REV. / ISSUE	DATE	DESCRIPTION
1	6/13/25	REV PER ADDITIONAL WETLAND DATA
2	10/08/25	REV PER NJDEP COMMENTS

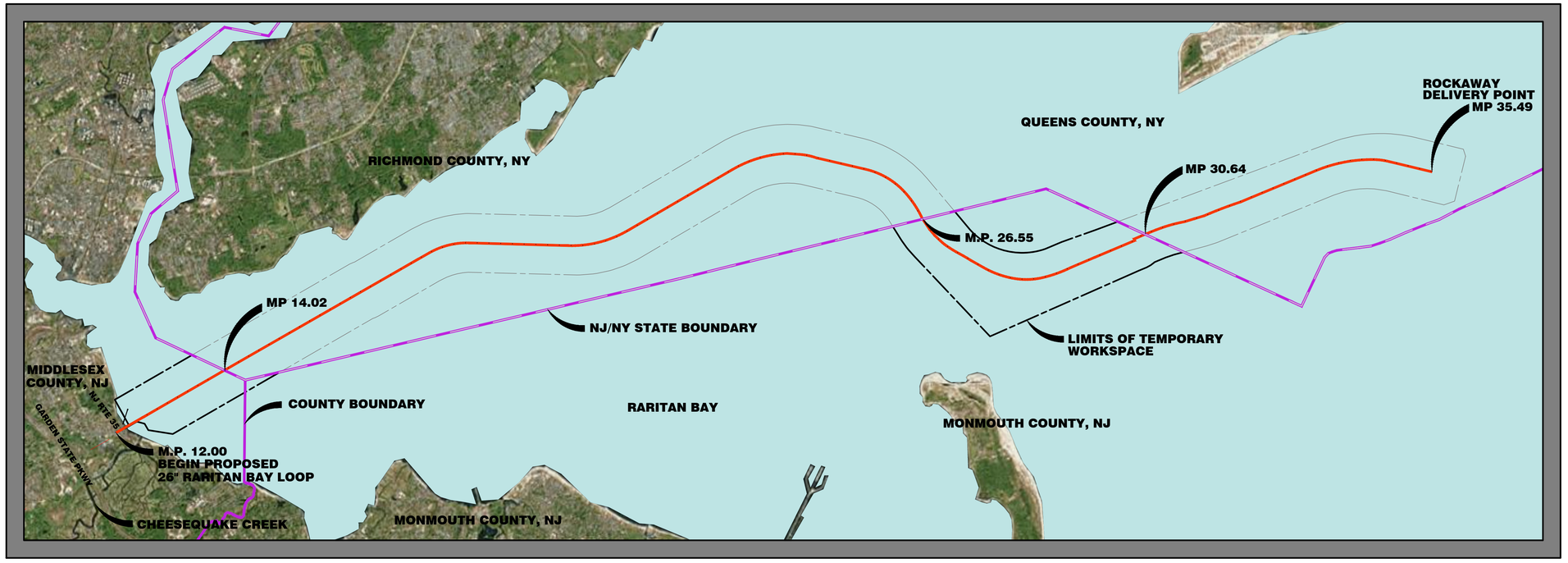
NJDEP LAND USE PERMIT PLANS

FOR THE

NORTHEAST SUPPLY ENHANCEMENT PROJECT

PROPOSED 26" RARITAN BAY LOOP (OFFSHORE)

TRANSCONTINENTAL GAS PIPE LINE COMPANY LLC



AERIAL KEY MAP

SOURCE: ARCGIS WORLD IMAGERY MAP SERVICE
WWW.MAPS.US.NEARMAP.COM, AERIAL MAPS,
MARCH 30, 2017
SCALE: 1" = 5000'

DRAWING LIST			
DWG. NO.	DWG. TITLE	ISSUED	LAST REVISED
1	COVER SHEET	05/21/25	10/08/25
2	GENERAL NOTES	05/21/25	10/08/25
3	WATERFRONT DEVELOPMENT PERMIT PLAN (MILE 12.00 TO 14.02)	05/21/25	10/08/25
4	WATERFRONT DEVELOPMENT PERMIT PLAN (MILE 26.55 TO 28.90)	05/21/25	10/08/25
5	WATERFRONT DEVELOPMENT PERMIT PLAN (MILE 28.90 TO 30.64)	05/21/25	10/08/25
6	CONSTRUCTION DETAILS	05/21/25	10/08/25
7	CONSTRUCTION DETAILS	05/21/25	10/08/25
8	CONSTRUCTION DETAILS	05/21/25	10/08/25

WATERFRONT DEVELOPMENT PLANS

NJDEP APPROVAL STAMP

I AM A DULY REGISTERED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT EXISTING CONDITIONS SHOWN WERE FIELD LOCATED AND PREPARED UNDER MY DIRECT SUPERVISION.

THOMAS J. MURPHY, PLS
DW SMITH ASSOCIATES, LLC
1450 STATE ROUTE 34, WALL, NJ 07753
PROFESSIONAL LAND SURVEYOR
N.J. LIC. NO. 37207 COA NO. 24GA28122400

SIGNATURE DATE

PAULUS, SOKOLOWSKI AND SARTOR, LLC.
1450 ROUTE 34
WALL, NJ 07753
PHONE: (732) 363-5850

CERTIFICATE OF AUTHORIZATION NO. 24GA28032700

ALL DIMENSIONS MUST BE VERIFIED BY THE CONTRACTOR. NOTIFY PAULUS, SOKOLOWSKI AND SARTOR, LLC. OF ANY CONFLICTS, ERRORS, AMBIGUITIES OR DISCREPANCIES IN THE CONTRACT DRAWINGS OR SPECIFICATIONS BEFORE PROCEEDING WITH CONSTRUCTION.

ALL DIMENSIONS SHALL BE AS NOTED IN WORDS OR NUMBERS ON THE CONTRACT DRAWINGS. DO NOT SCALE THE DRAWINGS TO DETERMINE DIMENSIONS.

THESE CONTRACT DRAWINGS CONTAIN DATA INTENDED SPECIFICALLY FOR THE NOTED PROJECT AND CLIENT. THEY ARE NOT INTENDED FOR USE ON EXTENSIONS OF THIS PROJECT OR FOR REUSE ON ANY OTHER PROJECT.

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UNLESS THESE DRAWINGS ARE SPECIFICALLY DESIGNATED AS "CONSTRUCTION ISSUE", THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION OR IMPROVEMENTS DEPICTED HEREIN. CONTRACTORS SHALL NOTIFY THE DESIGN ENGINEER TO OBTAIN CONSTRUCTION DOCUMENTS.

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I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT THE PROJECT ENGINEERING DESIGN REPRESENTED IN THESE ACCURATE AND CORRESPONDS WITH MY DIRECTION AND ENGINEERING JUDGEMENT.

JASON SCHOOLING, P.E.
PS&S, LLC
1450 HIGHWAY 34, WALL, NJ 07753
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05042501 COA NO. 24GA28032700

SIGNATURE DATE

PROJECT

NORTHEAST SUPPLY ENHANCEMENT PROJECT
PROPOSED
26" RARITAN BAY LOOP

MIDDLESEX & MONMOUTH COUNTY, NEW JERSEY

SHEET TITLE

COVER SHEET

PROJECT NO.: 05731.0009 | DRAWN BY: JPS
SCALE: AS NOTED | CHECKED BY: WS
DATE: 05/21/25 | SHEET 1 OF 8
SHEET NO. 1

STATE PLANE COORDINATES		
PROPOSED GAS PIPELINE CENTERLINE STATIONING	EASTING	NORTHING
279+62	557499	594178
280+00	557532	594197
290+00	558398	594697
300+00	559265	595197
310+00	560131	595697
320+00	560997	596197
330+00	561863	596697
340+00	562729	597197
350+00	563595	597696
360+00	564461	598196
370+00	565327	598696
380+00	566193	599196
386+05	566717	599499
1048+08	626219	612376
1050+00	626320	612213
1060+00	626889	611391
1070+00	627567	910657
1080+00	628343	610028
1090+00	629196	609506
1100+00	630063	609009
1110+00	630931	608511
1120+00	631802	608020
1130+00	632721	607628
1140+00	633686	607371
1150+00	634678	607254
1160+00	635677	607279
1170+00	636662	607447
1180+00	637613	607752
1190+00	638536	608139
1200+00	639458	608525
1210+00	639901	608711
1220+00	640380	608912
1230+00	641302	609299
1240+00	642225	609686
1250+00	643147	610072
1260+00	644069	610459
1263+97	645169	611083

NOTES ON USE OF PLANS:

1. UNLESS THESE PERMIT DRAWINGS ARE SPECIFICALLY DESIGNATED AS "CONSTRUCTION ISSUE," THESE DRAWINGS SHALL NOT BE USED FOR PERMITTING ASSOCIATED WITH CONSTRUCTION OR THE IMPROVEMENTS DEPICTED HEREIN. CONTRACTORS SHALL NOTIFY THE DESIGN ENGINEER TO OBTAIN PERMITTING DOCUMENTS. THESE PLANS ARE FOR NJDEP PERMITTING ONLY, NO CONSTRUCTION IS TO BE BASED UPON THESE PLANS.
2. ALL DIMENSIONS MUST BE VERIFIED IN THE FIELD DURING CONSTRUCTION BY THE CONTRACTOR. NOTIFY PAULUS, SOKOLOWSKI AND SARTOR, LLC OF ANY CONFLICTS, ERRORS, AMBIGUITIES OR DISCREPANCIES IN THE CONTRACT DRAWINGS OR SPECIFICATIONS BEFORE PROCEEDING WITH CONSTRUCTION.
3. ALL DIMENSIONS SHALL BE AS NOTED IN WORDS OR NUMBERS ON THE CONTRACT DRAWINGS. DO NOT SCALE THE DRAWINGS TO DETERMINE DIMENSIONS.
4. THESE CONTRACT DRAWINGS CONTAIN DATA INTENDED SPECIFICALLY FOR THE NOTED PROJECT AND CLIENT. THEY ARE NOT INTENDED FOR USE ON EXTENSIONS OF THIS PROJECT OR FOR REUSE ON ANY OTHER PROJECT.
5. THE COPYING AND/OR MODIFICATION OF THIS DOCUMENT OR ANY OTHER PORTION THEREOF WITHOUT THE WRITTEN PERMISSION OF PAULUS, SOKOLOWSKI, AND SARTOR, LLC IS EXPRESSLY PROHIBITED.
6. INFORMATION FOR DESIGN LAYOUT IS CONTAINED SOLELY IN THE WRITTEN DIMENSIONS, BEARINGS, AND ANGLES CONTAINED ON THE DRAWINGS.
7. THIS DIMENSIONAL INFORMATION IS NOT WARRANTED NOR SHOULD IT BE CONSIDERED AS COMPLETE FOR EVERY ASPECT OF THE LAYOUT. STANDARD PRACTICE REQUIRES THAT THE LAYOUT PERSON CHECK THE DIMENSIONAL DATA CONSISTENCY AND TO PERFORM SURVEY CALCULATIONS WHICH ARE CUSTOMARY FOR CONSTRUCTION LAYOUT. IN THE EVENT THAT A QUESTION OR INCONSISTENCY IS DISCOVERED, THE INSTALLER SHALL IMMEDIATELY NOTIFY THE DESIGN ENGINEER, PAULUS, SOKOLOWSKI, AND SARTOR, LLC.
8. THE GRAPHICAL INFORMATION CONTAINED IN ELECTRONIC FILES IS INTENDED AS DRAWING DATA ONLY. IT IS NOT INTENDED TO SERVE AS SURVEY LAYOUT DATA.
9. ALL PROPOSED FITTING ANGLES ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CUTTING.

GENERAL NOTES:

1. LOCATION OF EXISTING UTILITIES WITHIN THE LIMIT OF DISTURBANCE / TEMPORARY WORKSPACE OF PROJECT MUST BE FIELD VERIFIED BEFORE WORK MAY COMMENCE. ANY CONFLICTING INFORMATION FROM THAT SHOWN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE DESIGN ENGINEER, PAULUS, SOKOLOWSKI, AND SARTOR, LLC.
2. UNLESS SPECIFICALLY SHOWN HEREIN, THE DESIGN ENGINEER, PAULUS, SOKOLOWSKI, AND SARTOR, LLC HAS NOT CONDUCTED AN INVESTIGATION OR PROVIDED DATA ON THE NATURE OF, OR STRUCTURAL SUITABILITY OF ANY SUBSURFACE MATERIALS. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER, PAULUS, SOKOLOWSKI, AND SARTOR, LLC IN WRITING OF ANY UNUSUAL SOIL OR ROCK CONDITIONS ENCOUNTERED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING WARNING SIGNS, BARRICADES, AND ANY AND ALL SAFETY MEASURES AS MAY BE REQUIRED BY LOCAL CODE, OSHA, STANDARD PRACTICE, AND/OR COMMON SENSE AND MAINTENANCE THEREOF. LETTERING SHALL BE A MINIMUM OF 2" HIGH AND SHALL BE OF A COLOR THAT CONTRASTS WITH THE SIGN.
4. ALL ONSHORE SOIL EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES SHALL BE IN PLACE PRIOR TO ANY SITE DISTURBANCE.
5. CONTRACTOR TO RESTORE GROUND SURFACE OF GAS PIPELINE TRENCH, CONSTRUCTION STAGING AREAS, AND ALL OTHER DISTURBED AREAS TO THEIR ORIGINAL CONDITION OR BETTER, OR AS SPECIFIED IN THESE PLANS.
6. THE CONTRACTOR SHALL PREPARE AS-BUILT DRAWINGS FOR ALL UNDERGROUND IMPROVEMENTS INSTALLED DURING CONSTRUCTION, ETC. AS-BUILT DRAWINGS MUST BE SIGNED AND SEALED BY A NJ PROFESSIONAL ENGINEER OR LAND SURVEYOR. THE AS-BUILT SURVEY DRAWINGS MUST COMPLY WITH UTILITY OWNER STANDARDS / REQUIREMENTS. COPIES SHALL BE SUBMITTED TO UTILITY COMPANY AND/OR OWNER.
7. TRENCHING AND DREDGING WILL BE COMPLETED BY CLAMSHELL DREDGE, JET TRENCHER OR HAND JETS ACCORDING TO BURIAL DEPTH REQUIREMENTS, THE NATURE OF AREAS TO BE EXCAVATED AND WATER DEPTHS. BACKFILLING WILL BE COMPLETED USING CLAMSHELL AND PIPELAYING WILL BE COMPLETED USING PIPELAY BARGE. REFER TO SITE PLANS PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC.
8. TRANSCO PLANS TO INSTALL A TEMPORARY FIXED PLATFORM AT MP 12.50 TO SUPPORT OPERATIONS ASSOCIATED WITH THE MORGAN SHORE HDD AND SHALLOW WATER PIPELAY OPERATIONS. DUE TO THE SHALLOW WATERS FROM MP 12.50 TO MP 16.50 AND DRAFT RESTRICTIONS OF THE PIPELAY BARGE TO BE USED FOR CONSTRUCTION, THE PIPELAY BARGE WILL BE MOORED AT MP 14.50 WHERE THE BARGE WILL FABRICATE TWO PIPE STRINGS THAT WILL BE PULLED ON BOTTOM IN A PRE-DREDGED TRENCH TOWARDS MP 12.50 VIA A WINCH LOCATED ON THE FIXED PLATFORM. THE PIPELAY BARGE WILL THEN RELOCATE AND MOOR AT MP 16.50, WHERE ANOTHER PIPE STRING WILL BE FLOATED FROM MP 16.50 TO MP 14.50 UNDER CONTROL OF THE FIXED PLATFORM WINCH. ONCE IN POSITION, THIS PIPE STRING WILL BE SUNK INTO THE PRE-DREDGED TRENCH. TRANSCO WILL INSTALL GUIDE PILES FROM MP 14.50 TO MP 16.50 TO ASSIST THE PIPE PULL OPERATIONS AND WILL ATTACH BUOYANCY MODULES TO THE STRINGS DURING THE PULL-IN PROCESS. ONCE THE INDIVIDUAL PIPE STRINGS ARE IN PLACE, THE BUOYANCY MODULES WILL BE REMOVED, AND THE STRINGS WILL BE FLOODED.

COASTAL ZONE MANAGEMENT NOTES:

1. THE PURPOSE OF THESE PLANS IS TO SECURE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION COASTAL ZONE MANAGEMENT PERMITS FOR THE PROPOSED CONSTRUCTION OF A 26-INCH GAS TRANSMISSION MAIN OFFSHORE WITHIN RARITAN BAY. SEE NORTHEAST SUPPLY ENHANCEMENT PROJECT – PROPOSED 26" MADISON LOOP WATERFRONT DEVELOPMENT PERMIT PLANS FOR CONTINUATION OF ONSHORE IMPROVEMENTS.

   A. COASTAL ZONE MANAGEMENT PERMIT, WATERFRONT DEVELOPMENT INDIVIDUAL PERMIT – WATERFRONT DEVELOPMENT INDIVIDUAL PERMIT – WATER, COASTAL / TIDAL PERMIT; N.J.A.C. 7:7
2. THE APPLICANT/OWNER SHALL SECURE ALL PROPOSED PERMANENT AND TEMPORARY EASEMENTS AND RIGHTS OF ACCESS SHOWN ON THE PLANS PRIOR TO CONSTRUCTION. THE OWNER/CONTRACTOR SHALL ALSO SECURE NECESSARY EASEMENTS OR RIGHTS OF ACCESS BEYOND THE LIMITS SHOWN, AS DEEMED NECESSARY.
3. REFER TO PLANS ENTITLED "TRENCH CROSS-SECTION FOR PRE AND POST PIPELAY TRENCHING", REVISED NOVEMBER 20, 2017, PREPARED BY INTECSEA WORLEY PARSONS GROUP, PROVIDED BY TRANSCONTINENTAL PIPE LINE COMPANY, LLC. FOR MINIMUM COVER OF THE TRANSMISSION GAS MAIN ACCORDING TO EXCAVATION METHOD, NATURE OF THE AREAS TO BE EXCAVATED AND WATER DEPTHS.
4. TRENCHING AND DREDGING WILL BE COMPLETED BY CLAMSHELL DREDGE, JET TRENCHER OR HAND JETS ACCORDING TO BURIAL DEPTH REQUIREMENTS, THE NATURE OF AREAS TO BE EXCAVATED AND WATER DEPTHS. BACKFILLING WILL BE COMPLETED USING CLAMSHELL AND PIPELAYING WILL BE COMPLETED USING PIPELAY BARGE. REFER TO SITE PLANS ENTITLED "TRENCH CROSS-SECTION FOR PRE AND POST PIPELAY TRENCHING", LAST REVISED NOVEMBER 20, 2017, PREPARED BY INTECSEA, PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC.
5. TEMPORARY WORKSPACE WITHIN THE WATERFRONT DEVELOPMENT ZONE BELOW MEAN HIGH WATER ELEVATION IS 3,703 ACRES.
6. OPERATIONAL EASEMENT IS 30 FEET CENTERED ON PIPELINE ROUTE AND EQUIVALENT TO 22.40 ACRES (975,744 SF) IN NEW JERSEY. THIS ACREAGE REFLECTS THE OPERATIONAL EASEMENT THAT WILL BE ACQUIRED FOR THE RARITAN BAY LOOP; HOWEVER, FOLLOWING INSTALLATION NO ROUTINE BOTTOM DISTURBING IMPACTS ASSOCIATED WITH OPERATIONS ARE ANTICIPATED. FURTHER MAINTENANCE IS EXPECTED TO BE MINIMAL BASED ON THE OPERATIONAL LIFE OF THE PIPELINE.

REFERENCE NOTES

1. ONSHORE EXISTING CONDITIONS SHOWN HEREON ARE BASED UPON SURVEY INFORMATION PREPARED BY D.W. SMITH ASSOCIATES, LLC AND WILLIAMS TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC.
2. THE HORIZONTAL DATUM REFERS TO NAD83 NEW JERSEY STATE PLANE COORDINATE SYSTEM.
3. BATHYMETRY BASED UPON PLANS ENTITLED "GEOPHYSICAL SURVEY AND DATA ASSESSMENT FOR THE NORTHEAST SUPPLY ENHANCEMENT PROJECT, OFFSHORE RARITAN BAY LOOP", DATED 2016, PREPARED BY ROGERS SURVEYING, PLLC, PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC. IN MEAN LOWER LOW WATER DATUM (CONVERSION TO NGVD 1929; -1.87 FT.) THE VERTICAL DATUM FOR ONSHORE REFERS TO NAVD 88 TOPOGRAPHICAL DATA. (CONVERSION TO NGVD 1929; +1.04 FT.)
4. PORTION OF RARITAN BAY LOOP ABOVE MEAN HIGH WATER LINE IS SHOWN ON NORTHEAST SUPPLY ENHANCEMENT PROJECT 26" MADISON BAY LOOP WATERFRONT DEVELOPMENT PERMIT PLANS, DATED JUNE 8, 2018, PREPARED BY PAULUS, SOKOLOWSKI AND SARTOR, LLC.
5. THESE PERMIT PLANS ARE BASED UPON GAS ALIGNMENT PLANS ENTITLED "TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC – FERC ALIGNMENT SHEET NORTHEAST SUPPLY ENHANCEMENT PROJECT – PROPOSED 26" RARITAN BAY LOOP M.P. 12.00 TO M.P. 35.49 OFFSHORE", LAST REVISED MAY 9, 2018, PREPARED BY INTECSEA WORLEY PARSONS GROUP, AS PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC IN GIS FORMAT (SHAPEFILES).
6. THE FOLLOWING ADDITIONAL INFORMATION WAS PROVIDED BY WILLIAMS TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC AND/OR ECOLOGY AND ENVIRONMENT, INC. IN GIS FORMAT (SHAPEFILES) FROM VARIOUS SOURCES:

   A. NOAA SHIPPING LANES
   B. COMMERCIAL WHALE WATCHING GENERAL USE AREA
   C. NATIONAL PARKS SERVICE AREAS
   D. OFFSHORE HARBOR CAUTION AREAS
   E. NEW JERSEY SHELLFISH GROWING WATERS LIMITS
   F. NEW JERSEY HARD CLAM HABITAT
   G. LIMITS OF SURFCLAM PRELIMINARY DISTRIBUTION AREA
   H. NJDEP SPORT FISHING AREAS
   I. CHEESEQUAKE STATE PARK LIMITS
7. NEW YORK STATE BOUNDARY LINES TAKEN FROM "NYS GIS PROGRAM OFFICE COUNTY BOUNDARIES", 2013. NEW JERSEY COUNTY LINES TAKEN FROM "COUNTIES OF NEW JERSEY, NJ OFFICE OF INFORMATION TECHNOLOGY, OFFICE OF GEOGRAPHIC INFORMATION SYSTEMS", 2015.
8. MEAN HIGH WATER LEVEL VALUES PROVIDED BY WILLIAMS TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC GENERATED FROM NOAA VERTICAL DATUM WEBSITE AND VERIFIED AGAINST THE NEW JERSEY TIDAL BENCHMARK DATA. NEGLIGIBLE DIFFERENCE BETWEEN SOURCES IS ASSUMED TO BE RELATED TO SEA LEVEL RISE AND FROM NEW JERSEY DATA BEING FROM 1970'S TIDAL EPOCH DATASET.
9. THE MEAN LOW WATER LINE WAS DERIVED FROM SANDY HOOK, NJ TIDAL STATION DATA, CONVERTED UTILIZING NOAA V-DATUM TRANSFORMATION TOOL AND PLOTTED AGAINST BATHYMETRY DATA INDICATED ON NOAA NAUTICAL CHARTS (CHART #12327, DATED APRIL 2017). THE FOUR FEET BELOW MEAN LOW WATER LINE WAS PLOTTED AGAINST PARTIAL BATHYMETRY SURVEY BY ROGERS SURVEYING AND THE NOAA NAUTICAL CHARTS. THE MEAN LOW WATER LINE AND ELEVATION AND THE FOUR FEET BELOW MEAN LOW WATER LINE AND ELEVATION WERE PROVIDED BY ECOLOGY AND ENVIRONMENT, INC. THE FOUR FEET BELOW MEAN LOW WATER LINE DENOTES THE LINE SEPARATING INTERTIDAL ZONE (ABOVE ELEVATION -3.45, MLLW DATUM) AND SUBTIDAL SHALLOW ZONE (BELOW ELEVATION -3.45, MLLW DATUM).
10. DREDGING VOLUME CALCULATIONS BASED UPON CROSS-SECTIONS AND DREDGE VOLUMES PROVIDED ON PLANS ENTITLED "TRENCH CROSS-SECTION FOR PRE AND POST PIPELAY TRENCHING", LAST REVISED NOVEMBER 20, 2017, "MORGAN SHORE APPROACH HDD EXIT PIT GRADING – MP 12.50", LAST REVISED JANUARY 11, 2018, "NEPTUNE CABLE CROSSING AT MP 13.88", LAST REVISED APRIL 23, 2018, "AMBROSE CHANNEL HDD EXIT PIT GRADING" AND "AMBROSE CHANNEL HDD ENTRY PIT GRADING", LAST REVISED DECEMBER 19, 2017, ALL PREPARED BY INTECSEA WORLSEY PARSONS GROUP, PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC.
11. APPROXIMATE ANCHOR LOCATIONS AND METHOD PROVIDED ON PLANS ENTITLED "TYPICAL ANCHOR SPREAD DRAWING", DATED MARCH 15, 2017, PREPARE BY INTECSEA WORLEY PARSONS GROUP, PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC.
12. FOR DESIGN, PROFILES AND DETAILS OF THE CATHODIC PROTECTION POWER CABLE AND ANODE SLED, REFER TO PLANS ENTITLED "ANODE SLED INSTALLATION AND CP HDD PLAN AND PROFILE", LAST REVISED MAY 8, 2018, PREPARED BY INTECSEA WORLEY PARSONS GROUP, PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC.

ELEVATION TABLE			
	MEAN LOWER LOW WATER	NGVD 1929	NAVD 1988
MEAN HIGH WATER	5.27	3.40	2.36
MEAN LOW WATER	0.57	-1.30	-2.34
4 FT. BELOW MEAN LOW WATER	-3.45	-5.32	-6.36

OWNER / APPLICANT

TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC
2800 POST OAK BLVD.
HOUSTON, TEXAS 77056

REV. / ISSUE	DATE	DESCRIPTION
1	6/13/25	REV PER ADDITIONAL WETLAND DATA
2	10/08/25	REV PER NJDEP COMMENTS

NJDEP APPROVAL STAMP

I AM A DULY REGISTERED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT EXISTING CONDITIONS SHOWN WERE FIELD LOCATED AND PREPARED UNDER MY DIRECT SUPERVISION.

THOMAS J. MURPHY, PLS
DW SMITH ASSOCIATES, LLC
1450 STATE ROUTE 34, WALL, NJ 07753
PROFESSIONAL LAND SURVEYOR
N.J. LIC. NO. 37207 COA NO. 24GA28122400

SIGNATURE DATE

PAULUS, SOKOLOWSKI AND SARTOR, LLC.
1450 ROUTE 34
WALL, NJ 07753
PHONE: (732) 363-5850
CERTIFICATE OF AUTHORIZATION NO. 24GA28032700

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I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT THE PROPOSED ENVIRONMENTAL SITE DETAILS SHOWN ARE ACCURATE AND CORRESPOND WITH THE ORIGINAL ENGINEERING DRAWINGS.

JASON SCHOOLING, P.E.
PS&S, LLC
1450 HIGHWAY 34, WALL, NJ 07753
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24MI 00041200 COA NO. 24GA28032700

SIGNATURE DATE

PROJECT

NORTHEAST SUPPLY ENHANCEMENT PROJECT
PROPOSED
26" RARITAN BAY LOOP

MIDDLESEX & MONMOUTH COUNTY, NEW JERSEY

SHEET TITLE

GENERAL NOTES

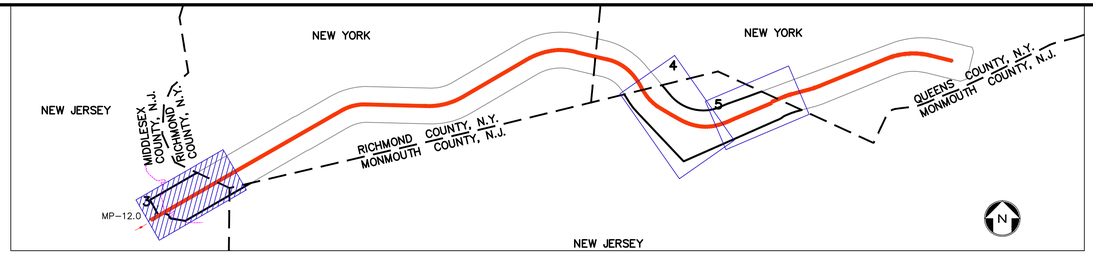
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SCALE: AS NOTED | CHECKED BY: WS
DATE: 05/21/25 | SHEET 2 OF 8
SHEET NO.

2

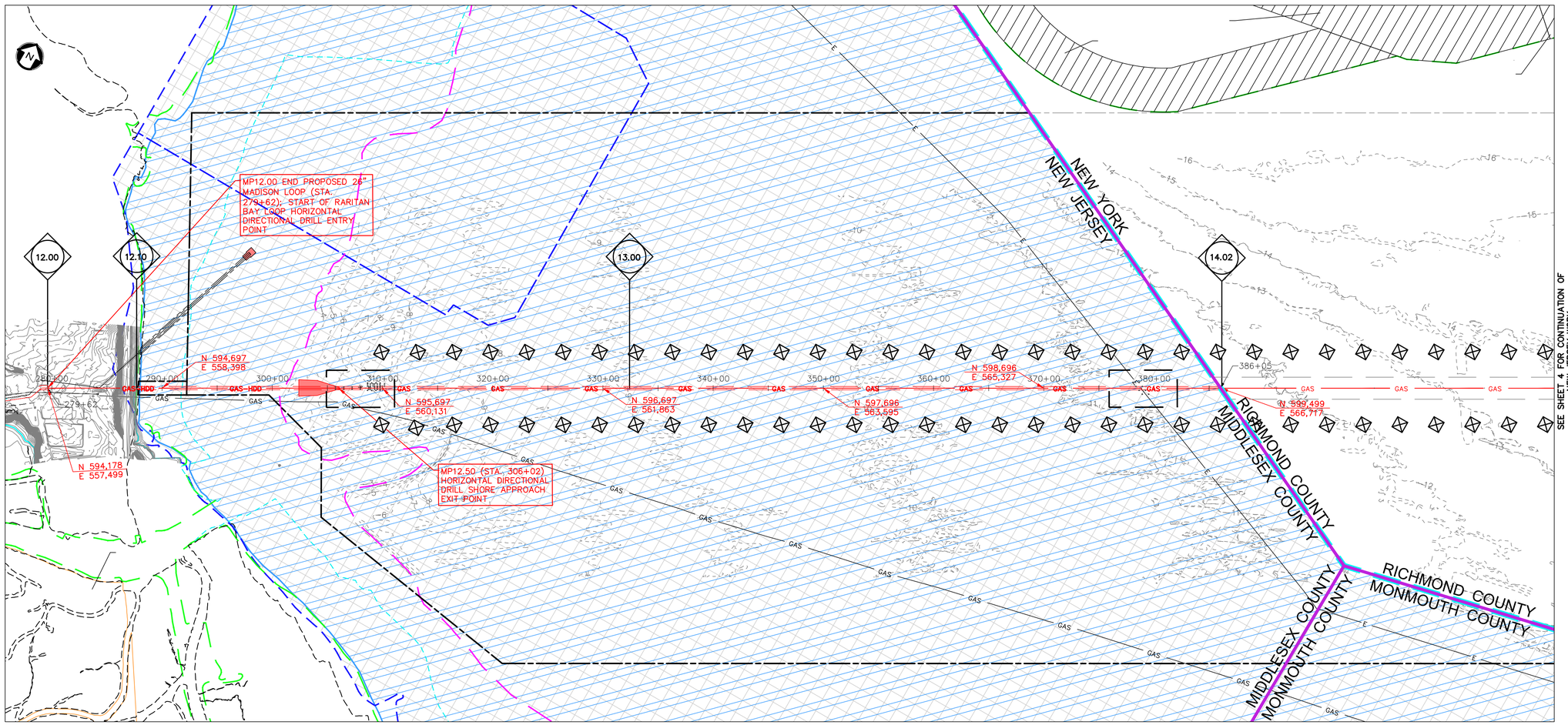
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REV. / ISSUE	DATE	DESCRIPTION
1	6/13/25	REV PER ADDITIONAL WETLAND DATA
2	10/08/25	REV PER NJDEP COMMENTS

NJDEP APPROVAL STAMP



KEY MAP
SCALE: 1" =10,000'



PROPOSED 26" RARITAN BAY LOOP LINE MP12.00 - MP14.02

SUMMARY OF DIRECT IMPACTS FOR OFFSHORE PIPELINE FACILITIES[g]

FACILITY	LAND AFFECTED DURING CONSTRUCTION NEW JERSEY (AC.)
OFFSHORE PIPELINE PRE-LAY TRENCHING[a,c]	9.30
OFFSHORE PIPELINE POST-LAY TRENCHING[a]	3.51
OFFSHORE CP[b]	0.15
LAY-DOWN AREA FOR PULL-BACK STRING (AMBROSE CROSSING)	0.34
NEPTUNE CABLE CROSSING	0.35
SUPPORT VESSEL, PIPELAY BARGE, AND DREDGE BARGE/CRANE BARGE ANCHOR FOOTPRINT[d]	0.93
ANCHOR CABLE SWEEP[e]	0.24
HDD EXIT WORKSPACE (MORGAN SHORE APPROACH HDD CROSSING)[b]	0.89
HDD ENTRANCE WORKSPACE EAST (AMBROSE CHANNEL CROSSING)[b]	1.78
HDD EXIT WORKSPACE WEST (AMBROSE CHANNEL CROSSING)[b]	1.13
MARINE SUPPORT BARGE, LIFT BARGE, AND DREDGE BARGE SPUD DISTURBANCE[f]	0.90
PILE DISTURBANCE FOR TEMPORARY FIXED PLATFORM, HDD SUPPORT, AND SHALLOW PIPELAYING OPERATIONS[i,j]	0.02
TOTAL	**19.54**

DREDGE VOLUME CALCULATION

M.P.	DESCRIPTION	VOLUME (CY)
CP POWER	ANODE SLED EXCAVATION PIT - CLAMSHELL DREDGING	461
12.50	HDD PIT EXCAVATION - CLAMSHELL DREDGING	9,931
12.50-13.88	CLAMSHELL EXCAVATION - PRE LAY SHALLOW AREA TRENCHING - TYPE 1 (52 ft. WIDE)	57,894
13.88	HAND JETTING ABOVE NEPTUNE CABLE (62 FT. WIDE)	1,676
13.88-14.02	CLAMSHELL EXCAVATION - PRE LAY SHALLOW AREA DREDGE - TYPE 1 (52 ft. WIDE)	5,974
26.55-29.52	JET TRENCHER POST LAY METHOD (9 FT. WIDE)	51,548
29.52	HDD EXIT PIT EXCAVATION - CLAMSHELL DREDGING	14,050
30.40	HDD ENTRY PIT EXCAVATION - CLAMSHELL DREDGING	32,450
30.40-30.64	JET TRENCHER POST LAY METHOD (9 FT. WIDE)	4,187
TOTAL		**178,171**

DIRECT IMPACT NOTES:

b. INCLUDES PIT EXCAVATION AND PLACEMENT AREA AT HDD ENTRY/EXIT POINTS.
c. INCLUDES LAY-DOWN AREA FOR PULL-BACK STRING (MORGAN SHORE APPROACH HDD CROSSING).
d. ANCHOR FOOTPRINTS ASSUMED TO HAVE IMPACT AREAS OF 10' X 20' PER ANCHOR.
e. MID-LINE BUOYS ASSUMED TO BE USED TO MINIMIZE ANCHOR CABLE SWEEP IMPACT AND FOR OBSTACLE AVOIDANCE WHERE NECESSARY.
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j. PILE DISTURBANCE AREA INCLUDES THE FOLLOWING PILES: EIGHTEEN 36-INCH DIAMETER PILES, TWENTY-FOUR 48-INCH DIAMETER PILES, TWENTY-TWO 24-INCH DIAMETER PILES, TWELVE 34-INCH DIAMETER PILES, EIGHT 60-INCH DIAMETER PILES.

NOTES:

1. THE FOLLOWING COASTAL ZONE MANAGEMENT SPECIAL AREAS ARE NOT LOCATED WITHIN THE REGION SHOWN ON THIS SHEET: SURF CLAM, PRIME FISHING, FINFISH MIGRATORY PATHWAYS, SUBMERGED VEGETATION HABITATS, NAVIGATION CHANNELS, CANALS, INLETS, MARINA MOORINGS, PORTS, WET BORROW PITS, DUNES, OVERWASH AREAS, COASTAL HIGH HAZARD, EROSION HAZARD, BARRIER ISLAND CORRIDOR, BAY ISLANDS, BEACHES, FILLED WATER'S EDGES, EXISTING LAGOON EDGES, FLOOD HAZARD AREAS, RIPARIAN ZONES, WETLANDS, WETLAND BUFFERS, COASTAL BLUFFS, INTERMITTENT STREAM CORRIDORS, FARMLAND CONSERVATION AREAS, STEEP SLOPES, DRY BORROW PITS, HISTORIC AND ARCHAEOLOGICAL RESOURCES, SPECIMEN TREES, PUBLIC OPEN SPACES, SPECIAL HAZARD AREAS, EXCLUDED FEDERAL LANDS, SPECIAL URBAN AREAS, PINELANDS NATIONAL RESERVE AND PINELANDS PROTECTION AREAS, HACKENSACK MEADOWLANDS DISTRICT, WILD AND SCENIC RIVER CORRIDORS, GEODETIC CONTROL REFERENCE MARKS, HUDSON RIVER WATERFRONT AREAS, ATLANTIC CITY, LANDS AND WATERS SUBJECT TO PUBLIC TRUST RIGHTS, OR DREDGED MATERIAL MANAGEMENT AREAS.
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GRAPHIC SCALE
500 0 250 500 1000
(IN FEET)
1 inch = 500 ft.

LEGEND
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THOMAS J. MURPHY, PLS
DW SMITH ASSOCIATES, LLC
1450 STATE ROUTE 34, WALL, NJ 07753
PROFESSIONAL LAND SURVEYOR
N.J. LIC. NO. 37207 COA NO. 24GA28122400

SIGNATURE DATE

PAULUS, SOKOLOWSKI AND SARTOR, LLC.
1450 ROUTE 34
WALL, NJ 07753
PHONE: (732) 363-5850
CERTIFICATE OF AUTHORIZATION NO. 24GA28032700

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JASON SCHOOLING, P.E.
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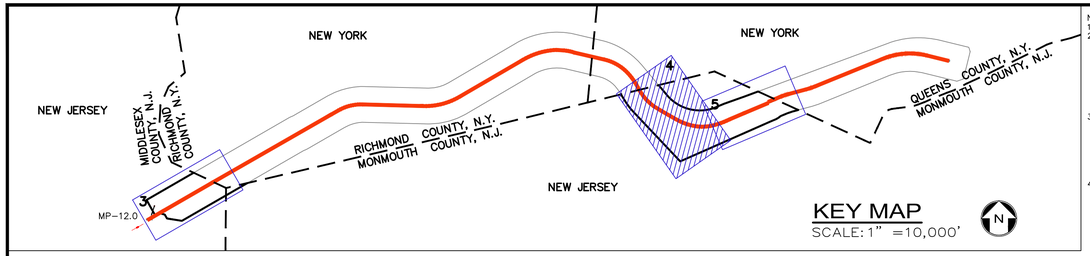
SIGNATURE DATE

PROJECT
NORTHEAST SUPPLY ENHANCEMENT PROJECT
PROPOSED
26" RARITAN BAY LOOP
MIDDLESEX & MONMOUTH COUNTY, NEW JERSEY

SHEET TITLE
WATERFRONT DEVELOPMENT PERMIT PLAN
MP 12.00 - 14.02

PROJECT NO.: 05731.0009		DRAWN BY:	JPS
SCALE:	AS NOTED	CHECKED BY:	WS
DATE:	05/21/25	SHEET	3 OF 8
SHEET NO.	3		

PLOT NAME: a:\05731\Cooper\NJDEV\CAD\Workspaces\06-21-25 NJDEP & Permit\05731-0009-Raritan Bay Loop_06-21-25.dwg, 6/21/2025 8:47 AM, 400in, Jacobsen



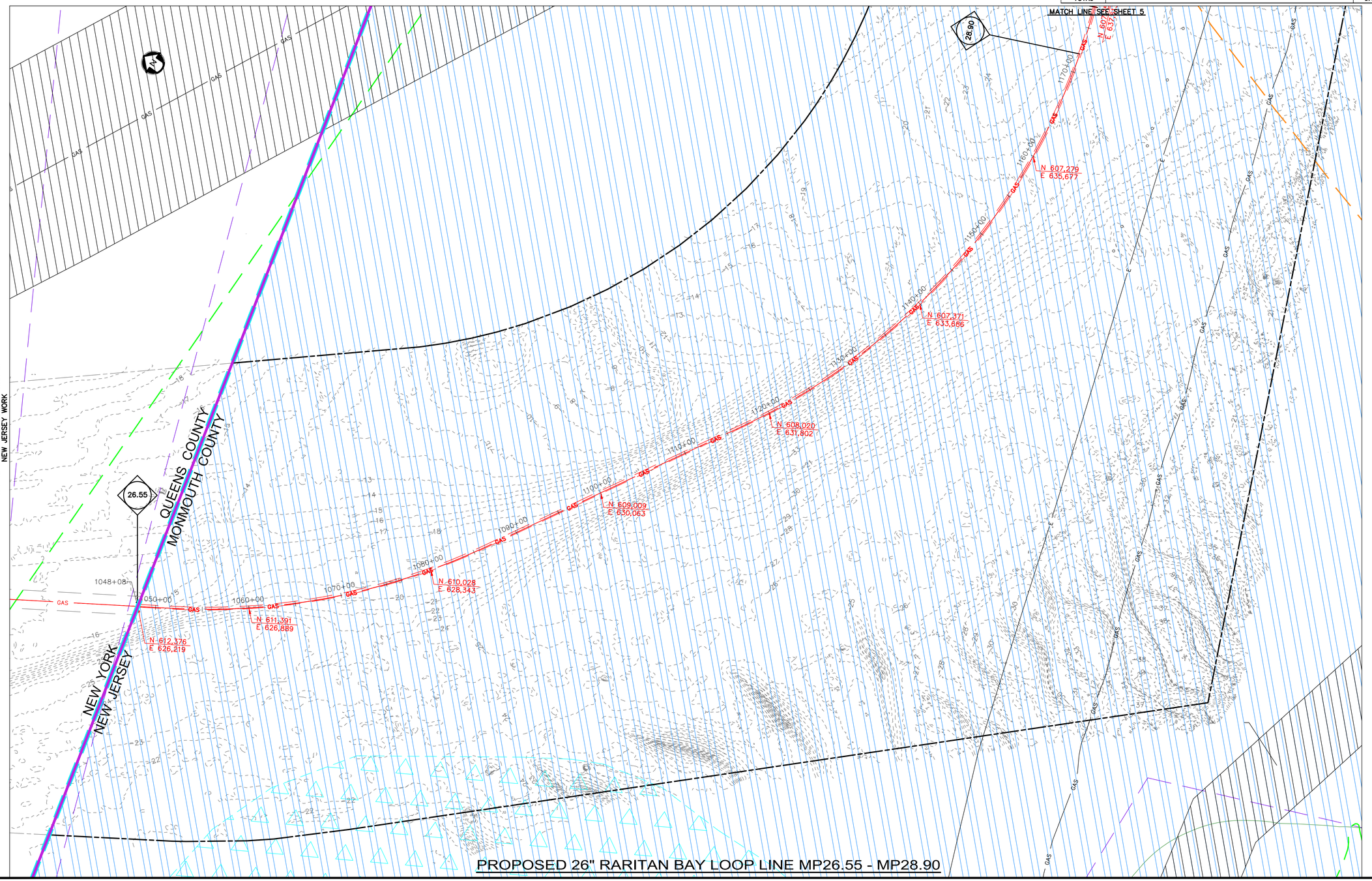
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500 0 250 500 1000
(IN FEET)
1 inch = 500 ft.

REV. / ISSUE	DATE	DESCRIPTION
1	6/13/25	REV PER ADDITIONAL WETLAND DATA
2	10/08/25	REV PER NJDEP COMMENTS

DREDGE VOLUME CALCULATION

M.P.	DESCRIPTION	VOLUME (CY)
CP POWER	ANODE SLED EXCAVATION PIT - CLAMSHELL DREDGING	461
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TOTAL		**178,171**



NJDEP APPROVAL STAMP

LEGEND

- PROPERTY LINE
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- COUNTY BOUNDARY LINE
- STATE BOUNDARY LINE
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THOMAS J. MURPHY, PLS
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1450 STATE ROUTE 34, WALL, NJ 07753
PROFESSIONAL LAND SURVEYOR
N.J. LIC. NO. 37207 COA NO. 24GA28122400

SIGNATURE DATE

PAULUS, SOKOLOWSKI AND SARTOR, LLC.
1450 ROUTE 34
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PHONE: (732) 363-5850

CERTIFICATE OF AUTHORIZATION NO. 24GA28032700

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JASON SCHOOLING, P.E.
PS&S, LLC
1450 HIGHWAY 34, WALL, NJ 07753
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05041900 COA NO. 24GA28032700

SIGNATURE DATE

PROJECT

NORTHEAST SUPPLY ENHANCEMENT PROJECT
PROPOSED
26" RARITAN BAY LOOP

MIDDLESEX & MONMOUTH COUNTY, NEW JERSEY

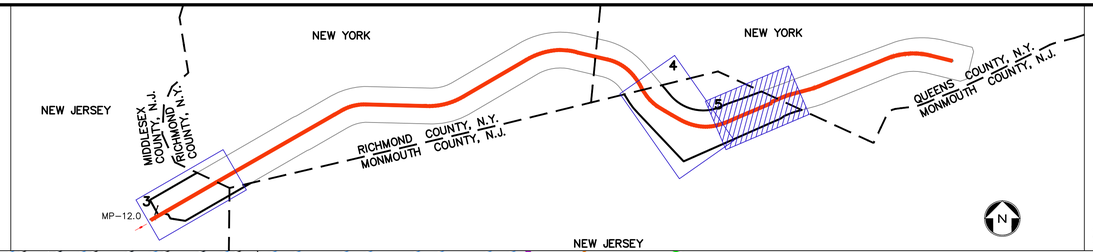
SHEET TITLE

WATERFRONT DEVELOPMENT PERMIT PLAN
MP 26.55 - 28.90

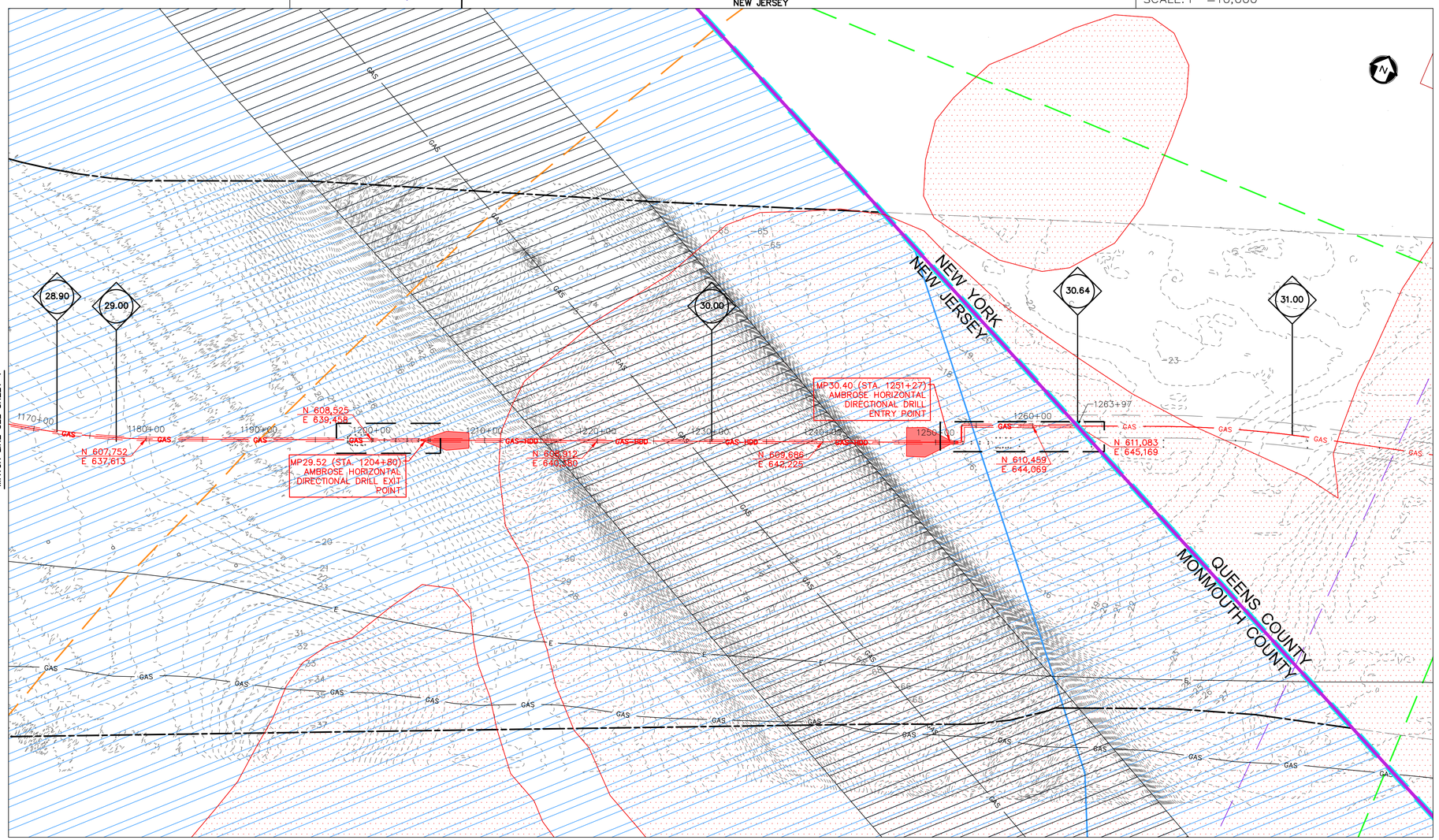
PROJECT NO.:	05731.0009	DRAWN BY:	JPS
SCALE:	AS NOTED	CHECKED BY:	WS
DATE:	05/21/25	SHEET	4 OF 8
SHEET NO.	4		

REV. / ISSUE	DATE	DESCRIPTION
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NJDEP APPROVAL STAMP



KEY MAP
SCALE: 1" =10,000'



LEGEND

- PROPERTY LINE
- EXISTING CONTOURS
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1450 HIGHWAY 34, WALL, NJ 07753
PROFESSIONAL ENGINEER
N.J. LIC. NO. 51504 COA NO. 24GA28032700

SIGNATURE DATE

PROJECT

NORTHEAST SUPPLY ENHANCEMENT PROJECT
PROPOSED
26" RARITAN BAY LOOP

MIDDLESEX & MONMOUTH COUNTY, NEW JERSEY

SHEET TITLE

WATERFRONT DEVELOPMENT PERMIT PLAN
MP 28.90 - 30.64

PROJECT NO.: 05731.0009 | DRAWN BY: JPS
SCALE: AS NOTED | CHECKED BY: WS
DATE: 05/21/25 | SHEET 5 OF 8
SHEET NO. 5

PROPOSED 26" RARITAN BAY LOOP LINE MP28.90 - MP30.64

SUMMARY OF DIRECT IMPACTS FOR OFFSHORE PIPELINE FACILITIES[g]

FACILITY	LAND AFFECTED DURING CONSTRUCTION NEW JERSEY (AC.)
OFFSHORE PIPELINE PRE-LAY TRENCHING[a,c]	9.30
OFFSHORE PIPELINE POST-LAY TRENCHING[a]	3.51
OFFSHORE CP[b]	0.15
LAY-DOWN AREA FOR PULL-BACK STRING (AMBROSE CROSSING)	0.34
NEPTUNE CABLE CROSSING	0.35
SUPPORT VESSEL, PIPELAY BARGE, AND DREDGE BARGE/CRANE BARGE ANCHOR FOOTPRINT[d]	0.93
ANCHOR CABLE SWEEP[e]	0.24
HDD EXIT WORKSPACE (MORGAN SHORE APPROACH HDD CROSSING)[b]	0.89
HDD ENTRANCE WORKSPACE EAST (AMBROSE CHANNEL CROSSING)[b]	1.78
HDD EXIT WORKSPACE WEST (AMBROSE CHANNEL CROSSING)[b]	1.13
MARINE SUPPORT BARGE, LIFT BARGE, AND DREDGE BARGE SPUD DISTURBANCE[f]	0.90
PILE DISTURBANCE FOR TEMPORARY FIXED PLATFORM, HDD SUPPORT, AND SHALLOW PIPELAYING OPERATIONS[i,j]	0.02
TOTAL	**19.54**

DIRECT IMPACT NOTES:

b. INCLUDES PIT EXCAVATION AND PLACEMENT AREA AT HDD ENTRY/EXIT POINTS.
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DREDGE VOLUME CALCULATION

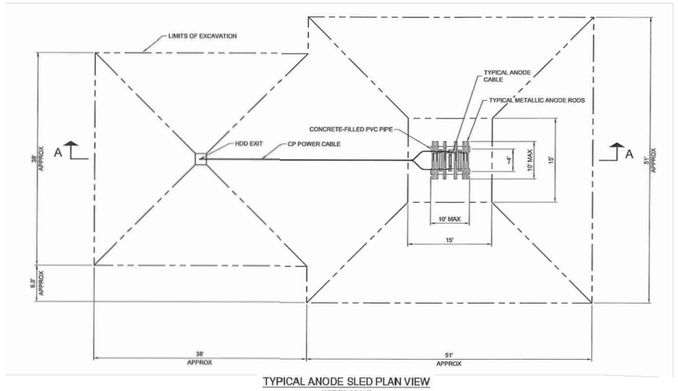
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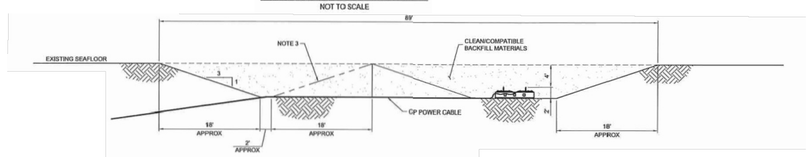
1. ENTIRE SHEET LIES WITHIN SCUBA AND SNORKELING USE AREA.
2. THE FOLLOWING COASTAL ZONE MANAGEMENT SPECIAL AREAS ARE NOT LOCATED WITHIN THE REGION SHOWN ON THIS SHEET: FINFISH MIGRATORY PATHWAYS, SUBMERGED VEGETATION HABITATS, CANALS, INLETS, MARINA MOORINGS, PORTS, WET BORROW PITS, DUNES, OVERWASH AREAS, COASTAL HIGH HAZARD, EROSION HAZARD, BARRIER ISLAND CORRIDOR, BAY ISLANDS, BEACHES, FILLED WATER'S EDGES, EXISTING LAGOON EDGES, FLOOD HAZARD AREAS, RIPARIAN ZONES, WETLANDS, WETLAND BUFFERS, COASTAL BLUFFS, INTERMITTENT STREAM CORRIDORS, FARMLAND CONSERVATION AREAS, STEEP SLOPES, DRY BORROW PITS, HISTORIC AND ARCHAEOLOGICAL RESOURCES, SPECIMEN TREES, PUBLIC OPEN SPACES, SPECIAL HAZARD AREAS, EXCLUDED FEDERAL LANDS, SPECIAL URBAN AREAS, PINELANDS NATIONAL RESERVE AND PINELANDS PROTECTION AREAS, HACKENSACK MEADOWLANDS DISTRICT, WILD AND SCENIC RIVER CORRIDORS, GEODETIC CONTROL REFERENCE MARKS, HUDSON RIVER WATERFRONT AREAS, ATLANTIC CITY, LANDS AND WATERS SUBJECT TO PUBLIC TRUST RIGHTS, OR DREDGED MATERIAL MANAGEMENT AREAS.
3. DREDGING VOLUME CALCULATIONS BASED UPON CROSS-SECTIONS AND DREDGE VOLUMES PROVIDED ON PLANS ENTITLED "TRENCH CROSS-SECTION FOR PRE AND POST PIPELAY TRENCHING", LAST REVISED NOVEMBER 20, 2017, "NEPTUNE CABLE CROSSING AT MP 13.88", LAST REVISED APRIL 23, 2018, "AMBROSE CHANNEL HDD EXIT PIT GRADING" AND "AMBROSE CHANNEL HDD ENTRY PIT GRADING", LAST REVISED DECEMBER 19, 2017, "ANODE SLED INSTALLATION AND OP HDD PLAN AND PROFILE", LAST REVISED MAY 8, 2018, AND "MORGAN SHORE APPROACH HDD PLAN AND PROFILE", LAST REVISED JANUARY 11, 2018, PREPARED BY INTECSEA WORLEY PARSONS GROUP AND PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC. VOLUMES ARE INTERPOLATED FROM "MP RANGE AND DREDGE VOLUME" TABLES ON ABOVE-REFERENCED PLANS.
4. LOCATIONS OF PROPOSED TEMPORARY CONSTRUCTION PILE AND BUOY LOCATIONS ARE BASED ON PLANS ENTITLED "TEMPORARY CONSTRUCTION PILES MARKING PLAN FOR AMBROSE HDD WEST AND EAST APPROACH" AND "TEMPORARY CONSTRUCTION PILES AND BUOYS MARKING PLAN FOR MORGAN SHORE APPROACH", DATED MAY 9, 2018, PREPARED BY INTECSEA WORLEY PARSONS GROUP AND PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC.

GRAPHIC SCALE
500 0 250 500 1000
(IN FEET)
1 inch = 500 ft.

I:\05731\0009\NJDEP\CAD\Waterfront Dev Permit\05731-0009-Raritan Bay Loop-05-21-25\05731-0009-Raritan Bay Loop-05-21-25.dwg, 5/21/2025 10:47:04 AM, JPS, ps&s



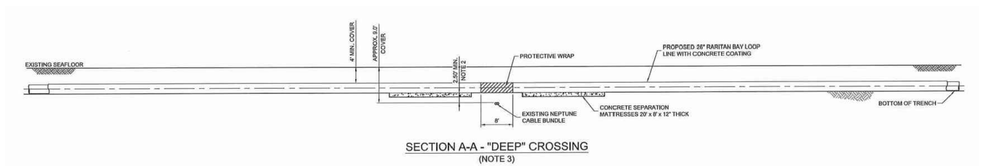
TYPICAL ANODE SLED PLAN VIEW
NOT TO SCALE



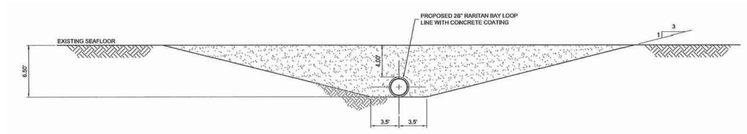
ANODE SLED AND EXIT PIT EXCAVATION
SECTION A-A
NOT TO SCALE

1. ALL DIMENSIONS AND COORDINATES ARE IN FEET AND ALL ANGLES ARE IN DEGREES UNLESS NOTED OTHERWISE. ALL HEADINGS ARE RELATIVE TO GRID NORTH UNLESS NOTED OTHERWISE.
2. IMPRESS CURRENT CATHODIC PROTECTION (CP) SYSTEM IS USED TO PROTECT THE PIPELINE FROM EXTERNAL CORROSION.
3. HDD EXIT PIT LIMITS DURING HDD. AFTER COMPLETION OF HDD CP POWER CABLE INSTALLATION, ADDITION EXCAVATION TO BE PERFORM TO INSTALL CABLE BETWEEN HDD EXIT PIT AND ANODE SLED EXCAVATION.

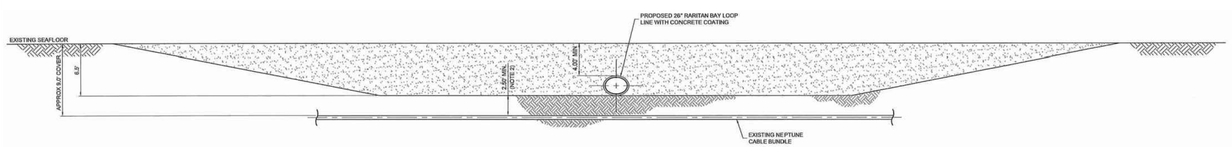
ANODE SLED INSTALLATION AND CATHODIC PROTECTION HDD DETAIL
N.T.S.



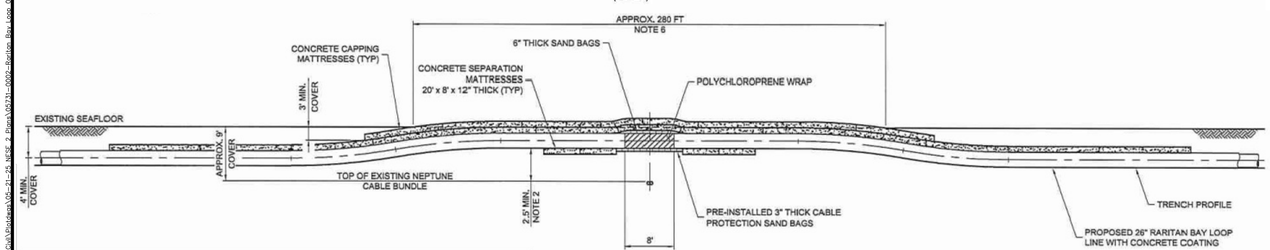
SECTION A-A - "DEEP" CROSSING
(NOTE 3)



SECTION B-B - "DEEP" CROSSING
TRENCH PROFILE AT LOCATION WITHIN 100' OF CROSSING
(NOTES 1 & 3)



SECTION C-C - "DEEP" CROSSING
(NOTE 3)

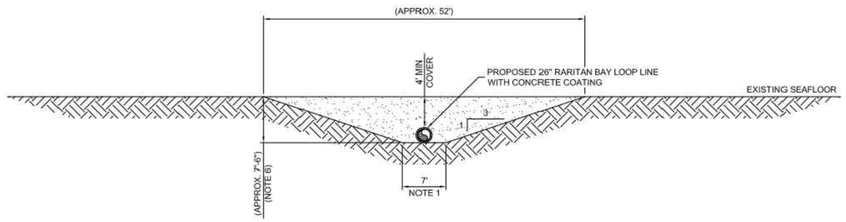


SECTION D-D - "SHALLOW" CROSSING
(NOTE 3)

NEPTUNE CABLE CROSSING AT MP 13.88 DETAIL
N.T.S.

NOTES:

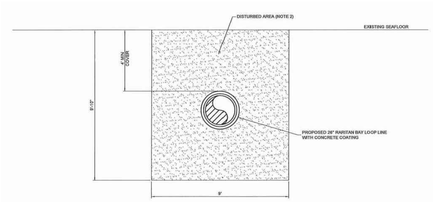
1. DURING PIPELINE INSTALLATION, TRENCHING WITHIN 100 ft OF EXISTING NEPTUNE CABLE SHALL BE PERFORMED BY HAND JETTING OR HYDRAULIC SUCTION DREDGING.
2. MINIMUM SEPARATION BETWEEN BOTTOM OF PIPE AND TOP OF CABLE TO BE 2.5 ft (30-INCHES, 1.5 ft MINIMUM CLEARANCE + 1 ft LONG TERM SETTLEMENT ALLOWANCE BASED ON LOCAL SOIL CONDITIONS).
3. TYPICAL "DEEP" CROSSING WHERE DEPTH OF CABLE BE EQUAL TO, OR GREATER THAN, 9 ft.
   TYPICAL "SHALLOW" CROSSING WHERE DEPTH OF CABLE IS LESS THAN 9 ft.
4. PROPOSED 26" PIPELINE SHALL HAVE A 4 ft MINIMUM SEDIMENT COVER OUTSIDE OF THE PROPOSED CABLE CROSSING AREA. WITHIN CROSSING AREA, CAPPING MATTRESSES SHALL BE INSTALLED AS SHOWN.
5. EDGE OF MATTRESS SHALL BE 3 ft BELOW SEAFLOOR, EXCEPT ABOVE THE CABLE WHERE 2.5 ft SEPARATION IS REQUIRED.
6. ESTIMATED MAXIMUM TOTAL SURFACE AREA OF CONCRETE MATTRESSES THAT MAY BE EXPOSED / UNBURIED IS 7,840 ft² (APPROX.).
7. NUMBER OF CAPPING MATTRESSES SHALL BE REDUCED FROM 2 TO 1 WHEN THE TOP OF PIPE COVER DEPTH IS GREATER THAN 3.25 ft.



NOTES:

1. TRENCH BOTTOM WIDTH WITHIN THE ROUTE CURVES TO BE INCREASED FROM 7 FT TO 10 FT.
2. MILE POST RANGES ARE APPROXIMATE.
3. ACTUAL SHIPPING CHANNEL SEABED ELEVATION MAY NOT COINCIDE WITH THE NOMINAL CHANNEL DEPTH SET BY THE US ARMY CORPS OF ENGINEERS. THE CHANNEL MAY BE DEEPER.
4. ALL UNITS ARE IN FEET UNLESS NOTED OTHERWISE.
5. "AUTHORIZED PROJECT" CHANNEL DEPTHS SET PER U.S. ARMY CORPS OF ENGINEERS CONTROLLING DEPTH REPORTS DATED 28 MAY 2013 (RARITAN) AND 30 JAN 2015 (CHAPEL HILL).
6. TRENCH DEPTH ASSUMES 1 FT OVERDEPTH TO ENSURE MINIMUM COVERAGE REQUIREMENTS.

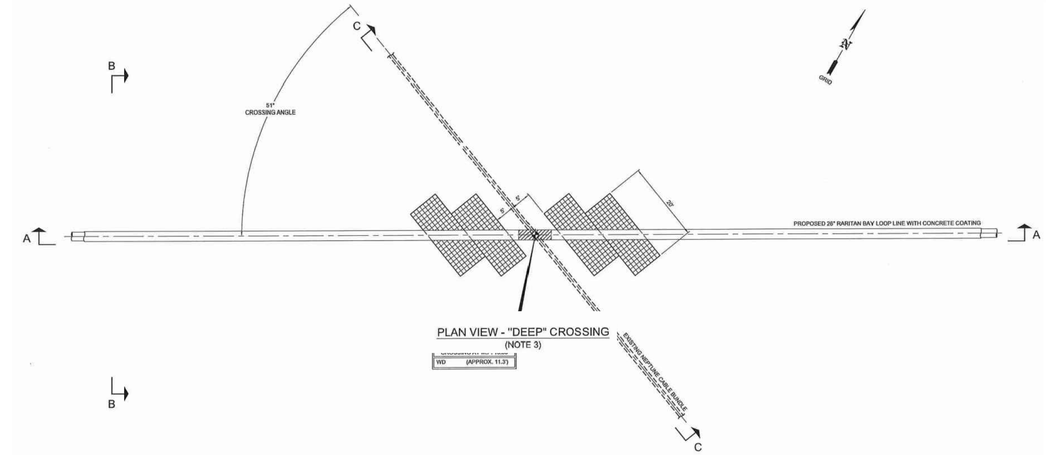
TYPE 1 - PRE-PIPELAY TRENCHING: SHALLOW AREA
4FT MINIMUM COVER



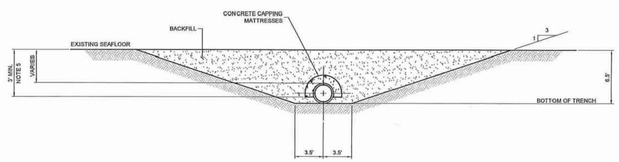
NOTES:

1. ALL UNITS ARE IN FEET UNLESS NOTED OTHERWISE.
2. SHADING INDICATES IMMEDIATE BACKFILL OF TRENCH FROM SLOUGHING AND JET TRENCHER DISCHARGE FOLLOWING FINAL PASS.
3. AS NECESSARY, PIPELINE TRENCH TO BE BACKFILLED TO GRADE WITH CLEAN/COMPATIBLE MATERIAL USING CLAMSHELL IMMEDIATELY FOLLOWING POST-INSTALLATION SURVEY.
4. MILE POST RANGES ARE APPROXIMATE.
5. TYPE 2 AND TYPE 3 TRENCHING METHODS ARE NOT APPLICABLE IN NEW JERSEY PORTIONS OF THE RARITAN BAY LOOP PROJECT.

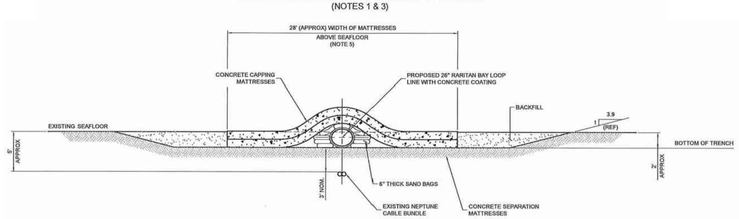
TYPE 4 - POST-PIPELAY TRENCHING BY JET TRENCHER: SHALLOW AREA
4 FT MINIMUM COVER



PLAN VIEW - "DEEP" CROSSING
(NOTE 3)



SECTION E-E - "SHALLOW" CROSSING
TRENCH PROFILE AT LOCATION WITHIN 100' OF CROSSING
(NOTES 1 & 3)



SECTION F-F - "SHALLOW CROSSING"
(NOTE 3)

NOTES:

1. ALL DETAILS SHOWN ARE TAKEN FROM PLANS ENTITLED "TRENCH CROSS-SECTION FOR PRE AND POST PIPELAY TRENCHING", LAST REVISED NOVEMBER 20, 2017, "ANODE SLED INSTALLATION AND CP HDD PLAN AND PROFILE", LAST REVISED MAY 8, 2018, "MORGAN SHORE APPROACH HDD EXIT PIT GRADING – MP 12.50", LAST REVISED JANUARY 11, 2018, "NEPTUNE CABLE CROSSING AT MP 13.88", LAST REVISED APRIL 23, 2018, "AMBROSE CHANNEL HDD EXIT PIT GRADING" AND "AMBROSE CHANNEL HDD ENTRY PIT GRADING", LAST REVISED DECEMBER 19, 2017, ALL PREPARED BY INTECSEA WORLSEY PARSONS GROUP, PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
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REV. / ISSUE	DATE	DESCRIPTION
1	6/13/25	REV PER ADDITIONAL WETLAND DATA
2	10/08/25	REV PER NJDEP COMMENTS

NJDEP APPROVAL STAMP

I AM A DULY REGISTERED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT EXISTING CONDITIONS SHOWN WERE FIELD LOCATED AND PREPARED UNDER MY DIRECT SUPERVISION.

THOMAS J. MURPHY, PLS
DW SMITH ASSOCIATES, LLC
1450 STATE ROUTE 34, WALL, NJ 07753
PROFESSIONAL LAND SURVEYOR
N.J. LIC. NO. 37207 COA NO. 24GA28122400

SIGNATURE DATE

PAULUS, SOKOLOWSKI AND SARTOR, LLC.
1450 ROUTE 34
WALL, NJ 07753
PHONE: (732) 363-5850

CERTIFICATE OF AUTHORIZATION NO. 24GA28032700

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I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT THE PROPOSED ENVIRONMENTAL TRENCH SECTIONS SHOWN ARE ACCURATE AND COMPLY WITH THE APPLICABLE CODES AND STANDARDS.

JASON SCHOOLING, P.E.
PS&S, LLC
1450 HIGHWAY 34, WALL, NJ 07753
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE04282700

SIGNATURE DATE

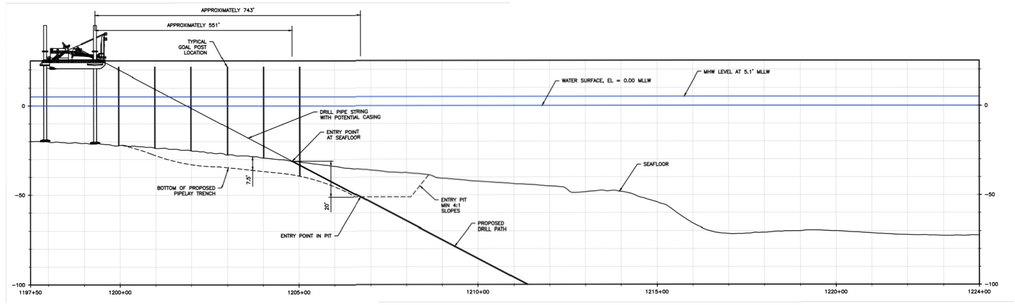
PROJECT
NORTHEAST SUPPLY ENHANCEMENT PROJECT
PROPOSED
26" RARITAN BAY LOOP
MIDDLESEX & MONMOUTH COUNTY, NEW JERSEY

SHEET TITLE
CONSTRUCTION DETAILS

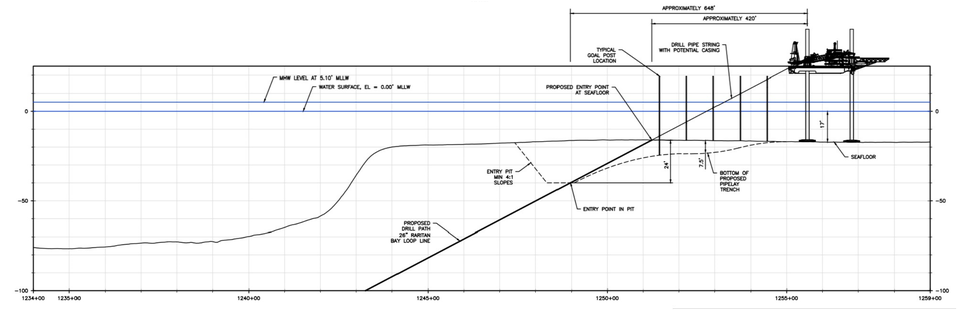
PROJECT NO.: 05731.0009		DRAWN BY:	JPS
SCALE:	AS NOTED	CHECKED BY:	WS
DATE:	05/21/25	SHEET	6 OF 8
SHEET NO.	6		

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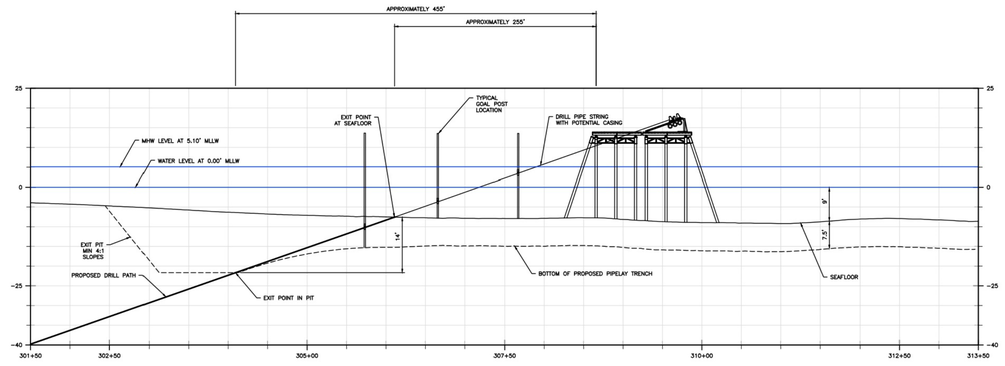
REV. / ISSUE	DATE	DESCRIPTION
1	6/13/25	REV PER ADDITIONAL WETLAND DATA
2	10/08/25	REV PER NJDEP COMMENTS



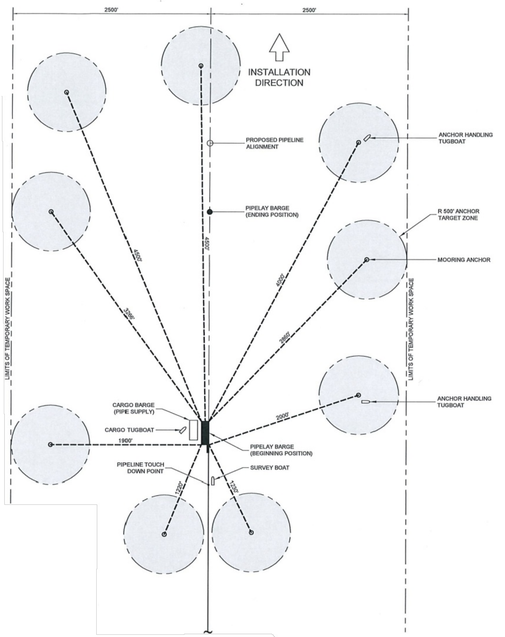
AMBROSE CHANNEL HDD EXIT PIT DETAIL
N.T.S.



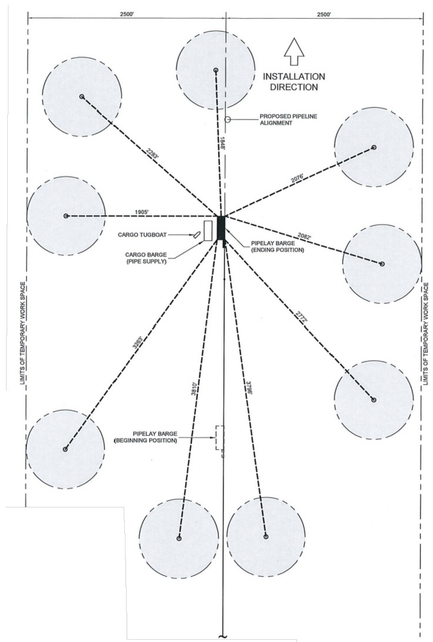
AMBROSE CHANNEL HDD ENTRY PIT DETAIL
N.T.S.



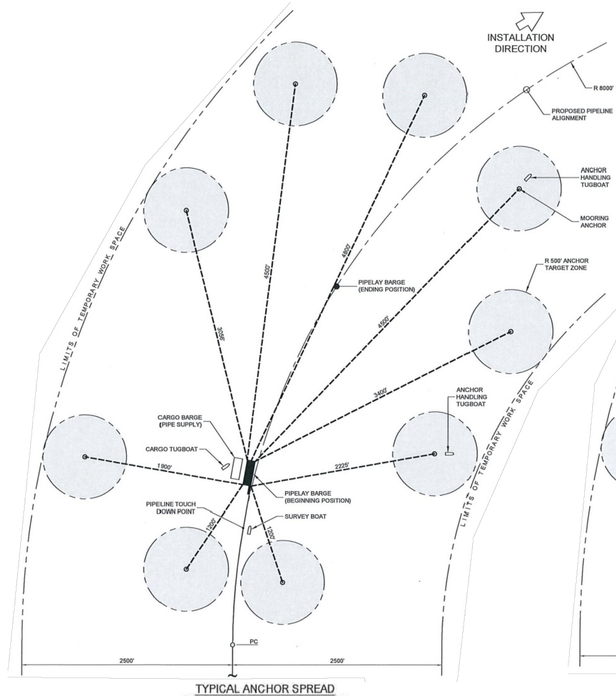
MORGAN APPROACH HDD EXIT PIT DETAIL
N.T.S.



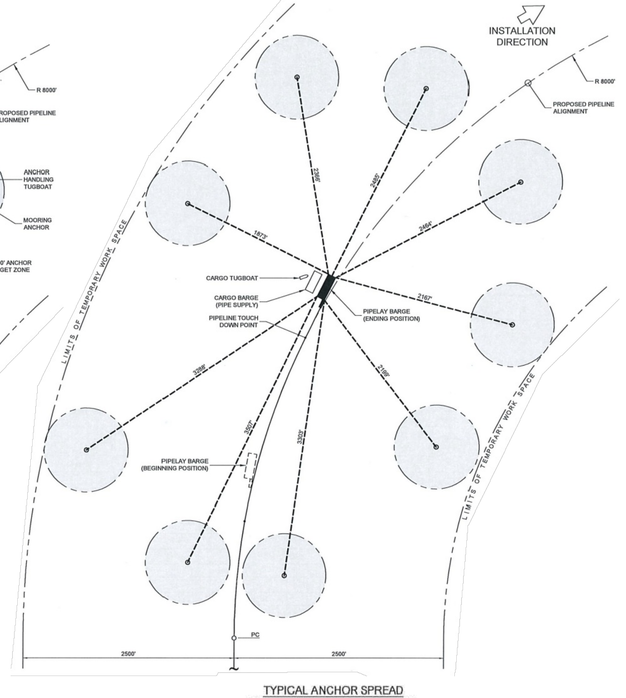
TYPICAL ANCHOR SPREAD
ON STRAIGHT ROUTE SEGMENTS
BEGINNING CONFIGURATION



TYPICAL ANCHOR SPREAD
ON STRAIGHT ROUTE SEGMENTS
ENDING CONFIGURATION



TYPICAL ANCHOR SPREAD
ON CURVED ROUTE SEGMENTS
BEGINNING CONFIGURATION



TYPICAL ANCHOR SPREAD
ON CURVED ROUTE SEGMENTS
ENDING CONFIGURATION

NOTES:

1. **DETAILS SHOWN ARE TAKEN FROM PLANS ENTITLED "TYPICAL ANCHOR SPREAD DRAWINGS", LAST REVISED MARCH 15, 2017, "MORGAN SHORE APPROACH HDD EXIT PIT GRADING – MP 12.50", LAST REVISED JANUARY 11, 2018, "AMBROSE CHANNEL HDD EXIT PIT GRADING" AND "AMBROSE CHANNEL HDD ENTRY PIT GRADING", LAST REVISED DECEMBER 19, 2017, ALL PREPARED BY INTECSEA WORLSEY PARSONS GROUP, PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.**
2. **DETAILS ARE SHOWN FOR PERMITTING PURPOSES ONLY, NO CONSTRUCTION IS TO BE BASED UPON THESE DETAILS.**

NJDEP APPROVAL STAMP

I AM A DULY REGISTERED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT EXISTING CONDITIONS SHOWN WERE FIELD LOCATED AND PREPARED UNDER MY DIRECT SUPERVISION.

THOMAS J. MURPHY, PLS
DW SMITH ASSOCIATES, LLC
1450 STATE ROUTE 34, WALL, NJ 07753
PROFESSIONAL LAND SURVEYOR
N.J. LIC. NO. 37207 COA NO. 24GA28122400

SIGNATURE DATE

PAULUS, SOKOLOWSKI AND SARTOR, LLC.
1450 ROUTE 34
WALL, NJ 07753
PHONE: (732) 363-5850
CERTIFICATE OF AUTHORIZATION NO. 24GA28032700

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I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT THE PROPOSED ENVIRONMENTAL IMPROVEMENTS SHOWN ARE ACCURATE AND CORRESPOND WITH TRANSMITTED ENGINEERING DRAWINGS.

JASON SCHOOLING, P.E.
PS&S, LLC
1450 HIGHWAY 34, WALL, NJ 07753
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05062700 COA NO. 24GA28032700

SIGNATURE DATE

PROJECT

NORTHEAST SUPPLY ENHANCEMENT PROJECT
PROPOSED
26" RARITAN BAY LOOP

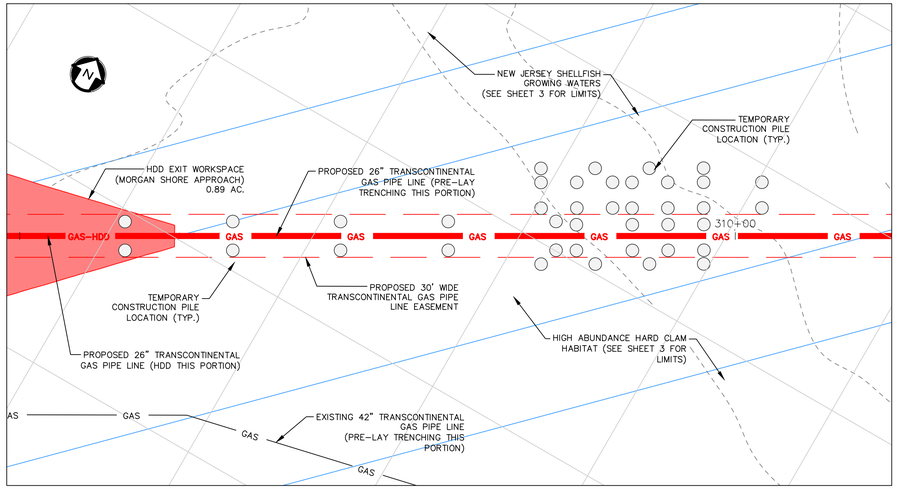
MIDDLESEX & MONMOUTH COUNTY, NEW JERSEY

SHEET TITLE

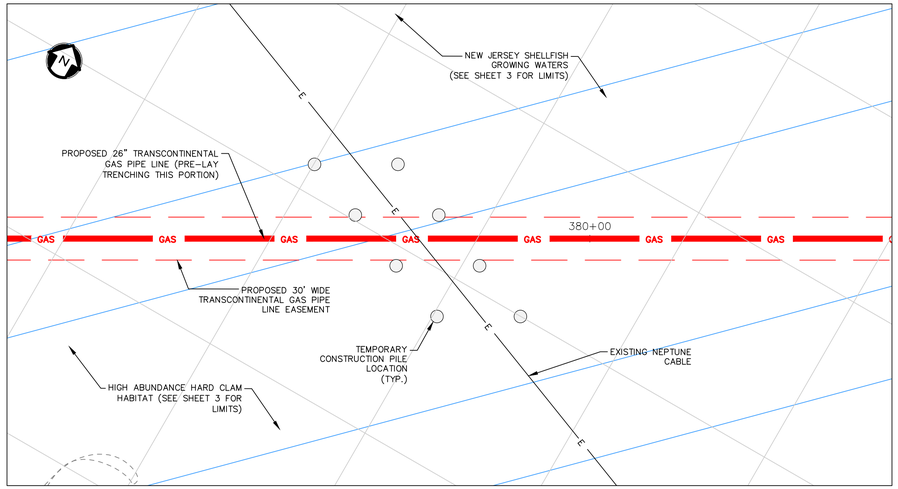
CONSTRUCTION DETAILS

PROJECT NO.: 05731.0009		DRAWN BY:	JPS
SCALE:	AS NOTED	CHECKED BY:	WS
DATE:	05/21/25	SHEET	7 OF 8
SHEET NO.	7		

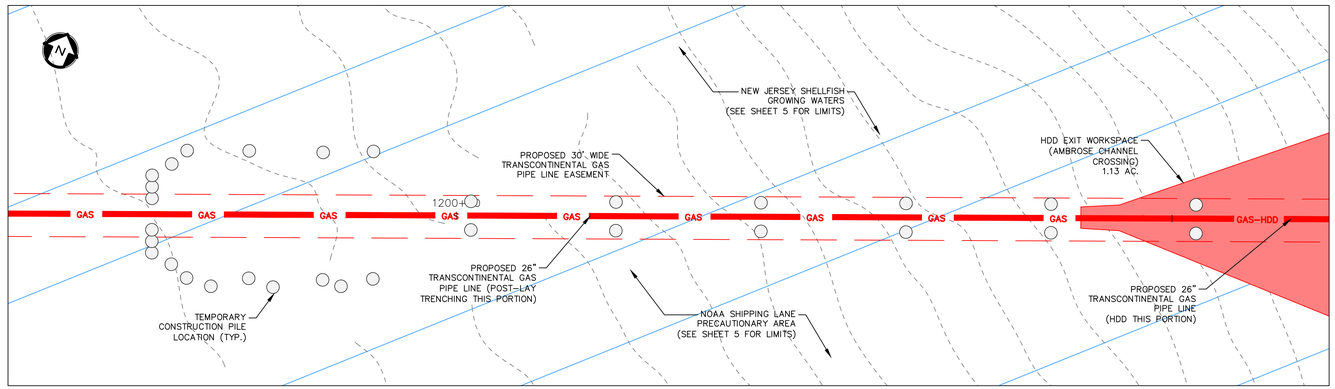
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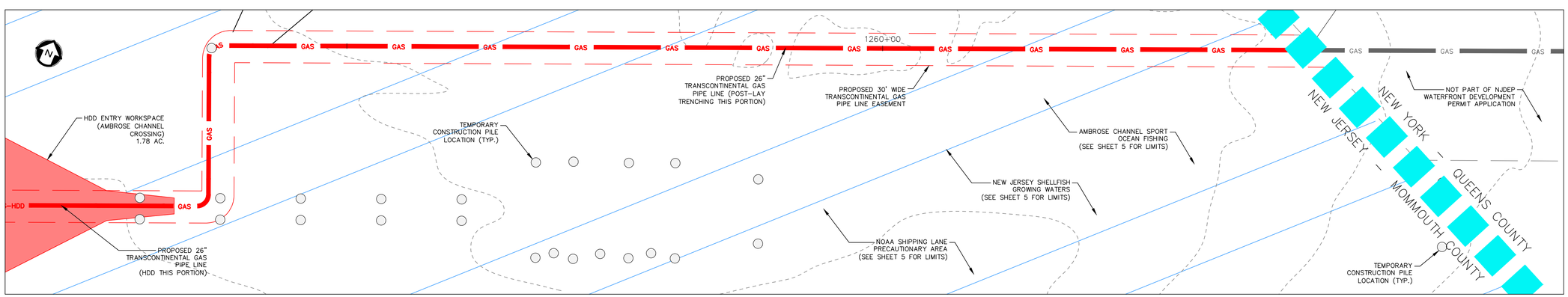
MORGAN APPROACH HDD EXIT PIT PILE LOCATIONS
1"=50'



NEPTUNE CABLE CROSSING PILE LOCATIONS
1"=50'



AMBROSE CHANNEL APPROACH HDD EXIT PIT PILE LOCATIONS
1"=50'



AMBROSE CHANNEL APPROACH HDD ENTRY PIT PILE LOCATIONS
1"=50'

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

NOTES:

1. **LOCATIONS OF PROPOSED TEMPORARY CONSTRUCTION PILE AND BUOY LOCATIONS ARE BASED ON PLANS ENTITLED "TEMPORARY CONSTRUCTION PILES MARKING PLAN FOR AMBROSE HDD WEST AND EAST APPROACH" AND "TEMPORARY CONSTRUCTION PILES AND BUOYS MARKING PLAN FOR MORGAN SHORE APPROACH", DATED MAY 9, 2018, PREPARED BY INTECSEA WORLEY PARSONS GROUP AND PROVIDED BY TRANSCONTINENTAL GAS PIPE LINE COMPANY, LLC.**
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SIGNATURE DATE

PAULUS, SOKOLOWSKI AND SARTOR, LLC.
1450 ROUTE 34
WALL, NJ 07753
PHONE: (732) 363-5850

CERTIFICATE OF AUTHORIZATION NO. 24GA28032700

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JASON SCHOOLING, P.E.
PS&S, LLC
1450 HIGHWAY 34, WALL, NJ 07753
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05003600 COA NO. 24GA28032700

SIGNATURE DATE

PROJECT

NORTHEAST SUPPLY ENHANCEMENT PROJECT
PROPOSED
26" RARITAN BAY LOOP

MIDDLESEX & MONMOUTH COUNTY, NEW JERSEY

SHEET TITLE

CONSTRUCTION DETAILS

PROJECT NO.: 05731.0009		DRAWN BY:	JPS
SCALE:	AS NOTED	CHECKED BY:	WS
DATE:	05/21/25	SHEET 8	OF 8
SHEET NO.	8		

PLOT NAME: P:\05731\0009\WORK\CAD\C-Plot Plans\Plan Sheets\31-24 NJDEP # Plans\05731-0009 Raritan Bay Loop 60-31-24 NJDEP # Plans.dwg, 60-31-24 NJDEP # Plans, LAST PLOT: 10/08/2025 - 09:45:58 AM, XREFs: Basemap