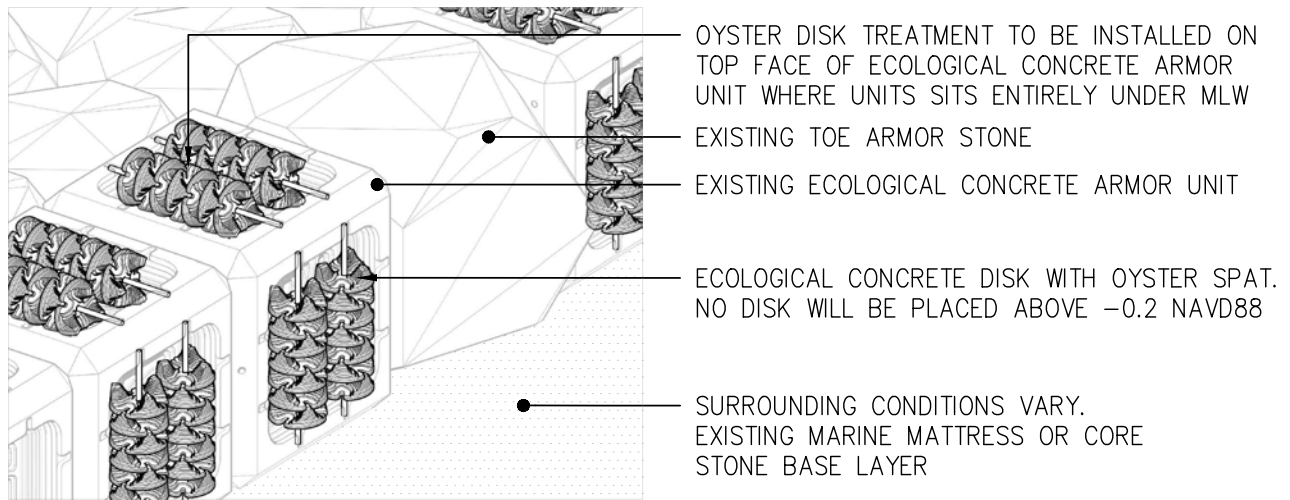
PROPOSED IN-SITU OYSTER LARVAE SETTING TREATMENT BARRIER ANCHORING TECHNIQUES

1" = 5'

<p style="font-size: small; margin: 0;">FOR PERMIT USE ONLY NOT FOR CONSTRUCTION</p> <p style="font-size: x-small; margin: 0;">05/24/2024 JOINT APPLICATION</p>	<p style="font-size: small; margin: 0;">DATUM: N.A.V.D. 88</p> <p style="font-size: small; margin: 0;">APPLICATION NO.:</p> <p style="font-size: x-small; margin: 0;">AGENT: NEW YORK OFFICE OF RESILIENT HOMES AND COMMUNITIES, FORMERLY KNOWN AS GOVERNOR'S OFFICE OF STORM RECOVERY.</p> <p style="font-size: x-small; margin: 0;">SUPPORTED BY: BILLION OYSTER PROJECT</p>	<p style="font-size: small; margin: 0;">PROPOSED OYSTER RESTORATION ON THE LIVING BREAKWATERS</p> <p style="font-size: x-small; margin: 0;">WARD POINT BEND, RARITAN BAY TOTTENVILLE, STATEN ISLAND COUNTY OF RICHMOND STATE OF NEW YORK</p> <p style="font-size: small; margin: 0;">DATE: 12/09/2024</p>
		<p style="font-size: small; margin: 0;">SHEET 13 OF 16</p>



ELEVATION
(NUMBER OF DISKS PER FACE VARIES,
MAXIMUM 14 DISKS)



AXON

PROPOSED OYSTER DISK TREATMENT ON EXISTING ECOLOGICAL CONCRETE ARMOR UNITS

SCALE: 1" = 3'

<p style="text-align: center; font-weight: bold; font-size: small;">FOR PERMIT USE ONLY NOT FOR CONSTRUCTION</p> <p style="font-size: x-small;">05/24/2024 JOINT APPLICATION</p>	<p style="font-size: small;">DATUM: N.A.V.D. 88</p> <p style="font-size: small;">APPLICATION NO.:</p> <p style="font-size: x-small;">AGENT: NEW YORK OFFICE OF RESILIENT HOMES AND COMMUNITIES, FORMERLY KNOWN AS GOVERNOR'S OFFICE OF STORM RECOVERY.</p> <p style="font-size: x-small;">SUPPORTED BY: BILLION OYSTER PROJECT</p>	<p style="font-size: x-small;">PROPOSED OYSTER RESTORATION ON THE LIVING BREAKWATERS</p> <p style="font-size: x-small;">WARD POINT BEND, RARITAN BAY TOTTENVILLE, STATEN ISLAND COUNTY OF RICHMOND STATE OF NEW YORK</p> <p style="font-size: x-small;">DATE: 12/09/2024</p>
		SHEET 14 OF 16

OVERALL SUMMARY OF TREATMENTS, OYSTER QUANTITIES, FOOTPRINT, AND VOLUME WITHIN THE PROJECT AREA (BASE CASE)

TREATMENT	BREAKWATERS	TOTAL UNITS	SPAT PER UNIT	TOTAL SPATS	FOOTPRINT (SQFT)	VOLUME (CUBIC YARD)
ARMOR UNIT: OYSTER DISK TREATMENT	D, F, G, H	4,494 DISKS (286 ARMOR UNITS)	~2,150	9,662,100	NA	12.48
SEEDED DROPLOCK UNIT	F, G, H	1,426	~11,121	15,858,546	NA	57.04
IN-SITU OYSTER LARVAE SETTING TREATMENTS	D, F, G	3	5,000,000	15,000,000	NA	NA
			5,000,000			
			5,000,000			
TOTAL				40,520,646	NA	69.52

NOTE:

- NO STRUCTURE IS ON THE BAY BOTTOM. ALL PROPOSED TREATMENTS ARE ATTACHED TO OR PLACED ON TOP OF EXISTING STRUCTURES.
- PLACEMENT OF APPROXIMATELY 12.48 CYS FOR THE 4,494 DISKS AND 57.04 CYS FOR THE 1,426 ECO-CONCRETE DROPLOCK UNITS. IF USED, CONTINGENCY SEEDED DROPLOCK UNITS WOULD IMPACT ADDITIONAL VOLUME WITHIN THE WATER COLUMN. SEE SHEET 16 FOR CONTINGENCY DROPLOCK QUANTITIES
- THE DROPLOCK UNITS HAVE A FOOTPRINT AREA OF 2.91 SQUARE FEET (SF) EACH, RESULTING IN A TOTAL PROJECT FOOTPRINT OF 4,150 SF ON THE EXISTING BREAKWATERS.

SUMMARY OF QUANTITIES AND FOOTPRINTS OF PROPOSED OYSTER RESTORATION

<p>FOR PERMIT USE ONLY NOT FOR CONSTRUCTION</p> <p>05/24/2024 JOINT APPLICATION</p> <p>09/19/2024 REV 1</p> <p>11/01/2024 REV 2</p> <p>12/09/2024 NOIA #2 REVISION</p>	<p>DATUM: N.A.V.D. 88</p> <p>APPLICATION NO.:</p> <p>AGENT: NEW YORK OFFICE OF RESILIENT HOMES AND COMMUNITIES, FORMERLY KNOWN AS GOVERNOR'S OFFICE OF STORM RECOVERY.</p> <p>SUPPORTED BY: BILLION OYSTER PROJECT</p>	<p>PROPOSED OYSTER RESTORATION ON THE LIVING BREAKWATERS</p> <p>WARD POINT BEND, RARITAN BAY TOTTENVILLE, STATEN ISLAND COUNTY OF RICHMOND STATE OF NEW YORK</p> <p>DATE: 12/09/2024</p>
		SHEET 15 OF 16

ALT 1: TWO IN-SITU TREATMENTS, ONE CONTINGENCY DROPLOCK DEPLOYMENT (450 ADDITIONAL UNITS)						
TREATMENT	BREAKWATERS	TOTAL UNITS	SPAT PER UNIT	TOTAL SPATS	FOOTPRINT (SQFT)	VOLUME (CUBIC YARD)
ARMOR UNIT: OYSTER DISK	D, F, G, H	4,494 DISKS (286 ARMOR UNITS)	~2,150	9,662,100	*N/A	12.48
SEEDED DROPLOCK UNIT	F, G, H	1426	~11,121	15,858,546	*N/A	57.04
CONTINGENCY SEEDED DROPLOCK UNIT	G, H	450	~11,121	5,000,000	*N/A	18
IN-SITU OYSTER LARVAE SETTING TREATMENTS	D, F, G		5,000,000	10,000,000	*N/A	*N/A
			5,000,000			
TOTAL				40,520,646	0	87.52

ALT 2: ONE IN-SITU TREATMENTS, TWO CONTINGENCY DROPLOCK DEPLOYMENT (900 ADDITIONAL UNITS)						
TREATMENT	BREAKWATERS	TOTAL UNITS	SPAT PER UNIT	TOTAL SPATS	FOOTPRINT (SQFT)	VOLUME (CUBIC YARD)
ARMOR UNIT: OYSTER DISK	D, F, G, H	4,494 DISKS (286 ARMOR UNITS)	~2,150	9,662,100	*N/A	12.48
SEEDED DROPLOCK UNIT	F, G, H	1426	~11,121	15,858,546	*N/A	57.04
CONTINGENCY SEEDED DROPLOCK UNIT	G, H	900	~11,121	10,000,000	*N/A	36
IN-SITU OYSTER LARVAE SETTING TREATMENTS	D, F, G		5,000,000	5,000,000	*N/A	*N/A
TOTAL				40,520,646	0	105.52

ALT 3: NO IN-SITU TREATMENTS, THREE CONTINGENCY DROPLOCK DEPLOYMENT (1350 ADDITIONAL UNITS)						
TREATMENT	BREAKWATERS	TOTAL UNITS	SPAT PER UNIT	TOTAL SPATS	FOOTPRINT (SQFT)	VOLUME (CUBIC YARD)
ARMOR UNIT: OYSTER DISK	D, F, G, H	4,494 DISKS (286 ARMOR UNITS)	~2,150	9,662,100	*N/A	12.48
SEEDED DROPLOCK UNIT	F, G, H	1426	~11,121	15,858,546	*N/A	57.04
CONTINGENCY SEEDED DROPLOCK UNIT	G, H	1350	~11,121	15,000,000	*N/A	48
TOTAL				40,520,646	0	117.52

SUMMARY OF QUANTITIES OF CONTINGENCY DROPLOCK UNITS

FOR PERMIT USE ONLY NOT FOR CONSTRUCTION
05/24/2024 JOINT APPLICATION
09/19/2024 REV 1
11/01/2024 REV 2
12/09/2024 NOIA #2 REVISION

DATUM: N.A.V.D. 88
 APPLICATION NO.:
 AGENT: NEW YORK OFFICE OF RESILIENT HOMES AND COMMUNITIES, FORMERLY KNOWN AS GOVERNOR'S OFFICE OF STORM RECOVERY.
 SUPPORTED BY: BILLION OYSTER PROJECT

PROPOSED OYSTER RESTORATION ON THE LIVING BREAKWATERS
 WARD POINT BEND, RARITAN BAY
 TOTTENVILLE, STATEN ISLAND
 COUNTY OF RICHMOND
 STATE OF NEW YORK
 DATE: 12/09/2024 SHEET 16 OF 16

STATE OF NEW YORK
DEPARTMENT OF STATE

ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001
HTTPS://DOS.NY.GOV

KATHY HOCHUL
GOVERNOR

WALTER T. MOSLEY
SECRETARY OF STATE

November 20, 2024

Kyle W. Buelow, CERP, CPESC, CPSWQ
Senior Project Scientist, Biodiversity & Ecology
Environment & Health
Ramboll
333 West Washington Street
Syracuse, NY 13202

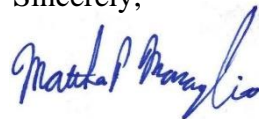
Re: F-2024-0346
U.S. Army Corps of Engineers/ New York District
Permit Application – New York State Office of
Resilient Homes and Communities
Proposing to incorporate oyster restoration on and
adjacent to several breakwater segments, to be
conducted by Billion Oyster Project. BOP would
establish multiple oyster restoration techniques on
and around the Living Breakwaters, including bay
balls installed on the floor of Raritan Bay adjacent
to the breakwaters on the lee side, placement of
disks within the ECO-enhanced concrete units on
the breakwaters, and in-situ oyster larvae setting
treatments.
Raritan Bay, Tottenville Shoreline Project,
Tottenville, NY, 10301
Concurrence with Consistency Certification

Dear Kyle Buelow:

The Department of State received your Federal Consistency Assessment Form and consistency certification and supporting information for the above-referenced proposal on 5/24/2024 and has completed its review of your consistency certification regarding the consistency of this activity with the New York Coastal Management Program.

Pursuant to 15 CFR Part 930.62, and based upon the project information submitted, the Department of State concurs with your consistency certification for this activity. This concurrence is without prejudice to and does not obviate the need to obtain all other applicable licenses, permits, or other forms of authorization or approval that may be required pursuant to existing State statutes.

Sincerely,



Matthew P. Maraglio
Director, Development Division
Office of Planning, Development and
Community Infrastructure



Department
of State

MM/pb

ecc: ACOE - NY District - Arlene Tirado
NYSDEC Marine Resources - Jennifer O'Dwyer, Wade Carden
NYC Department of City Planning - Dan Chibbaro (WRP# 24-189)