US Army Corps of Engineers®
Wilmington District

ISLAND CREEK SEEPAGE BERM REPAIR
MECKLENBURG COUNTY,
VIRGINIA

CONTRACT NO.:

SOLICITATION NO.: W912PM24B0013

ISSUE DATE: TBD

AMENDMENTS:

SIGNATURES AFFIXED BELOW INDICATE OFFICIAL RECOMMENDATION AND APPROVAL OF ALL DRAWINGS IN THIS SET AS INDEXED ON SHEET GI01.

Approval Recommended: *
MURPHY.TAMARA.C.1386322240 Digitally signed by MURPHY.TAMARA.C.1386322240 Date: 2025.01.31 16:24:20 -05'00' — 31 Jan 2025
CHIEF, DESIGN and GENERAL ENGINEERING SECTION — DATE

Approved: *
MURPHY.TAMARA.C.1386322240 Digitally signed by MURPHY.TAMARA.C.1386322240 Date: 2025.01.31 16:20:32 -05'00' — 31 Jan 2025
CHIEF, ENGINEERING BRANCH — DATE

* THIS PROJECT WAS DESIGNED BY THE U.S. ARMY CORPS OF ENGINEERS, WILMINGTON DISTRICT. INDIVIDUALS WHOSE SIGNATURES AND REGISTRATION DESIGNATIONS APPEAR ON THESE DOCUMENTS ARE OPERATING WITHIN THE SCOPE OF THEIR EMPLOYMENT. SIGNATURES ARE REQUIRED BY ER 1110-1-8152.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"X34"
ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JK1.103-07-38
FILE NAME: IslandCreek_G-001.dwg

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

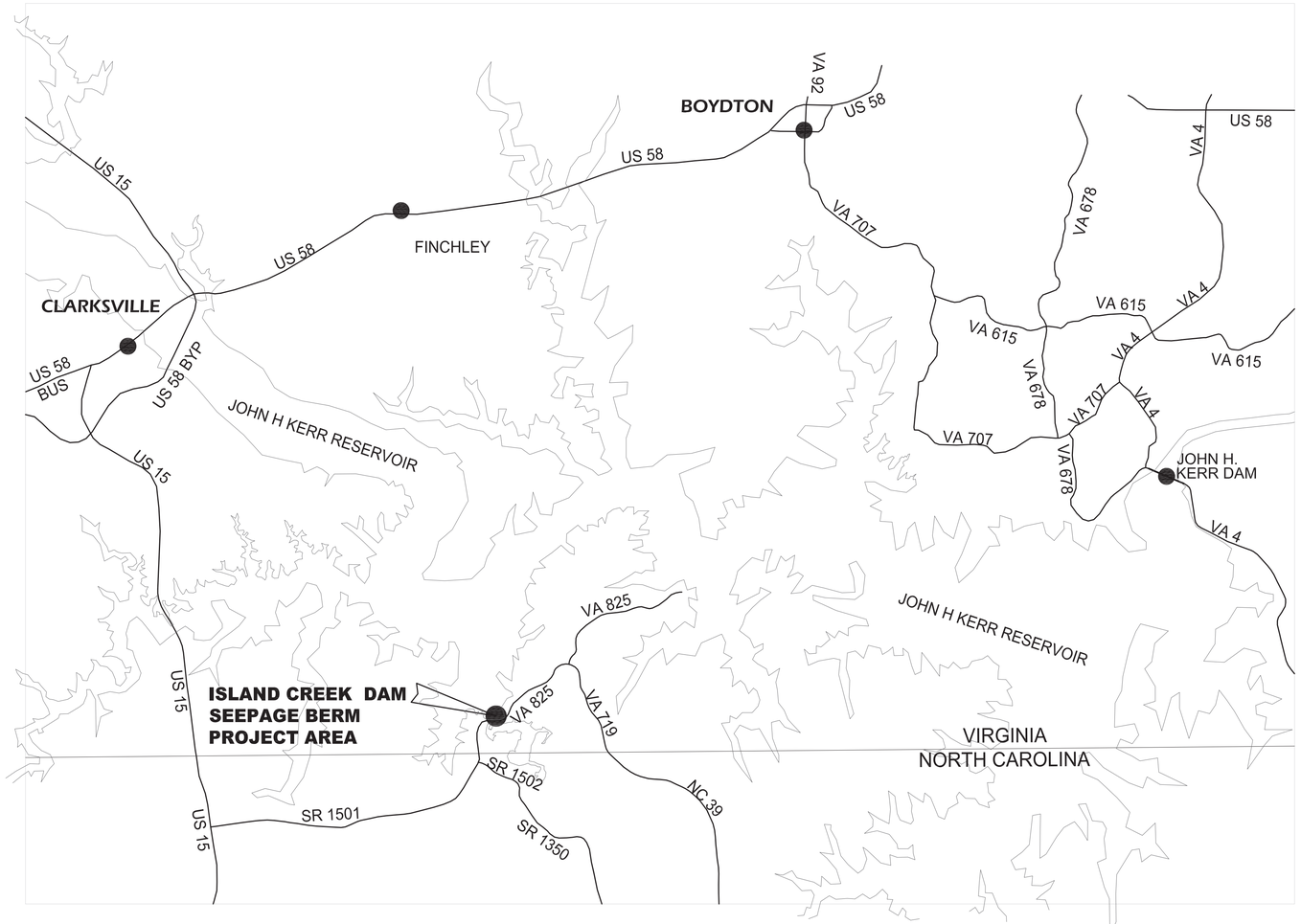
COVER SHEET

SHEET ID
G-001

READY TO ADVERTISE (RTA)

DRAWING INDEX

PLATE NO.	TITLE
G-001	COVER SHEET
GI01	INDEX OF DRAWINGS PROJECT LOCATION VICINITY MAP
GI02	GENERAL LOCATION MAP ISLAND CREEK DAM & BORROW AREA
B101	BORROW AREA B SITE PLAN, SECTION, AND PROFILE
V101	EXISTING SITE CONDITIONS
C100	EROSION AND SEDIMENT CONTROL PLAN NOTES
C101	SITE PLAN - SEEPAGE BERM RE-GRADING TOP OF SEEPAGE BERM
C102	SITE PLAN SEEPAGE BERM RE-GRADING
C103	EROSION AND SEDIMENT CONTROL PLAN TOP OF SEEPAGE BERM
C104	EROSION AND SEDIMENT CONTROL PLAN ACCESS ROAD
C300	TYPICAL SECTIONS AND DETAILS
C301	TYPICAL SECTIONS
C302	INSTALLATION INSTRUCTIONS TURF REINFORCEMENT MATTING
C303	ACCESS ROADS CROSS SECTIONS STA. 0+70 TO STA. 3+40
C304	ACCESS ROADS CROSS SECTIONS STA. 3+50 TO STA. 4+80
C305	ACCESS ROADS CROSS SECTIONS STA. 5+00 TO STA. 6+00
C306	ACCESS ROADS CROSS SECTIONS STA. 6+20 TO STA. 7+50
C307	ACCESS ROADS CROSS SECTIONS STA. 7+60 TO STA. 7+84.03
C308	ACCESS ROADS CROSS SECTIONS STA. 7+84.03 TO STA. 8+80
C309	ACCESS ROADS CROSS SECTIONS STA. 9+00 TO STA. 10+80
C310	ACCESS ROADS CROSS SECTIONS STA. 11+00 TO STA. 12+60
C311	ACCESS ROADS CROSS SECTIONS STA. 12+80 TO STA. 14+40
C312	ACCESS ROADS CROSS SECTIONS STA. 14+60 TO STA. 15+38.20
R1	EXISTING CONDITION PHOTOGRAPHS
R2	POWERLINE ELEVATION DRAWING
R3-R28	2017 ISLAND CREEK BERM PLANS



PROJECT LOCATION, VICINITY MAP

0 1/2 1 2
SCALE IN MILES

N

GENERAL SCOPE

THE ISLAND CREEK DAM SEEPAGE BERM PROJECT CONSISTS OF THREE MAIN TASKS:

1. GRADING THE BERM AND RECONSTRUCTING THE ACCESS ROAD TO FLOW TOWARDS THE RESERVOIR.
2. CONSTRUCTING A TRAPEZOIDAL STORMWATER DITCH TO PREVENT EROSION ALONG THE DAM GROIN
3. PLACEMENT OF RIP-RAP FROM THE EXISTING RIP-RAP TO THE RESERVOIR EDGE.

THE PROJECT ALSO INCLUDES PLACING AND ESTABLISHING SEED/SOD, RENOVATING EXISTING PIEZOMETER CONCRETE PADS, REPAIRING MANHOLE TOPS, AND FOLLOWING ALL REQUIRED EROSION AND SEDIMENT CONTROL MEASURES REQUIRED BY VADEQ.

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CONTRACT NO.: TBD
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FILE NAME: IslandCreek_GI01_Overall_Index.dwg

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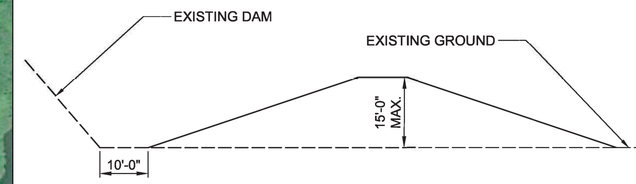
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

INDEX OF DRAWINGS
PROJECT LOCATION
VICINITY MAP

SHEET ID
GI01

READY TO ADVERTISE (RTA)



1
GI02

TYPICAL SECTION
STOCKPILE AREAS

NOT TO SCALE

NOTES:
1. MAXIMUM SIDE SLOPES ARE 1V:3H FOR THE STOCKPILE AREA.

LEGEND:

BENCH MARK

NOTE:
1. ELEVATIONS BASED ON NAVD 88 DATUM.
2. COORDINATES BASED ON VA SOUTH GRID (NAD 1983 DATUM).
3. SEE PLATE B101 FOR SITE PLAN BORROW AREA B.
4. SEE PLATES C101 AND C102 FOR SITE PLAN ISLAND CREEK DAM SEEPAGE BERM MODIFICATION.

N
NORTH BASED ON VA SOUTH GRID (NAD 1983)

0 100 200 400
SCALE: 1" = 200'

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FILE NAME: IslandCreek_G102_LocationMap.dwg
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69 DARLINGTON AVENUE
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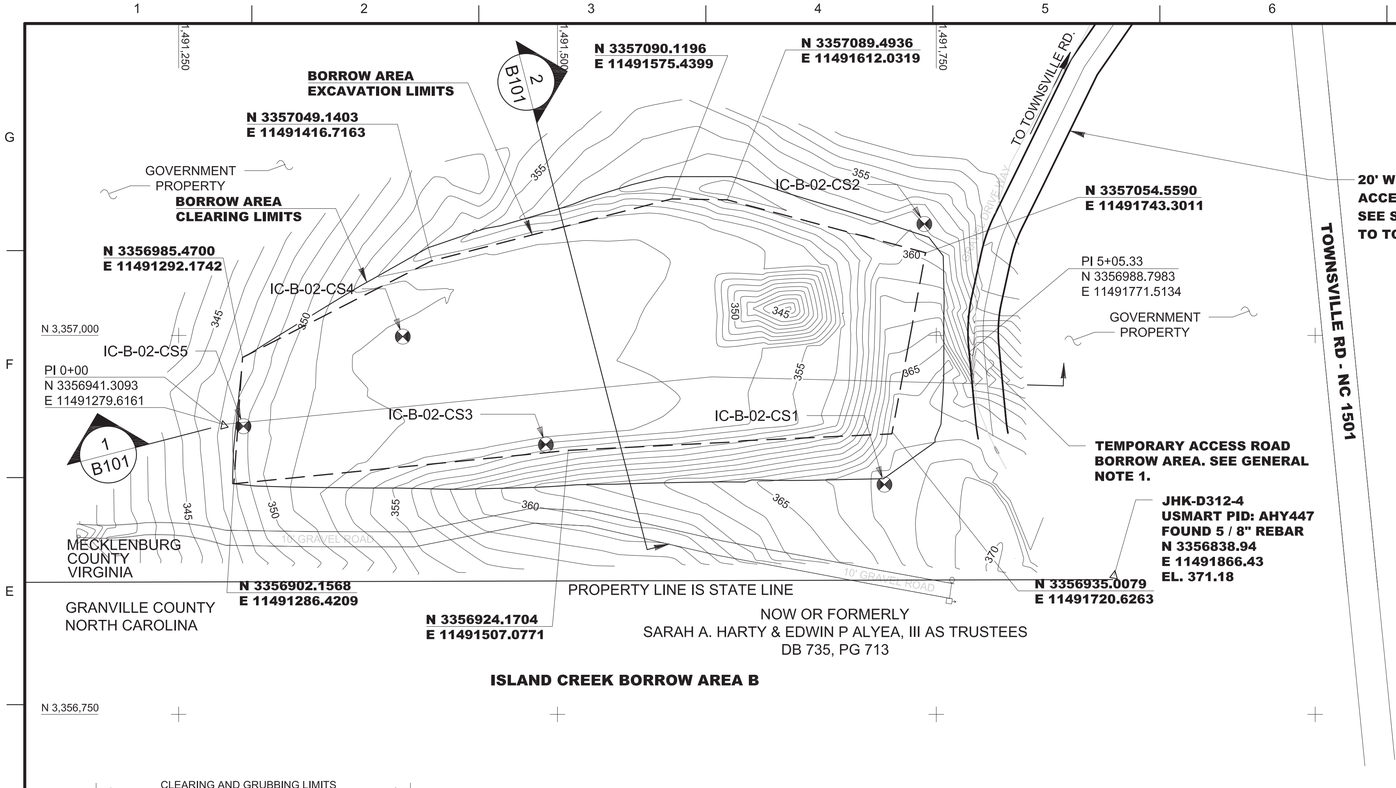
ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

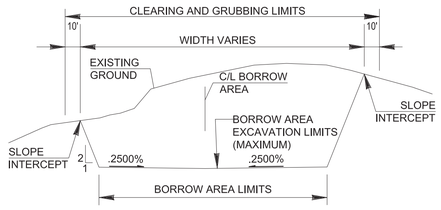
GENERAL LOCATION MAP
ISLAND CREEK DAM &
BORROW AREA

SHEET ID
GI02

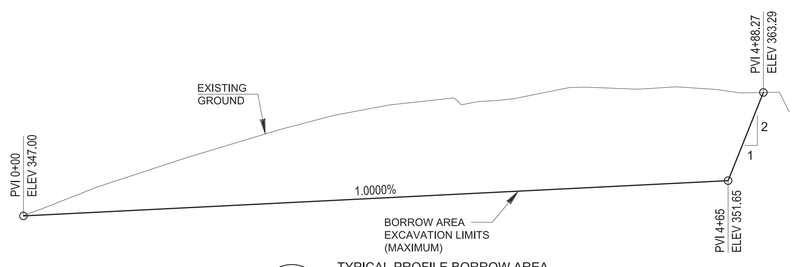
READY TO ADVERTISE (RTA)



ISLAND CREEK BORROW AREA B



2 / B101 TYPICAL SECTION BORROW EXCAVATION MAXIMUM LIMITS



1 / B101 TYPICAL PROFILE BORROW AREA EXCAVATION MAXIMUM LIMITS

ISLAND CREEK BORROW AREA B BORE HOLES

BORE HOLE	NORTHING (Y)	EASTING (X)	ELEVATION
IC-B-02-CS1	3356901.5605	11491715.7693	368.23
IC-B-02-CS2	3357073.4866	11491742.1115	358.07
IC-B-02-CS3	3356927.8797	11491492.3401	362.84
IC-B-02-CS4	3356999.2225	11491397.9111	355.94
IC-B-02-CS5	3356940.0433	11491292.7842	349.42
IC-B-02-B4	3356968.9672	11491639.6971	366.72
IC-B-02-B5	3356970.0342	11491442.4510	359.82

ISLAND CREEK BORROW AREA B LIMITS

POINT NO.	NORTHING	EASTING
1	3356852.7953	11491802.0186
2	3357101.1264	11491804.9799
3	3357154.4672	11491572.2248
4	3357098.1630	11491395.1414
5	3357009.8544	11491253.5932
6	3356858.7221	11491239.3791

GENERAL NOTES:

1. THE EXISTING BORROW AREA WAS UTILIZED IN THE CONSTRUCTION OF EXISTING SEEPAGE BERM IN 2017-2018. SURVEY WAS CONDUCTED ON 03 MARCH 2022. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM A POST CONSTRUCTION SURVEY OF THE ENTIRE BORROW AREA.

2. THE CONTRACTOR SHALL CONSTRUCT, MAINTAIN AND REMOVE ANY TEMPORARY ACCESS ROAD TO THE BORROW AREA AS SEEN ON SHEET C-104 . NO SEPARATE PAYMENTS WILL BE MADE FOR CONSTRUCTION, MAINTENANCE OR REMOVAL OF ANY TEMPORARY ACCESS ROADS TO, OR HAUL ROADS FROM, THE BORROW AREA. ALL COST SHALL BE INCLUDED IN COST OF MATERIAL ACCEPTABLY PLACED AS EMBANKMENT IN PLACE FOR THE SEEPAGE BERM. THE CONTRACTOR SHALL SUBMIT A PLAN SHOWING TEMPORARY ACCESS ROAD TO THE BORROW AREA. THE TEMPORARY ACCESS ROAD SHALL BE CONSTRUCTED ON THE VIRGINIA SIDE AND WITHIN GOVERNMENT PROPERTY. TEMPORARY ACCESS ROADS SHALL BE REMOVED WHEN NO LONGER REQUIRED. ALL DISTURBED AREAS SHALL BE GRADED AND SEEDED IN ACCORDANCE WITH SECTION 32 92 19 SEEDING.

3. THE CONTRACTOR SHALL SUBMIT A WORK PLAN FOR EACH BORROW AREA AND SEEPAGE BERM SHOWING THE PROPOSED ACTIVITY IN EACH PORTION OF THE AREA, AS WELL AS THE LOCATIONS OF LIMITED USE OR NONUSE. EACH PLAN SHALL INCLUDE MEASURES FOR SEEDING, DRAINAGE, AND EROSION CONTROL.

4. THE COSTS INCURRED BY THE CONTRACTOR FOR CLEARING, GRUBBING, SEEDING, DRAINAGE, AND EROSION CONTROL SHALL BE CONSIDERED INCIDENTAL TO EACH BORROW AREA OPERATION AND INCLUDED IN THE APPLICABLE BID ITEMS.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS, LICENSES, AND/OR OTHER APPROVALS REQUIRED FOR THE USE OF BORROW AREA AND SEEPAGE BERM THAT ARE NOT ALREADY PROVIDED BY THE GOVERNMENT.

6. IF THE CONTRACTOR ELECTS TO BRING COMMERCIALLY OBTAINED BORROW MATERIAL ONSITE, THE ENVIRONMENTAL PROTECTION PLAN SHALL SPECIFY THE LOCATION OF THE PIT(S), THE NAMES OF THE OWNERS AND OPERATORS, AND THE TYPES AND ESTIMATED QUANTITIES OF MATERIALS TO BE OBTAINED FROM EACH.

LEGEND:

GATE

EXIST. GRAVEL ROAD

BORING

NORTH BASED ON VA. SOUTH GRID (NAD 1983)

NOTE:

1. ELEVATIONS BASED ON NAVD 88 DATUM.
2. COORDINATES BASED ON VIRGINA SOUTH (NAD 1983 DATUM).

0 25 50 100

SCALE: 1" = 50'

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DRAWING CODE: JA 103-07-38
FILE NAME: IslandCreek_B101_BorrowArea.dwg

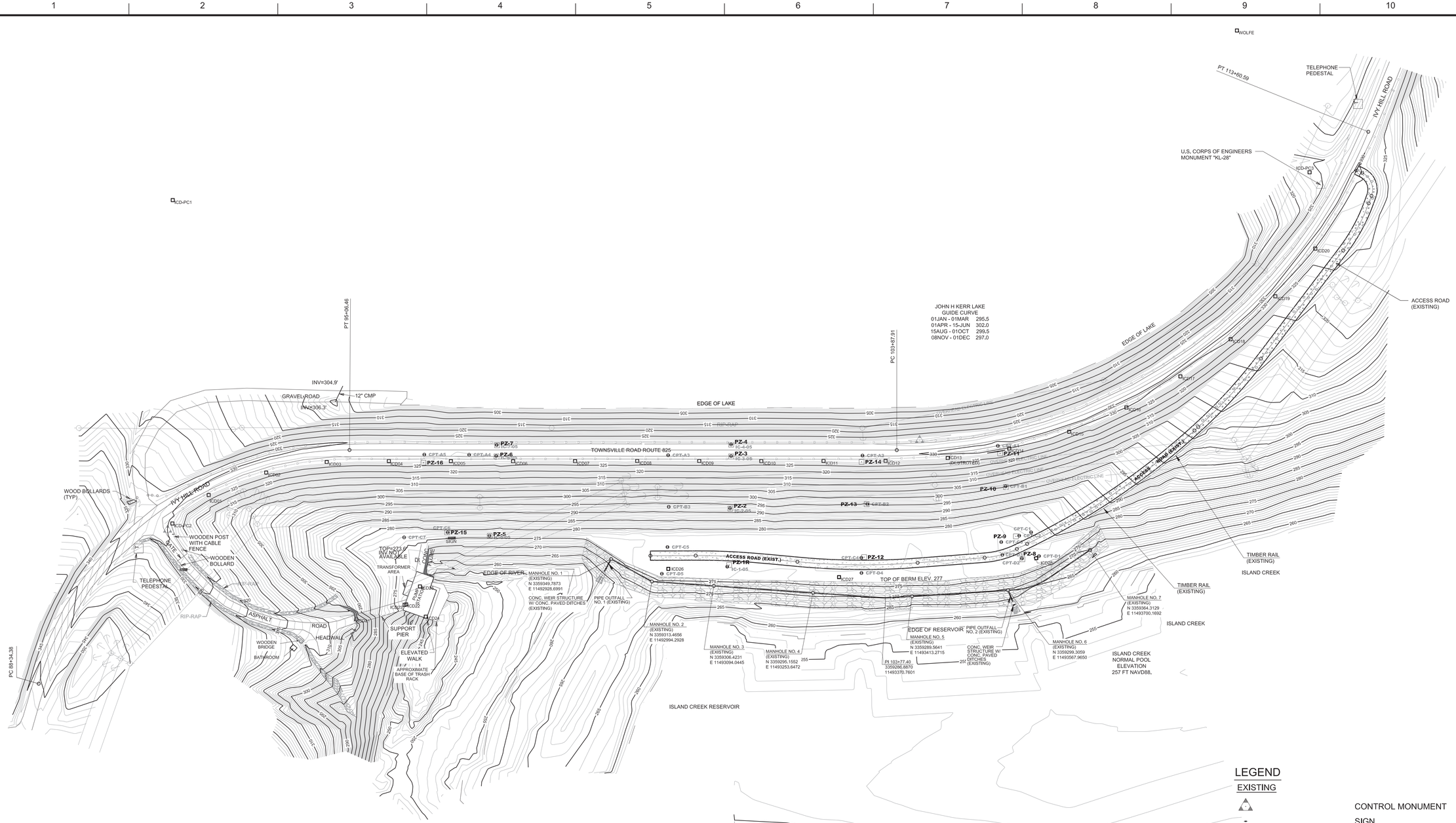
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR, MECKLENBURG COUNTY, VIRGINIA

BORROW AREA B SITE PLAN, SECTION, AND PROFILE

SHEET ID
B101

READY TO ADVERTISE (RTA)



NOTES

1. ALL SURVEY WORK IS REFERENCED TO NAD 1983 VIRGINIA STATE PLANE SOUTH U.S. SURVEY FEET IN THE HORIZONTAL PLANE AND NAVD 1988 U.S. SURVEY FEET IN THE VERTICAL PLANE. SURVEY IS BASED ON THE AS-BUILT SEEPAGE BERM SURVEY CONDUCTED IN AUGUST OF 2020.

2. EXISTING CONCRETE WEIRS AND PAVED DITCHES ARE NOT TO BE DISTURBED. THE NEWLY PLANNED RIPRAP ADDITION SHALL TIE TO THE EXISTING CONCRETE PAVED DITCHES WITH A SMOOTH TRANSITION.

3. THE ISLAND CREEK RESERVOIR ELEVATION IS MAINTAINED AT ELEVATION 257.0 NAVD88 YEAR ROUND WITH THE EXCEPTION OF FLOOD EVENTS.

LEGEND

EXISTING

- CONTROL MONUMENT
- SIGN
- PAVED ROAD
- 300 — MAJOR CONTOUR
- MINOR CONTOUR
- MANHOLE
- TOE DRAIN
- CONSTRUCTION LIMITS
- PZ-1R — PIEZOMETER
- UTILITY POLE
- CPT-C5 — BORING LOCATION
- TELEPHONE PEDESTAL
- GUARDRAIL
- TIMBER RAIL

US Army Corps of Engineers®

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WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

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CHECKED BY: T. KNIGHT	CONTRACT NO.: TBD
SUPERVISED BY: T. MURPHY	DRAWING CODE: JK 103-07-38
SIZE: 22"x34"	FILE NAME: V101_existing_conditions.dwg

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

EXISTING SITE CONDITIONS

SHEET ID
V101

READY TO ADVERTISE (RTA)

SEDIMENT AND EROSION CONTROL NOTES

1. Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.

2. During construction of the project, soil stock piles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.

3. A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.

4. Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.

5. Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.

6. Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.

   a. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.

   b. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at a minimum, maintain the structural integrity of the basin during a 25-year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.

7. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

8. Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.

9. Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.

10. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.

11. Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.

12. When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.

13. When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided.

14. All applicable federal, state and local requirements pertaining to working in or crossing live watercourses shall be met.

15. The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.

16. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

   a. No more than 500 linear feet of trench may be opened at one time.

   b. Excavated material shall be placed on the uphill side of trenches.

   c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.

   d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.

   e. Restabilization shall be accomplished in accordance with this chapter.

   f. Applicable safety requirements shall be complied with.

17. Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities.

18. All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the VESCP authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

19. Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria. Stream restoration and relocation projects that incorporate natural channel design concepts are not man-made channels and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels:

   a. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be performed.

   b. Adequacy of all channels and pipes shall be verified in the following manner:

   (1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is 100 times greater than the contributing drainage area of the project in question; or

   (2) (a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks;

   (b) All previously constructed man-made channels shall be analyzed by the use of a 10-year storm to verify that stormwater will not overtop its banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and

   (c) Pipes and storm sewer systems shall be analyzed by the use of a 10-year storm to verify that stormwater will be contained within the pipe or system.

   c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:

   (1) Improve the channels to a condition where a 10-year storm will not overtop the banks and a two-year storm will not cause erosion to the channel, the bed, or the banks;

   (2) Improve the pipe or pipe system to a condition where the 10-year storm is contained within the appurtenances;

   (3) Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into a natural channel or will not cause the pre-development peak runoff rate from a 10-year storm to increase when runoff outfalls into a man-made channel; or

   (4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the VESCP authority to prevent downstream erosion.

   d. The applicant shall provide evidence of permission to make the improvements.

   e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development condition of the subject project.

   f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the VESCP of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.

   g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transition from the facility to the receiving channel.

   h. All on-site channels must be verified to be adequate.

   i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.

   j. In applying these stormwater management criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.

   k. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.

   l. Any plan approved prior to July 1, 2014, that provides for stormwater management that addresses any flow rate capacity and velocity requirements for natural or man-made channels shall satisfy the flow rate capacity and velocity requirements for natural or man-made channels if the practices are designed to (i) detain the water quality volume and to release it over 48 hours; (ii) detain and release over a 24-hour period the expected rainfall resulting from the one year, 24-hour storm; and (iii) reduce the allowable peak flow rate resulting from the 1.5, 2, and 10-year, 24-hour storms to a level that is less than or equal to the peak flow rate from the site assuming it was in a good forested condition, achieved through multiplication of the forested peak flow rate by a reduction factor that is equal to the runoff volume from the site when it was in a good forested condition divided by the runoff volume from the site in its proposed condition, and shall be exempt from any flow rate capacity and velocity requirements for natural or man-made channels as defined in any regulations promulgated pursuant to § 62.1-44.15:54 or 62.1-44.15:65 of the Act.

   m. For plans approved on and after July 1, 2014, the flow rate capacity and velocity requirements of § 62.1-44.15:52 A of the Act and this subsection shall be satisfied by compliance with water quantity requirements in the Stormwater Management Act (§ 62.1-44.15:24 et seq. of the Code of Virginia) and attendant regulations, unless such land-disturbing activities (i) are in accordance with provisions for time limits on applicability of approved design criteria in 9VAC25-870-47 or grandfathering in 9VAC25-870-48 of the Virginia Stormwater Management Program (VSMP) Regulation, in which case the flow rate capacity and velocity requirements of § 62.1-44.15:52 A of the Act shall apply, or (ii) are exempt pursuant to § 62.1-44.15:34 C 7 of the Act.

   n. Compliance with the water quantity minimum standards set out in 9VAC25-870-66 of the Virginia Stormwater Management Program (VSMP) Regulation shall be deemed to satisfy the requirements of this subdivision 19.

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ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

EROSION AND SEDIMENT CONTROL
PLAN NOTES

SHEET ID
C100

READY TO ADVERTISE (RTA)

ACCESS ROAD COORDINATES

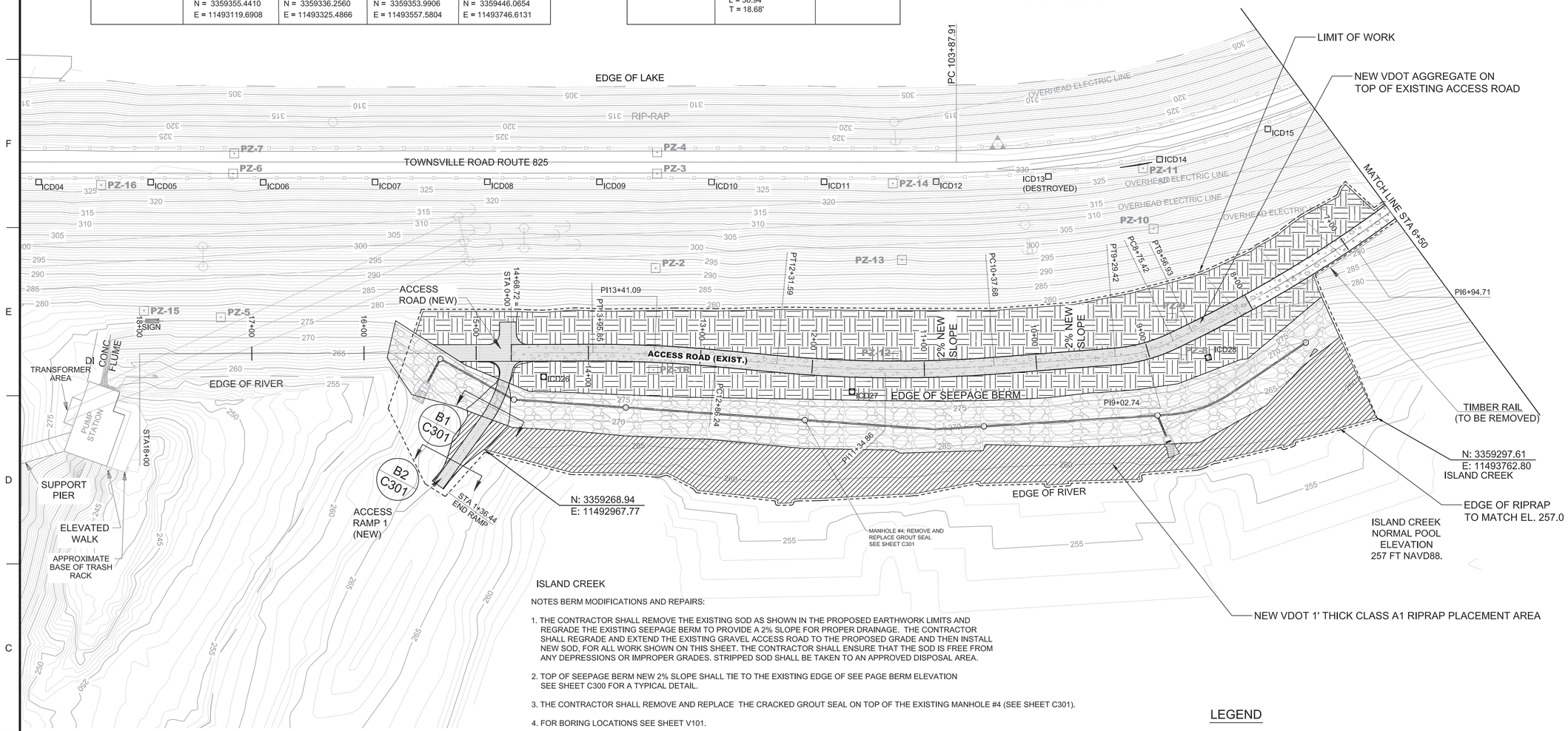
PI = 18+00 N = 3359354.2053 E = 11492660.6958	PI = 13+41.09 DEL = 5°28'48.52" LT Dc = 5°00'00.00" R = 1145.92' T = 54.84' L = 109.60' N = 3359355.4410 E = 11493119.6908	PI = 11+34.86 DEL = 9°41'43.59" RT Dc = 5°00'00.00" R = 1145.92' T = 97.19' L = 193.91' N = 3359336.2560 E = 11493325.4866	PI = 9+02.74 DEL = 21°36'01.57" RT Dc = 40°00'00.00" R = 143.24' T = 27.32' L = 54.00' N = 3359353.9906 E = 11493557.5804	PI = 6+94.71 DEL = 16°20'02.44" RT Dc = 5°00'00.00" R = 1145.92' T = 164.46' L = 326.68' N = 3359446.0654 E = 11493746.6131

ACCESS RAMP 1 COORDINATES

ACCESS RAMP 1 STA 0+00 N 3359355.0972 E 11492991.9756	ACCESS RAMP 1 PI = 0+45.50 N = 3359311.0682 E = 11492980.4813 R = 100.00' Dc = 57°17'44.81" DEL = 21°09'58.97" RT L = 36.94' T = 18.68'	ACCESS RAMP 1 STA1+36.44 N = 3359236.9634 E = 11492927.0401

JOHN H KERR LAKE
GUIDE CURVE

01JAN - 01MAR	295.5
01APR - 15-JUN	302.0
15AUG - 01OCT	299.5
08NOV - 01DEC	297.0



PIEZOMETERS WITH PROPOSED NEW CONCRETE PADS		
PIEZOMETERS	TOP OF CASING EXISTING	FINISHED GRADE
PZ-1R	280	276.48
PZ-8	280	277.22
PZ-9	280	278.00
PZ-12	280	277.55

NOTES EXISTING AUTOMATED DATA ACQUISITION SYSTEM:

1. THE CONTRACTOR SHALL PROTECT THE AUTOMATED DATA ACQUISITION SYSTEM (ADAS) THAT WAS INSTALLED TO IMPROVE THE COLLECTION AND MONITORING OF PIEZOMETRIC AND SEE PAGE DATA AT ISLAND CREEK DAM.
2. SEE SHEET C300 FOR DETAILS OF EXISTING PIEZOMETERS AND ASSOCIATED FEATURES.

NOTES BERM MODIFICATIONS AND REPAIRS:

1. THE CONTRACTOR SHALL REMOVE THE EXISTING SOD AS SHOWN IN THE PROPOSED EARTHWORK LIMITS AND REGRADE THE EXISTING SEEPAGE BERM TO PROVIDE A 2% SLOPE FOR PROPER DRAINAGE. THE CONTRACTOR SHALL REGRADE AND EXTEND THE EXISTING GRAVEL ACCESS ROAD TO THE PROPOSED GRADE AND THEN INSTALL NEW SOD, FOR ALL WORK SHOWN ON THIS SHEET. THE CONTRACTOR SHALL ENSURE THAT THE SOD IS FREE FROM ANY DEPRESSIONS OR IMPROPER GRADES. STRIPPED SOD SHALL BE TAKEN TO AN APPROVED DISPOSAL AREA.
2. TOP OF SEEPAGE BERM NEW 2% SLOPE SHALL TIE TO THE EXISTING EDGE OF SEE PAGE BERM ELEVATION SEE SHEET C300 FOR A TYPICAL DETAIL.
3. THE CONTRACTOR SHALL REMOVE AND REPLACE THE CRACKED GROUT SEAL ON TOP OF THE EXISTING MANHOLE #4 (SEE SHEET C301).
4. FOR BORING LOCATIONS SEE SHEET V101.
5. ALL AREAS OF NEW CONSTRUCTION SHALL BE CLEARED AND GRUBBED PER SPECIFICATION SECTION 31 11 00.
6. NO WORK SHALL BE DONE BELOW THE ISLAND CREEK NORMAL POOL ELEVATION OF 257 FT. NOTE THAT REFERENCE SHEETS R2-R28 SHOW ISLAND CREEK NORMAL POOL ELEVATION AT 258 FT MSL. IN THE NAVD88 VERTICAL DATUM THE NORMAL POOL ELEVATION IS 257 FT.
7. EXISTING CONCRETE WEIRS AND PAVED DITCHES ARE NOT TO BE DISTURBED. THE NEWLY PLANNED RIP RAP ADDITION SHALL TIE TO THE EXISTING CONCRETE PAVED DITCHES WITH A SMOOTH TRANSITION.
8. EXISTING TIMBER RAIL SHALL BE REMOVED AND DISPOSED OF OFFSITE IN AN APPROVED LOCATION.
9. SEE SHEET R-2 FOR ELECTRICAL LINE ELEVATIONS

PRECISE ALIGNMENT MONUMENTS			
MONUMENT	EASTING	NORTHING	ELEVATIONS
MONITORING MONUMENTS SEE PAGE BERM			
ICD26	11493020.770	3359333.818	276.6791
ICD27	11493295.767	3359320.569	276.8526
ICD28	11493613.226	3359351.022	277.1415

NOTES SURVEY:

1. ALL SURVEY WORK IS REFERENCED TO NAD 1983 VIRGINIA STATE PLANE SOUTH U.S. SURVEY FEET IN THE HORIZONTAL PLANE AND NAVD 1988 U.S. SURVEY FEET IN THE VERTICAL PLANE.
2. EXISTING PRECISE ALIGNMENTS MONUMENTS TO BE RESET TO NEW FINISHED GRADE ELEVATIONS (SEE TABLE ABOVE).

LEGEND

EXISTING		PROPOSED	
	CONTROL MONUMENT		LIMIT OF WORK
	SIGN		RIPRAP PLACEMENT
	PAVED ROAD		VDOT AGGREGATE
300	MAJOR CONTOUR		EARTHWORK REGRADING
	MINOR CONTOUR		
	MANHOLE		
	TOE DRAIN		
	CONSTRUCTION LIMITS		
PZ-1R	PIEZOMETER		
	UTILITY POLE		
	BORING LOCATION		
	TELEPHONE PEDESTAL		
	GUARDRAIL		
TR	TIMBER RAIL		
	RIPRAP		

N

0 25 50 100
SCALE 1" = 50'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: S. STELLO	ISSUE DATE: TBD
DRAWN BY: S. STELLO	SOLICITATION NO.: W912PM24B0013
CHECKED BY: T. KNIGHT	CONTRACT NO.: TBD
SUBMITTED BY: T. KNIGHT	DRAWING CODE: JAK 103-07-38
SIZE: 22"x34"	FILE NAME: IslandCreek_C101_site_plan.dwg

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

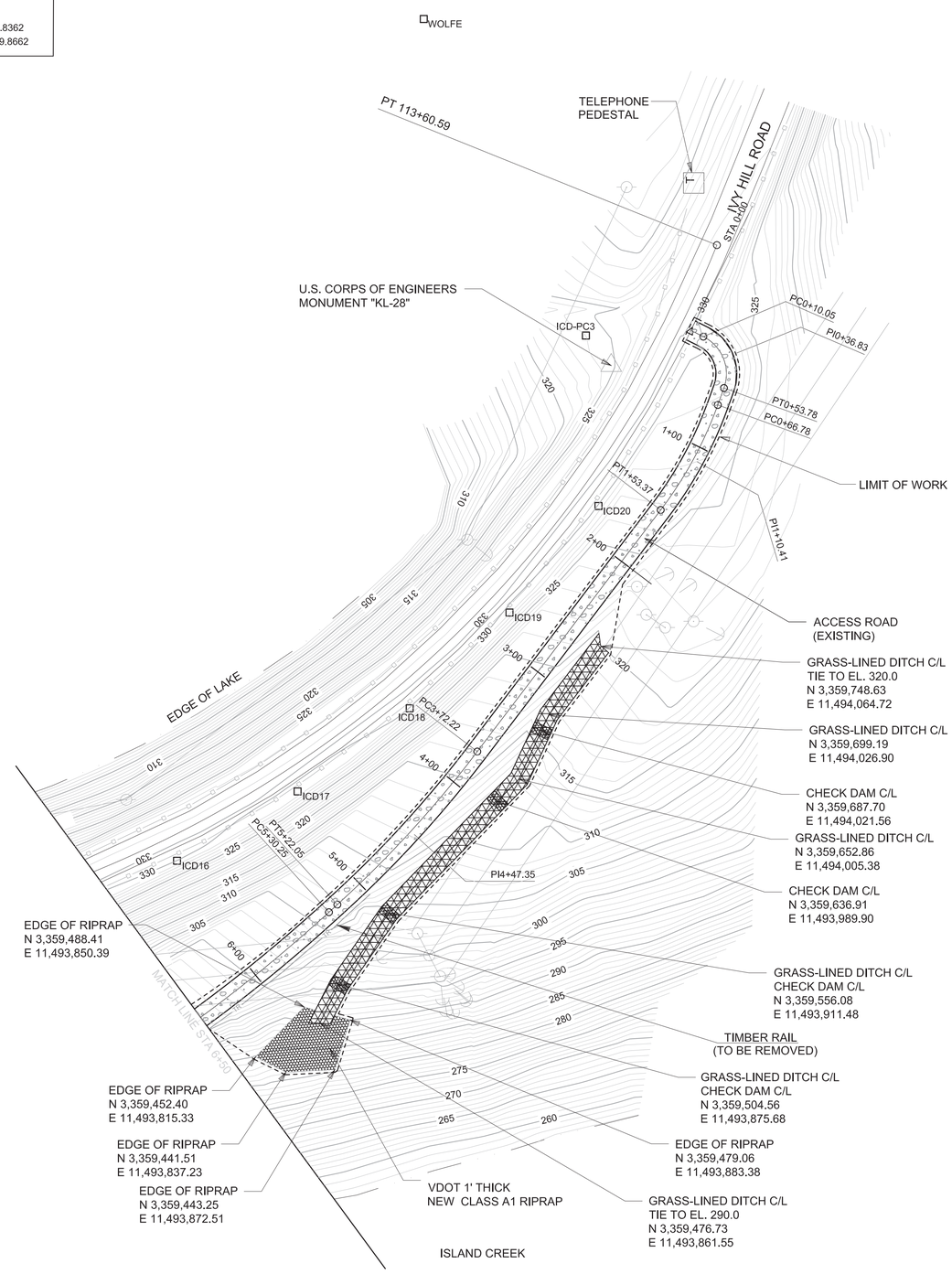
SITE PLAN - SEEPAGE BERM
RE-GRADING TOP OF SEEPAGE BERM

SHEET ID
C101

READY TO ADVERTISE (RTA)

ACCESS ROAD COORDINATES

PI = 0+36.83	PI = 1+10.41	PI = 4+47.35
DEL = 83°30'56.73" RT	DEL = 17°19'04.55" RT	DEL = 10°29'16.85" RT
Dc = 190°59'09.35"	Dc = 20°00'00.00"	Dc = 7°00'00.00"
R = 30.00'	R = 286.48'	R = 818.51'
T = 26.78'	T = 43.63'	T = 75.12'
L = 43.73'	L = 86.59'	L = 149.83'
N = 3359960.1576	N = 3359881.7208	N = 3359612.8362
E = 11494162.3983	E = 11494134.0199	E = 11493929.8662



ACCESS ROAD REPAIRS NOTES:

1. THE CONTRACTOR SHALL REPAIR AND REGRADE THE EXISTING GRAVEL ACCESS ROAD THAT HAS ERODED AND WASHED OUT IN AREAS ALONG THE ROAD. THE CONTRACTOR SHALL REGRADE THE EXISTING ACCESS ROAD TO THE PROFILE AND TYPICAL SECTION BETWEEN APPROXIMATELY STATION 4+00 TO STATION 8+00 AREAS ARE NOT REFLECTED ON THE CURRENT SITE PLAN AND CONTOURS.
2. THE CONTRACTOR SHALL INSTALL A NEW GRASS-LINED CHANNEL AND ROCK CHECK DAMS AS SHOWN ON THE SITE PLAN. DETAILS CAN BE FOUND ON SHEET C-301.
3. ALL NEW WORK SHALL BE CLEARED AND GRUBBED PER SPECIFICATION SECTION 31 11 00.
4. SEEDING SHALL BE ALLOWED FOR AREAS EAST OF THE ACCESS ROAD SHOWN ON THIS SHEET. ALL OTHER AREAS SHALL REQUIRE SOD. THE CONTRACTOR SHALL BE ALLOWED TO USE SOD IN LIEU OF SEEDING. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND WATERING THE SEEDING/SOD UNTIL IT HAS ESTABLISHED. SEE SPECIFICATIONS.
5. TYPICAL DETAILS FOR ALL WORK CAN BE FOUND ON SHEET C-301.
6. CONTRACTOR SHALL INSTALL A MINIMUM OF 6" OF TOPSOIL IN THE SEEDED AREAS. TOPSOIL SHALL ALSO BE APPLIED OVER THE PERMANENT TURF REINFORCEMENT MATTING IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. SEE SHEET R-2 FOR POWERLINE ELEVATIONS

LEGEND

EXISTING		PROPOSED	
	CONTROL MONUMENT		LIMIT OF WORK
	SIGN		NEW RIP RAP PLACEMENT
	PAVED ROAD		PERMANENT TURF REINFORCEMENT MATTING
300	MAJOR CONTOUR		ACCESS ROAD
	MINOR CONTOUR		
	MANHOLE		
	TOE DRAIN		
	CONSTRUCTION LIMITS		
PZ-1R	PIEZOMETER		
	UTILITY POLE		
CPT-C5	BORING LOCATION		
	TELEPHONE PEDESTAL		
	GUARDRAIL		
TR	TIMBER RAIL		

N

0 25 50 100

SCALE 1" = 50'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"X34"
ISSUE DATE: TBD
SOLICITATION NO.: W912P8-25-B-0013
CONTRACT NO.: TBD
DRAWING CODE: JK 103-07-38
FILE NAME: IslandCreek_C102_seepage_berm.dwg

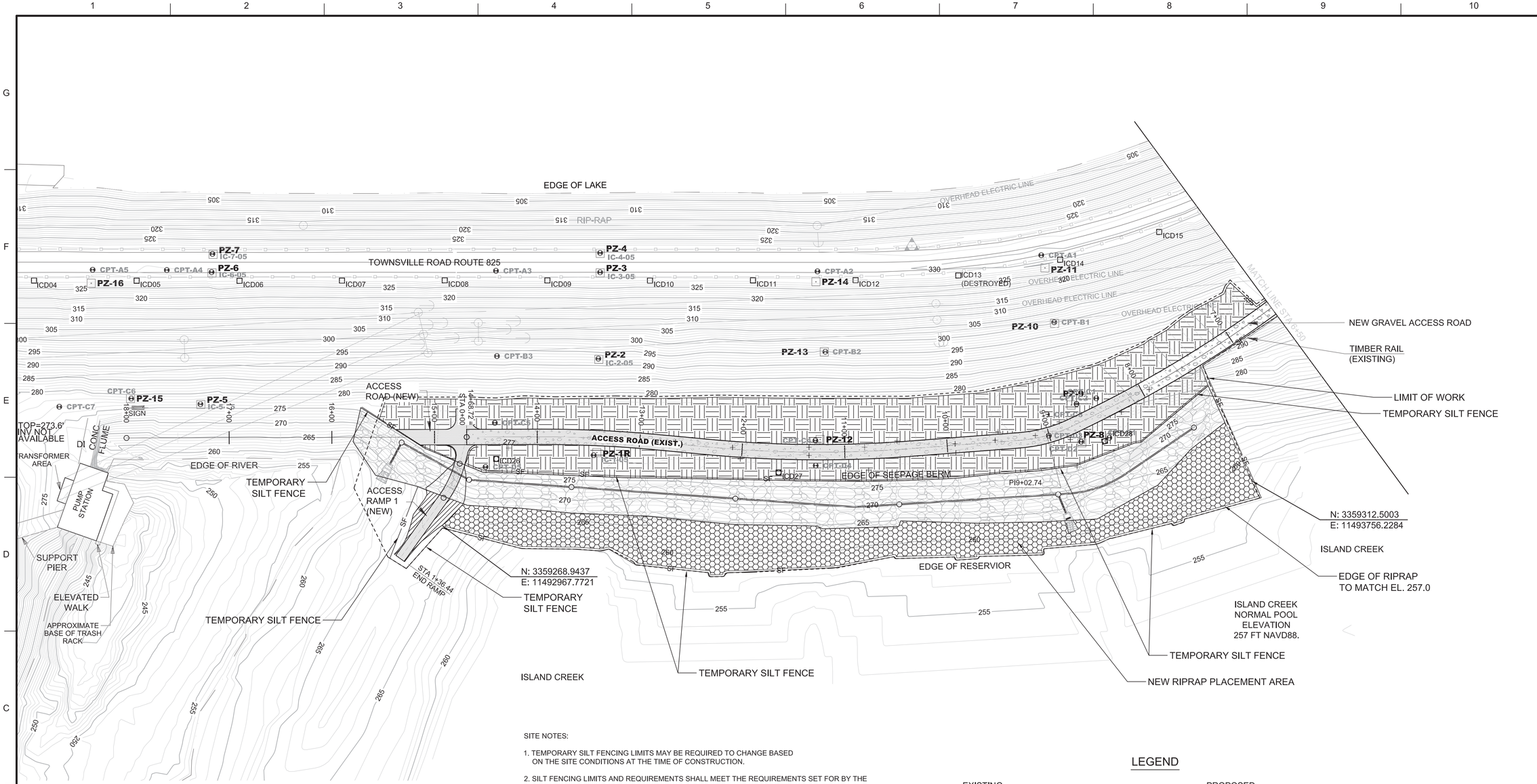
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

SITE PLAN SEEPAGE BERM RE-GRADING

SHEET ID
C102

READY TO ADVERTISE (RTA)



SITE NOTES:

1. TEMPORARY SILT FENCING LIMITS MAY BE REQUIRED TO CHANGE BASED ON THE SITE CONDITIONS AT THE TIME OF CONSTRUCTION.
2. SILT FENCING LIMITS AND REQUIREMENTS SHALL MEET THE REQUIREMENTS SET FOR BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY. THE CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS SET FORTH IN PERMIT VAR10R080.
3. SEE SHEET C104 FOR DETAILS.
4. SILT FENCING SHALL BE PLACED ALONG THE WATER EDGE UNTIL RIPRAP MATERIAL IS IN PLACE .
5. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THE SOIL TO A PROFESSIONAL LAB AND APPLYING THE RECOMMENDED AMOUNTS OF TOP SOIL, RECONDITIONING CHEMICALS AND FERTILIZER BEFORE INSTALLING SOD.

LEGEND

EXISTING		PROPOSED	
	CONTROL MONUMENT		LIMIT OF WORK
	SIGN		NEW RIPRAP PLACEMENT
	PAVED ROAD		VDOT AGGREGATE
300	MAJOR CONTOUR		SODDED AREA
	MINOR CONTOUR		NEW GRAVEL ACCESS ROAD
	MANHOLE		
	TOE DRAIN		
	CONSTRUCTION LIMITS		
PZ-1R	PIEZOMETER		
	UTILITY POLE		
CPT-C5	BORING LOCATION		
	TELEPHONE PEDESTAL		
	GUARDRAIL		
TR	TIMBER RAIL		
SF	TEMPORARY SILT FENCE		
	EXISTING RIPRAP		

N

0 25 50 100

SCALE 1" = 50'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. MURPHY
SUBMITTED BY: T. MURPHY
SIZE: 22"x34"
ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JK 103-07-38
FILE NAME: IslandCreek_C103_E&S_site_plan.dwg

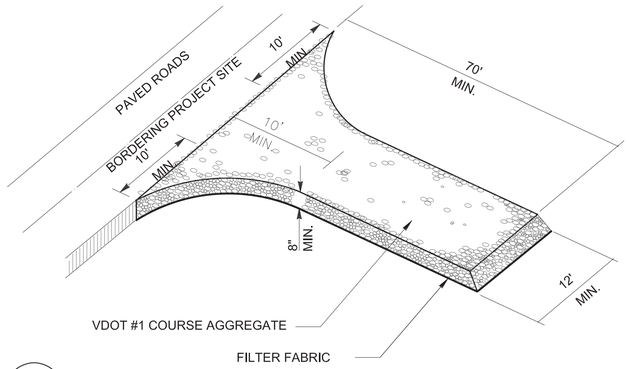
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARTMOUTH STREET
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

EROSION AND SEDIMENT CONTROL PLAN
TOP OF SEEPAGE BERM

SHEET ID
C103

READY TO ADVERTISE (RTA)

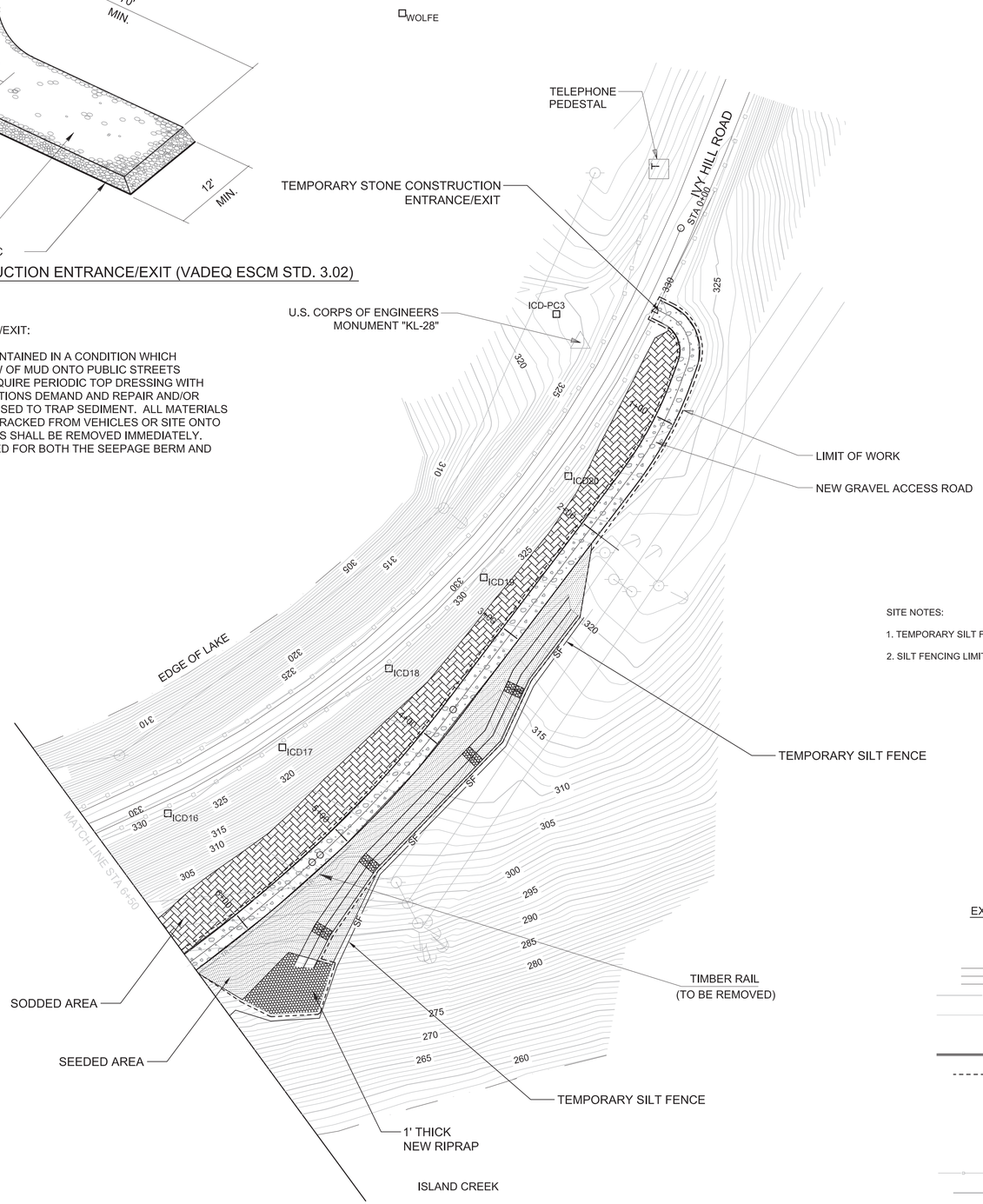


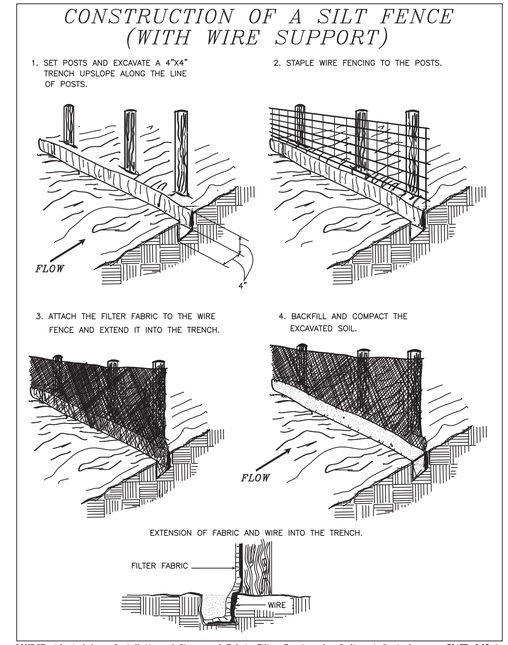
GI02 TEMPORARY STONE CONSTRUCTION ENTRANCE/EXIT (VADEQ ESCM STD. 3.02)

NOT TO SCALE

NOTES CONSTRUCTION ENTRANCE/EXIT:

THE ENTRANCE/EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC STREETS OR RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH NCDOT CLASS A STONE, AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS SHALL BE REMOVED IMMEDIATELY. ENTRANCE/EXITS WILL BE REQUIRED FOR BOTH THE SEEPAGE BERM AND BORROW AREA ACCESS POINTS.





TEMPORARY SILT FENCE (TSF) (VDEQ ESC HANDBOOK PLATE 3.05-1)

NOT TO SCALE

SITE NOTES:

1. TEMPORARY SILT FENCING LIMITS MAY BE REQUIRED TO CHANGE BASED ON THE SITE CONDITIONS AT THE TIME OF CONSTRUCTION.

2. SILT FENCING LIMITS AND REQUIREMENTS SHALL MEET THE REQUIREMENTS SET FOR BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY.

LEGEND

EXISTING		PROPOSED	
	CONTROL MONUMENT		LIMIT OF WORK
	SIGN		RIPRAP PLACEMENT
	PAVED ROAD		SEEDED AREA
300	MAJOR CONTOUR		SODDED AREA
	MINOR CONTOUR		NEW GRAVEL ACCESS ROAD
	MANHOLE		
	TOE DRAIN		
	CONSTRUCTION LIMITS		
PZ-1R	PIEZOMETER		
	UTILITY POLE		
CPT-C5	BORING LOCATION		
	TELEPHONE PEDESTAL		
	GUARDRAIL		
TR	TIMBER RAIL		

N

0 25 50 100

SCALE 1' = 50'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: S. STELLO	ISSUE DATE: TBD
DRAWN BY: S. STELLO	SOLICITATION NO.: W912PM24B00013
CHECKED BY: T. KNIGHT	CONTRACT NO.: TBD
SUBMITTED BY: T. LAURITY	DRAWING CODE: JK 103-07-38
SIZE: 22"X34"	FILE NAME: IslandCreek_C104_ACCESS_E&Sc.dwg

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

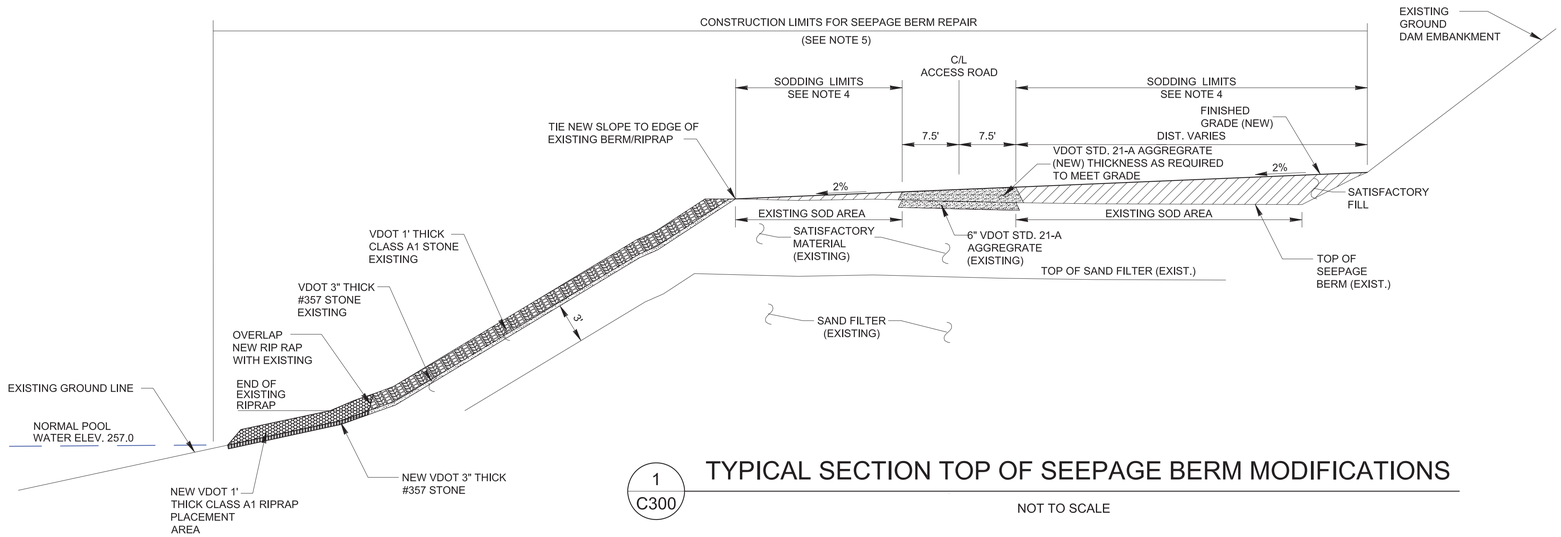
ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

EROSION AND SEDIMENT CONTROL PLAN
ACCESS ROAD

SHEET ID

C104

READY TO ADVERTISE (RTA)



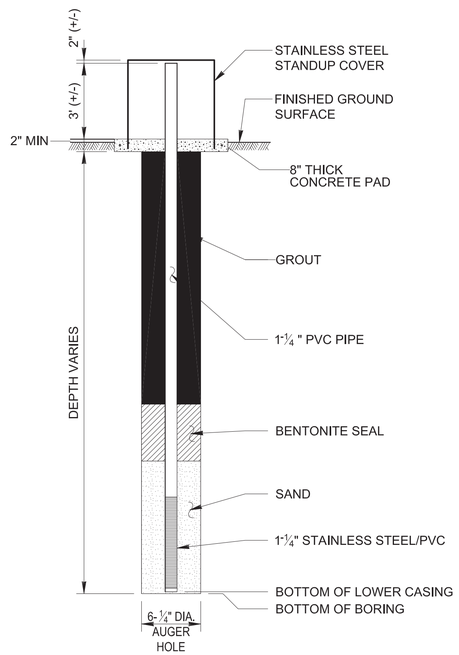
1 C300

TYPICAL SECTION TOP OF SEEPAGE BERM MODIFICATIONS

NOT TO SCALE

NOTES:

1. SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS FOR SATISFACTORY FILL.
2. SEE SHEETS C101 AND C102 FOR SEEPAGE BERM SITE PLAN.
3. REMOVE EXISTING SOD PRIOR TO PLACING NEW FILL.
4. FINISHED GRADE WITH SOD IN PLACE SHALL DRAIN AWAY FROM THE EXISTING DAM EMBANKMENT AT A 2% SLOPE AND SHALL BE FLUSH WITH THE TOP OF THE ACCESS ROAD AS TO NOT CREATE ANY DEPRESSIONS OR RIDGES.
5. CONSTRUCTION LIMITS TO BE DETERMINED BY EDGE OF SEEPAGE BERM ELEVATION AT A 2% BACKSLOPE TOWARDS THE EXISTING DAM.
6. ALL NEW WORK AREAS SHALL BE CLEARED AND GRUBBED PER SPECIFICATION SECTION 31 11 00.



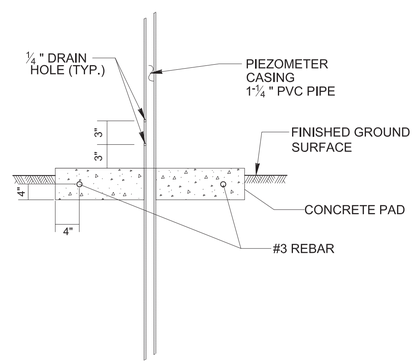
2 C300

EXISTING PIEZOMETER DETAIL

NOT TO SCALE

NOTES:

1. BOLLARDS NOT SHOWN FOR CLARITY. SEE DETAIL 4 FOR BOLLARD INFORMATION.



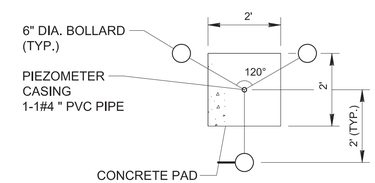
3 C300

PIEZOMETER DRAIN HOLES

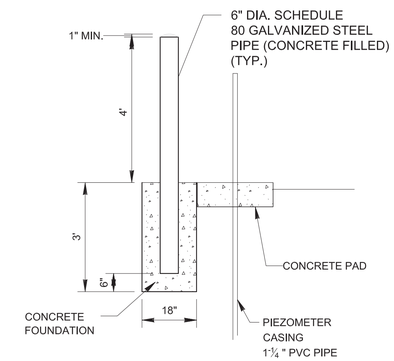
NOT TO SCALE

NOTES (EXISTING PIEZOMETERS):

1. THE CONTRACTOR SHALL PROTECT THE EXISTING PIEZOMETERS, EXISTING AUTOMATED DATA ACQUISITION SYSTEM (ADAS), BOLLARDS, AND COVERS AT THE LOCATIONS AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL TO REPAIR ANY DAMAGED PIEZOMETERS AND ASSOCIATED FEATURES AS INSTALLED AND AS NOTED ON THE SITE PLANS.
2. THE EXISTING STAINLESS STEEL COVERS SHALL BE REMOVED AND STORED TEMPORARILY FOR REUSE AFTER THE COMPLETION OF CONSTRUCTION IF REQUIRED.
3. THE CONTRACTOR SHALL ADD TO THE HEIGHT OF THE EXISTING CONCRETE PADS AROUND THE EXISTING PIEZOMETERS WHERE APPLICABLE. WHEN REQUIRED THE CONTRACTOR SHALL CONSTRUCT NEW CONCRETE PADS AROUND THE EXISTING PIEZOMETERS UPON COMPLETION OF CONSTRUCTION AND INSTALL STAINLESS STEEL COVERS AROUND THE EXISTING PIEZOMETERS IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. SHOULD ADJUSTMENT TO THE PIEZOMETERS BE REQUIRED THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING THE ADAS COMPONENTS TO SIMILAR CONDITION AND ENSURING PROPER OPERATION.



BOLLARD LAYOUT PLAN



BOLLARD SECTION

4 C300

TYPICAL EXISTING BOLLARD PLAN

NOT TO SCALE

NOTES (EXISTING PIEZOMETERS) CONTINUED:

4. THE EXISTING PIEZOMETERS HAVE A FLIP TYPE COVER WITH LOCK. THE CONTRACTOR MAY RE-USE THE EXISTING LOCKING FLIP COVER, WHERE POSSIBLE, AT ALL EXISTING PIEZOMETERS LOCATIONS WITHIN THE CONSTRUCTION AREA. IF THE EXISTING LOCKING FLIP COVER IS NOT REUSABLE, THE CONTRACTOR SHALL PROVIDE A NEW LOCKING FLIP COVER SIMILAR TO THE EXISTING FLIP COVER CONSTRUCTION.
5. CONCRETE PADS SHALL BE PLACED A MINIMUM OF 2" ABOVE THE FINISHED GRADE.
6. CONCRETE PADS SHALL BE MIN 4500 PSI STRENGTH MIX.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JA1 103-07-38
FILE NAME: IslandCreek_C300_TypSections_Details.dwg

DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"X34"

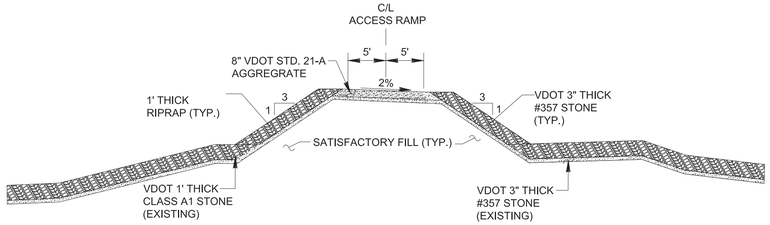
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR, MECKLENBURG COUNTY, VIRGINIA

TYPICAL SECTIONS AND DETAILS

SHEET ID
C300

READY TO ADVERTISE (RTA)

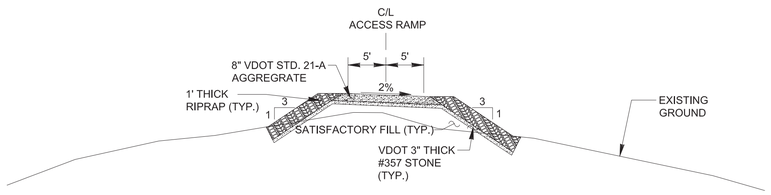


B1 / C301 TYPICAL SECTION ACCESS RAMP 1

NOT TO SCALE STA 0+25.96 TO STA 0+62.41

NOTES:

1. EXISTING RIPRAP AND BEDDING STONE SHALL BE REMOVED FROM UNDER THE NEW ACCESS RAMPS AND REPLACED WITH FILL MATERIAL.



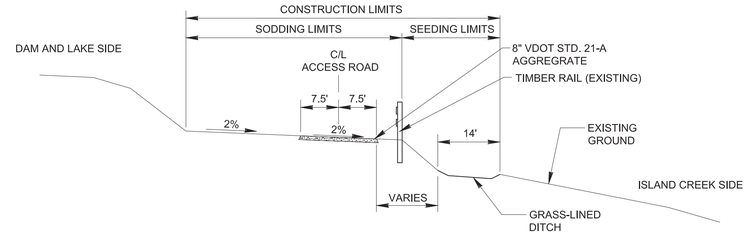
B2 / C301 TYPICAL SECTION ACCESS RAMP 1

NOT TO SCALE STA 0+62.41 TO STA 1+36.44

NOTES:

1. THE TOP OF THE SEEPAGE BERM SHALL BE REGRADED TO A +2% GRADE.

2. SEE PLATE C101 AND C102 FOR LAYOUT OF THE GRAVEL ACCESS ROAD AND ACCESS RAMP.



TYPICAL SECTION ACCESS ROAD

NOT TO SCALE STA 0+00 TO STA 9+00

NOTES:

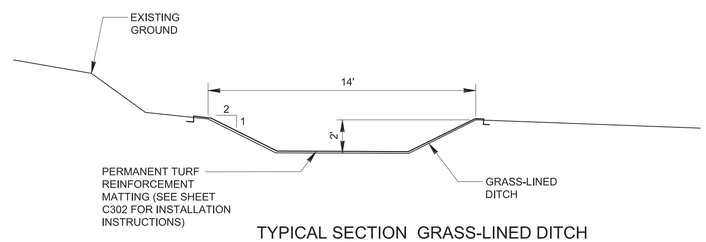
1. EXISTING TIMBER RAIL SHALL BE REMOVED AND DISPOSED OFFSITE.

2. FOR EXTENTS OF THE GRASS-LINED DITCH AND EXISTING TIMBER RAIL, SEE SHEETS C101 AND C102.

3. SEE SHEETS C101 AND C102 FOR LAYOUT OF THE GRAVEL ACCESS ROAD.

4. THE EXISTING GROUND SLOPES SHALL BE FIELD VERIFIED THAT THEY ARE CURRENTLY DRAINING TOWARDS ISLAND CREEK. SHOULD ANY RIDGES OR DEPRESSIONS BE PRESENT, THEY SHALL BE ADJUSTED TO PROVIDE PROPER DRAINAGE TOWARDS ISLAND CREEK, AS SHOWN ABOVE. SLOPES AND ELEVATIONS UNDER THE EXISTING TIMBER RAIL SHALL BE VERIFIED.

5. ALL NEW WORK AREAS SHALL BE CLEARED AND GRUBBED PER SPECIFICATION SECTION 31 11 00.



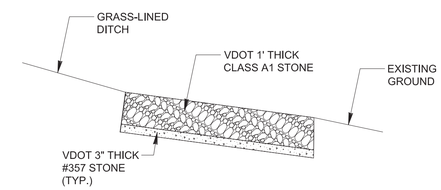
TYPICAL SECTION GRASS-LINED DITCH

NOT TO SCALE

NOTES:

1. GRASS REQUIREMENTS SHALL MEET VDOT REQUIREMENTS FOR GRASS-LINED CHANNELS ASSUMING A MAX VELOCITY OF 4 FT/SEC. THESE REQUIREMENTS CAN BE FOUND IN TABLE 3.17-A OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

2. SEE SHEET CN302 FOR TURF REINFORCEMENT MATTING INSTALLATION DETAILS. FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR ANCHOR, TOP SOIL, AND VEGETATION INSTALLATION.

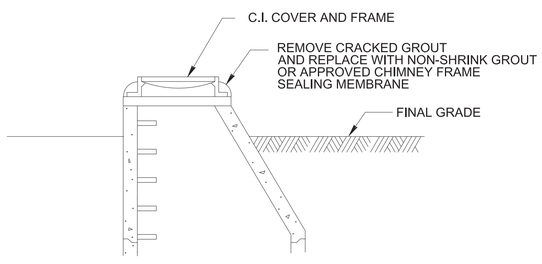


TYPICAL SECTION RIPRAP PAD

NOT TO SCALE

NOTES:

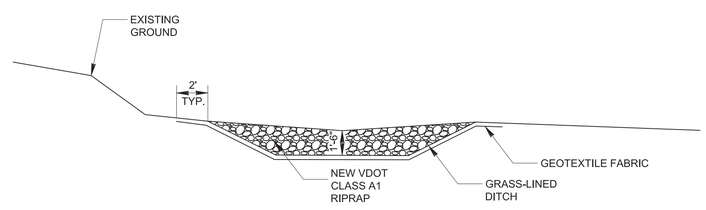
1. THE TOP OF THE VDOT CLASS A1 STONE SHALL FOLLOW THE EXISTING GROUND CONTOURS.
2. FOR LIMITS OF THE RIPRAP PAD AREA SEE SHEET C102.



SECTION

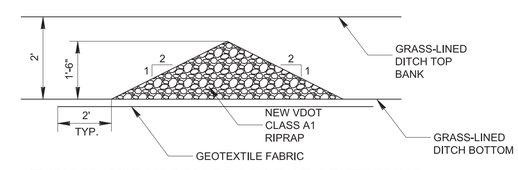
3 / C301 MANHOLE GROUT REPAIR DETAIL

NOT TO SCALE



TYPICAL CHECK DAM CROSS SECTION

NOT TO SCALE



TYPICAL CHECK DAM PROFILE AT CENTERLINE

NOT TO SCALE

NOTES:

1. CHECK DAMS SHALL MEET THE REQUIREMENTS OF THE VDOT ROCK CHECK DAM SPECIFICATIONS. CHECK DAM REQUIREMENTS CAN BE FOUND IN THE VIRGINA EROSION AND SEDIMENT CONTROL HANDBOOK CHAPTER 3.20.
2. ALL STONE REQUIRED SHALL MEET THE RIPRAP REQUIREMENTS FOUND IN THE SPECIFICATIONS.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. LAUFFER
SIZE: 22"X34"
ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: DK-103-07-38
FILE NAME: IslandCreek_C301_TypSections_AccessRamps_rev1.dwg

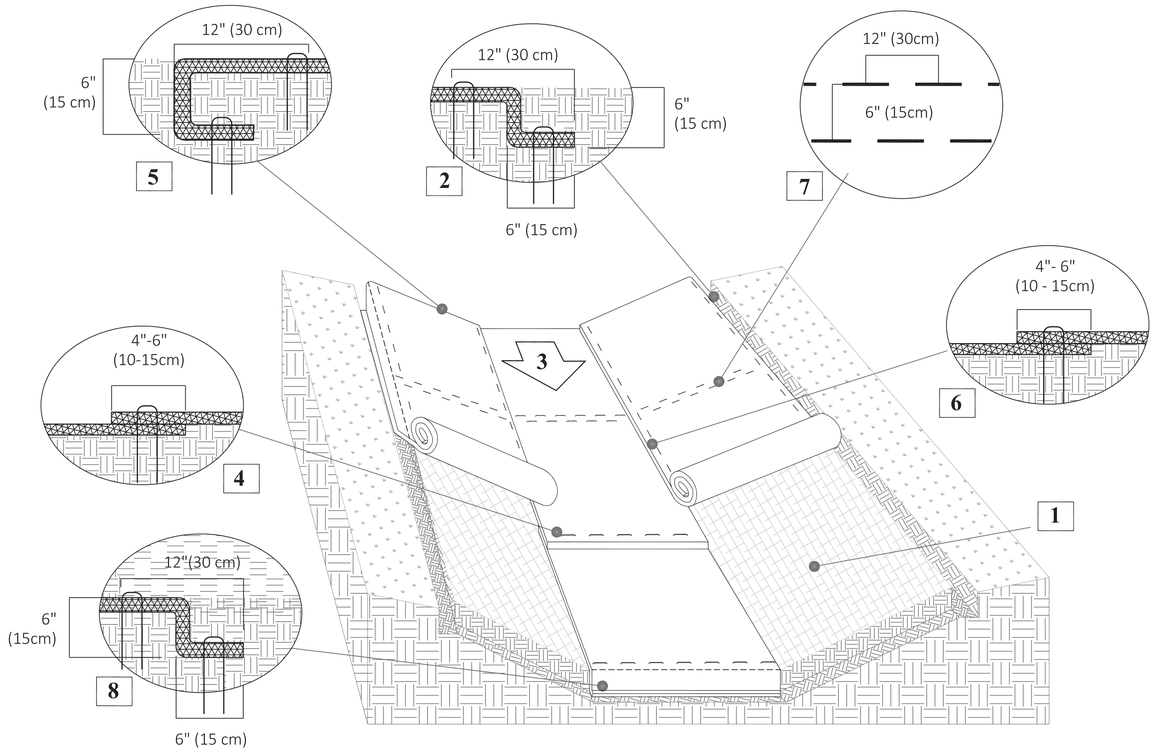
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

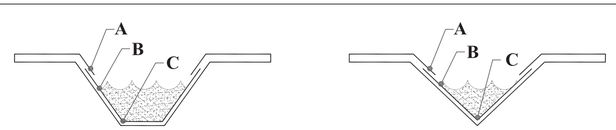
ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

TYPICAL SECTIONS

SHEET ID
C301

READY TO ADVERTISE (RTA)





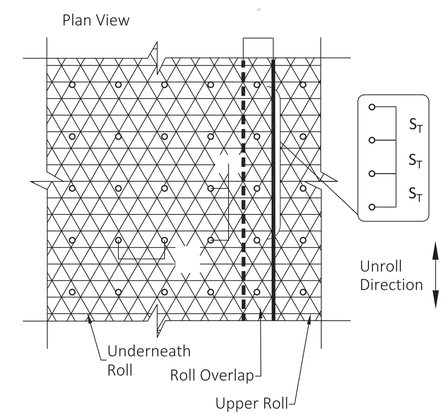
CRITICAL POINTS
- A. Overlaps and Seams
- B. Projected Water Line
- C. Channel Bottom/Side Slope Vertices

NOTES:
*Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.

Instructions

1. Prepare soil before installing rolled erosion control products (RECPs), including any necessary application of lime, fertilizer, and seed. Ground surface must be free of debris, rocks, clay clods and raked smooth sufficient to allow intimate contact of the RECP with the soil over the entirety of the installation.
2. Begin at the top of the channel by anchoring the RECPs in a 6" (15 cm) deep X 6" (15 cm) wide trench with approximately 12" (30 cm) of RECPs extended beyond the up-slope portion of the trench. Use ShoreMax mat at the channel/culvert outlet as supplemental scour protection as needed. Anchor the RECPs with a row of staples/stakes/pins approximately 12" (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12" (30 cm) portion of RECPs back over the seed and compacted soil. Secure RECPs over compacted soil with a row of staples/stakes/pins spaced approximately 12" (30 cm) apart across the width of the RECPs.
3. Roll center RECPs in direction of water flow in bottom of channel. RECPs will unroll with appropriate side against the soil surface. All RECPs must be securely fastened to soil surface by placing staples/stakes/pins in appropriate locations as shown in the staple pattern guide.
4. Place consecutive RECPs end-over-end (Shingle style) with a 4"- 6" (10 - 15 cm) overlap. Use a double row of staples staggered 4" apart and 4" on center to secure RECPs.
5. Full length edge of RECPs at top of side slopes must be anchored with a row of staples/stakes/pins spaced at S_T apart in a 6" (15 cm) deep X 6"(15 cm) wide trench. Backfill and compact the trench after stapling.
6. Adjacent RECPs must be overlapped approximately 4"- 6" (10 - 15 cm) and secured with staples/stakes/pins at S_T.
7. In high flow channel applications a staple check slot is recommended at 30 to 40 foot (9 -12m) intervals. Use a double row of staples staggered 6" (15 cm) apart and 12" (30 cm) on center over entire width of the channel.
8. The terminal end of the RECPs must be anchored with a row of staples/stakes/pins spaced at S_T apart in a 6" (15 cm) deep X 6" (15 cm) wide trench. Backfill and compact the trench after stapling.
9. Fasteners should provide a minimum of twenty pounds of pullout resistance. Six-inch (10 cm) X one-inch (2.5 cm) eleven gauge staples are typically adequate. In loose soils, longer staples may be necessary, twist pins can provide the greatest pullout resistance. In hard or rocky soils, straight pins may by used where staples or twist pins are refused, provided the minimum pullout requirements are met. Bio-degradable fasteners shall not be used with VMax (TRM) or TMax (HPTRM) materials.

Staple Pattern Guide



- Pin / Staple / Twist Pin, as appropriate for field conditions

	Staple Pattern
Dimension	E
W_T	20" (50 cm)
L_T	20" (50 cm)
S_T	18" (45 cm)
Nominal Frequency	3.8 / SY

US Army Corps of Engineers®

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DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"X34"
ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JA1 103-07-38
FILE NAME: IslandCreek_C302_TRM_Details.dwg

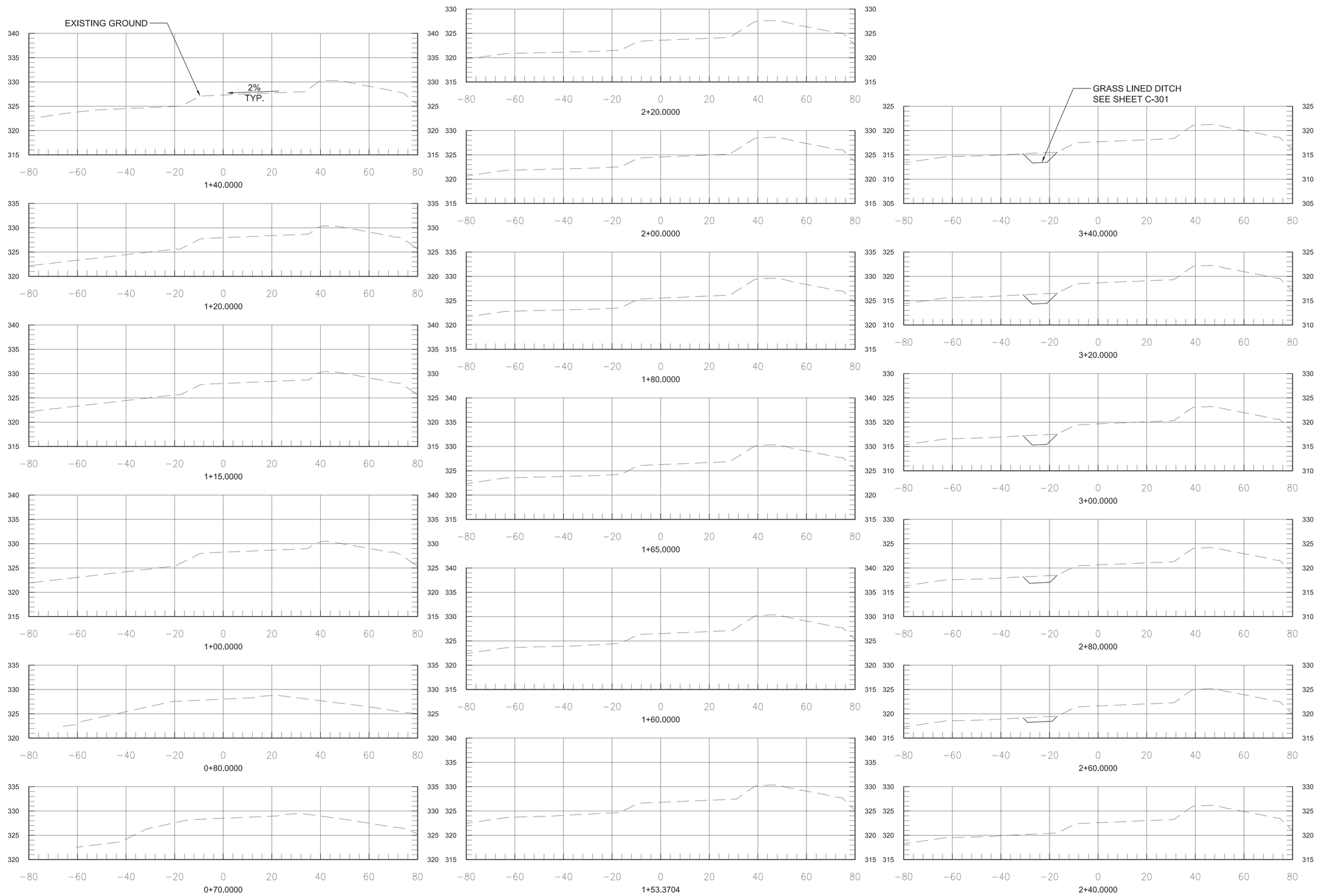
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

INSTALLATION INSTRUCTIONS
TURF REINFORCEMENT MATTING

SHEET ID
C302

READY TO ADVERTISE (RTA)



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MARK	DESCRIPTION	DATE

ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JK 103-07-38
FILE NAME: IslandCreek_C202_31_cross_sections.dwg

DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"x34"

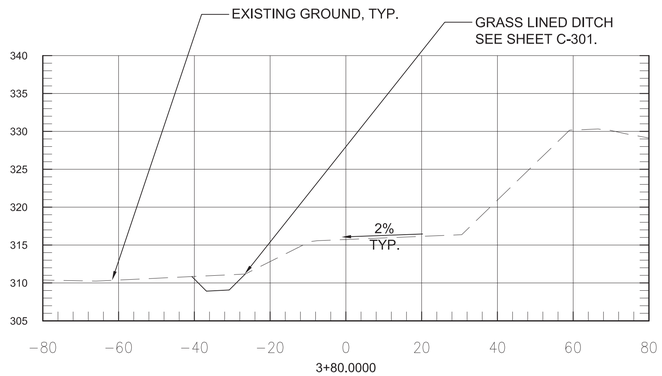
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

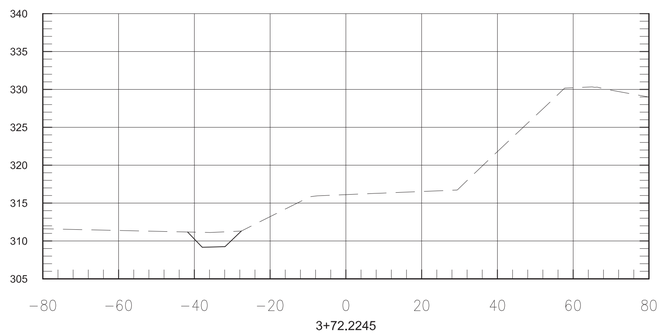
ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

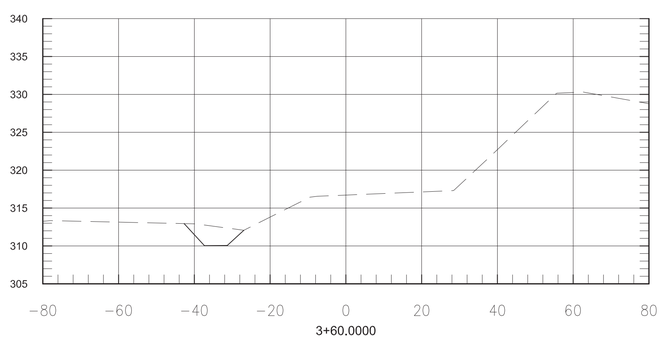
ACCESS ROADS CROSS SECTIONS
STA. 0+70 TO STA. 3+40

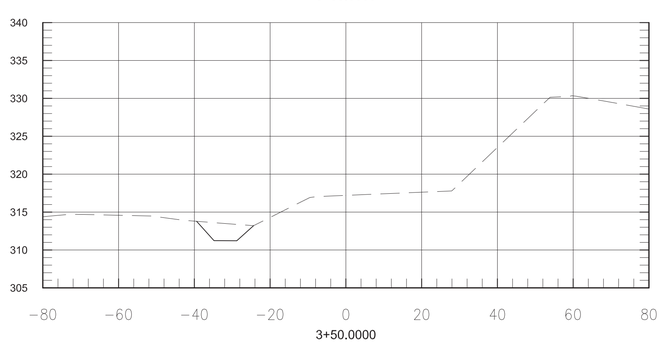
SHEET ID
C303

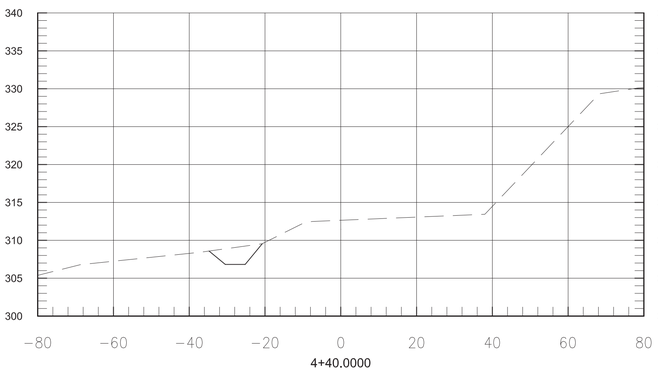
READY TO ADVERTISE (RTA)

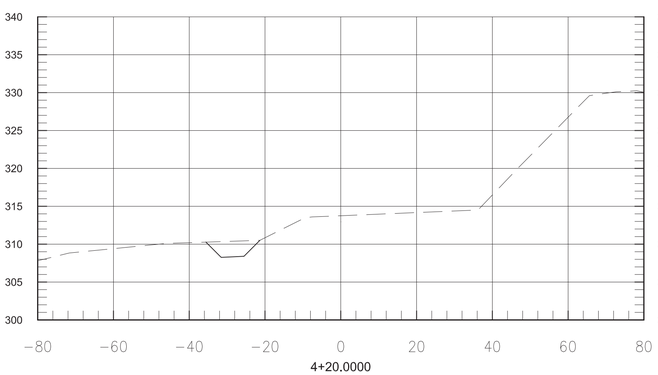


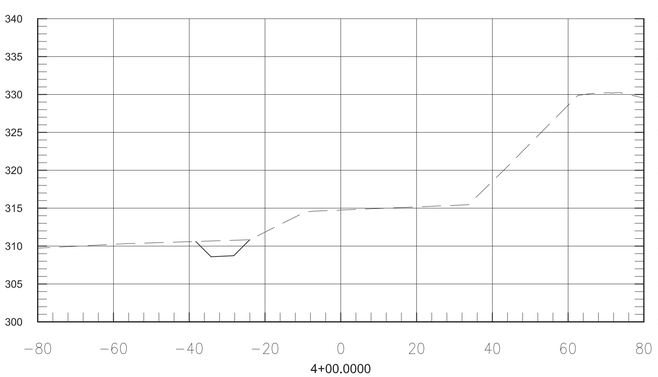


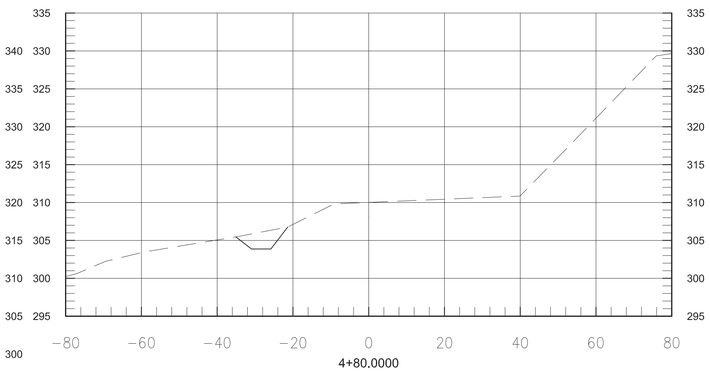


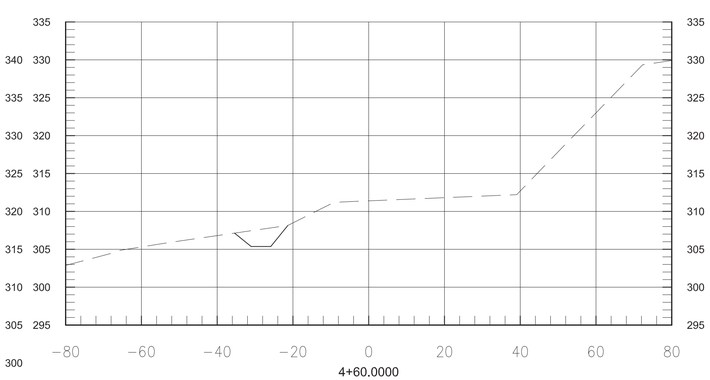


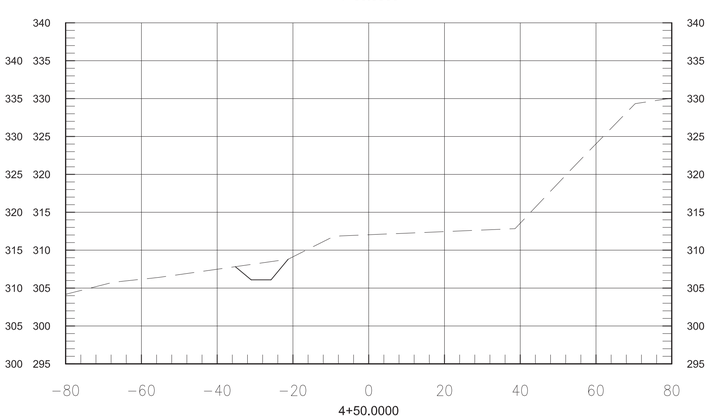












US Army Corps of Engineers®

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SUBMITTED BY: T. MURPHY
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ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JK 103-07-38
FILE NAME: Island_Creek_C302_311_cross_sections.dwg

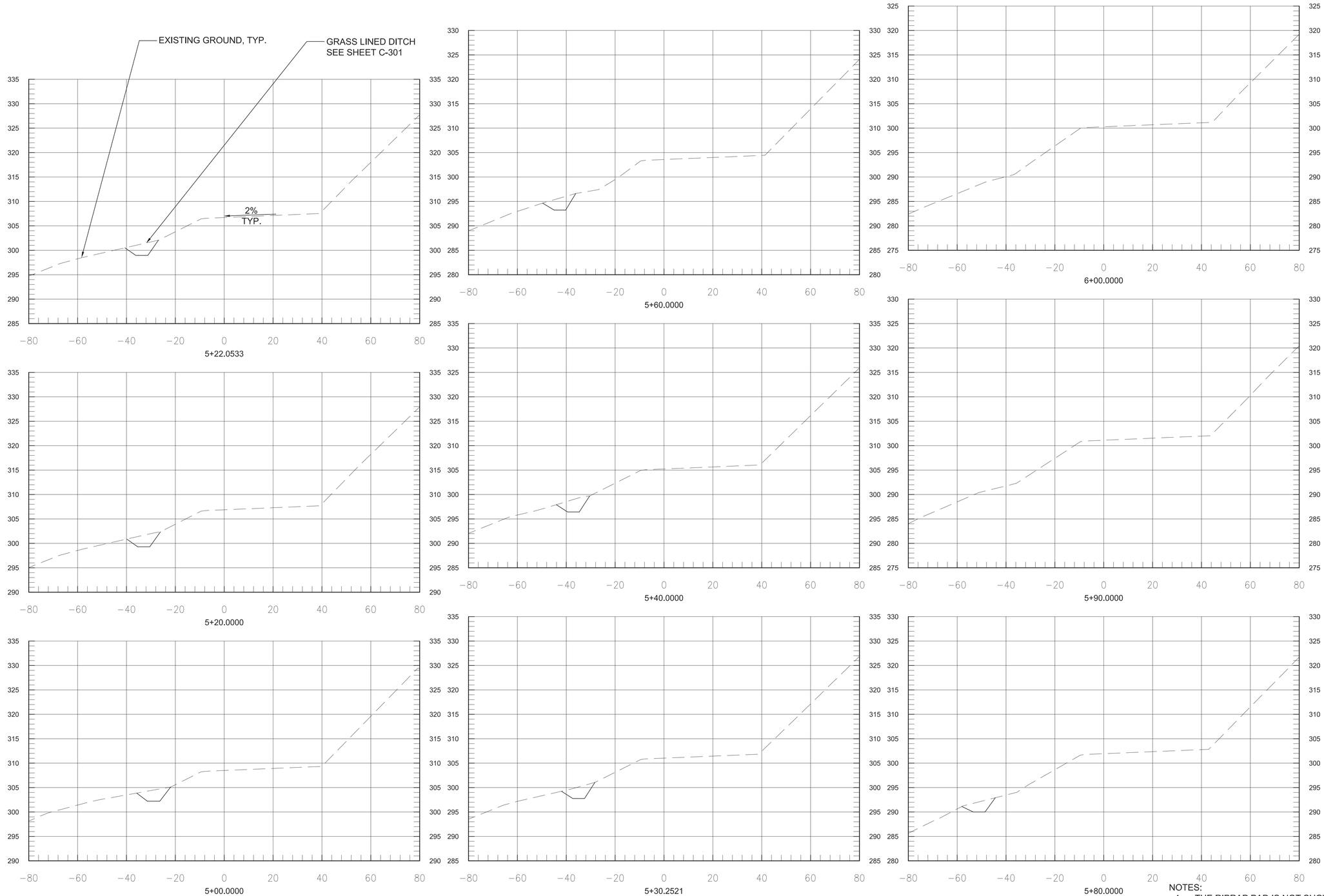
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

ACCESS ROADS CROSS SECTIONS
STA. 3+50 TO STA. 4+80

SHEET ID
C304

READY TO ADVERTISE (RTA)



NOTES:

1. THE RIPRAP PAD IS NOT SHOWN FOR CLARITY. SEE SHEET C-102 FOR COORDINATES OF THE RIPRAP PAD.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

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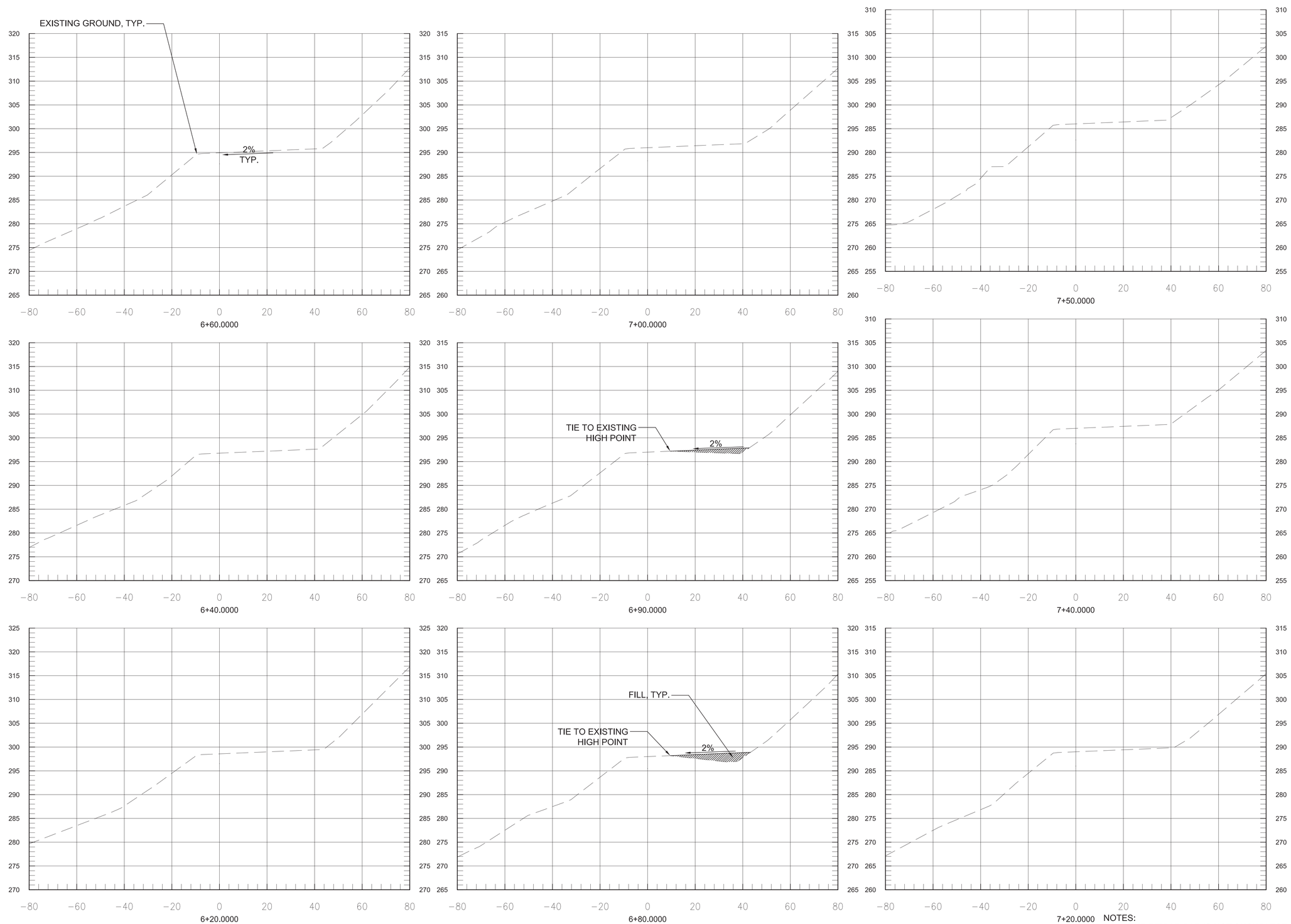
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"X34"
ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JK 103-07-38
FILE NAME: 06_ACCESS_cross_sections.dwg

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

ACCESS ROADS CROSS SECTIONS
STA. 5+00 TO STA. 6+00

SHEET ID
C305

READY TO ADVERTISE (RTA)



NOTES:

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DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"X34"
ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JK 103-07-38
FILE NAME: Island Creek_C306_ST_cross_sections.dwg

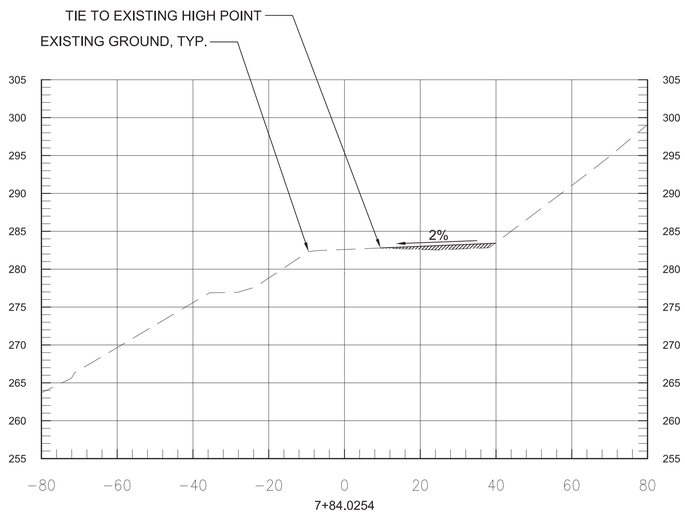
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

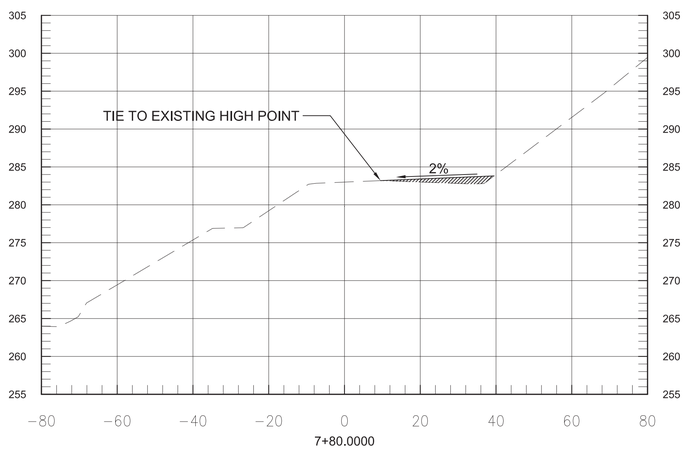
ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

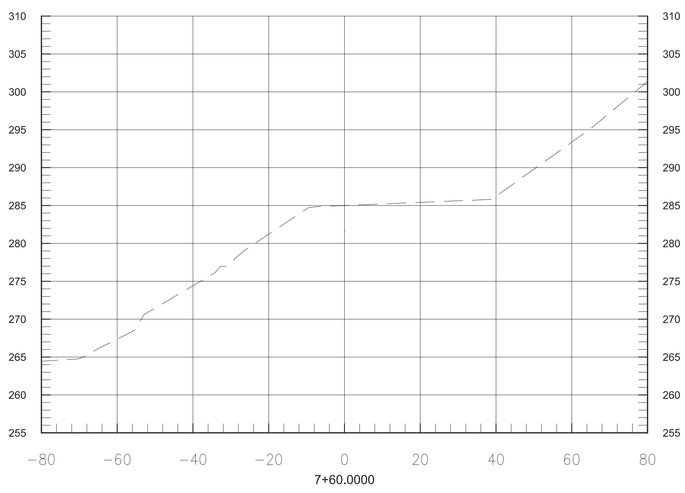
ACCESS ROADS CROSS SECTIONS
STA. 6+20 TO STA. 7+50

SHEET ID
C306

READY TO ADVERTISE (RTA)







NOTES:
1. NEW AND EXISTING RIPRAP IS NOT SHOWN FOR CLARITY. SEE SHEETS C101 AND C102 FOR RIPRAP LIMITS.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
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69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

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CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"x34"
ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
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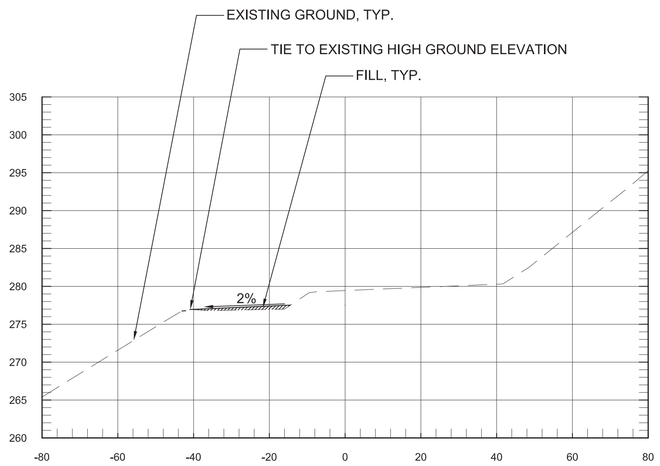
FILE NAME: IslandCreek_C302_311_cross_sections.dwg

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

ACCESS ROADS CROSS SECTIONS
STA. 7+60 TO STA. 7+84.03

SHEET ID
C307

READY TO ADVERTISE (RTA)



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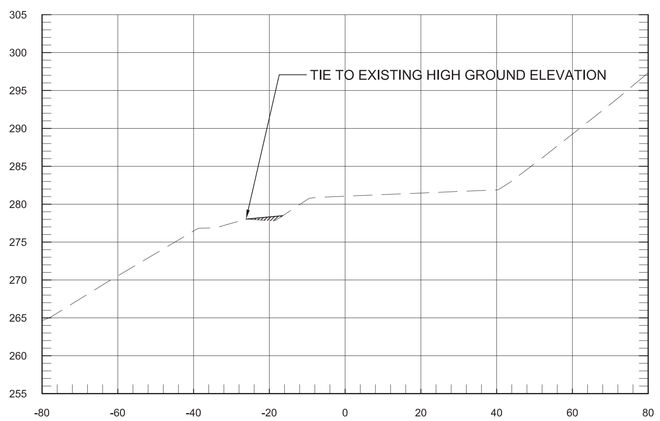

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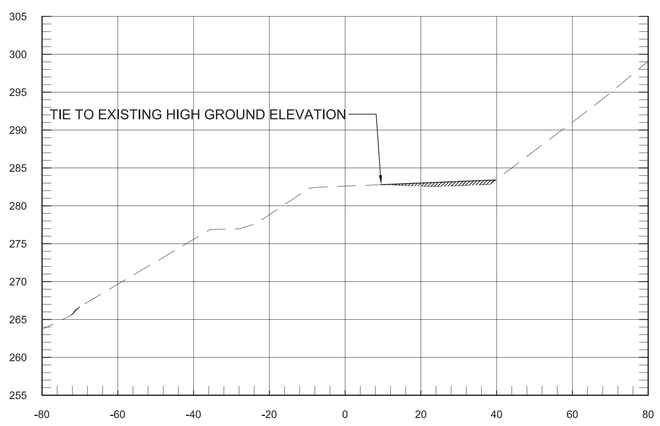

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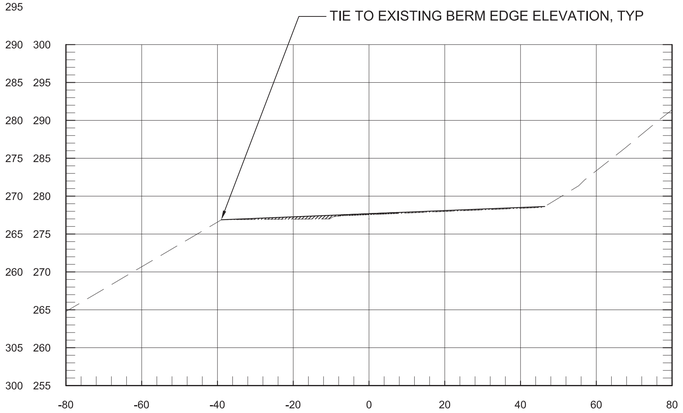

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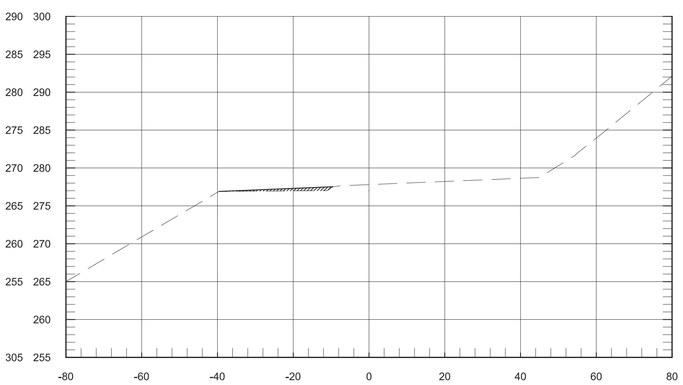

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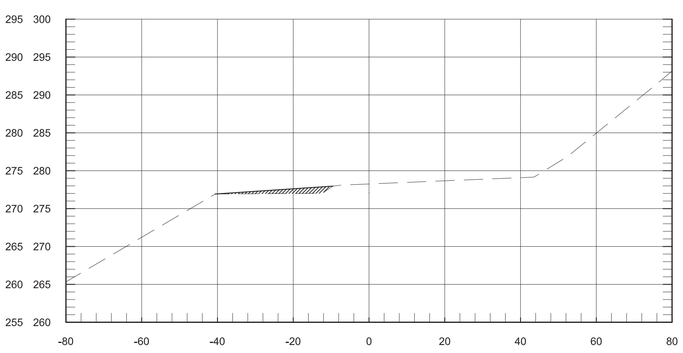

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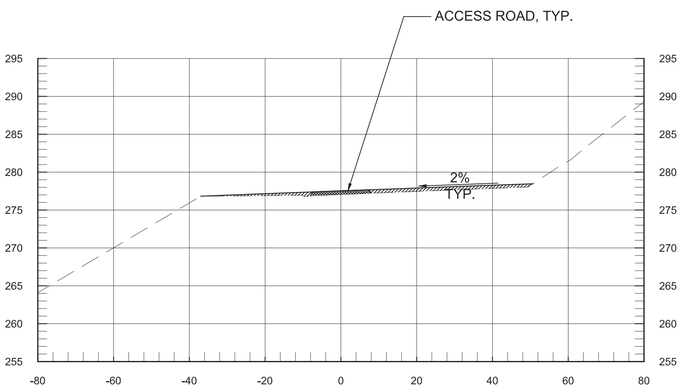

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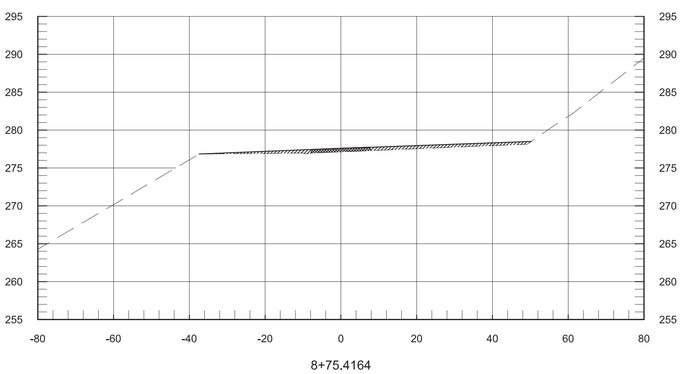

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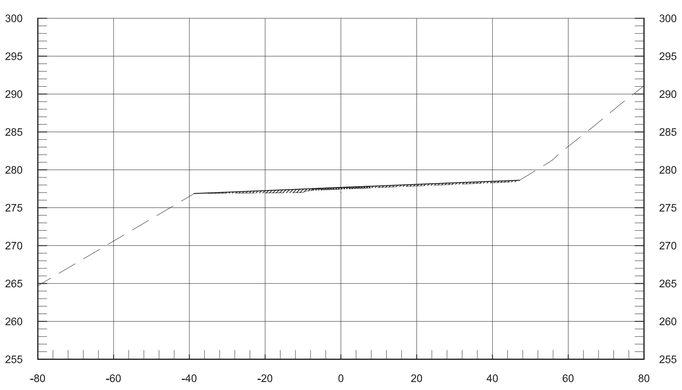

8+60.0000

NOTES:
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DESIGNED BY: S. STELLO	ISSUE DATE: TBD
DRAWN BY: S. STELLO	SOLICITATION NO.: W912PM24B0013
CHECKED BY: T. KNIGHT	CONTRACT NO.: TBD
SUBMITTED BY: T. MURPHY	DRAWING CODE: JK KO-07-58
SIZE: 22"x34"	FILE NAME: 1930_C308_cross_sections.dwg

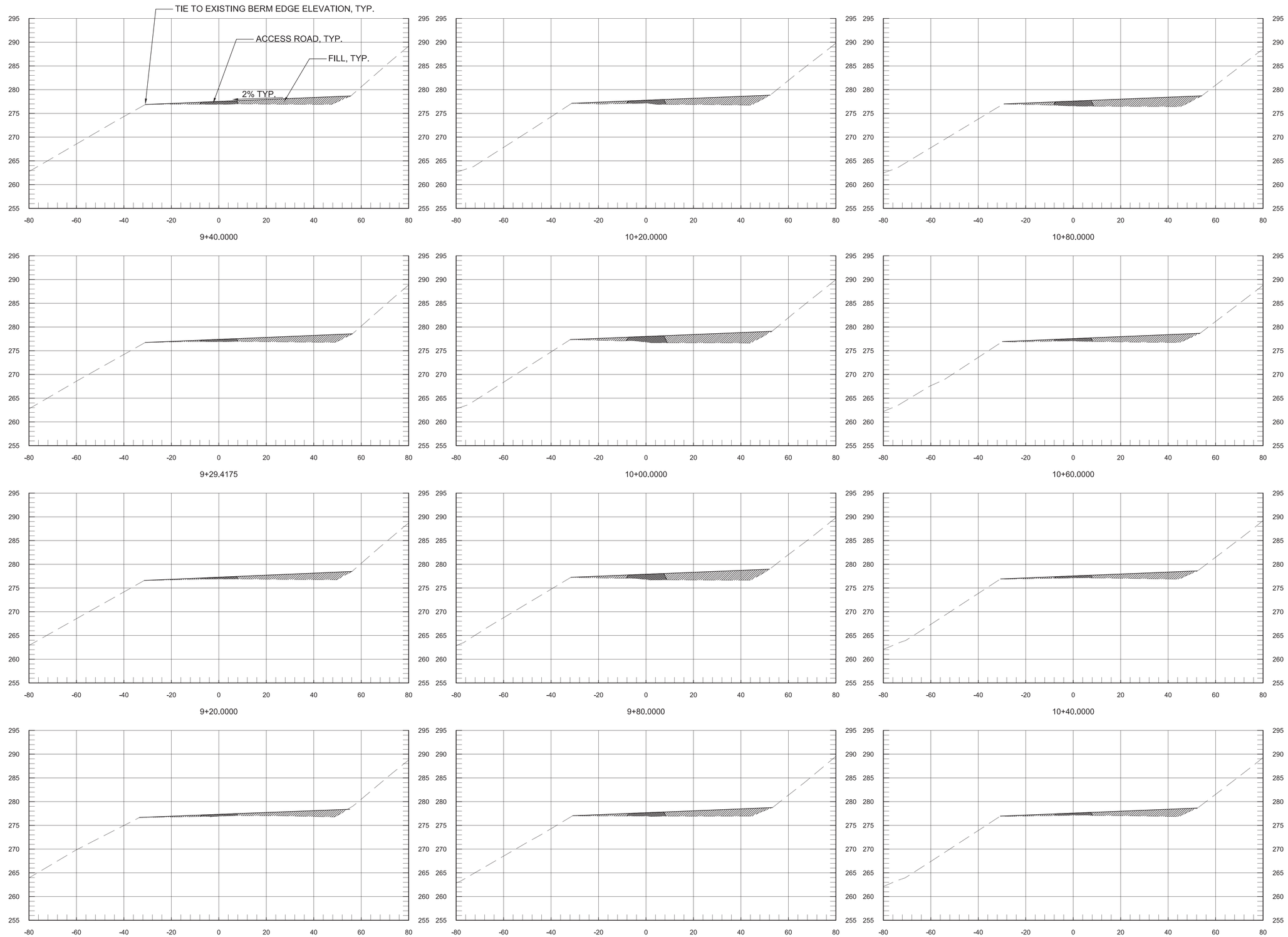
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

ACCESS ROADS CROSS SECTIONS
STA. 7+84.03 TO STA. 8+80

SHEET ID
C308

READY TO ADVERTISE (RTA)



NOTES:

1. NEW AND EXISTING RIPRAP IS NOT SHOWN FOR CLARITY. SEE SHEETS C101 AND C102 FOR RIPRAP LIMITS.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

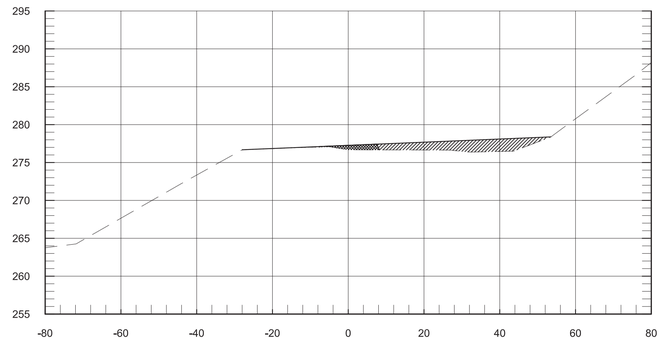
DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"x34"
ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: AK 103-07-38
FILE NAME: 103_07_38_C309_cross_sections.dwg

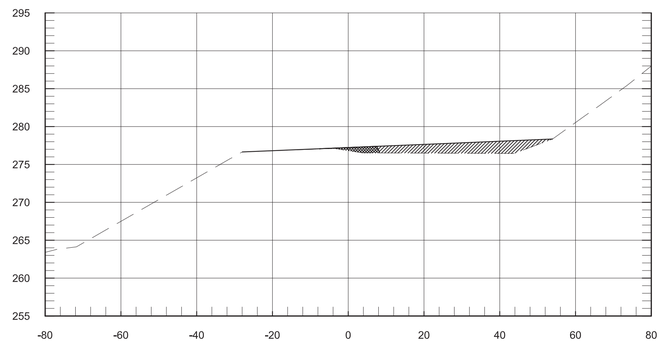
ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

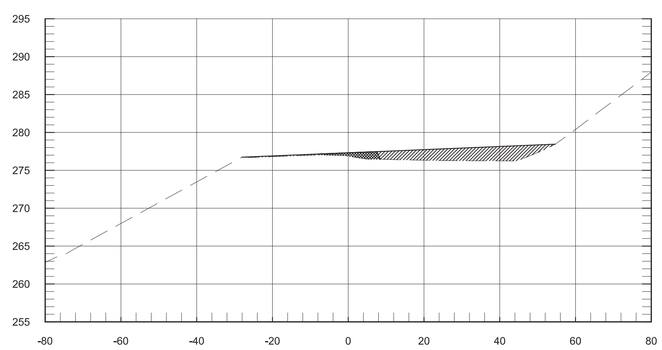
ACCESS ROADS CROSS SECTIONS
STA. 9+00 TO STA. 10+80

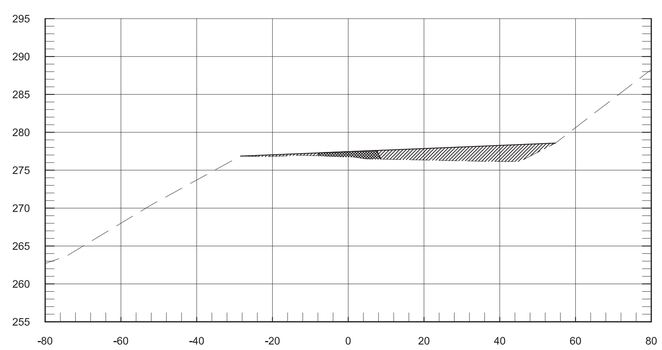
SHEET ID
C309

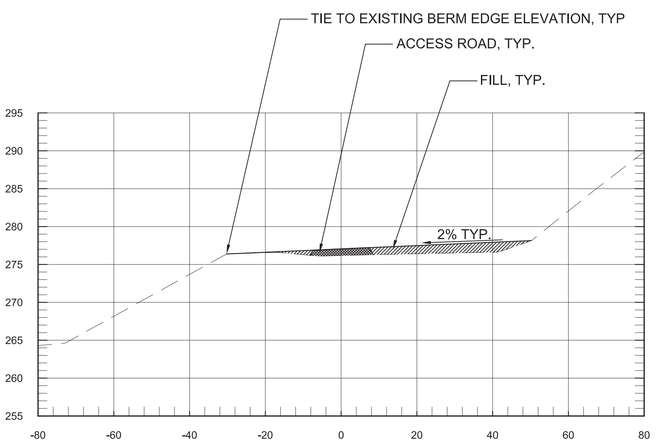
READY TO ADVERTISE (RTA)

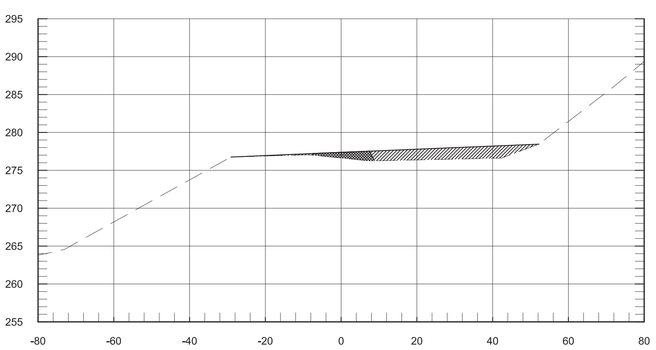


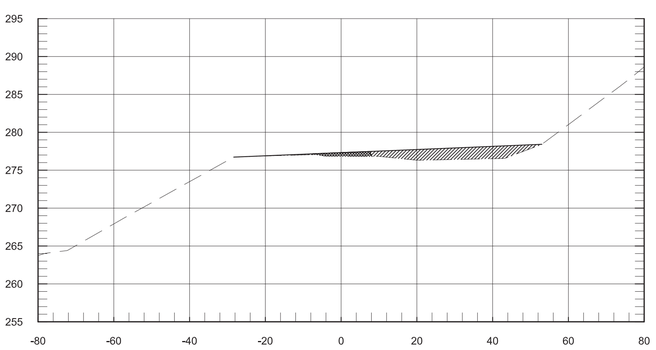


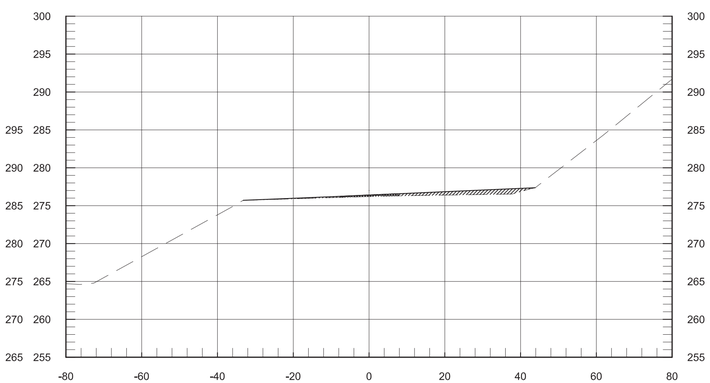


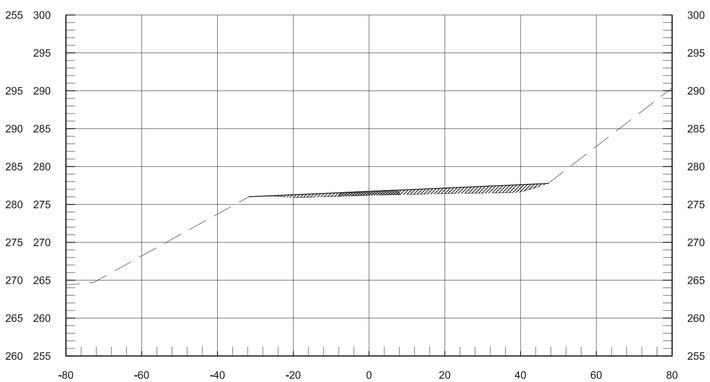


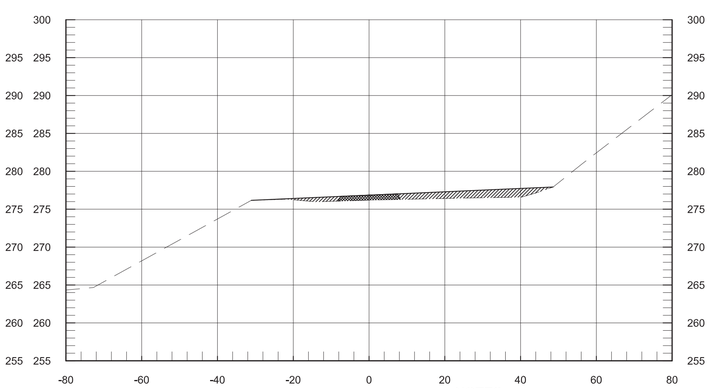












NOTES:

1. NEW AND EXISTING RIPRAP IS NOT SHOWN FOR CLARITY. SEE SHEETS C101 AND C102 FOR RIPRAP LIMITS.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JK 103-07-38
FILENAME: 3002_311_cross_sections.dwg

DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"x34"

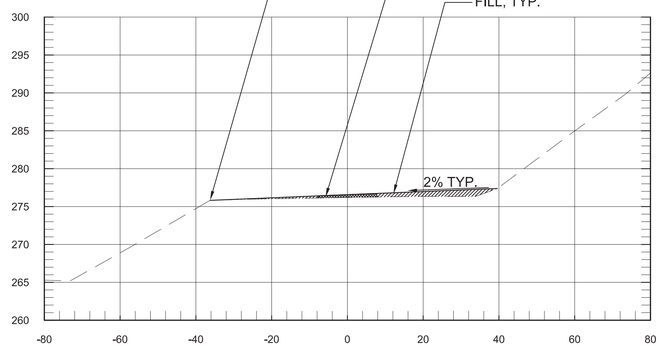
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

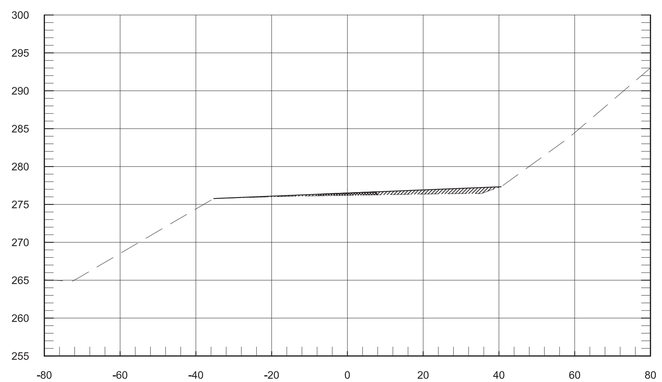
ACCESS ROADS CROSS SECTIONS
STA. 11+00 TO STA. 12+60

SHEET ID
C310

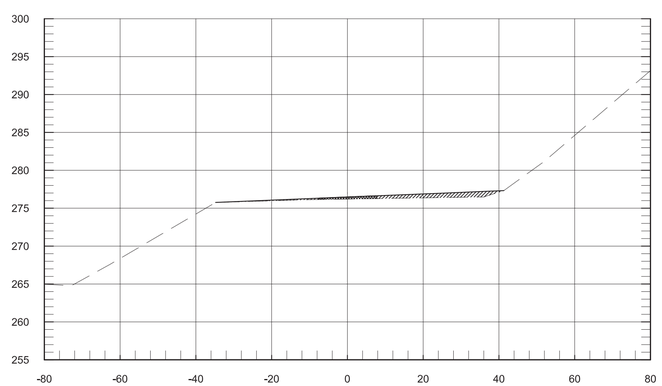
READY TO ADVERTISE (RTA)



13+00.0000



12+86.2437



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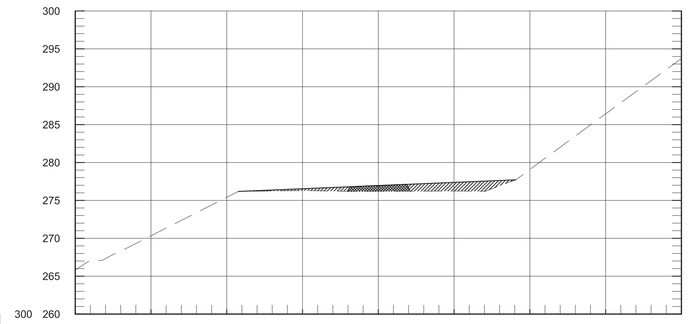
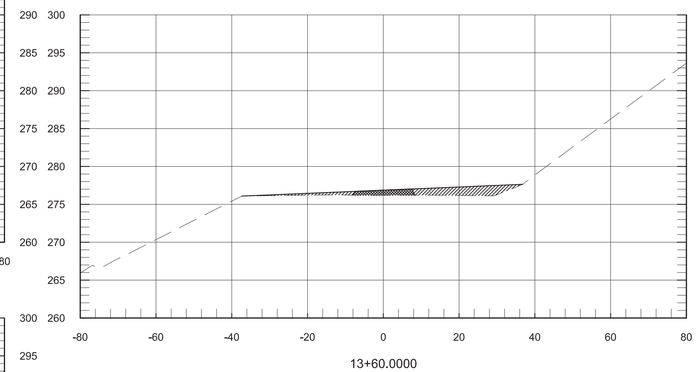


13+80.0000



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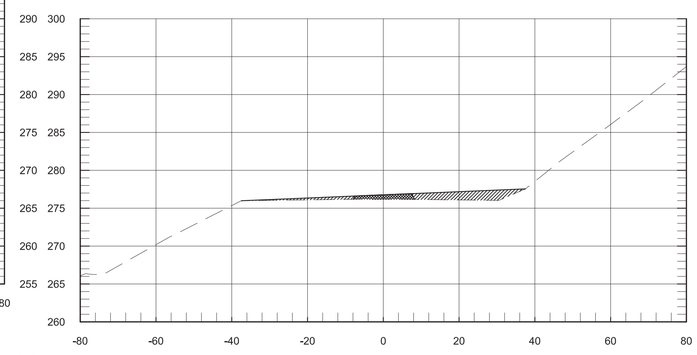

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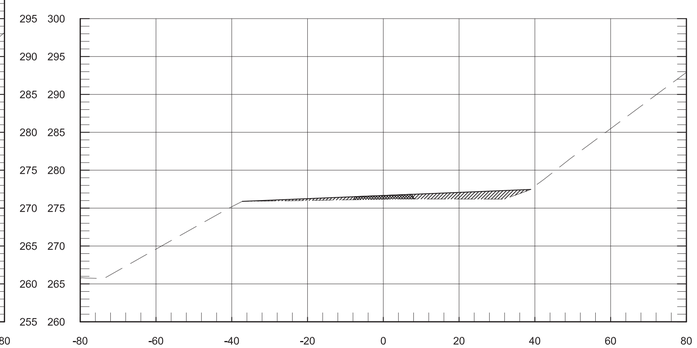

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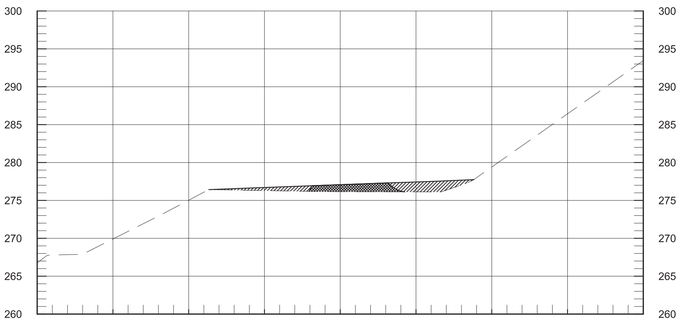

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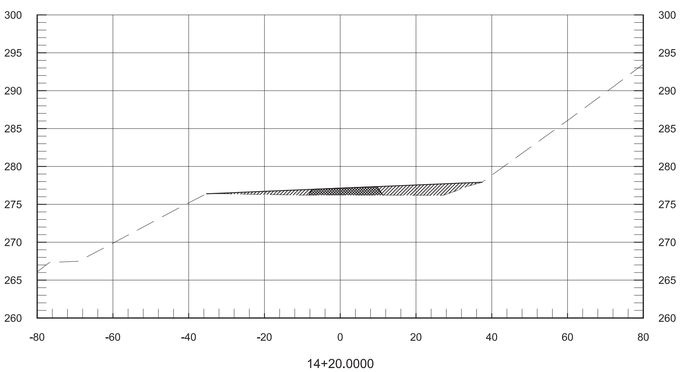

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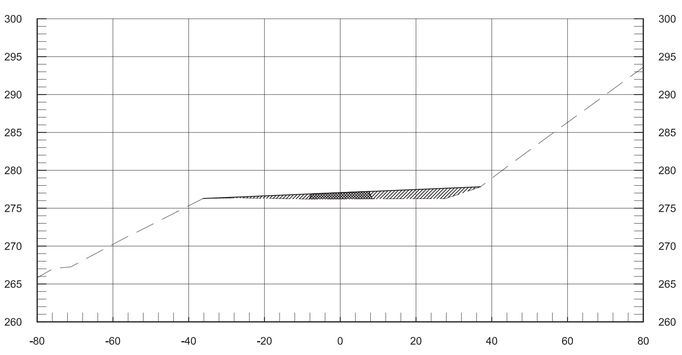
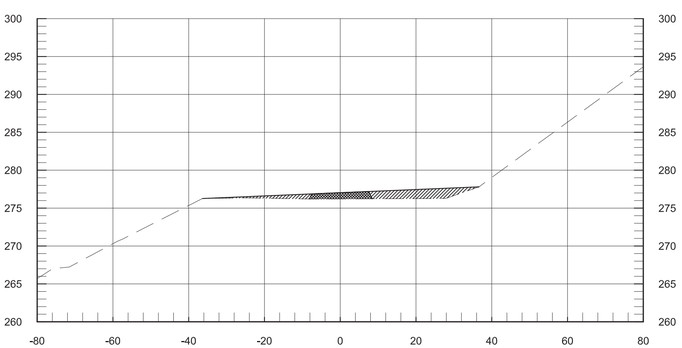


14+00.0000



13+95.8466

NOTES:

1. NEW AND EXISTING RIPRAP IS NOT SHOWN FOR CLARITY. SEE SHEETS C101 AND C102 FOR RIPRAP LIMITS.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JK 103-07-38
FILENAME: 1302_311_cross_sections.dwg

DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"x34"

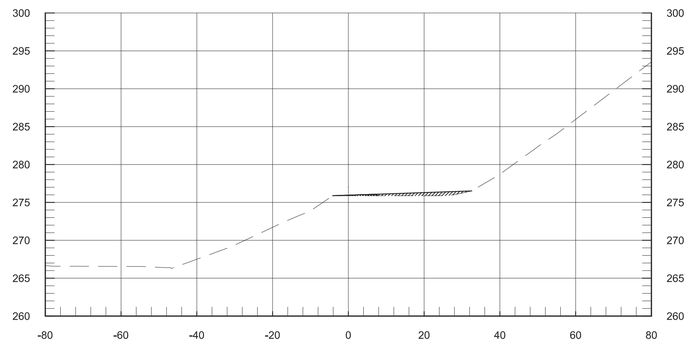
U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

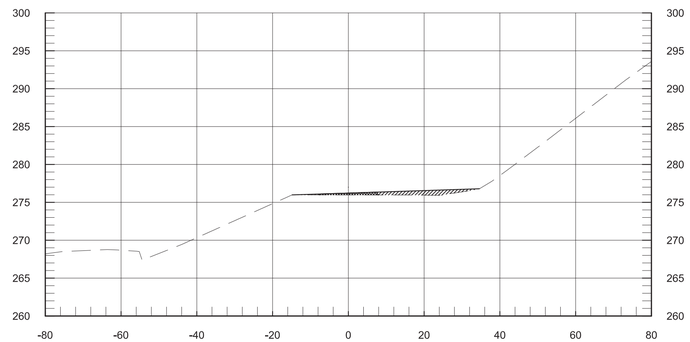
ACCESS ROADS CROSS SECTIONS
STA. 12+80 TO STA. 14+40

SHEET ID
C311

READY TO ADVERTISE (RTA)



15+20.0000



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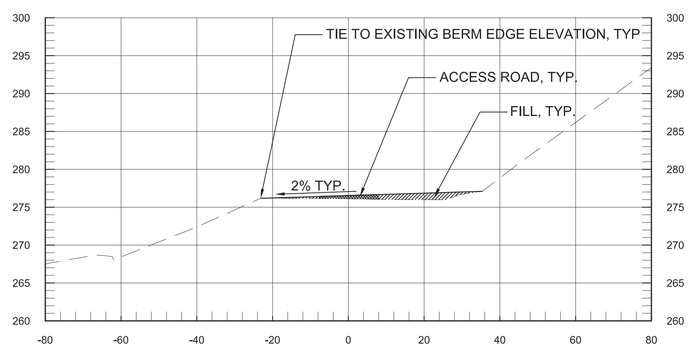
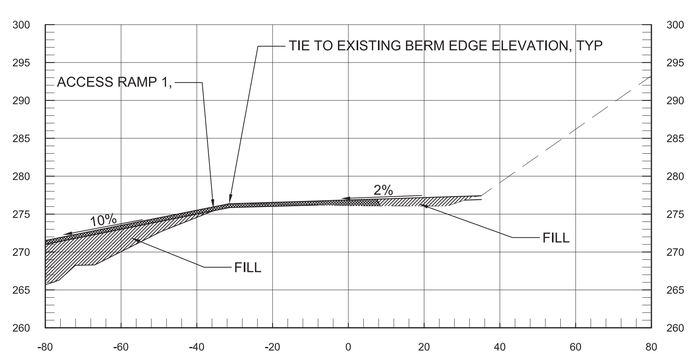
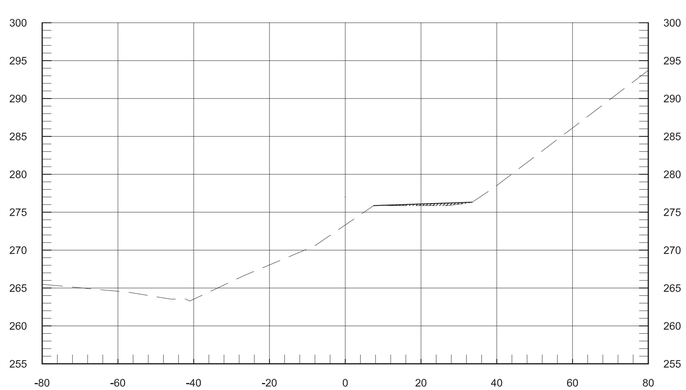


14+80.0000



14+68.7200



15+38.2028

NOTES:
1. NEW AND EXISTING RIPRAP IS NOT SHOWN FOR CLARITY. SEE SHEETS C101 AND C102 FOR RIPRAP LIMITS.
2. FOR DISPLAY PURPOSES THE ACCESS RAMP 1 IS ONLY SHOWN ONLY AT CROSS SECTION 14+68.72. FOR PI LOCATIONS AND HORIZONTAL DATA SEE SHEET C101. FOR TYPICAL CROSS SECTIONS SEE SHEET C301.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: S. STELLO
DRAWN BY: S. STELLO
CHECKED BY: T. KNIGHT
SUBMITTED BY: T. MURPHY
SIZE: 22"X34"
ISSUE DATE: TBD
SOLICITATION NO.: W912PM24B0013
CONTRACT NO.: TBD
DRAWING CODE: JK 103-07-38
FILE NAME: 103_07_38_11_cross_sections.dwg

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
69 DARLINGTON AVENUE
WILMINGTON, NORTH CAROLINA 28403

ISLAND CREEK SEEPAGE BERM REPAIR,
MECKLENBURG COUNTY,
VIRGINIA

ACCESS ROADS CROSS SECTIONS
STA. 14+60 TO STA. 15+38.20

SHEET ID
C312

READY TO ADVERTISE (RTA)