



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-2023-00338-EMI**
Issue Date: **August 9, 2023**
Expiration Date: **September 8, 2023**

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) and an application for a Department of the Army permission pursuant to Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. 408).

APPLICANT: Transcontinental Gas Pipe Line Company, LLC
2800 Post Oak Boulevard, Level 11
Houston, Texas 77056

ACTIVITY: Pipeline Maintenance Activities

WATERWAY: Raritan Bay, Lower New York Bay, and the Atlantic Ocean

LOCATION: Between Middlesex County, New Jersey and Nassau 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 EMAILED TO REACH THIS OFFICE BEFORE THE EXPIRATION DATE OF THIS NOTICE,

CENAN-OP-RE
PUBLIC NOTICE NO. NAN-2023-00338-EMI

otherwise, it will be presumed that there are no objections to the activity.

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 email is considered just as carefully in the permit decision process and bears the same weight as that furnished at a public hearing.

Our preliminary determination is that the activity for which authorization is sought herein is not likely to affect any Federally endangered or threatened species or their critical habitat listed by the U.S. Fish and Wildlife Service. The project may affect Federally endangered or threatened species or their critical habitat listed by the National Oceanic and Atmospheric Administration (NOAA). Pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the District Engineer is consulting with the appropriate Federal agency to determine the presence of and potential impacts to listed species in the project area or their critical habitat.

The Magnuson-Stevens Fishery Conservation and Management Act, 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). The proposed work, fully described in the attached work description, could cause the disruption of habitat for various lifestages of some EFH-designated species as a result of a temporary increase in turbidity during construction and habitat conversion. However, the New York District has made the preliminary determination that the site-specific adverse effects are not likely to be substantial because it is expected that fish populations would avoid the area of disturbance. Further consultation with NOAA/FS regarding EFH impacts and conservation recommendations is being conducted and will be concluded prior to the final decision.

Based upon a review of the latest published version of the National Register of Historic Places, there are no known sites eligible for, or included in, the Register within the permit area. Presently unknown archeological, scientific, prehistorical, 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 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

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PUBLIC NOTICE NO. NAN-2023-00338-EMI

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. For activities within the coastal zone of New Jersey State, the applicant's certification and accompanying information is available from the New Jersey Department of Environmental Protection, Coastal Management Program, P.O. Box 418, 401 E. State Street, Trenton, NJ, 08625, Telephone (609) 633-2201. 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
- New Jersey Department of Environmental Protection

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. Please send all comments and questions concerning this application to Christopher.W.Minck@usace.army.mil.

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 permit applicant, Transcontinental Gas Pipe Line Company, LLC has requested Department of the Army (DA) authorization for pipeline maintenance activities to increase protection of the Lower New York Bay Lateral (LNYBL) pipeline. The project is located in Raritan Bay, Lower New York Bay, and the Atlantic Ocean at seven work areas between Middlesex County, New Jersey and Nassau County, New York.

The proposed work would involve the following:

Discharge approximately 131,100 cubic yards of rock across seven proposed work areas totaling 26.52 acres (approximately 17.28 acres in New Jersey and approximately 9.24 acres in New York).

State	Work Area	Work Area Start	Work Area End	Area (sq ft)	Quantity of Fill (CY)
NJ	1	40° 28' 18.1234" N 74° 14' 01.1621" W	40° 28' 20.0347" N 74° 13' 50.5204" W	6,400	510
NJ	2	40° 28' 41.6225" N 74° 06' 15.4813" W	40° 28' 40.1587" N 74° 06' 00.8547" W	3,600	390
NJ	3	40° 29' 03.1178" N 74° 01' 12.5930" W	40° 29' 25.5166" N 73° 59' 36.6538" W	523,000	79,200
NJ	4	40° 29' 37.8127" N 73° 58' 49.1020" W	40° 29' 53.9587" N 73° 57' 44.6955" W	47,900	3,510
NJ	5	40° 29' 56.7932" N 73° 57' 32.4107" W	40° 30' 16.7822" N 73° 56' 14.3708" W	172,300	18,141
NY	6	40° 30' 31.1242" N 73° 55' 18.8546" W	40° 30' 43.7108" N 73° 54' 28.5576" W	56,300	4,240
NY	7	40° 32' 39.1774" N 73° 46' 38.1658" W	40° 33' 35.1839" N 73° 42' 34.1313" W	346,200	24,740

Additionally, at Area 3, approximately 2,400 linear feet of submerged sheet pile will be installed to create a submerged retaining wall to prevent currents through Sandy Hook Channel from eroding the underlying seabed. The top of the sheet pile wall would be at elevations ranging from approximately -25 feet Mean Lower Low Water (MLLW) to -45 feet MLLW, extending approximately one foot above the rock cover armor layer elevation. The proposed submerged sheet pile would be located approximately 589 feet north of the Sandy Hook Federal Navigation Channel and the rock placement area would be approximately 557 feet north of the Sandy Hook Channel.

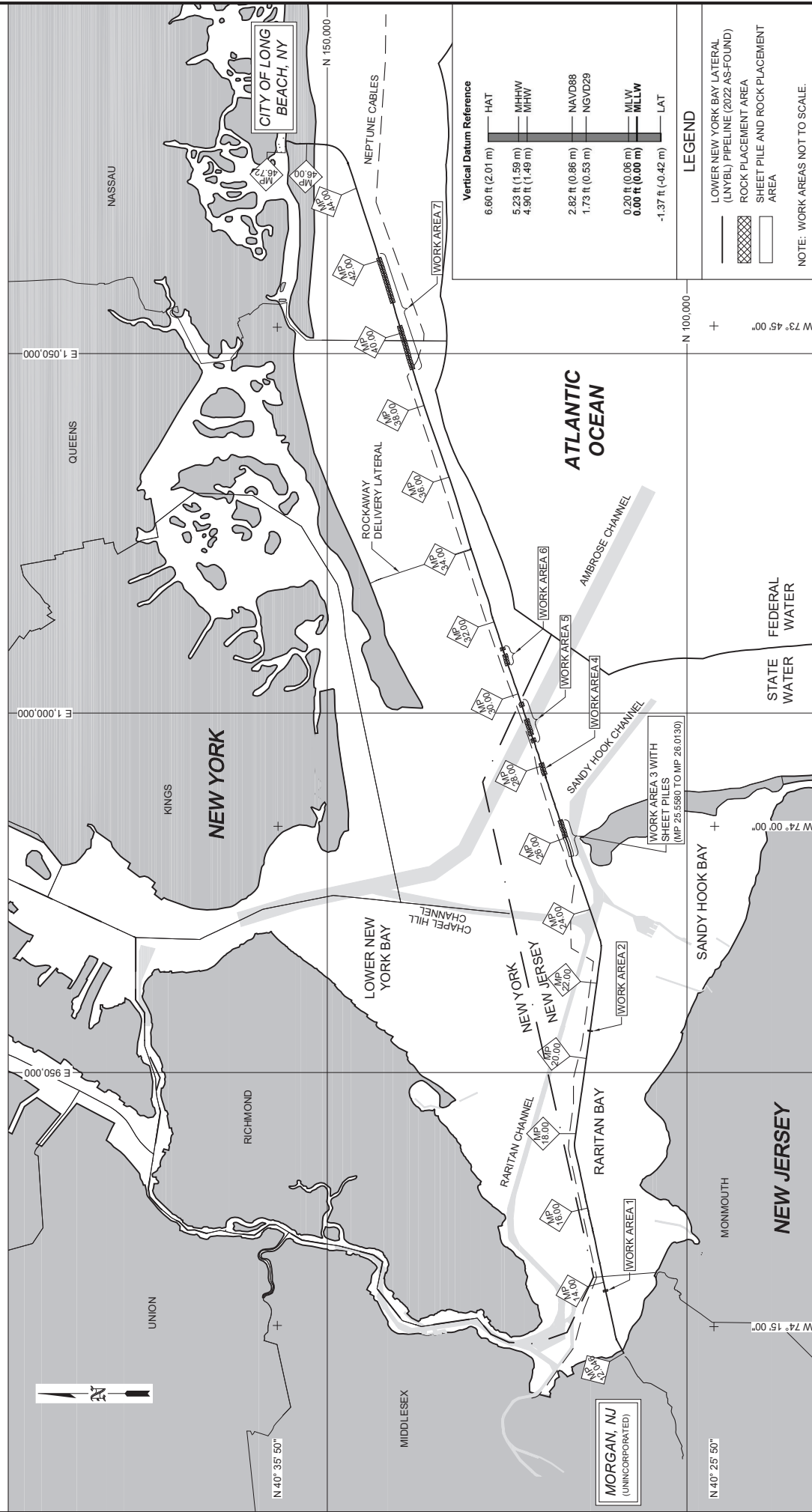
Part of Work Area 5 is within the Ambrose Federal Navigation Channel. Approximately 15,950 cubic yards of rock will be placed over approximately 137,900 square feet within the Ambrose Channel. The top of the proposed rock cover in the Ambrose Channel will remain below the currently authorized depth of the channel (-53 feet Mean Low Water). The applicant is coordinating with USACE, pursuant to Section 14 of the Rivers and Harbors Act (33 U.S.C. 408), regarding requirements of removing the rock cover placed within the Ambrose Channel as it pertains to future maintenance dredging and deepening of the Ambrose Channel by USACE.

The applicant has stated that they have avoided, minimized, and mitigated for potential impacts proposed to the maximum extent practicable by ensuring all proposed rock is cleaned of dust and

CENAN-OP-RE
PUBLIC NOTICE NO. NAN-2023-00338-EMI

sediments before loaded onto barges to minimize turbidity, which will generate less turbidity than sand. Rock will be released from the barge at mid-depth to ensure better accuracy of placement and decrease velocity as the rock travels through the water column.

The applicant's stated purpose of the project is to promptly restore cover over seven discrete sections of the existing offshore LNYBL pipeline and limit the rate of erosion due to dynamic seafloor conditions over these sections of the pipeline where surveying conducted by Transco has identified limited cover, including areas with less than one foot of cover.



CORPS OF ENGINEERS PERMIT DRAWING

HORIZONTAL SCALE 1" = 20,000'

0 10,000 20,000 30,000 40,000

GEODETIC DATUM: NAD83
 SPHEROID: GRS80
 GRID UNIT: U.S. SURVEY FEET
 PROJECTION: US STATE PLANE NEW YORK-LONG ISLAND (FIPS 3104)
 CENTRAL MERIDIAN: 74° W
 FALSE EASTING: 984,250 FT
 FALSE NORTHING: 0 FT
 VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW)

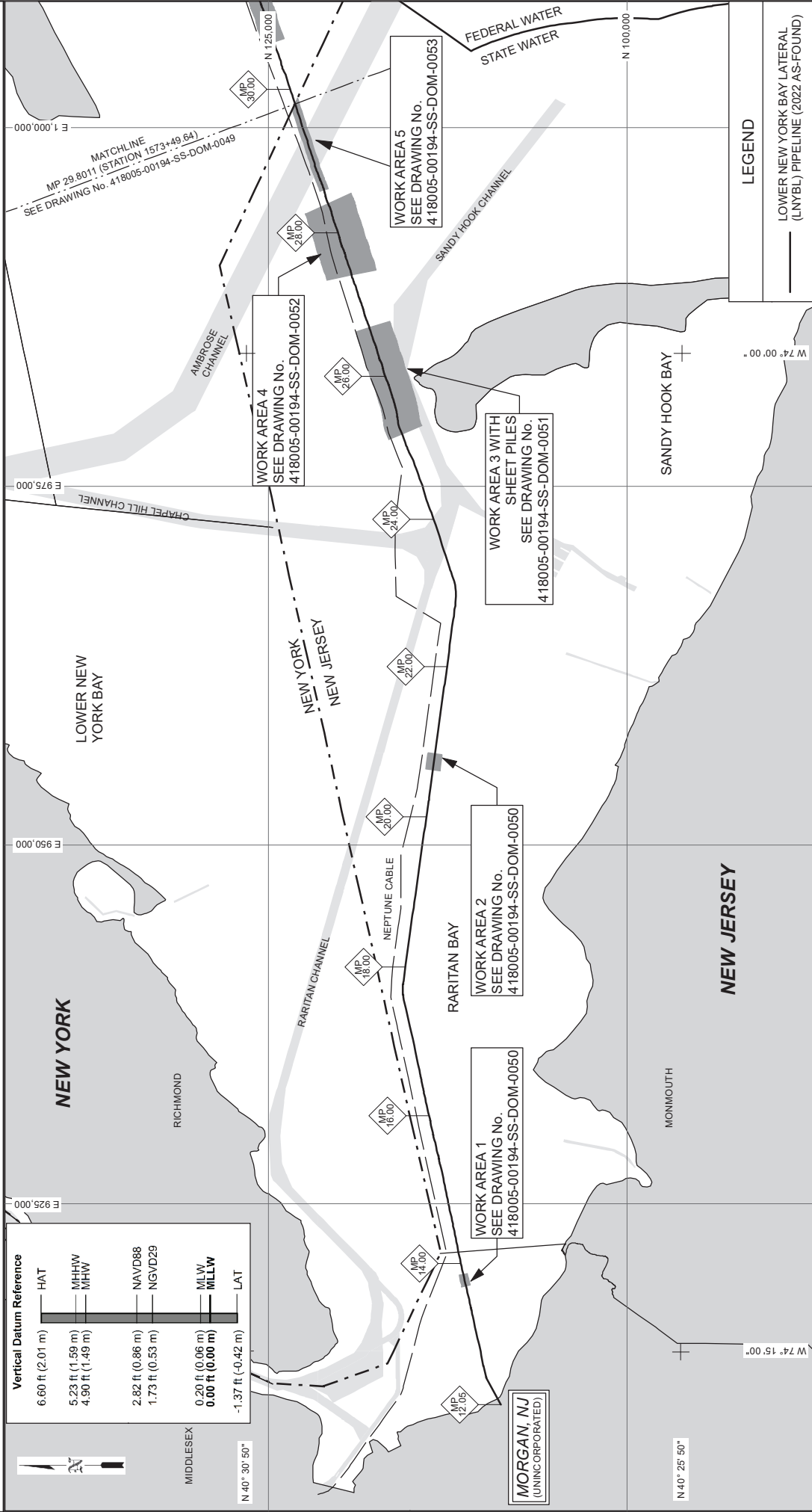
USACE PERMIT DRAWINGS:
SHEET 1 OF 19

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
LOCATION MAP: AREAS OF PROPOSED ROCK COVER / MATERIAL PLACEMENT ACTIVITIES
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK

Williams.

NO.	DATE	BY	KGS	REVISION DESCRIPTION	WO NO.	CHK.	APP.
0	03/06/2023	KGS	JC	ISSUED FOR USE	1229183	DH	JC
1	09/27/2023	KGS	DH	RE-ISSUED FOR USE	1229183	DH	JC

DRAWN BY:	KGS	DATE:	01/19/2023	ISSUED FOR BID:	SCALE:	1"=20,000'
CHECKED BY:	DH	DATE:	01/19/2023	ISSUED FOR CONSTRUCTION:	REVISION:	1
APPROVED BY:	JC	DATE:	01/19/2023	DRAWING NUMBER:	418005-00194-CM-DOM-0003 OF 1	
WO:	1229183					



Vertical Datum Reference

HAT	6.60 ft (2.01 m)
MHHW	5.23 ft (1.59 m)
MHW	4.90 ft (1.49 m)
NAVD88	2.82 ft (0.86 m)
NGVD29	1.73 ft (0.53 m)
MLW	0.20 ft (0.06 m)
MLLW	0.00 ft (0.00 m)
LAT	-1.37 ft (-0.42 m)



LEGEND

—	LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
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**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
OVERVIEW MAP: PROPOSED NEW JERSEY WORKSPACES
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY**

Williams®

ISSUED FOR BID:	DATE:	DP	DRAWN BY:	1229183
ISSUED FOR CONSTRUCTION:	DATE:	DH	CHECKED BY:	1229183
DRAWING NUMBER:	DATE:	JC	APPROVED BY:	1229183
418005-00194-SS-DOM-0048	03/28/2023	JC	WO:	1229183
SHEET 1				
OF 1				

**USACE PERMIT DRAWINGS:
SHEET 2 OF 19**

NO.	DATE	BY	REVISION DESCRIPTION	WO. NO.	CHK.	APP.
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CORPS OF ENGINEERS PERMIT DRAWING

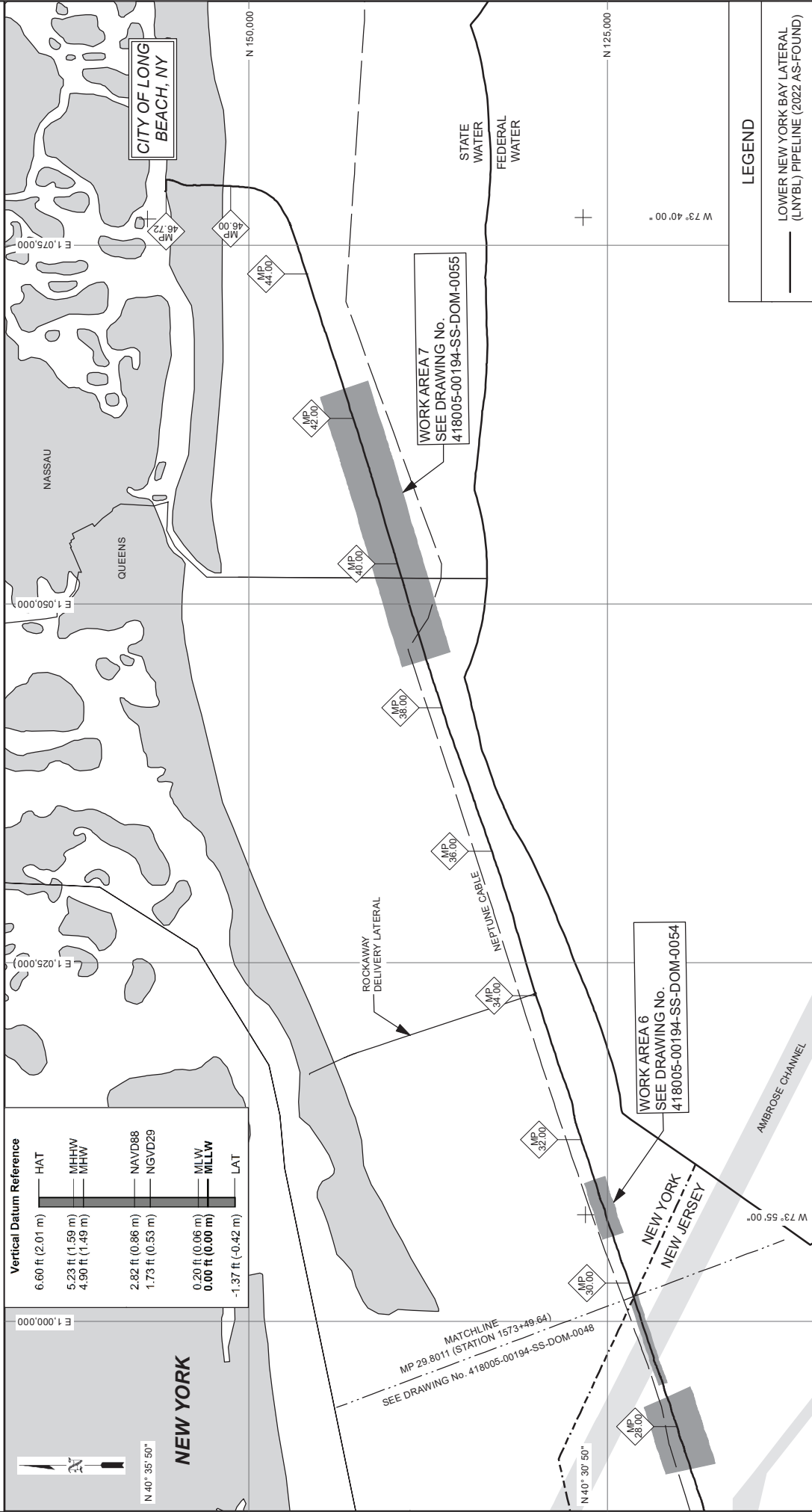
REFERENCE TITLE

DRAWING NO.

GEODETIC INFORMATION

PROJECTION:	STATE PLANE	DATUM:	NAD83
ZONE:	NEW YORK - LONG ISLAND	CENTRAL MERIDIAN:	-74° W
SPHEROID:	GRS 1980	GRID UNITS:	US SURVEY FEET

HORIZONTAL SCALE 1" = 10,000'



Vertical Datum Reference

HAT	6.60 ft (2.01 m)
MHHW	5.23 ft (1.59 m)
MHW	4.90 ft (1.49 m)
NAVD88	2.82 ft (0.86 m)
NGVD29	1.73 ft (0.53 m)
MLW	0.20 ft (0.06 m)
MILLW	0.00 ft (0.00 m)
LAT	-1.37 ft (-0.42 m)

NEW YORK

N 40° 35' 50"

Vertical Datum Reference

Horizontal Datum Reference

E 1,000,000

Vertical Datum Reference

HAT

MHHW

MHW

NAVD88

NGVD29

MLW

MILLW

LAT

CORPS OF ENGINEERS PERMIT DRAWING

USACE PERMIT DRAWINGS: SHEET 3 OF 19

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
OVERVIEW MAP: PROPOSED NEW YORK WORKSPACES
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW YORK

LEGEND

LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)

GEODETIC INFORMATION

PROJECTION: STATE PLANE DATUM: NAD83

ZONE: NEW YORK - LONG ISLAND CENTRAL MERIDIAN: -74° W

SPHEROID: GRS 1980 GRID UNITS: US SURVEY FEET

REFERENCE TITLE

USACE PERMIT DRAWINGS: SHEET 3 OF 19

NO.	DATE	BY	REVISION DESCRIPTION	WO. NO.	CHK.	APP.	DRAWN BY:	DP	DATE:	ISSUED FOR BID:
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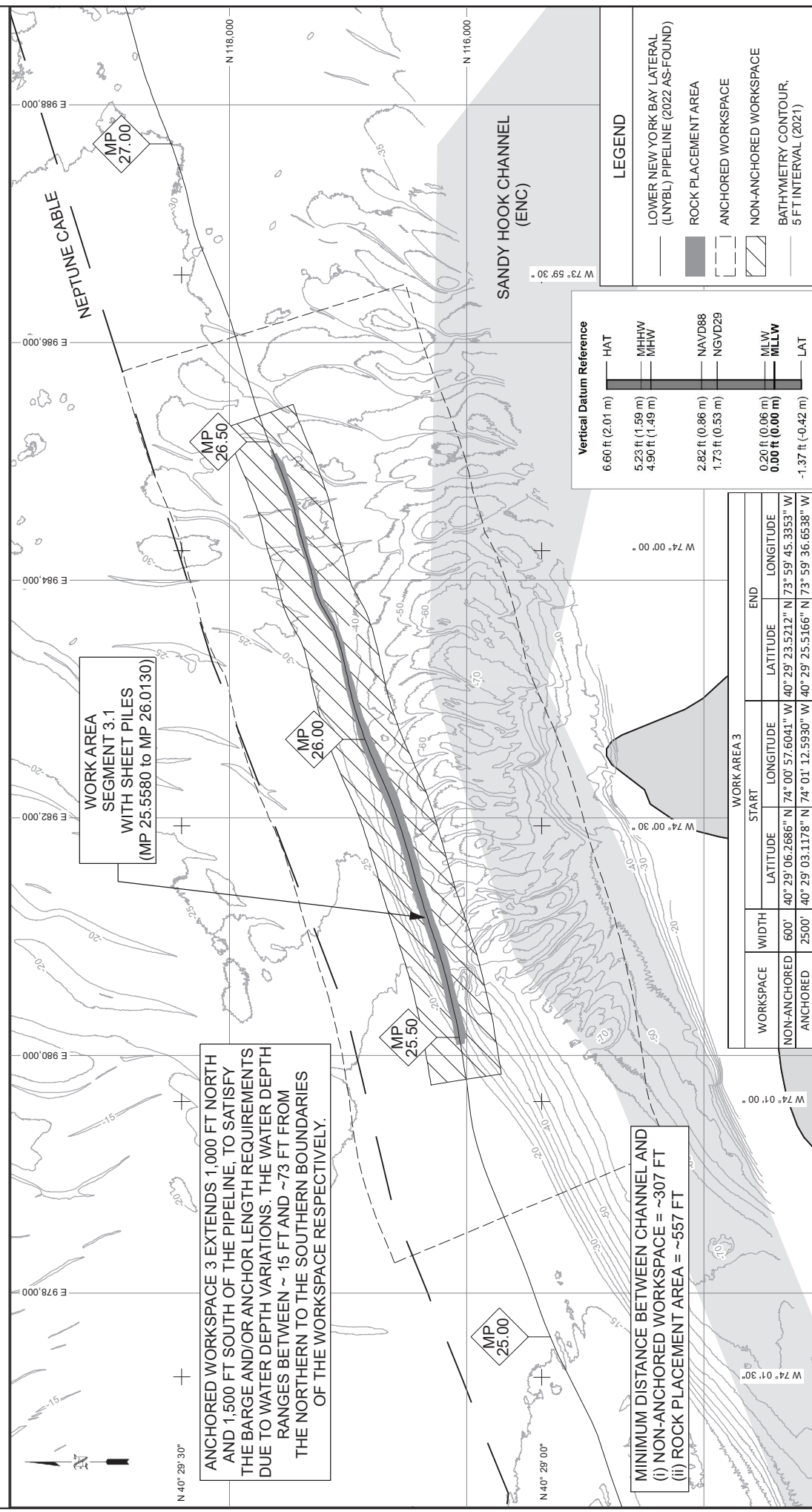
WO: 1229183

SCALE: 1" = 10,000'

REVISION: 1

SHEET 1 OF 1

3 OF 19



CORPS OF ENGINEERS PERMIT DRAWING

**USACE PERMIT DRAWINGS:
SHEET 5 OF 19**

**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
PROPOSED WORKSPACES AND
ROCK COVER FOOTPRINTS, WORK AREA 3
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY**

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LEGEND

- LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
- ROCK PLACEMENT AREA
- ANCHORED WORKSPACE
- NON-ANCHORED WORKSPACE
- BATHYMETRY CONTOUR, 5 FT INTERVAL (2021)

Vertical Datum Reference

HAT	6.60 ft (2.01 m)
MHHW	5.23 ft (1.59 m)
MHW	4.90 ft (1.49 m)
NAVD88	2.82 ft (0.86 m)
NGVD29	1.73 ft (0.53 m)
MLW	0.20 ft (0.06 m)
MLLW	0.00 ft (0.00 m)
LAT	-1.37 ft (-0.42 m)

DRAWING NO.		REFERENCE TITLE	
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1	03/27/2023	RE-ISSUED FOR USE	RE-ISSUED FOR USE

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1	03/27/2023	DP	RE-ISSUED FOR USE	1229183	DH	JC	DH	03/27/2023	03/27/2023

GEODETTIC INFORMATION		SCALE:	
PROJECTION:	STATE PLANE	DATUM:	NAD83
ZONE:	NEW YORK - LONG ISLAND	CENTRAL MERIDIAN:	-74° W
SPHEROID:	GRS 1980	GRID UNITS:	US SURVEY FEET

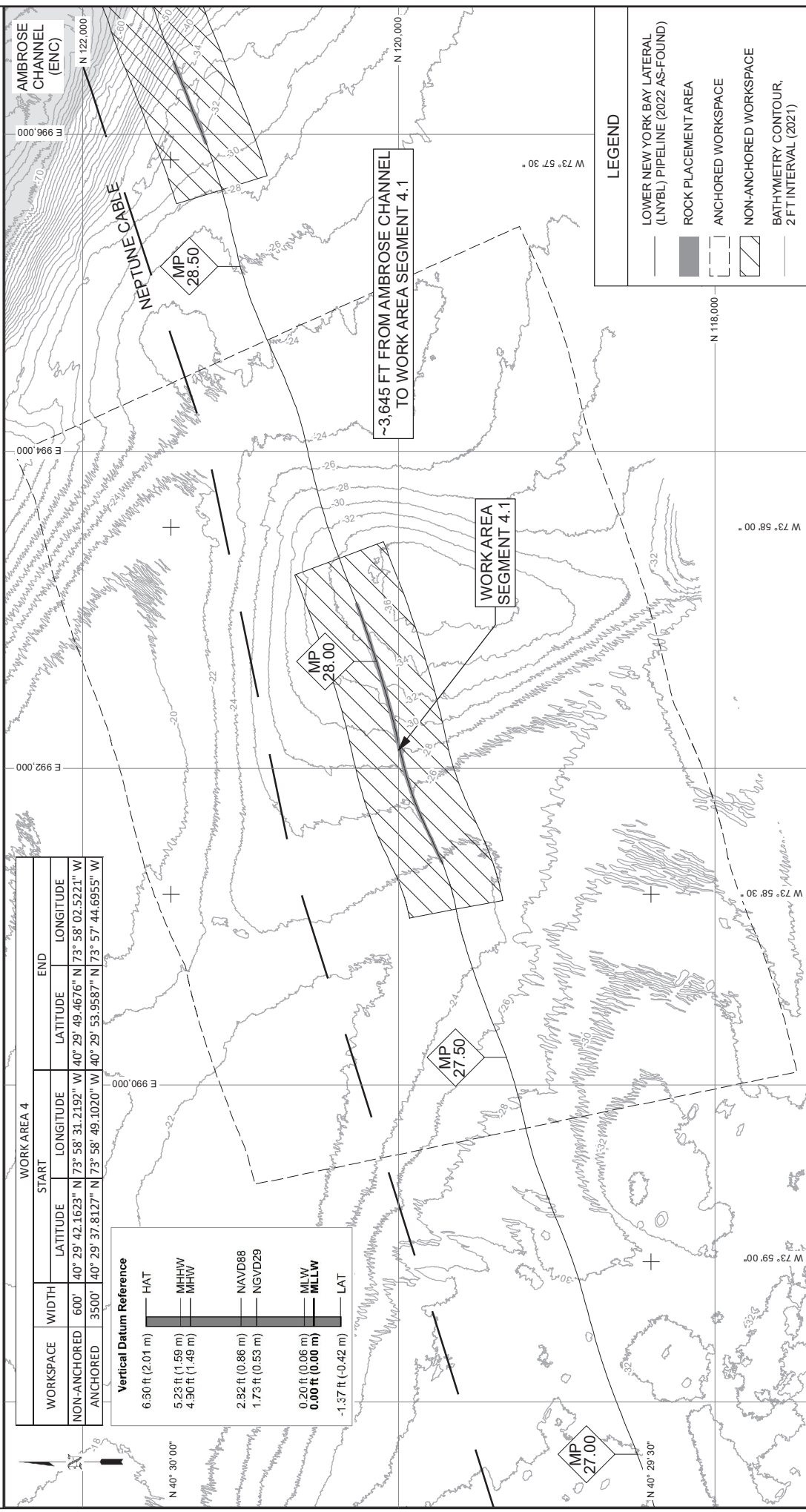
HORIZONTAL SCALE 1" = 1,200'

SCALE: 1" = 1,200'

REVISION: 1

DRAWING NUMBER: 418005-00194-SS-DOM-0051

SHEET 1 OF 1



CORPS OF ENGINEERS PERMIT DRAWING

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
PROPOSED WORKSPACES AND
ROCK COVER FOOTPRINTS, WORK AREA 4
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY

USACE PERMIT DRAWINGS:
SHEET 6 OF 19

REFERENCE TITLE

GEODETIC INFORMATION

PROJECTION:	STATE PLANE	DATUM:	NAD83
ZONE:	NEW YORK - LONG ISLAND	CENTRAL MERIDIAN:	-74° W
SPHEROID:	GRS 1980	GRID UNITS:	US SURVEY FEET

HORIZONTAL SCALE 1" = 900'

0 225 450 900 1350 1800 FEET

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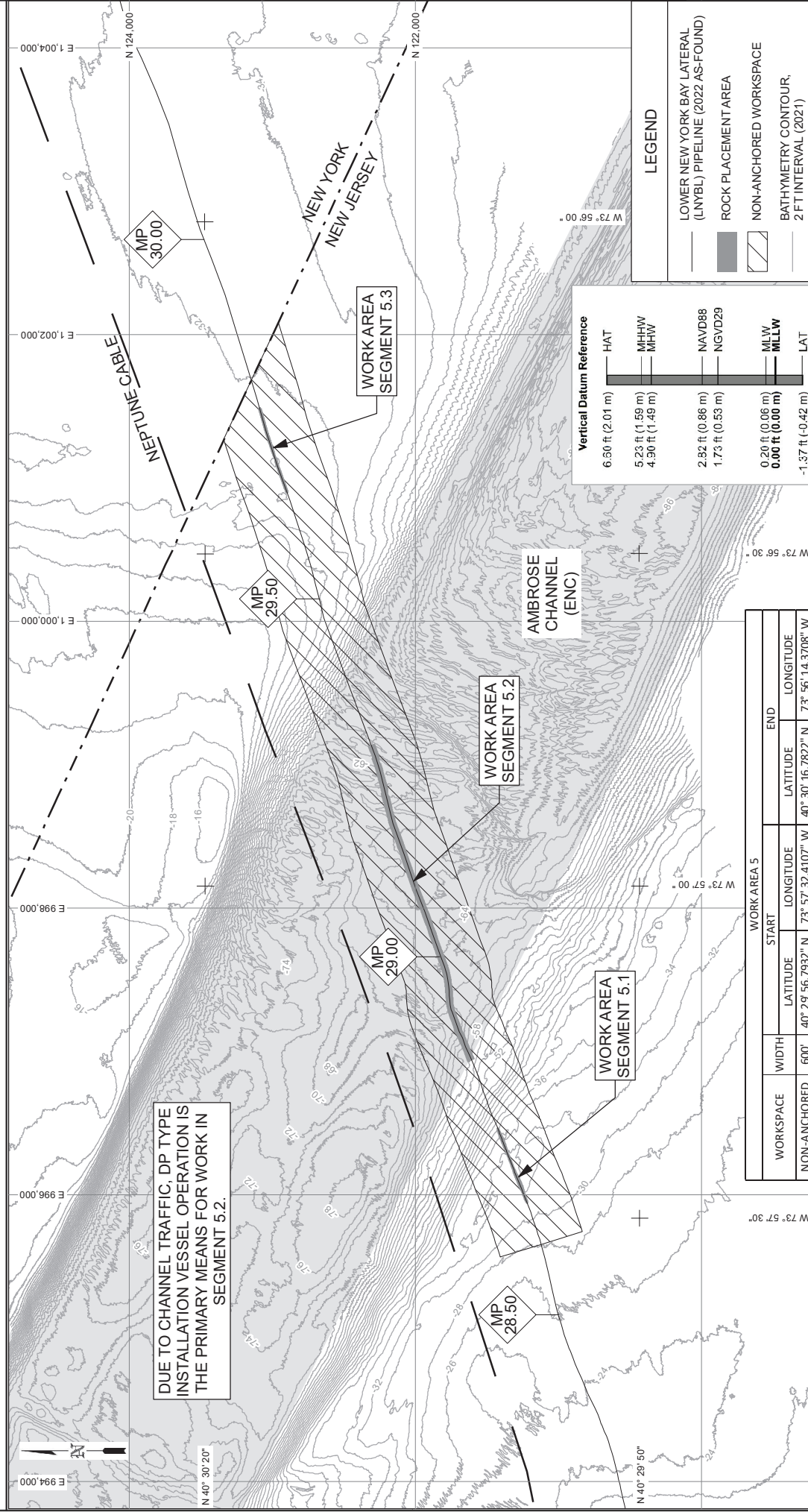
NO.	DATE	BY	REVISION DESCRIPTION	WO. NO.	CHK.	APP.
0	02/28/2023	LC	ISSUED FOR USE	1229183	DH	JC
1	03/27/2023	DP	RE-ISSUED FOR USE	1229183	DH	JC

ISSUED FOR BID: DATE: 03/27/2023 DRAWN BY: DP
ISSUED FOR CONSTRUCTION: DATE: 03/27/2023 CHECKED BY: DH
 DATE: 03/28/2023 APPROVED BY: JC
 WO: 1229183

SCALE: 1" = 900'
REVISION: 1
DRAWING NUMBER: 418005-00194-SS-DOM-0052
SHEET 1 OF 1

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6 OF 19



Vertical Datum Reference

HAT	6.30 ft (2.01 m)
MHHW	5.23 ft (1.59 m)
MHW	4.30 ft (1.49 m)
NAVD88	2.32 ft (0.86 m)
NGVD29	1.73 ft (0.53 m)
MLW	0.20 ft (0.06 m)
MLLW	0.00 ft (0.00 m)
LAT	-1.37 ft (-0.42 m)

LEGEND

- LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
- ROCK PLACEMENT AREA
- NON-ANCHORED WORKSPACE
- BATHYMETRY CONTOUR, 2 FT INTERVAL (2021)

WORK AREA 5

WORKSPACE	WIDTH	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	END
NON-ANCHORED	600'	40° 29' 56.7932" N	73° 57' 32.4107" W	40° 30' 16.7822" N	73° 56' 14.3708" W	

CORPS OF ENGINEERS PERMIT DRAWING

**USACE PERMIT DRAWINGS:
SHEET 7 OF 19**

REFERENCE TITLE

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
PROPOSED WORKSPACES AND
ROCK COVER FOOTPRINTS, WORK AREA 5
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY

GEODETIC INFORMATION

PROJECTION: STATE PLANE DATUM: NAD83

ZONE: NEW YORK - LONG ISLAND CENTRAL MERIDIAN: -74° W

SPHEROID: GRS 1980 GRID UNITS: US SURVEY FEET

REVISIONS

NO.	DATE	BY	REVISION DESCRIPTION	WO. NO.	CHK.	APP.
0	02/28/2023	LC	ISSUED FOR USE	1229183	DH	JC
1	03/27/2023	DP	RE-ISSUED FOR USE	1229183	DH	JC

DRAWING NO.

SCALE: 1" = 1,000'

ISSUED FOR BID: DATE: 03/27/2023

ISSUED FOR CONSTRUCTION: DATE: 03/27/2023

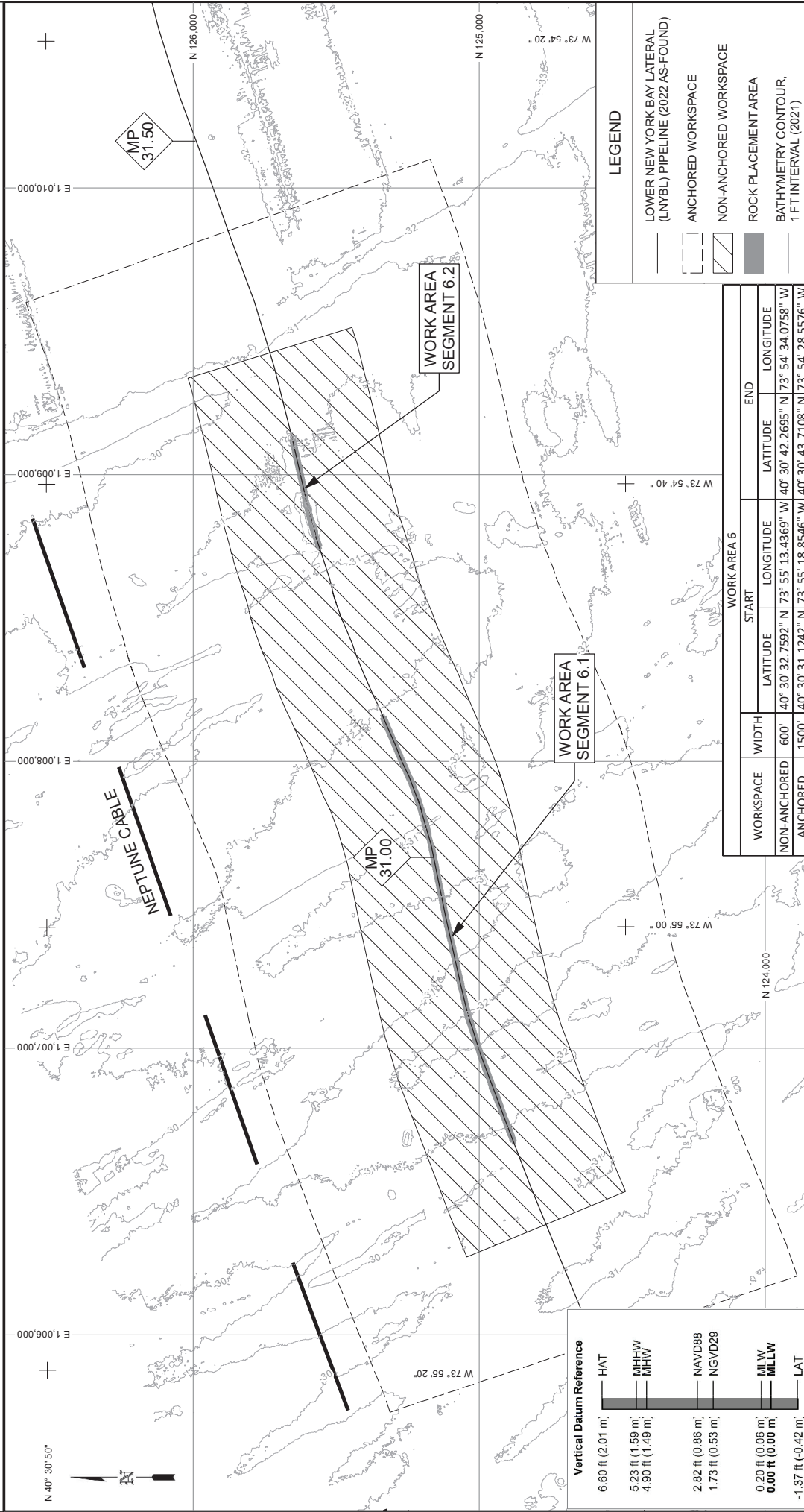
DRAWING NUMBER: 418005-00194-SS-DOM-0053

SCALE: 1" = 1,000'

REVISION: 1

SHEET 1 OF 1

7 OF 19



Vertical Datum Reference

6.60 ft (2.01 m)	HAT
5.23 ft (1.59 m)	MHHW
4.90 ft (1.49 m)	MHW
2.82 ft (0.86 m)	NAVD88
1.73 ft (0.53 m)	NGVD29
0.20 ft (0.06 m)	MLW
0.00 ft (0.00 m)	MLLW
-1.37 ft (-0.42 m)	LAT

CORPS OF ENGINEERS PERMIT DRAWING

HORIZONTAL SCALE 1" = 500'

GEODETTIC INFORMATION	
PROJECTION:	STATE PLANE
DATUM:	NAD83
ZONE:	NEW YORK - LONG ISLAND
CENTRAL MERIDIAN:	-74° W
SPHEROID:	GRS 1980
GRID UNITS:	US SURVEY FEET

NO.	DATE	BY	REVISION DESCRIPTION
0	02/28/2023	LC	ISSUED FOR USE
1	03/27/2023	DP	RE-ISSUED FOR USE

WO. NO.	CHK.	APP.	REVISION DESCRIPTION
1229183	DH	JC	ISSUED FOR USE
1229183	DH	JC	RE-ISSUED FOR USE

DRAWN BY:	DP	DATE:	03/27/2023	ISSUED FOR BID:
CHECKED BY:	DH	DATE:	03/27/2023	ISSUED FOR CONSTRUCTION:
APPROVED BY:	JC	DATE:	03/28/2023	DRAWING NUMBER:
WO:	1229183			

USACE PERMIT DRAWINGS:	
SHEET 8 OF 19	

REFERENCE TITLE

**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
PROPOSED WORKSPACES AND
ROCK COVER FOOTPRINTS, WORK AREA 6
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW YORK**

LEGEND

- LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
- ANCHORED WORKSPACE
- NON-ANCHORED WORKSPACE
- ROCK PLACEMENT AREA
- BATHYMETRY CONTOUR, 1 FT INTERVAL (2021)

WORKSPACE

WORKSPACE	WIDTH	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE
NON-ANCHORED	600'	40° 30' 32.7592" N	73° 55' 13.4369" W	40° 30' 42.2695" N	73° 54' 34.0758" W
ANCHORED	1500'	40° 30' 31.1242" N	73° 55' 18.8546" W	40° 30' 43.7108" N	73° 54' 28.5576" W

WORK AREA 6

WORK AREA SEGMENT 6.1

WORK AREA SEGMENT 6.2

MP 31.00

MP 31.50

NEPTUNE CABLE

LEGEND

- LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
- ANCHORED WORKSPACE
- NON-ANCHORED WORKSPACE
- ROCK PLACEMENT AREA
- BATHYMETRY CONTOUR, 1 FT INTERVAL (2021)

SCALE: 1" = 500'

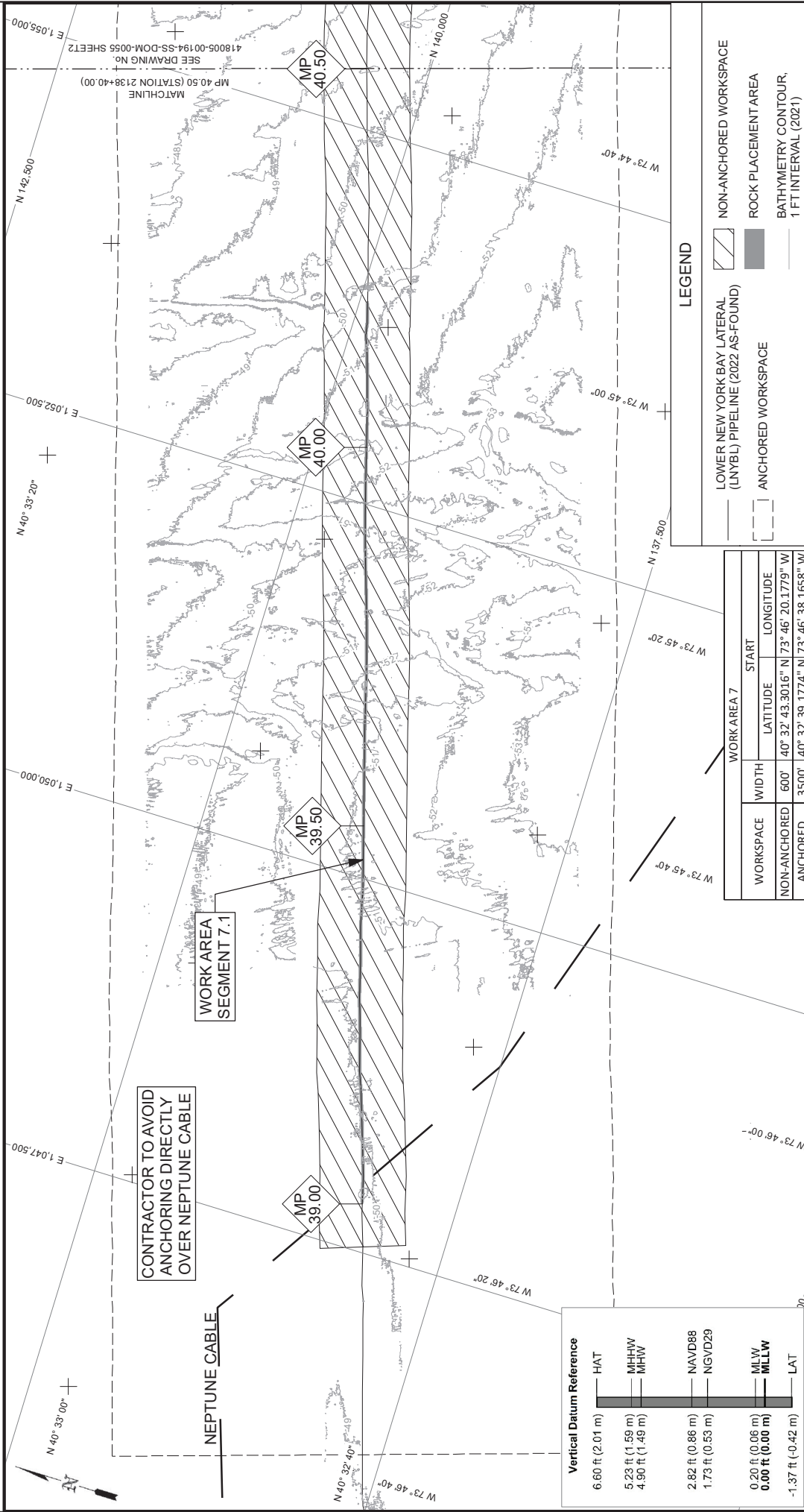
REVISION: 1

ISSUED FOR CONSTRUCTION:

DRAWING NUMBER: 418005-00194-SS-DOM-0054

SHEET 1 OF 1

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CONTRACTOR TO AVOID ANCHORING DIRECTLY OVER NEPTUNE CABLE

WORK AREA SEGMENT 7.1

Vertical Datum Reference

HAT	6.60 ft (2.01 m)
MHHW	5.23 ft (1.59 m)
MHW	4.90 ft (1.49 m)
NAVD88	2.82 ft (0.86 m)
NGVD29	1.73 ft (0.53 m)
MLW	0.20 ft (0.06 m)
MLLW	0.00 ft (0.00 m)
LAT	-1.37 ft (-0.42 m)



LEGEND

[Hatched Box]	LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
[Solid Box]	NON-ANCHORED WORKSPACE
[Dashed Box]	ANCHORED WORKSPACE
[Diagonal Line Box]	ROCK PLACEMENT AREA
[Dotted Line]	BATHYMETRY CONTOUR, 1 FT INTERVAL (2021)

WORK AREA 7

WORKSPACE	WIDTH	LATITUDE	LONGITUDE
NON-ANCHORED	600'	40° 32' 43.3016" N	73° 46' 20.1779" W
ANCHORED	3500'	40° 32' 39.1774" N	73° 46' 38.1658" W

CORPS OF ENGINEERS PERMIT DRAWING

USACE PERMIT DRAWINGS: SHEET 9 OF 19

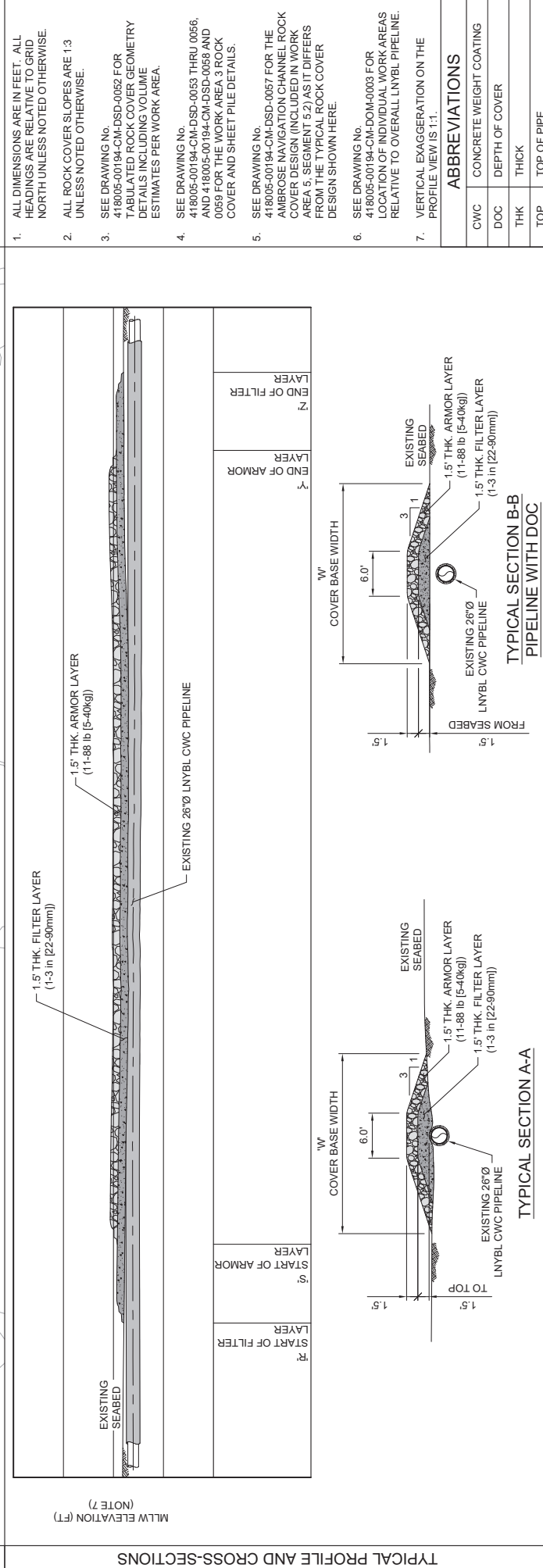
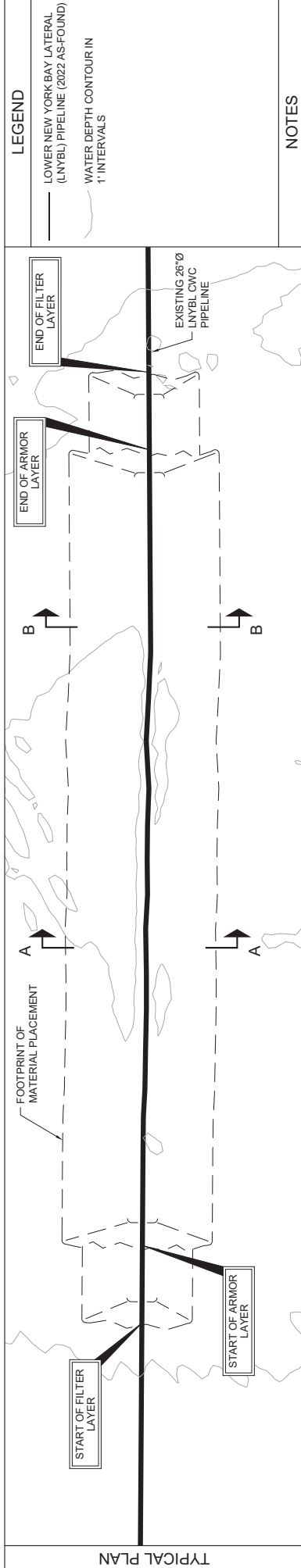
**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
PROPOSED WORKSPACES AND
ROCK COVER FOOTPRINTS, WORK AREA 7
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW YORK**

William's®

NO.	0	1
DATE	02/28/2023	03/27/2023
BY	LC	DP
REVISION DESCRIPTION	ISSUED FOR USE	RE-ISSUED FOR USE
WO. NO.	1229183	1229183
CHK.	DH	JC
APP.	DH	JC
DRAWN BY:	DP	
CHECKED BY:	DH	
APPROVED BY:	JC	
WO:	1229183	
ISSUED FOR BID:	03/27/2023	
ISSUED FOR CONSTRUCTION:	03/27/2023	
DRAWING NUMBER:	418005-00194-SS-DOM-0055	
SCALE:	1" = 1,000'	
REVISION:	1	
SHEET	1	2

GEODETIC INFORMATION

PROJECTION:	STATE PLANE	DATUM:	NAD83
ZONE:	NEW YORK - LONG ISLAND	CENTRAL MERIDIAN:	-74° W
SPHEROID:	GRS 1980	GRID UNITS:	US SURVEY FEET



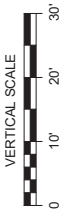
CORPS OF ENGINEERS PERMIT DRAWING		DRAWING NO.		REFERENCE TITLE	
USACE PERMIT DRAWINGS: SHEET 11 OF 19		TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC TYPICAL ROCK COVER / MATERIAL PLACEMENT WORK AREAS 1-2, 4, 5.1, 5.3, AND 6-7 LOWER NEW YORK BAY MAINTENANCE PROJECT RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK		USACE PERMIT DRAWINGS: SHEET 11 OF 19	
NO.	DATE	BY	KGS	REVISION DESCRIPTION	WD NO.
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1	03/27/2023			RE-ISSUED FOR USE	1229183
DRAWN BY:		KGS		DATE:	12/14/2022
CHECKED BY:		DH		DATE:	12/14/2022
APPROVED BY:		JC		DATE:	12/14/2022
WO:		1229183		DRAWING NUMBER:	
SCALE:		N.T.S.		REVISION:	
		1		SHEET 11 OF 19	

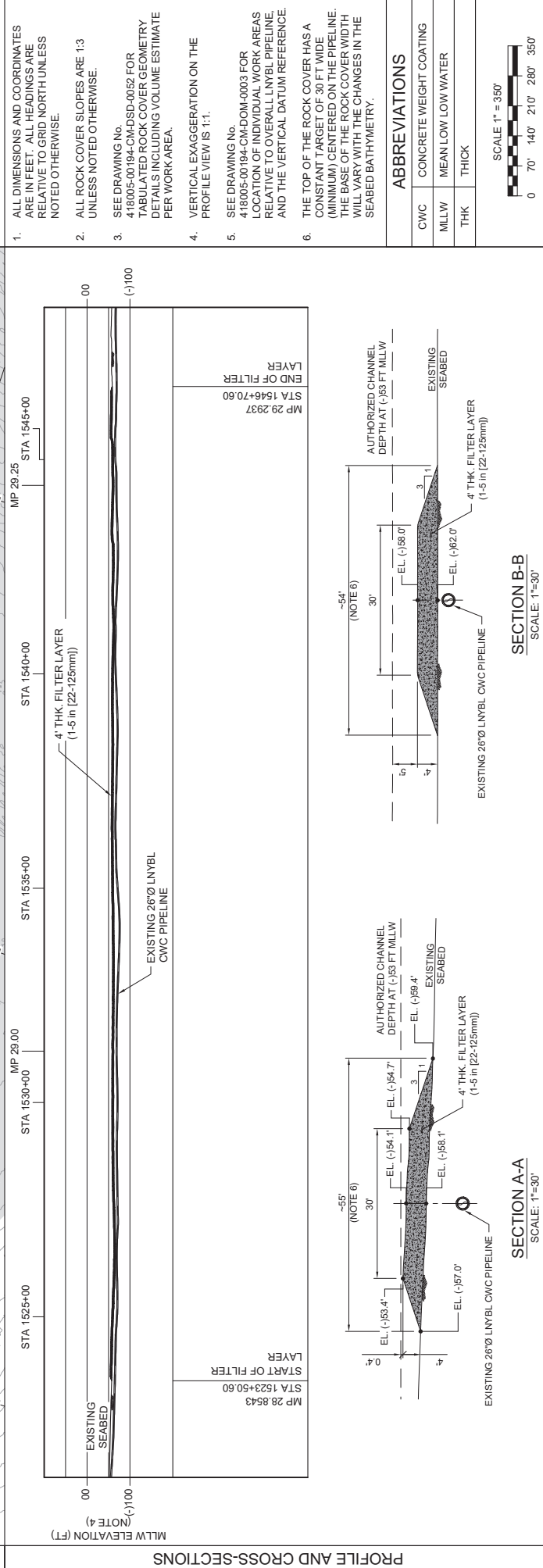
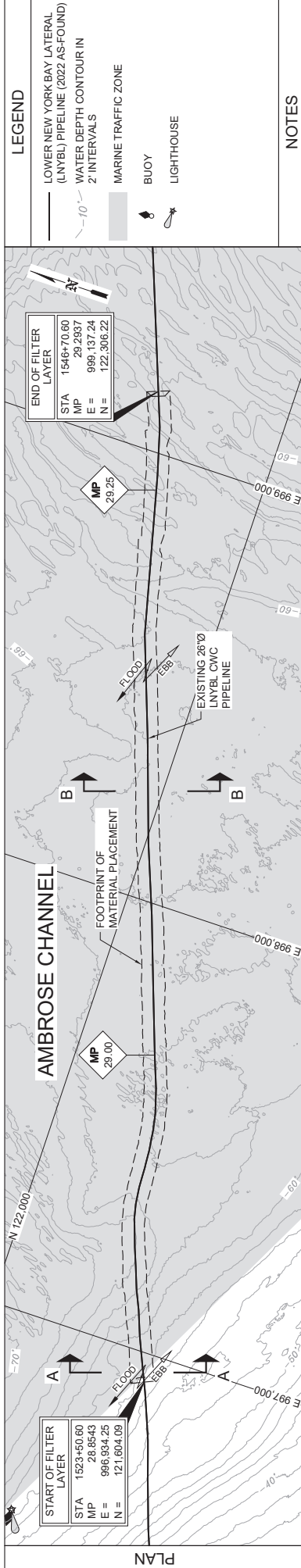
LEGEND

— LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)

- - - WATER DEPTH CONTOUR IN 1' INTERVALS

- NOTES**
- ALL DIMENSIONS ARE IN FEET. ALL HEADINGS ARE RELATIVE TO GRID NORTH UNLESS NOTED OTHERWISE.
 - ALL ROCK COVER SLOPES ARE 1:3 UNLESS NOTED OTHERWISE.
 - SEE DRAWING No. 418005-00194-CM-DSD-0059 FOR TABULATED ROCK COVER GEOMETRY DETAILS INCLUDING VOLUME ESTIMATES PER WORK AREA.
 - SEE DRAWING No. 418005-00194-CM-DSD-0053 THRU 0056, AND 418005-00194-CM-DSD-0058 AND 0059 FOR THE WORK AREA 3 ROCK COVER AND SHEET PILE DETAILS.
 - SEE DRAWING No. 418005-00194-CM-DSD-0057 FOR THE AMBROSE NAVIGATION CHANNEL ROCK COVER DESIGN (INCLUDED IN WORK AREA 5, SEGMENT 5.2) AS IT DIFFERS FROM THE TYPICAL ROCK COVER DESIGN SHOWN HERE.
 - SEE DRAWING No. 418005-00194-CM-DSD-0003 FOR LOCATION OF INDIVIDUAL WORK AREAS RELATIVE TO OVERALL LNYBL PIPELINE. VERTICAL EXAGGERATION ON THE PROFILE VIEW IS 1:1.
- ABBREVIATIONS**
- CWC CONCRETE WEIGHT COATING
- DOC DEPTH OF COVER
- THK THICK
- TOP TOP OF PIPE





LEGEND

- LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
- - - WATER DEPTH CONTOUR IN 2' INTERVALS
- MARINE TRAFFIC ZONE
- BUOY
- ⦿ LIGHTHOUSE

NOTES

1. ALL DIMENSIONS AND COORDINATES ARE IN FEET. ALL HEADINGS ARE RELATIVE TO GRID NORTH UNLESS NOTED OTHERWISE.
2. ALL ROCK COVER SLOPES ARE 1:3 UNLESS NOTED OTHERWISE.
3. SEE DRAWING No. 418005-00194-CM-DSD-0052 FOR TABULATED ROCK COVER GEOMETRY DETAILS INCLUDING VOLUME ESTIMATE PER WORK AREA.
4. VERTICAL EXAGGERATION ON THE PROFILE VIEW IS 1:1.
5. SEE DRAWING No. 418005-00194-CM-DSD-0003 FOR LOCATION OF INDIVIDUAL WORK AREAS RELATIVE TO OVERALL LNYBL PIPELINE, AND THE VERTICAL DATUM REFERENCE.
6. THE TOP OF THE ROCK COVER HAS A CONSTANT TARGET OF 30 FT WIDE (MINIMUM) CENTERED ON THE PIPELINE. THE BASE OF THE ROCK COVER WIDTH WILL VARY WITH THE CHANGES IN THE SEABED BATHYMETRY.

ABBREVIATIONS

CWC	CONCRETE WEIGHT COATING
MLLW	MEAN LOW WATER
THK	THICK

SCALE 1" = 350'

SECTION B-B
SCALE: 1" = 30'

SECTION A-A
SCALE: 1" = 30'

REFERENCE TITLE

**USACE PERMIT DRAWINGS:
SHEET 12 OF 19**

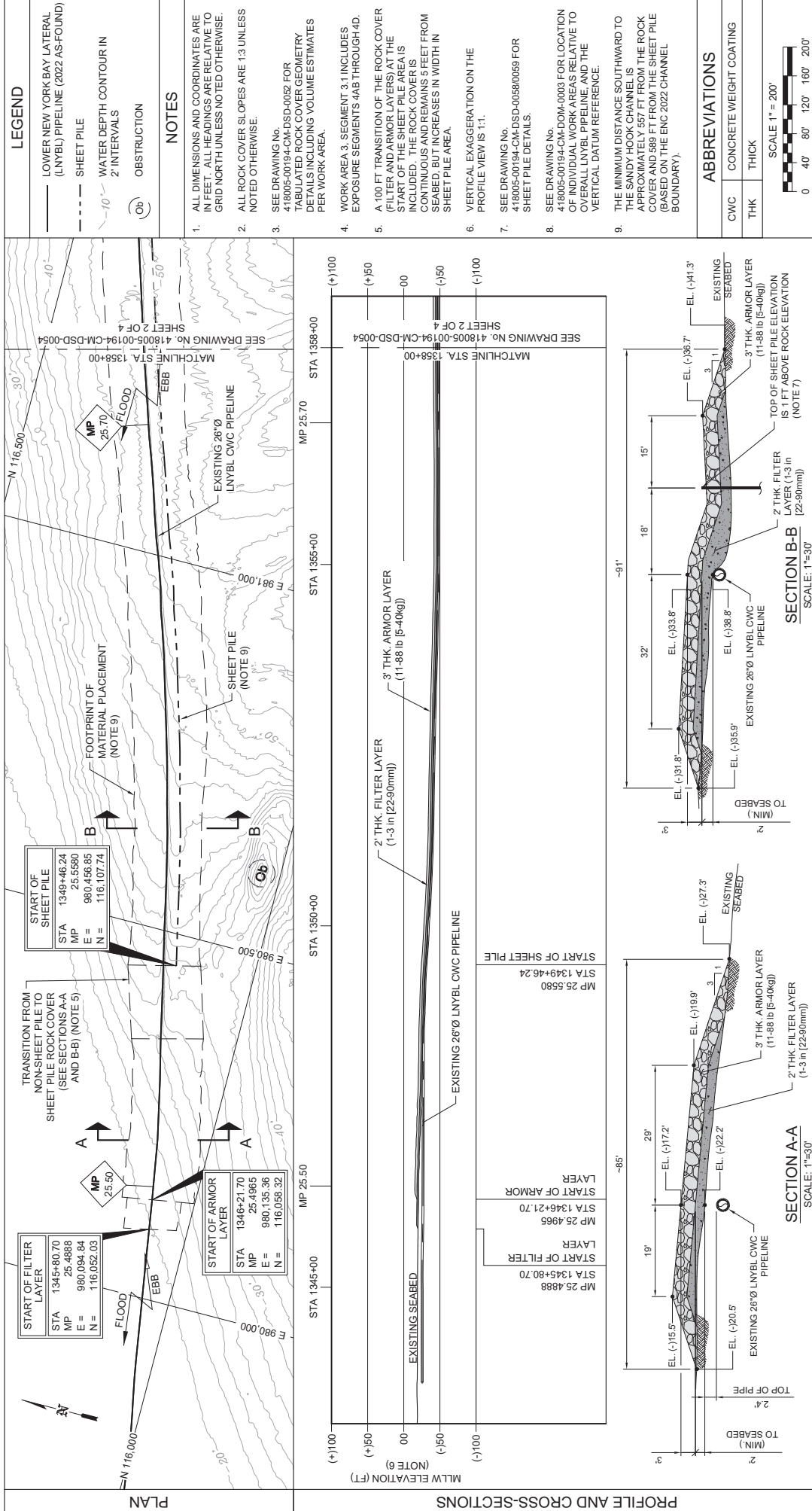
CORPS OF ENGINEERS PERMIT DRAWING

GEODEIC DATUM: NAD83
 SPHEROID: GRS80
 GRID UNIT: U.S. SURVEY FEET
 PROJECTION: US STATE PLANE NEW YORK-LONG ISLAND (FIPS 3104)
 CENTRAL MERIDIAN: 74° W
 FALSE EASTING: 984,250 FT
 FALSE NORTHING: 0 FT
 VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW)

**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
ROCK COVER / MATERIAL PLACEMENT
WORK AREA 5, SEGMENT 5.2 AMBROSE NAVIGATION CHANNEL
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK**

NO.	DATE	BY	REVISION DESCRIPTION	WO NO.	CHK.	APP.
0	03/03/2023	KGS	ISSUED FOR USE	1229183	DH	JC
1	03/27/2023	KGS	RE-ISSUED FOR USE	1229183	DH	JC
2	05/22/2023	KGS	RE-ISSUED FOR USE	1229183	DH	JC
3	06/15/2023	KGS	RE-ISSUED FOR USE	1229183	DH	JC

DRAWN BY:	KGS	DATE:	01/03/2023	ISSUED FOR BID:	NOTED
CHECKED BY:	DH	DATE:	01/03/2023	ISSUED FOR CONSTRUCTION:	3
APPROVED BY:	JC	DATE:	01/03/2023	DRAWING NUMBER:	418005-00194-CM-DSD-0057
WO:	1229183			SHEET	1
				OF	1



LEGEND

- LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
- - - SHEET PILE
- 10'- WATER DEPTH CONTOUR IN 2' INTERVALS
- (Ob) OBSTRUCTION

- NOTES**
- ALL DIMENSIONS AND COORDINATES ARE IN FEET. ALL HEADINGS ARE RELATIVE TO GRID NORTH UNLESS NOTED OTHERWISE.
 - ALL ROCK COVER SLOPES ARE 1:3 UNLESS NOTED OTHERWISE.
 - SEE DRAWING No. 418005-00194-CM-DSD-0052 FOR TABULATED ROCK COVER GEOMETRY DETAILS INCLUDING VOLUME ESTIMATES PER WORK AREA.
 - WORK AREA 3. SEGMENT 3.1 INCLUDES EXPOSURE SEGMENTS 3.4B THROUGH 4D.
 - A 100 FT TRANSITION OF THE ROCK COVER FILTER AND ARMOR LAYERS AT THE START OF THE SHEET PILE AREA IS INCLUDED. THE ROCK COVERS IS CONTINUOUS AND REMAINS 5 FEET FROM SEABED BUT INCREASES IN WIDTH IN SHEET PILE AREA.
 - VERTICAL EXAGGERATION ON THE PROFILE VIEW IS 1:1.
 - SEE DRAWING No. 418005-00194-CM-DSD-0058/0059 FOR SHEET PILE DETAILS.
 - SEE DRAWING No. 418005-00194-CM-DOM-0003 FOR LOCATION OF INDIVIDUAL WORK AREAS RELATIVE TO OVERALL LNYBL PIPELINE AND THE VERTICAL DATUM REFERENCE.
 - THE MINIMUM DISTANCE SOUTHWARD TO THE SANDY HOOK CHANNEL IS APPROXIMATELY 557 FT FROM THE ROCK COVER AND 589 FT FROM THE SHEET PILE (BASED ON THE ENC 2022 CHANNEL BOUNDARY).

ABBREVIATIONS

CWC	CONCRETE WEIGHT COATING
THK	THICK

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
ROCK COVER / MATERIAL PLACEMENT
WORK AREA 3, SEGMENT 3.1
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK

USACE PERMIT DRAWINGS:
SHEET 13 OF 19

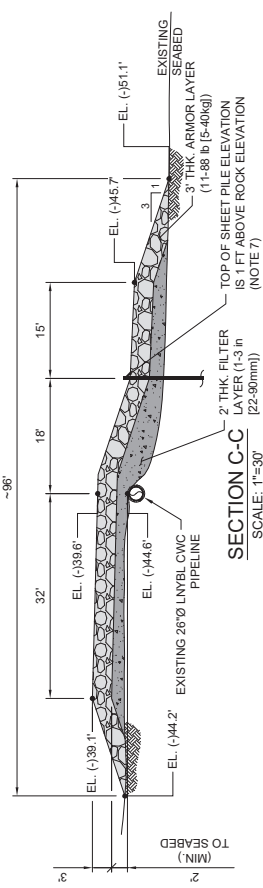
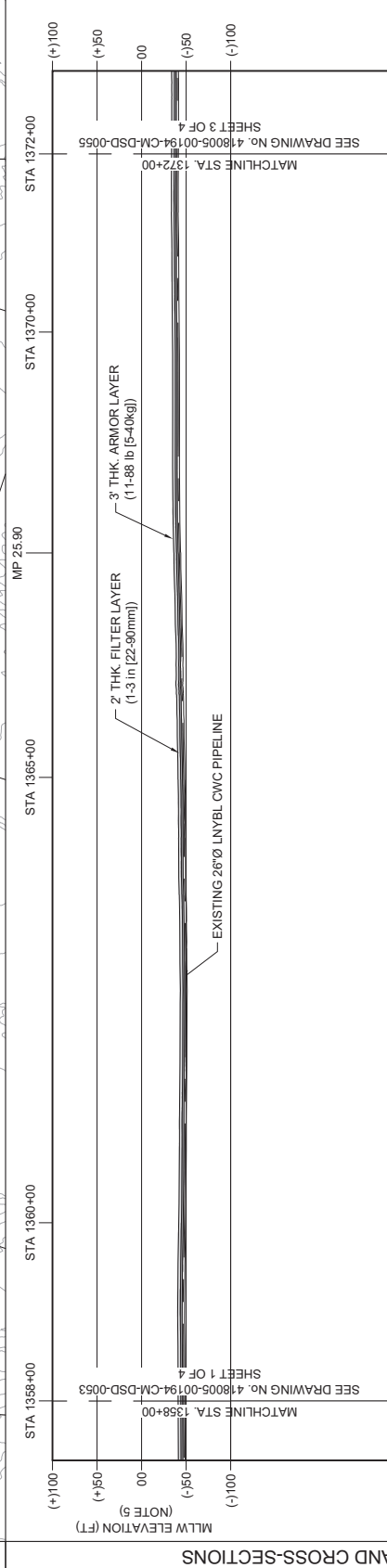
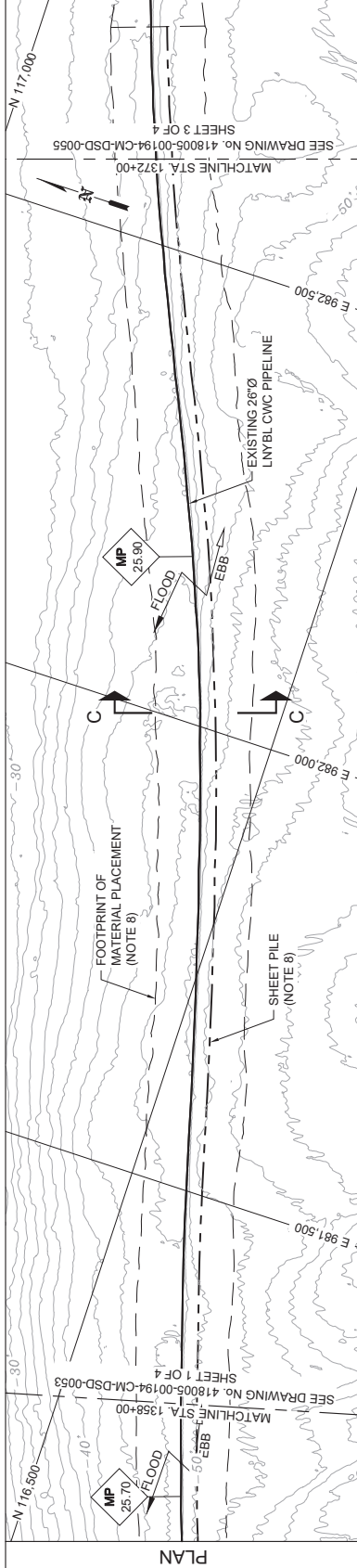
REFERENCE TITLE

CORPS OF ENGINEERS PERMIT DRAWING

GEODETIC DATUM: NAD83
 SPHEROID: GRS80
 GRID UNIT: U.S. SURVEY FEET
 PROJECTION: US STATE PLANE NEW YORK-LONG ISLAND (FIPS 3104)
 CENTRAL MERIDIAN: 74° W
 FALSE EASTING: 984,250 FT
 FALSE NORTHING: 0 FT
 VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW)

NO.	DATE	BY	KGS	REVISION DESCRIPTION	WO NO.	CHK.	APP.
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1	03/27/2023			RE-ISSUED FOR USE	1229183	DH	JC
2	06/14/2023			RE-ISSUED FOR USE	1229183	DH	JC

DRAWN BY:	KGS	DATE:	01/15/2023	ISSUED FOR BID:	NOTED
CHECKED BY:	DH	DATE:	01/15/2023	ISSUED FOR CONSTRUCTION:	2
APPROVED BY:	JC	DATE:	01/15/2023	DRAWING NUMBER:	418005-00194-CM-DSD-0053
WO:	1229183				SHEET 1 OF 4



LEGEND

- LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
- - - SHEET PILE
- 10'- WATER DEPTH CONTOUR IN 2' INTERVALS

- NOTES**
- ALL DIMENSIONS AND COORDINATES ARE IN FEET. ALL HEADINGS ARE RELATIVE TO GRID NORTH UNLESS NOTED OTHERWISE.
 - ALL ROCK COVER SLOPES ARE 1:3 UNLESS NOTED OTHERWISE.
 - SEE DRAWING No. 418005-00194-CM-DSD-0052 FOR TABULATED ROCK COVER GEOMETRY DETAILS INCLUDING VOLUME ESTIMATES PER WORK AREA.
 - WORK AREA 3, SEGMENT 3.1 INCLUDES EXPOSURE SEGMENTS 4A8 THROUGH 4D. VERTICAL EXAGGERATION ON THE PROFILE VIEW IS 11.
 - SEE DRAWING No. 418005-00194-CM-DSD-0058/0059 FOR SHEET PILE DETAILS.
 - SEE DRAWING No. 418005-00194-CM-DSD-0003 FOR LOCATION OF INDIVIDUAL WORK AREAS RELATIVE TO OVERALL LNYBL PIPELINE, AND THE VERTICAL DATUM REFERENCE.
 - THE MINIMUM DISTANCE SCOUTWARD TO THE SANDY HOOK CHANNEL IS APPROXIMATELY 50 FT FROM THE ROCK COVER AREA. SET FROM THE SHEET PILE CENTERLINE TO THE SHEET PILE BOUNDARY ON THE ENC 2022 CHANNEL BOUNDARY).

ABBREVIATIONS

CWC	CONCRETE WEIGHT COATING
THK	THICK

SCALE 1" = 200'

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
ROCK COVER / MATERIAL PLACEMENT
WORK AREA 3, SEGMENT 3.1
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK

USACE PERMIT DRAWINGS:
SHEET 14 OF 19

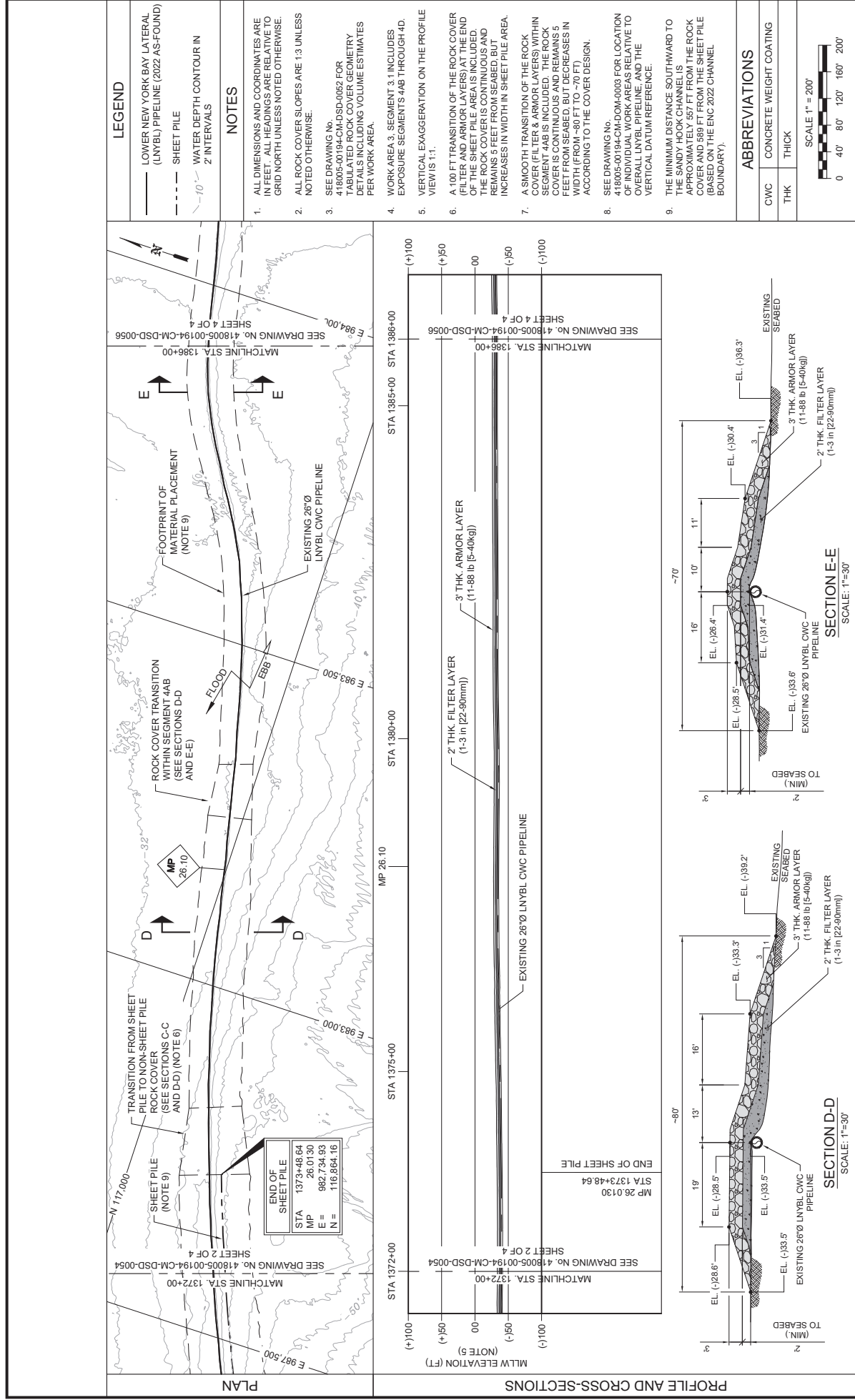
REFERENCE TITLE

NO.	DATE	BY	KGS	REVISION DESCRIPTION	WO NO.	CHK.	APP.
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1	03/27/2023			RE-ISSUED FOR USE	1229183	DH	JC
2	06/14/2023			RE-ISSUED FOR USE	1229183	DH	JC

DRAWN BY:	KGS	DATE:	01/15/2023	ISSUED FOR BID:	NOTED
CHECKED BY:	DH	DATE:	01/15/2023	ISSUED FOR CONSTRUCTION:	2
APPROVED BY:	JC	DATE:	01/15/2023	DRAWING NUMBER:	418005-00194-CM-DSD-0054
WO:	1229183				SHEET 2 OF 4

CORPS OF ENGINEERS PERMIT DRAWING

GEODETIC DATUM: NAD83
 SPHEROID: GRS80
 GRID UNIT: U.S. SURVEY FEET
 PROJECTION: US STATE PLANE NEW YORK-LONG ISLAND (FIPS 3104)
 CENTRAL MERIDIAN: 74° W
 FALSE EASTING: 984,250 FT
 FALSE NORTHING: 0 FT
 VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW)

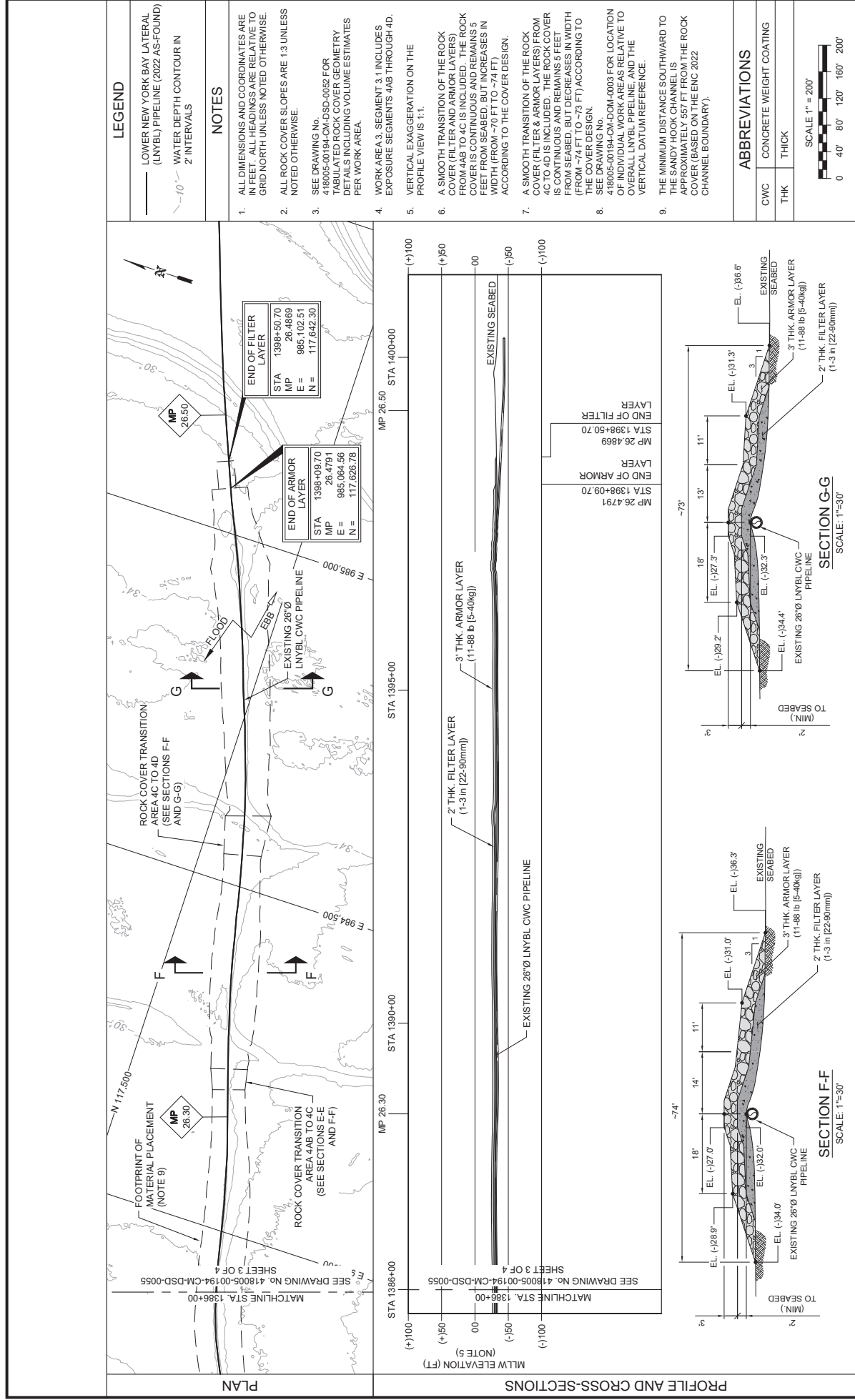


**USACE PERMIT DRAWINGS:
SHEET 15 OF 19**

**TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
ROCK COVER / MATERIAL PLACEMENT
WORK AREA 3, SEGMENT 3.1
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK**

NO.	DATE	BY	KGS	REVISION DESCRIPTION	W/O NO.	CHK.	APP.	DATE	KGS	ISSUED FOR BID:
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1	03/27/2023			RE-ISSUED FOR USE	1229183	DH	JC	01/15/2023		01/15/2023
2	06/14/2023			RE-ISSUED FOR USE	1229183	DH	JC	01/15/2023		01/15/2023

SCALE:	NOTED
REVISION:	2
DRAWING NUMBER:	418005-00194-CM-DSD-0055
SHEET	3
OF	4



LEGEND

— LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)

-10- WATER DEPTH CONTOUR IN 2' INTERVALS

- NOTES**
- ALL DIMENSIONS AND COORDINATES ARE IN FEET. ALL HEADINGS ARE RELATIVE TO GRID NORTH UNLESS NOTED OTHERWISE.
 - ALL ROCK COVER SLOPES ARE 1:3 UNLESS NOTED OTHERWISE.
 - SEE DRAWING NO. 418005-00194-CM-DSD-0052 FOR TABULATED ROCK COVER GEOMETRY DETAILS INCLUDING VOLUME ESTIMATES PER WORK AREA.
 - WORK AREA 3, SEGMENT 3.1 INCLUDES EXPOSURE SEGMENTS 4A-B THROUGH 4D.
 - VERTICAL EXAGGERATION ON THE PROFILE VIEW IS 1:1.
 - A SMOOTH TRANSITION OF THE ROCK COVER (FILTER AND ARMOR LAYERS) FROM 4A-B TO 4C IS INCLUDED. THE ROCK COVER IS CONTINUOUS AND REMAINS 5 FEET FROM SEABED, BUT INCREASES IN WIDTH FROM 70 TO 74 FEET TO THE COVER DESIGN, ACCORDING TO THE COVER DESIGN.
 - A SMOOTH TRANSITION OF THE ROCK COVER (FILTER & ARMOR LAYERS) FROM 4C TO 4D IS INCLUDED. THE ROCK COVER IS CONTINUOUS AND REMAINS 5 FEET FROM SEABED, BUT DECREASES IN WIDTH (FROM 74 FT TO 73 FT) ACCORDING TO THE COVER DESIGN.
 - SEE DRAWING NO. 418005-00194-CM-DSD-0003 FOR LOCATION OF INDIVIDUAL WORK AREAS RELATIVE TO CENTERLINE OF PIPELINE USING THE VERTICAL DATUM REFERENCE.
 - THE MINIMUM DISTANCE SOUTHWARD TO THE SANDY HOOK CHANNELS IS APPROXIMATELY 557 FT FROM THE ROCK COVER (BASED ON THE ENC 2022 CHANNEL BOUNDARY).

ABBREVIATIONS

CWC	CONCRETE WEIGHT COATING
THK	THICK

SCALE 1" = 200'

0 40' 80' 120' 160' 200'

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
ROCK COVER / MATERIAL PLACEMENT
WORK AREA 3, SEGMENT 3.1
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK

USACE PERMIT DRAWINGS:
SHEET 16 OF 19

CORPS OF ENGINEERS PERMIT DRAWING

GEODETTIC DATUM: NAD83
 SPHEROID: GRS80
 GRID UNIT: U.S. SURVEY FEET
 PROJECTION: US STATE PLANE NEW YORK-LONG ISLAND (FIPS 3104)
 CENTRAL MERIDIAN: 74° W
 FALSE EASTING: 984,250 FT
 FALSE NORTHING: 0 FT
 VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW)

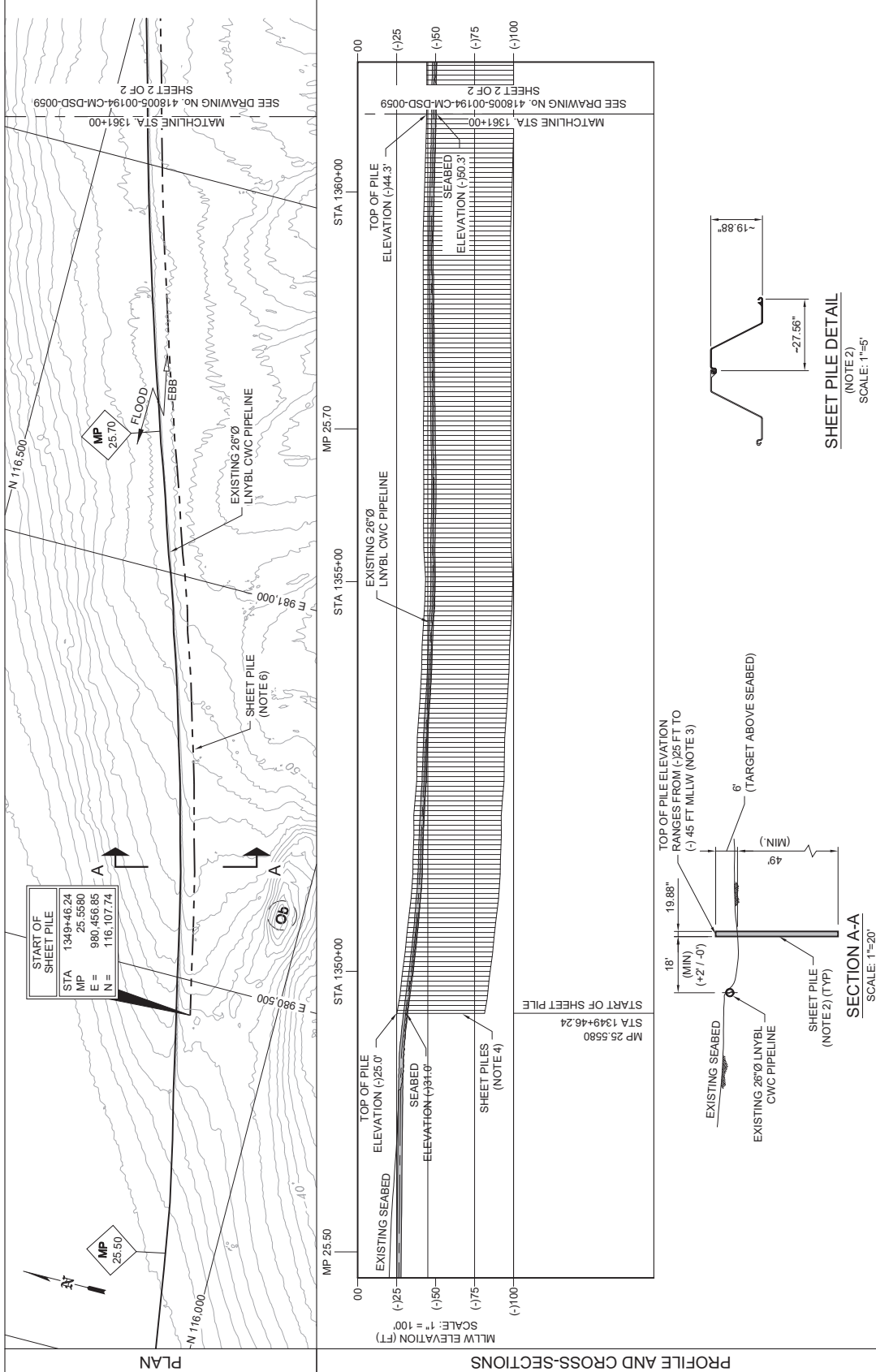
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2	06/14/2023			RE-ISSUED FOR USE	1229183	DH	JC

DRAWN BY:	KGS	DATE:	01/15/2023	ISSUED FOR BID:	NOTED
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APPROVED BY:	JC	DATE:	01/15/2023	DRAWING NUMBER:	418005-00194-CM-DSD-0056
WO:	1229183			SHEET	4
				OF	4

SCALE: 1"=30'

SCALE: 1"=30'

SCALE: 1"=30'



LEGEND

- LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
- - - SHEET PILE
- 10'- WATER DEPTH CONTOUR IN 2' INTERVALS
- (OB) OBSTRUCTION

- NOTES**
- ALL DIMENSIONS AND COORDINATES ARE IN FEET. ALL HEADINGS ARE RELATIVE TO GRID NORTH UNLESS NOTED OTHERWISE.
 - STEEL SHEET PILE SIZE AND MATERIAL GRADE: NUCOR AZ22-700, A572 GRADE 80, YIELD STRENGTH 60ksi OR APPROVED EQUIVALENT.
 - TOP OF SHEET PILE TARGET ELEVATION IS APPROXIMATELY 1FT ABOVE ROCK COVER ARMOR LAYER ELEVATION (MINIMUM FLUSH WITH TOP OF COVER); SEE DRAWINGS 418005-00194-CM-DSD-0053 THROUGH -0056. TOP OF SHEET PILE ELEVATION RANGES FROM (-)25 FT MLLW TO (-)45 FT MLLW.
 - A 100 FT TRANSITION OF THE ROCK COVER (FILTER AND ARMOR LAYERS) AT THE START OF THE SHEET PILE AREA IS INCLUDED. THE ROCK COVER IS TO BE CONSTRUCTED TO EXTEND THE LENGTH OF THE SHEET PILE, PERFORMING BACK TO THE NATURAL SEALED BUTT JOINTS. INCREASES IN WIDTH IN THE SHEET PILE AREA.
 - REFER TO DRAWING No. 418005-00194-CM-DDM-0003 FOR THE VERTICAL DATUM REFERENCE.
 - THE MINIMUM DISTANCE SOUTHWARD TO THE SANDY HOOK CHANNEL IS APPROXIMATELY 589 FT FROM THE SHEET PILE (BASED ON THE ENG 2022 CHANNEL BOUNDARY).

ABBREVIATIONS

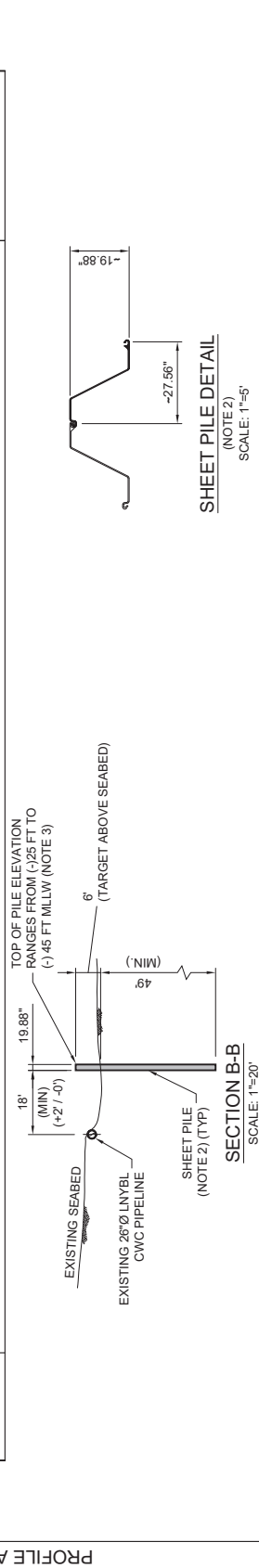
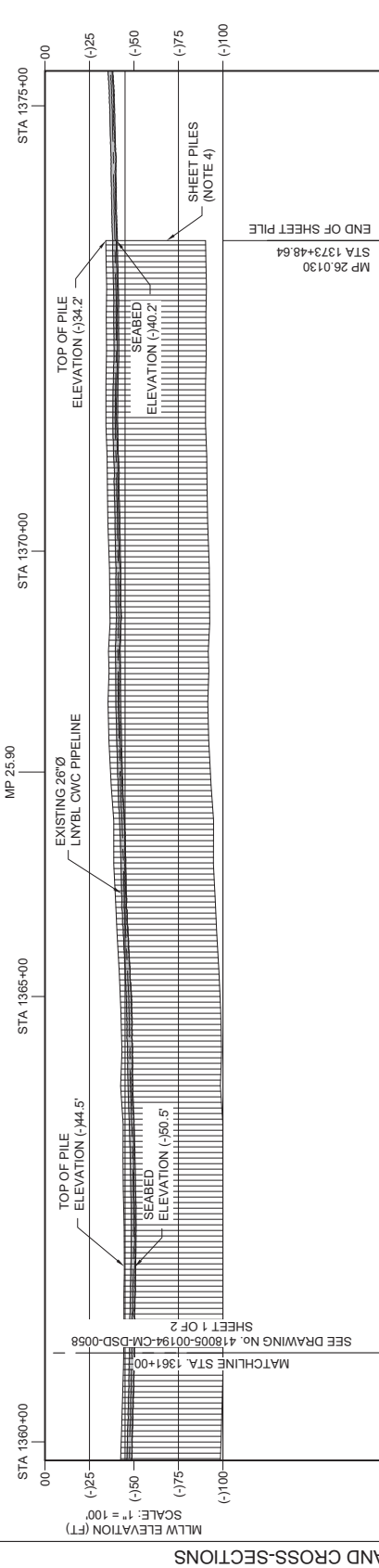
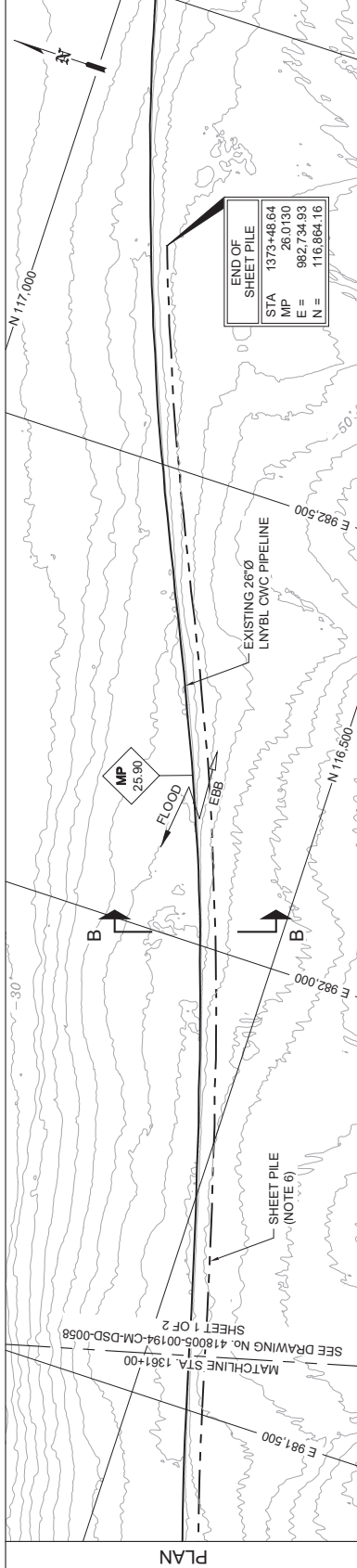
CWC	CONCRETE WEIGHT COATING
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VERTICAL SCALE 1" = 100'
0 25' 50' 75' 100'

HORIZONTAL SCALE 1" = 200'
0 40' 80' 120' 160' 200'

CORPS OF ENGINEERS PERMIT DRAWING		REFERENCE TITLE	
USACE PERMIT DRAWINGS: SHEET 17 OF 19		TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC SHEET PILE WALL WORK AREA 3, SEGMENT 3.1 LOWER NEW YORK BAY MAINTENANCE PROJECT RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK	
NO.	DATE	BY	REVISION DESCRIPTION
0	03/03/2023	KGS	ISSUED FOR USE
1	03/27/2023	KGS	RE-ISSUED FOR USE
2	06/13/2023	KGS	RE-ISSUED FOR USE
NO.	CHK.	APP.	WO NO.
	DH	JC	1229183
	DH	JC	1229183
	DH	JC	1229183
NO.	DATE	ISSUED FOR BID:	SCALE:
	01/15/2023	01/15/2023	2
PROJECTION:	STATE PLANE:	DATUM:	REVISION:
ZONE: NEW YORK-LONG ISLAND	GRS 1980	NAD83	2
SPHEROID:	GRS 1980	CENTRAL MERIDIAN:	DRAWING NUMBER:
		-74° W	418005-00194-CM-DSD-0058
	GRID UNITS:	US SURVEY FEET	SHEET 1
			OF 2





LEGEND

- LOWER NEW YORK BAY LATERAL (LNYBL) PIPELINE (2022 AS-FOUND)
- - - SHEET PILE
- 10'- WATER DEPTH CONTOUR IN 2' INTERVALS

- NOTES**
- ALL DIMENSIONS AND COORDINATES ARE IN FEET. ALL HEADINGS ARE RELATIVE TO GRID NORTH UNLESS NOTED OTHERWISE.
 - STEEL SHEET PILE SIZE AND MATERIAL GRADE: NUCOR A36-700 A572 GRADE 80, YIELD STRENGTH 160ksi OR APPROVED EQUIVALENT.
 - TOP OF SHEET PILE TARGET ELEVATION IS APPROXIMATELY 1FT ABOVE ROCK COVER ARMOR LAYER ELEVATION (MINIMUM FLUSH WITH TOP OF COVER); SEE DRAWINGS 418005-00194-CM-DSD-0053 THROUGH -0056. TOP OF SHEET PILE ELEVATION RANGES FROM (-)25 FT MLLW TO (-)45 FT MLLW.
 - A 100 FT TRANSITION OF THE ROCK COVER (FILTER AND ARMOR LAYERS) AT THE START OF THE SHEET PILE AREA IS INCLUDED. THE ROCK COVER IS CONTINUOUS AND 1-2 FEET ABOVE THE END OF THE SHEET PILE TAPERING BACK TO THE NATURAL SEABED BUT INCREASES IN WIDTH IN THE SHEET PILE AREA.
 - REFER TO DRAWING No. 418005-00194-CM-DSD-0003 FOR THE VERTICAL DATUM REFERENCE.
 - THE MINIMUM DISTANCE SOUTHWARD TO THE SANDY HOOK CHANNELS FROM THE SHEET PILE IS APPROXIMATELY 150 FT FROM THE SHEET PILE (BASED ON THE ENC 2022 CHANNEL BOUNDARY).

ABBREVIATIONS

CWC	CONCRETE WEIGHT COATING
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VERTICAL SCALE 1" = 100'
HORIZONTAL SCALE 1" = 200'

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
SHEET PILE WALL
WORK AREA 3, SEGMENT 3.1
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK

USACE PERMIT DRAWINGS:
SHEET 18 OF 19

Williams.

DRAWN BY:	KGS	DATE:	01/15/2023	ISSUED FOR BID:	SHOWN
CHECKED BY:	DH	DATE:	01/15/2023	ISSUED FOR CONSTRUCTION:	2
APPROVED BY:	JC	DATE:	01/15/2023	DRAWING NUMBER:	SHEET 2 OF 2
WO:	1229183				

GEODETTIC INFORMATION		REVISION DESCRIPTION		REFERENCE TITLE	
PROJECTION:	STATE PLANE	NO.	DATE	BY	NO. NO.
ZONE:	NEW YORK-LONG ISLAND	0	03/03/2023	KGS	1229183
SPHEROID:	GRS 1980	1	03/27/2023	KGS	1229183
		2	06/13/2023	KGS	1229183

ROCK TYPE COVER DIMENSIONS BY WORK AREA														
WORK AREA	SEGMENT ID	APPROXIMATE WATER DEPTH RANGE (FT)	FILTER LAYER			ARMOR LAYER		ROCK COVER			APPROXIMATE AREA OF ROCK COVER SEABED DISTURBANCE (FT ²)		APPROXIMATE VOLUME (YD ³)	
			'R' START OF FILTER LAYER (MP)	'Z' END OF FILTER LAYER (MP)	'S' START OF ARMOR LAYER (MP)	'Y' END OF ARMOR LAYER (MP)	'W' COVER BASE WIDTH (FT)	ROCK COVER LENGTH (FT)	FILTER LAYER (NOTE 2)	ARMOR LAYER				
1	1.1	9.8 - 10.6	13.7473	13.7937	13.7501	13.7909	25.9	245	6,400	210	300			
2	2.1	21.8 - 22.1	20.7210	20.7475	20.7238	20.7446	29.6	140	3,600	190	200			
3 (NOTE 1)	3.1	19.7 - 49.2	25.4888	26.4869	25.4965	26.4791	72.4-106.7	5,339	523,000	30,900	48,300			
4	4.1	23.5 - 35.1	27.7441	28.0740	27.7469	28.0711	25.1	1,742	47,900	1,330	2,180			
5	5.1	30.4 - 36.5	28.6513	28.7592	28.6541	28.7564	27.8	570	17,400	620	790			
5	5.2	57.4 - 66.4	28.8543	29.2937	NONE REQUIRED		54.1	2,320	137,900	15,950	0			
5	5.3	30.1 - 33.6	29.6442	29.7638	29.6471	29.7609	24.1	631	16,500	410	740			
6	6.1	30.3 - 32.8	30.8018	31.1001	30.8047	31.0973	25.5	1,575	44,000	1,260	2,000			
6	6.2	30.9 - 33.4	31.2164	31.2939	31.2192	31.2910	27.4	409	12,300	430	550			
7	7.1	49.8 - 53.0	39.0009	40.1939	39.0037	40.1910	24.9	6,299	171,700	4,610	7,820			
7	7.2	45.0 - 49.8	40.8255	42.0651	40.8283	42.0622	24.3	6,545	174,500	4,410	7,900			


CORPS OF ENGINEERS PERMIT DRAWING

NOTES:

- SHEET PILE AREA. SHEET PILING LOCATED BETWEEN MP 25.558 AND MP 26.013.
- SEGMENT 5.2 FILTER LAYER ROCK SIZING RANGES FROM 1-5 in [22-125mm]. FILTER LAYER SIZING FOR ALL OTHER SEGMENTS IS 1-3 in [22-90mm].
- DIMENSIONS OF COVER ARE TYPICAL AND DO NOT INCLUDE CONSTRUCTION TOLERANCES OR WATER DEPTH VARIATIONS.

DRAWING NO.		REFERENCE TITLE	
USACE PERMIT DRAWINGS: SHEET 19 OF 19		WO NO.	CHK. APP.
		1229183	DH JC
NO.	DATE	BY	REVISION DESCRIPTION
0	03/03/2023	KGS	ISSUED FOR USE
1	09/27/2023	KGS	RE-ISSUED FOR USE

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC
DESIGN ROCK COVER
ALL WORK AREAS
LOWER NEW YORK BAY MAINTENANCE PROJECT
RARITAN BAY / ATLANTIC OCEAN, NEW JERSEY / NEW YORK



DRAWN BY:	KGS	DATE:	12/14/2022	ISSUED FOR BID:	SCALE:	N.T.S.
CHECKED BY:	DH	DATE:	12/14/2022	ISSUED FOR CONSTRUCTION:	REVISION:	1
APPROVED BY:	JC	DATE:	12/14/2022	DRAWING NUMBER:	418005-00194-CM-DSD-0052	
WO:	1229183					

SHEET 1
OF 1