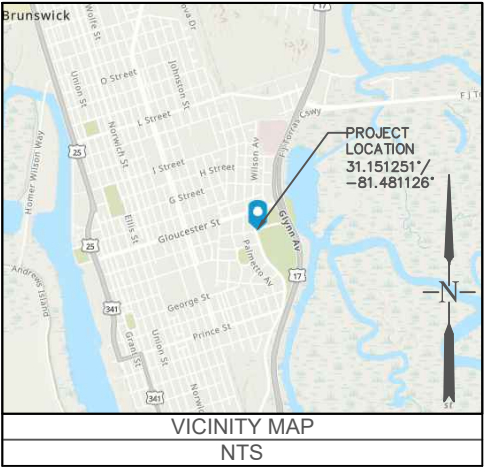


LIVING SHORELINE HOWARD COFFIN PARK



PREPARED FOR:
CITY OF BRUNSWICK
HOWARD COFFIN PARK
BRUNSWICK, GA 31520

LABARBA ENVIRONMENTAL SERVICES
139 ALTAMA CONN. #161
BRUNSWICK, GA 31525

NOT RELEASED
FOR
CONSTRUCTION

LEGEND

These standard symbols will be found in the drawing.

- DNR CMPA
- EXISTING CONTOURS
- PROPOSED CONTOURS

- RIP RAP
- FLEXAMAT
- DREDGE SOX
- COIRMAT
- COIR LOGS
- OYSTER BAGS
- OYSTER TABLES
- UPLAND VEG PLANTING
- MARSH VEG PLANTING

ORIGINAL ISSUE DATE: 04/08/25

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2	EXISTING CONDITIONS	05/14/2025
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9	CROSS SECTIONS (CULVERT)	05/14/2025
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COVER

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025

SCALE: NTS

1

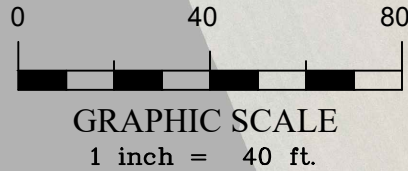
SHEET:

NOTES:
EXISTING IMPACTS
1. WALKWAY CULVERT: 149.42 SF
(69.06 SF in CMPA Jurisdiction)
2. GDOT CULVERT: 21.15 SF
3. 90.21 SF OF IMPACTS IN CMPA
JURISDICTION

NOT RELEASED
FOR
CONSTRUCTION

LEGEND
These standard symbols will
be found in the drawing.
DNR CMPA
EXISTING CONTOURS
PROPOSED CONTOURS

RIP RAP
FLEXAMAT
DREDGE SOX
COIRMAT
COIR LOGS
OYSTER BAGS
OYSTER TABLES
UPLAND VEG PLANTING
MARSH VEG PLANTING



EXISTING CONDITIONS
LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025
SCALE: 1" = 40'

NOTES:

PROPOSED IMPACTS:
WALKWAY CULVERT: 336.31 SF
GDOT CULVERT: 21.15 SF
GRADING: 10,904.41 SF*
FLEXAMAT: 3,808.94 SF (28.21 CY)
RIP RAP: 723.12 SF (26.78 CY)
DREDGESOX: 1,774.2 SF (184.15 CY)
OYSTER BAGS: 582.39 SF (9.06 CY)
OYSTER TABLES: 400.10 SF**
COIR MAT: 1,310.22 SF
COIR LOGS: 366.94 SF (20.39 CY)
BUBBLER BOX: 82.00 SF
TOTAL IMPACTS: 8,171.74 SF (268.59 CY)

PROPOSED IMPACTS IN CMPA JURISDICTION:
WALKWAY CULVERT: 209.81 SF
GDOT CULVERT: 21.15 SF
GRADING: 9,997.73 SF*
FLEXAMAT: 3,049.80 SF (22.63 CY)
RIP RAP: 716.40 SF (26.54 CY)
DREDGESOX: 1,371.40 SF (148.11 CY)
OYSTER BAGS: 582.39 SF (9.06 CY)
OYSTER TABLES: 400.10 SF**
COIR MAT: 1,310.22 SF
COIR LOGS: 366.94 SF (20.39 CY)
BUBBLER BOX: 0.00 SF
TOTAL IMPACTS IN CMPA JURISDICTION: 6,941.06 SF (226.7 CY)

*ALL GRADING WILL BE COMPLETED WITH LOCALLY SOURCES MATERIALS. NO FOREIGN EARTH FILL WILL BE BROUGHT TO THE SITE.

**OYSTER TABLES OR SIMILAR PRODUCT WILL BE USED FOR TOE PROTECTION IN CONJUNCTIONS WITH TRADITIONAL TYPE 3 RIP RAP.

NOT RELEASED FOR CONSTRUCTION

LEGEND

These standard symbols will be found in the drawing.

DNR CMPA

EXISTING CONTOURS

PROPOSED CONTOURS

RIP RAP

FLEXAMAT

DREDGE SOX

COIRMAT

COIR LOGS

OYSTER BAGS

OYSTER TABLES

UPLAND VEG PLANTING

MARSH VEG PLANTING

OVERALL PROPOSED CONDITIONS

LABARBA ENVIRONMENTAL SERVICES

BRUNSWICK, GA

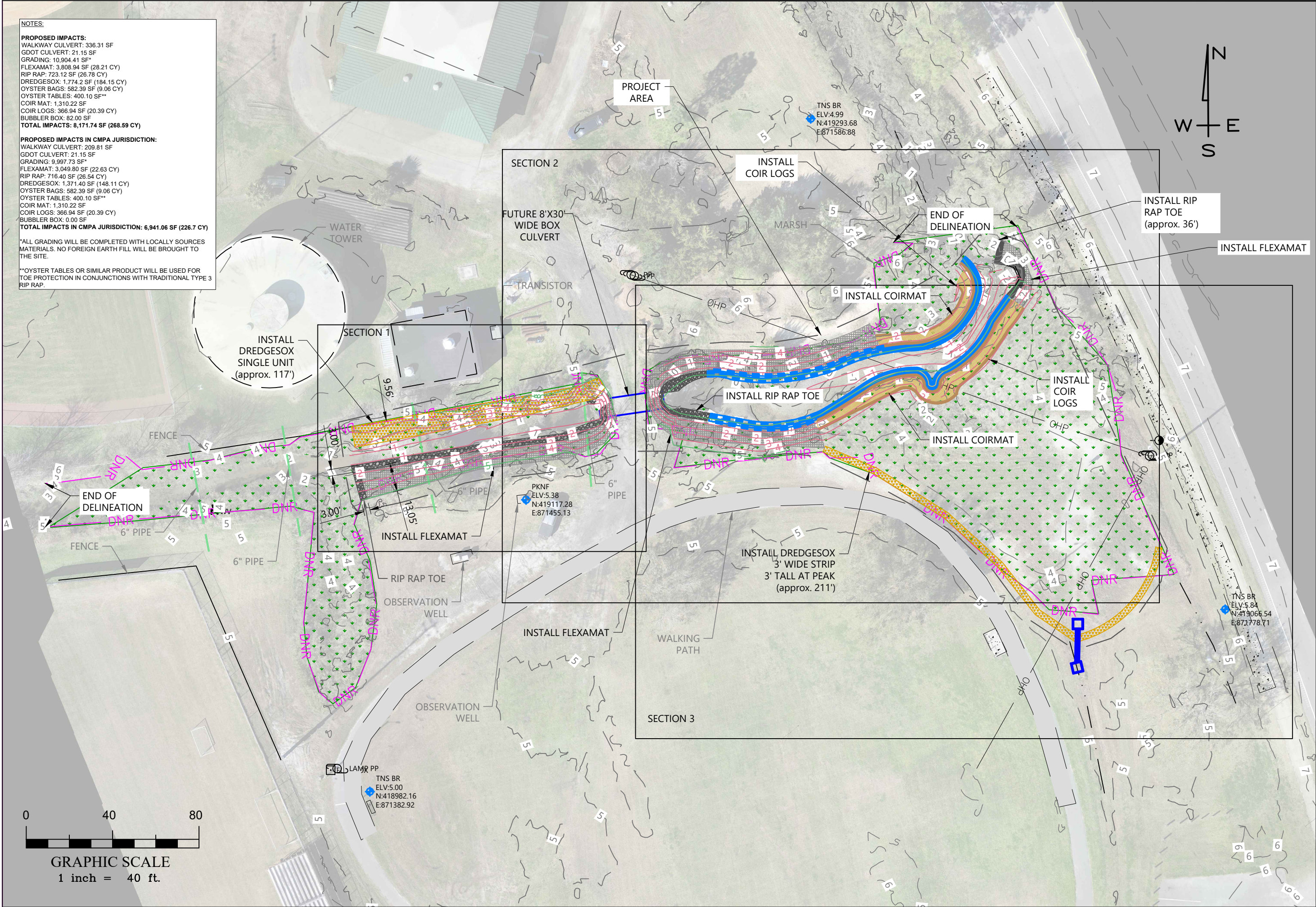
PREPARED FOR:
CITY OF BRUNSWICK

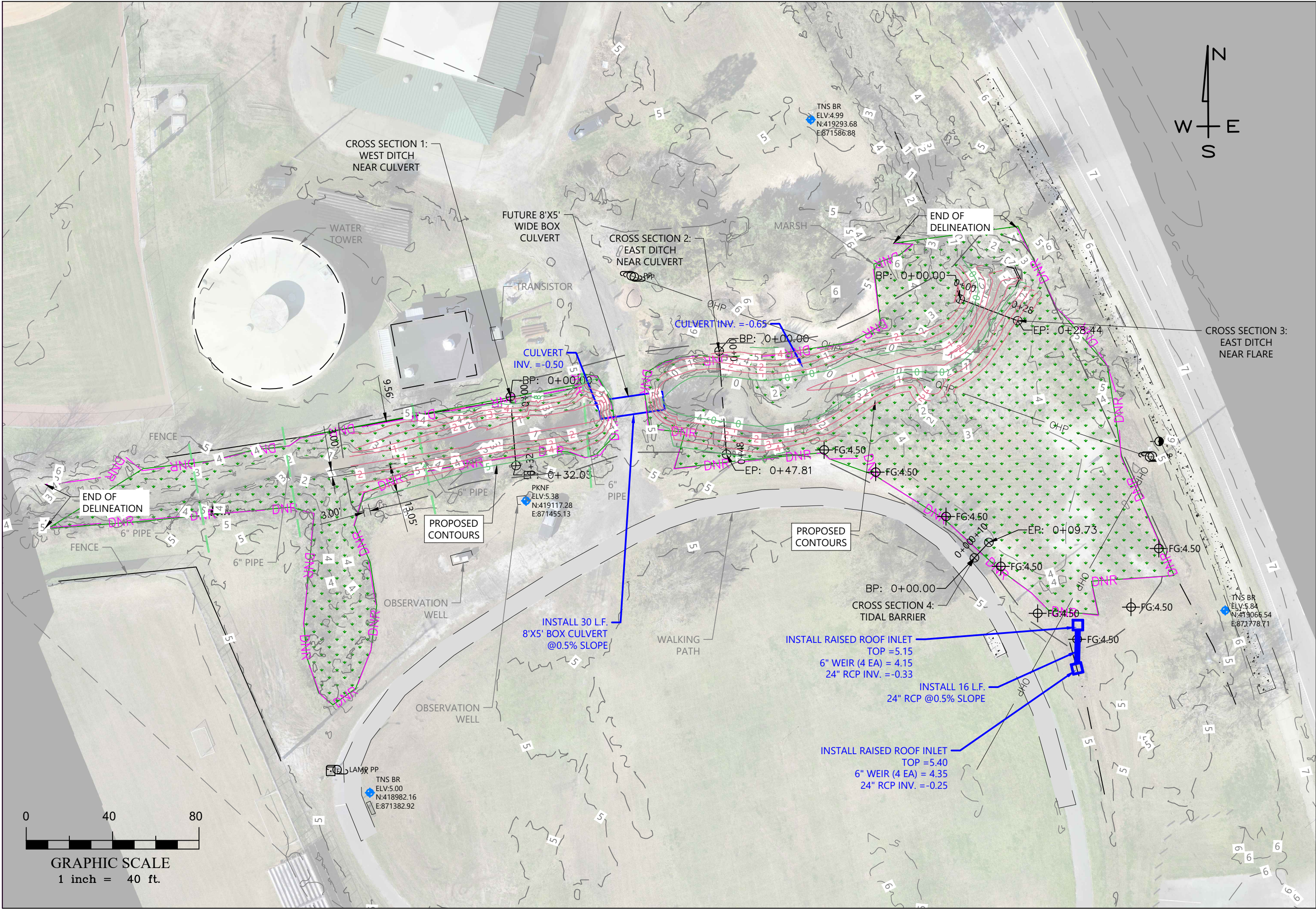
DATE: 05/14/2025

SCALE: 1" = 40'

3

SHEET:





NOT RELEASED FOR CONSTRUCTION

LEGEND

These standard symbols will be found in the drawing.

DNR CMPA

EXISTING CONTOURS

PROPOSED CONTOURS

RIP RAP

FLEXAMAT

DREDGE SOX

COIRMAT

COIR LOGS

OYSTER BAGS

OYSTER TABLES

UPLAND VEG PLANTING

MARSH VEG PLANTING

GRADING

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

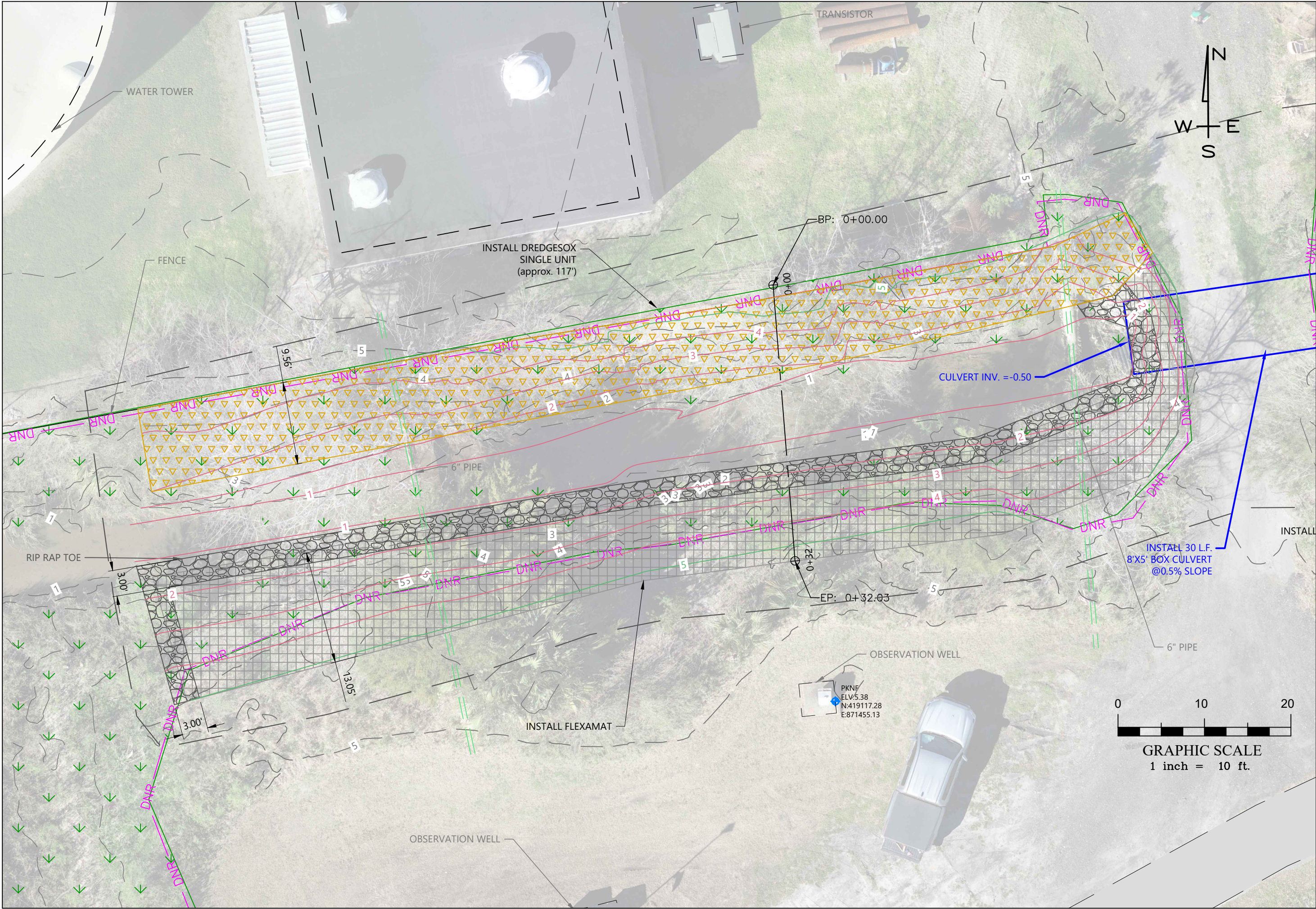
PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025

SCALE: 1" = 40'

4

SHEET:



NOT RELEASED FOR CONSTRUCTION

LEGEND

These standard symbols will be found in the drawing.

- DNR CMPA
- EXISTING CONTOURS
- PROPOSED CONTOURS
- RIP RAP
- FLEXAMAT
- DREDGE SOX
- COIR MAT
- COIR LOGS
- OYSTER BAGS
- OYSTER TABLES
- UPLAND VEG PLANTING
- MARSH VEG PLANTING

SECTION 1

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025

SCALE: 1" = 10'

5

SHEET:

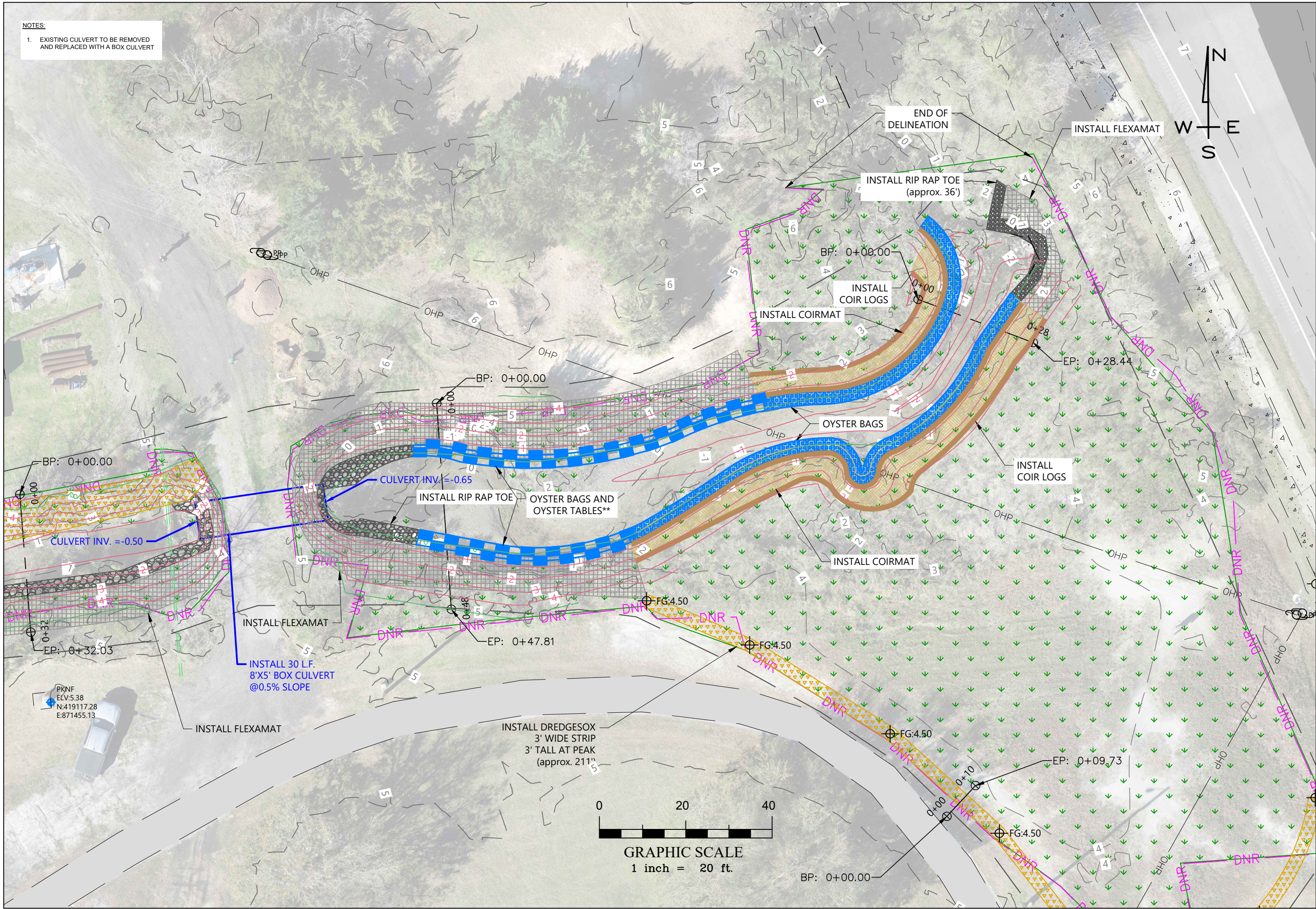
NOTES:
1. EXISTING CULVERT TO BE REMOVED
AND REPLACED WITH A BOX CULVERT

NOT RELEASED
FOR
CONSTRUCTION

LEGEND

These standard symbols will be found in the drawing.

- DNR CMPA
- EXISTING CONTOURS
- PROPOSED CONTOURS
- RIP RAP
- FLEXAMAT
- DREDGE SOX
- COIRMAT
- COIR LOGS
- OYSTER BAGS
- OYSTER TABLES
- UPLAND VEG PLANTING
- MARSH VEG PLANTING



SECTION 2

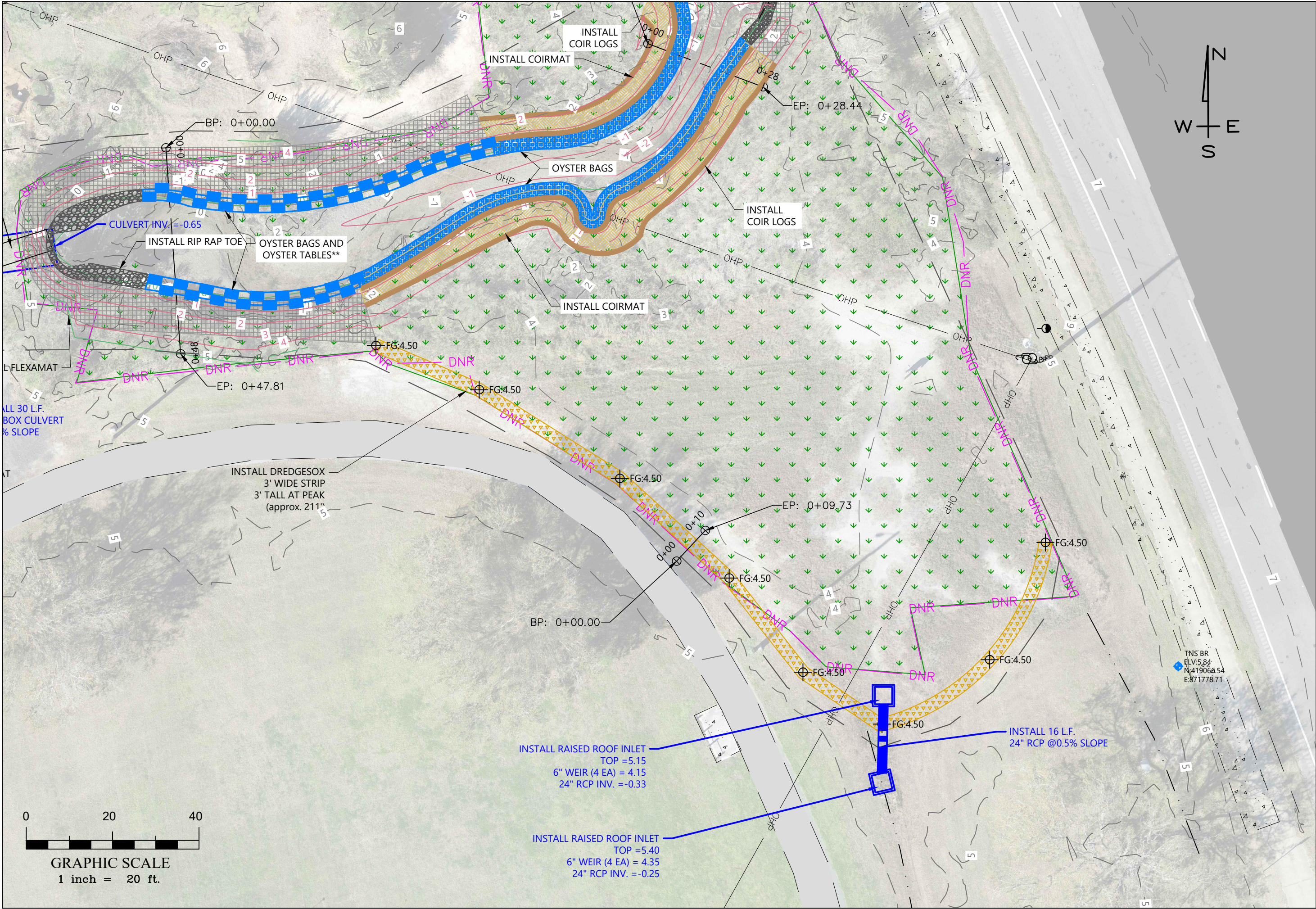
LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025
SCALE: 1" = 20'

6

SHEET:



NOT RELEASED
FOR
CONSTRUCTION

LEGEND

These standard symbols will be found in the drawing.

DNR CMPA

EXISTING CONTOURS

PROPOSED CONTOURS

RIP RAP

FLEXAMAT

DREDGE SOX

COIR MAT

COIR LOGS

OYSTER BAGS

OYSTER TABLES

UPLAND VEG PLANTING

MARSH VEG PLANTING

SECTION 3

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

PREPARED FOR:
CITY OF BRUNSWICK

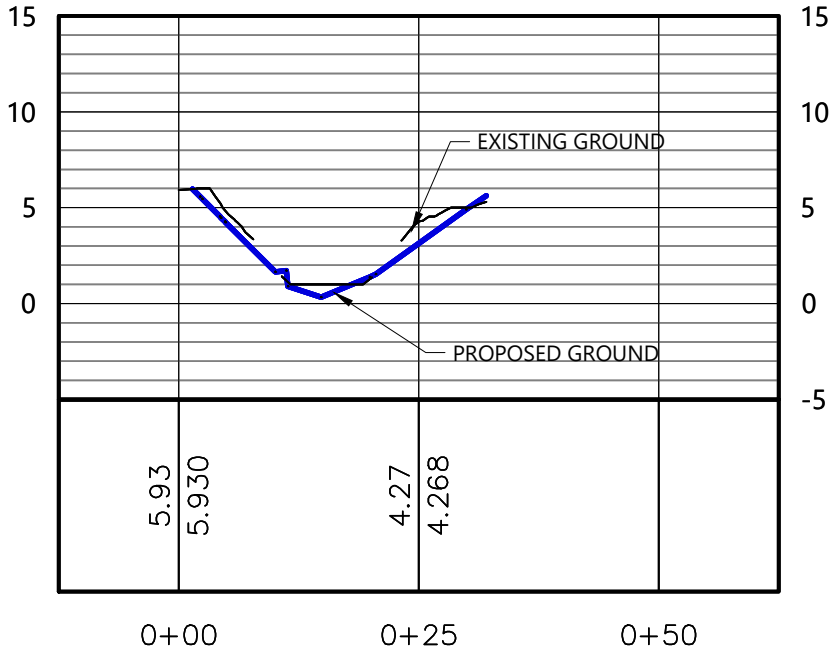
DATE: 05/14/2025

SCALE: 1" = 20'

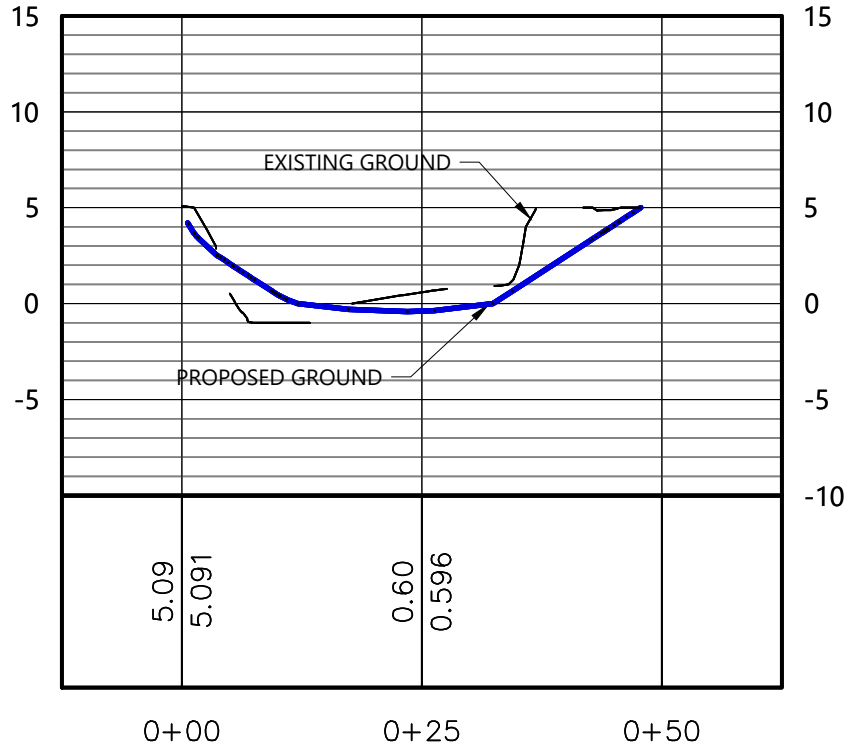
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SHEET:

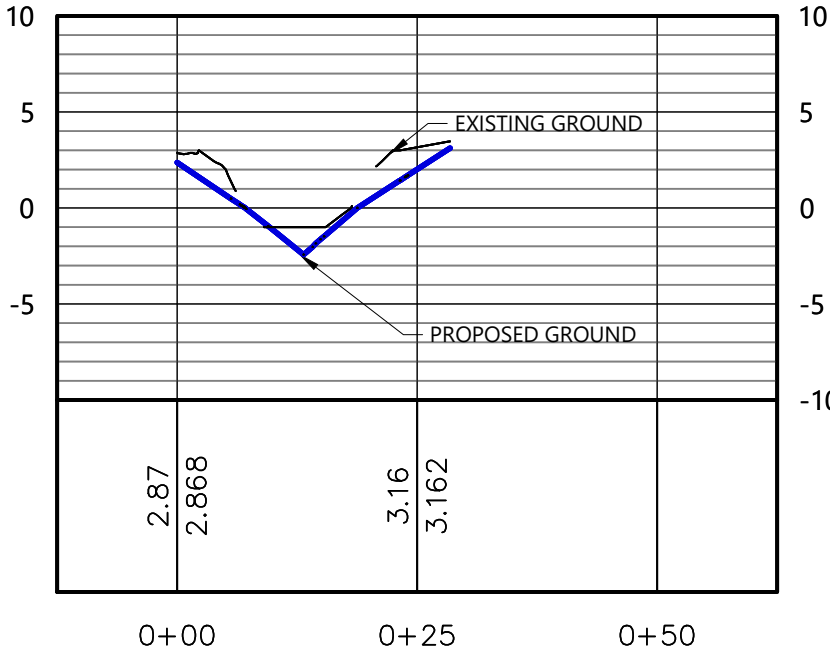
DATUM ELEV
-5.000
West Ditch Near Culvert
PROFILE



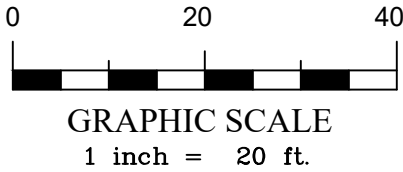
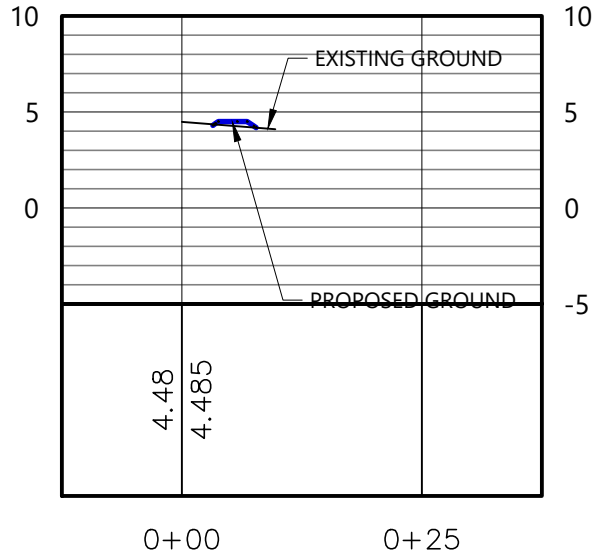
DATUM ELEV
-10.000
East Ditch Near Culvert
PROFILE



DATUM ELEV
-10.000
East Ditch Near Flare
PROFILE



DATUM ELEV
-5.000
Tidal Barrier
PROFILE



NOT RELEASED
FOR
CONSTRUCTION

- LEGEND
- These standard symbols will be found in the drawing.
- DNR CMPA
 - EXISTING CONTOURS
 - PROPOSED CONTOURS
 - RIP RAP
 - FLEXAMAT
 - DREDGE SOX
 - COIRMAT
 - COIR LOGS
 - OYSTER BAGS
 - OYSTER TABLES
 - UPLAND VEG PLANTING
 - MARSH VEG PLANTING

CROSS SECTIONS

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

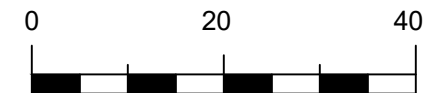
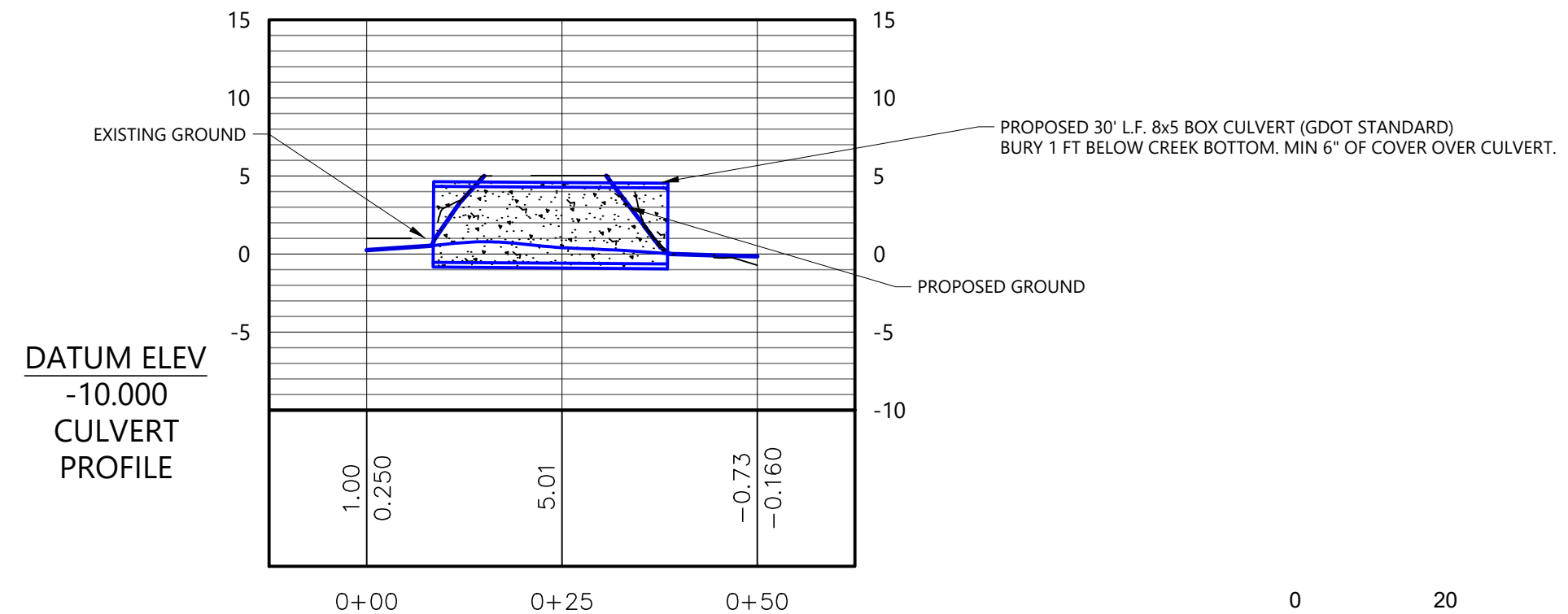
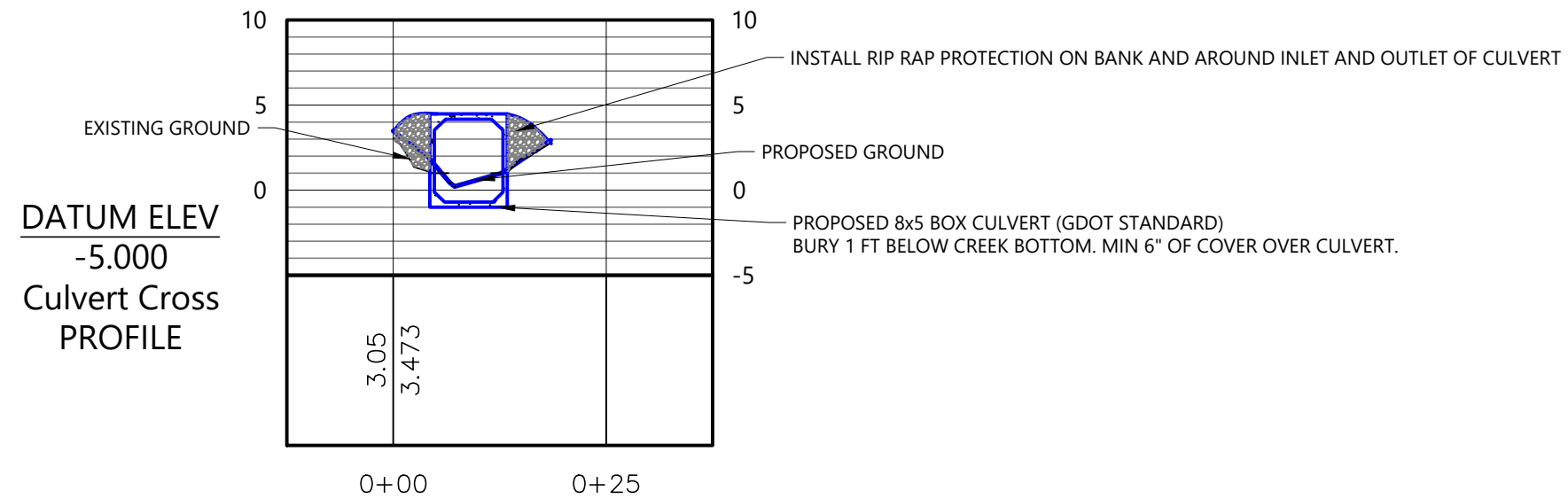
PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025
SCALE: 1" = 20'

LEGEND

These standard symbols will be found in the drawing.

- DNR CMPA
- EXISTING CONTOURS
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- RIP RAP
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- OYSTER TABLES
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- MARSH VEG PLANTING



GRAPHIC SCALE
1 inch = 20 ft.

CROSS SECTIONS (CULVERT)

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
CITY OF BRUNSWICK

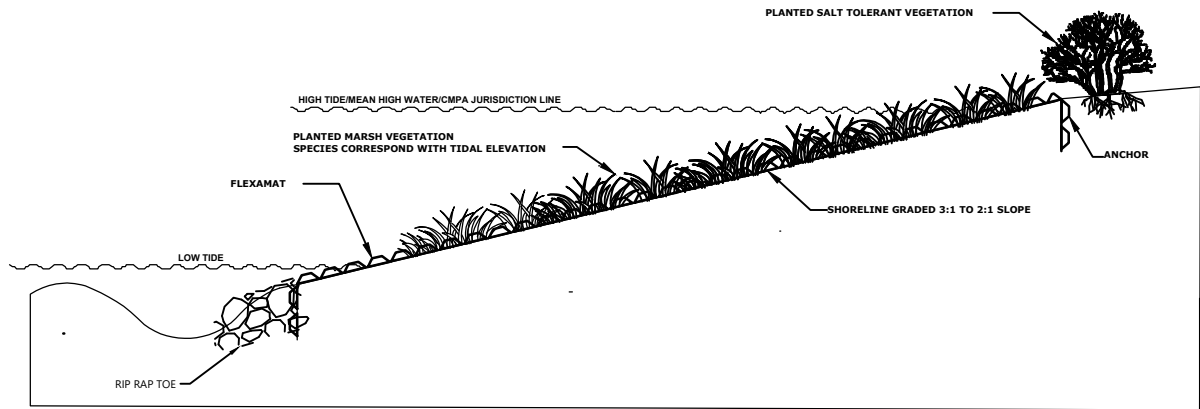
DATE: 05/14/2025

SCALE: 1" = 20'

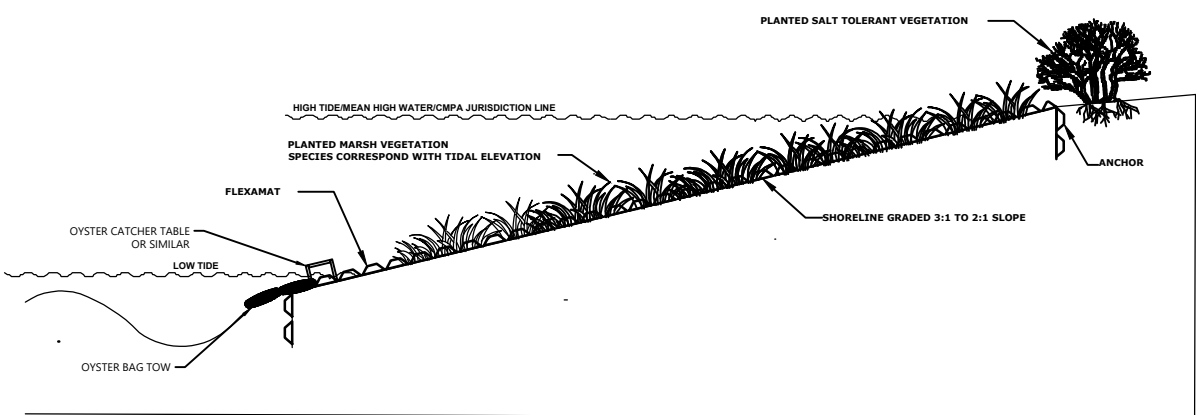
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SHEET:

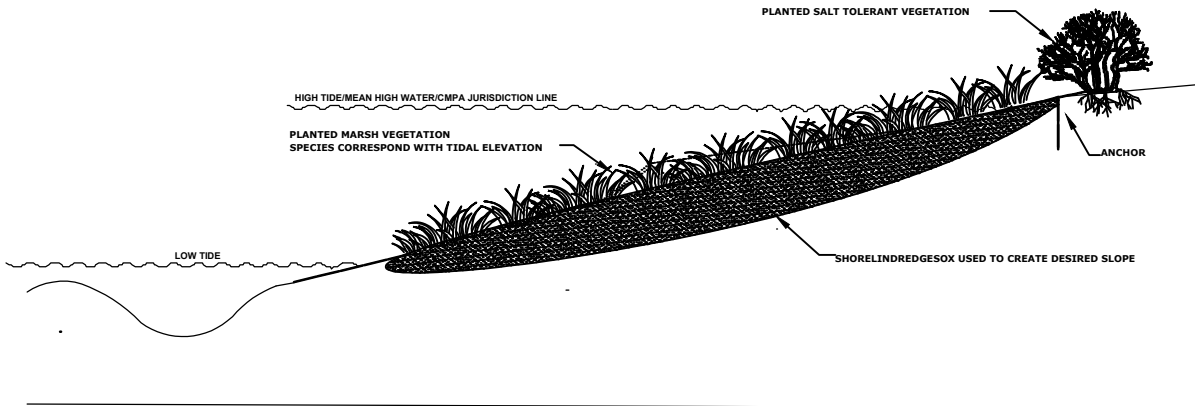
FLEXAMAT & RIP RAP TOE



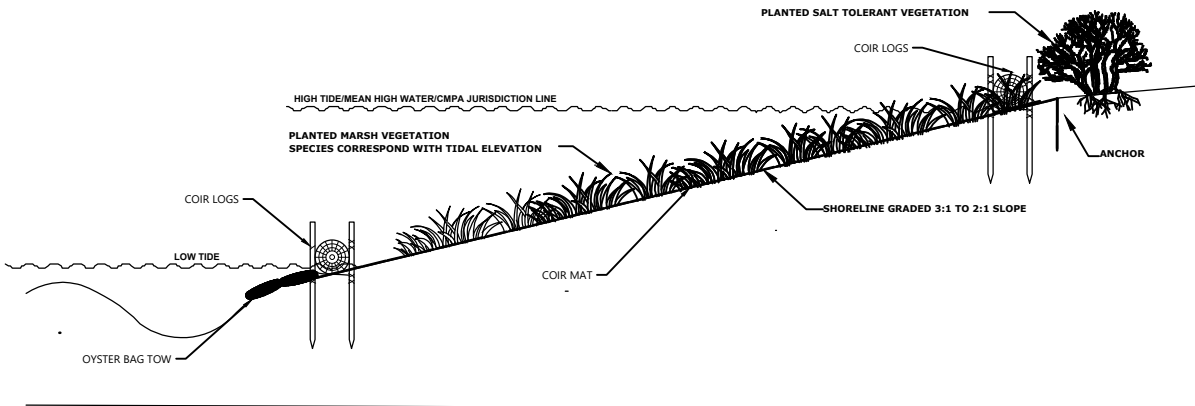
FLEXAMAT & OYSTER TOE



DREDGESOX



COIR MAT & COIR LOGS



NOT RELEASED
FOR
CONSTRUCTION

LEGEND

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- DNR CMPA
- EXISTING CONTOURS
- PROPOSED CONTOURS

- RIP RAP
- FLEXAMAT
- DREDGE SOX
- COIR MAT
- COIR LOGS
- OYSTER BAGS
- OYSTER TABLES
- UPLAND VEG PLANTING
- MARSH VEG PLANTING

TYPICAL PROFILES
LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025
SCALE: NTS

LEGEND

These standard symbols will be found in the drawing.

DNR CMPA
EXISTING CONTOURS
PROPOSED CONTOURS

RIP RAP
FLEXAMAT
DREDGE SOX
COIRMAT
COIR LOGS
OYSTER BAGS
OYSTER TABLES
UPLAND VEG PLANTING
MARSH VEG PLANTING

MATERIAL SHEET (DREDGESOX)

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

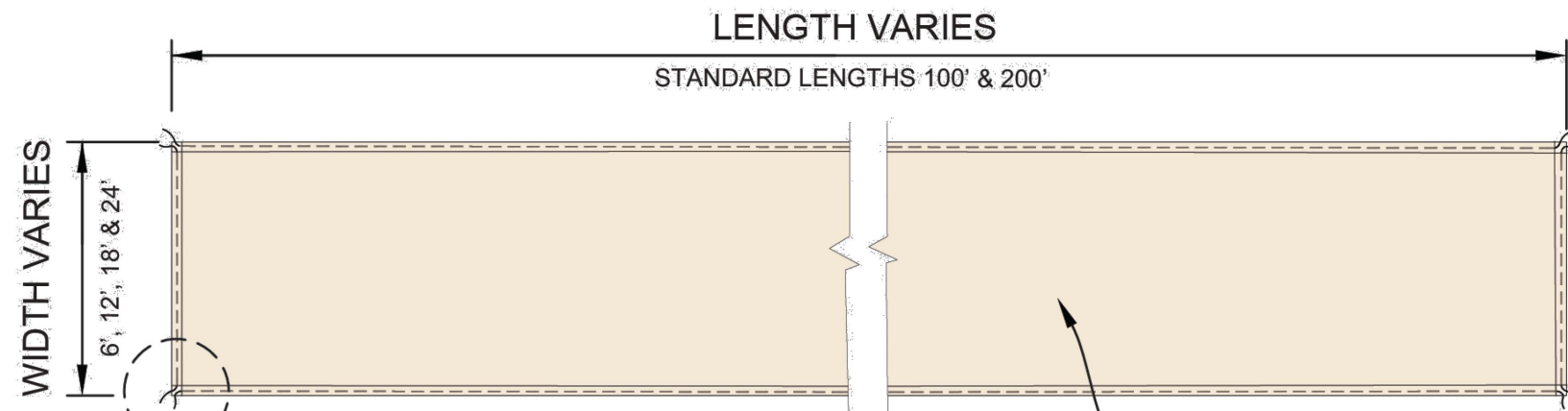
PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025

SCALE: NTS

11

SHEET:



LENGTH VARIES
STANDARD LENGTHS 100' & 200'

WIDTH VARIES
6', 12', 18' & 24'

PANEL DETAIL

PANEL SECTIONS CAN BE CUT AND SEWN TO CUSTOM LENGTHS AS NEEDED DURING INSTALLATION

TWO LAYERS OF HIGH DENSITY POLYETHYLENE TECHNICAL MESH (KNITTED MESH)

SHORESUX/DREDGESUX KNITTED MESH IS FOLDED AND THEN SEWN TO CREATE A CHANNEL FOR THE ANCHORING ROPE

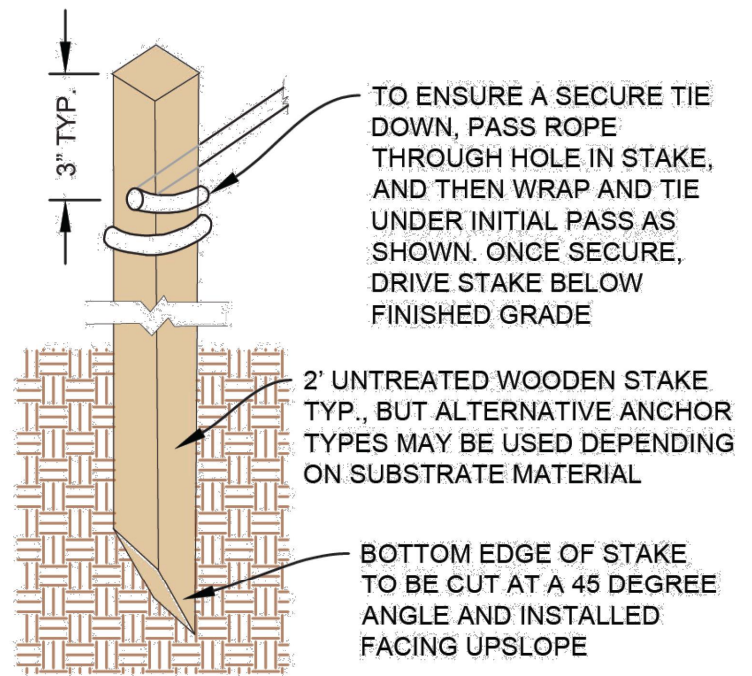
REINFORCED MONOFILAMENT SELVEDGE

1/4" DIAMOND BRAIDED MULTIFILAMENT POLYPROPYLENE (MFP) ROPE WITH TEX CORE

FABRIC PANEL CORNER DETAIL

DOUBLE-LAYERED KNITTED POLYETHYLENE MESH WITH THE FOLLOWING:

- 11 SPI COURSE COUNT
- 7.34 OZ/SQ-YD WEIGHT (ASTM D3776)
- 135 LBS WARP AND 207 LBS FILL BREAK STRENGTH (ASTM D5034)
- 32.3% WARP AND 61.7% FILL BREAK ELONGATION (ASTM D5034)
- 58.0 LBS WARP AND 70.3 LBS FILL TEAR STRENGTH (ASTM D5587)
- 284 PSI BURSTING STRENGTH (ASTM D3786)
- AVAILABLE IN SADDLE TAN OR NATURAL GREEN
- AVAILABLE IN FIRE RETARDANT VERSION



TO ENSURE A SECURE TIE DOWN, PASS ROPE THROUGH HOLE IN STAKE, AND THEN WRAP AND TIE UNDER INITIAL PASS AS SHOWN. ONCE SECURE, DRIVE STAKE BELOW FINISHED GRADE

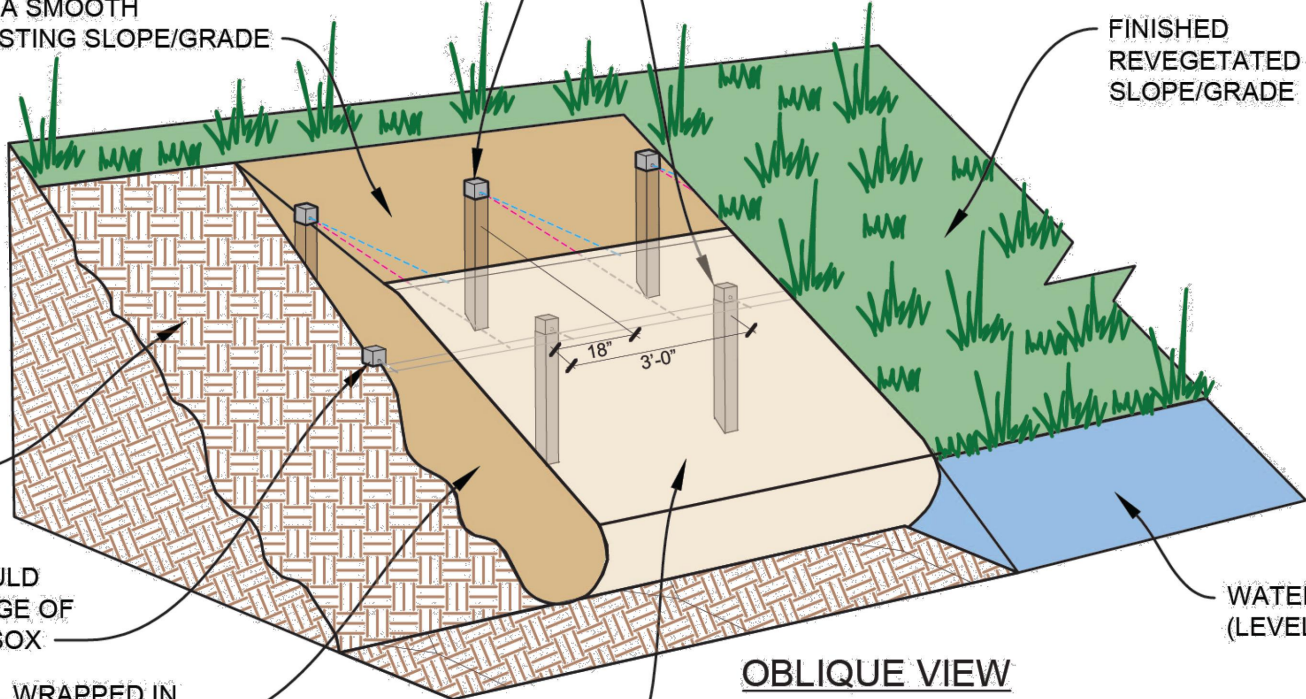
2' UNTREATED WOODEN STAKE TYP., BUT ALTERNATIVE ANCHOR TYPES MAY BE USED DEPENDING ON SUBSTRATE MATERIAL

BOTTOM EDGE OF STAKE TO BE CUT AT A 45 DEGREE ANGLE AND INSTALLED FACING UPSLOPE

WOODEN STAKE DETAIL

TOP AND BOTTOM STAKES AND ROPES TO BE SET BELOW FINISHED GRADE. STAKES PLACED EVERY 3' OC, TOP AND BOTTOM STAKES OFFSET EVERY 18"

SOIL UPSLOPE OF SHORESUX/DREDGESUX TO BE FEATHERED FOR A SMOOTH TRANSITION TO THE EXISTING SLOPE/GRADE



FINISHED REVEGETATED SLOPE/GRADE

WATER COURSE (LEVEL VARIES)

OBLIQUE VIEW

EXISTING ERODED SLOPE/GRADE

BOTTOM STAKE SHOULD BE TIED TIGHT TO EDGE OF SHORESUX/DREDGESUX

SOIL FILL WRAPPED IN THE KNITTED MESH

SHORESUX/DREDGESUX ON SLOPE/GRADE

SHORESUX/
DREDGESOX DETAIL



FOR CONSULTATION, CONTACT:

950 PENINSULA CORPORATE CIRCLE, SUITE 3010
BOCA RATON, FL 33487
(561) 501-0057
WWW.SOXEROSION.COM

PROJECT NO.: 0000.000.000

SCALE: NO SCALE

DRAWN BY: CH

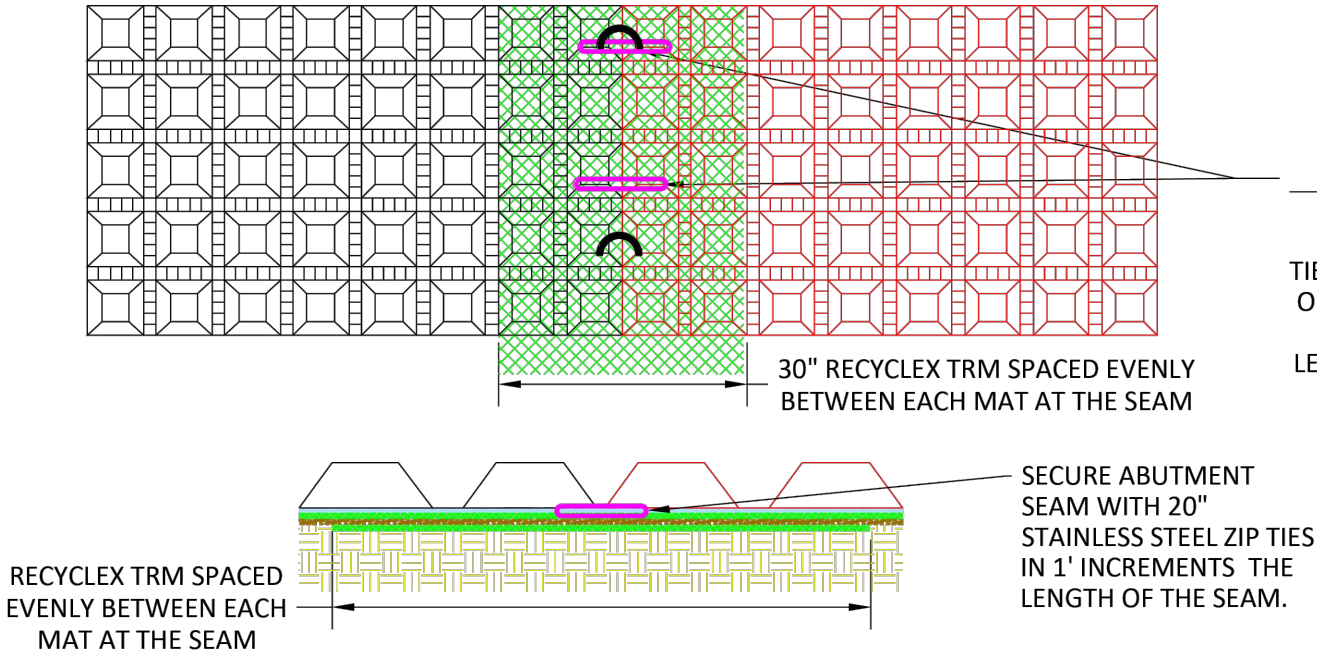
CHECKED BY: CC

DETAIL NO.

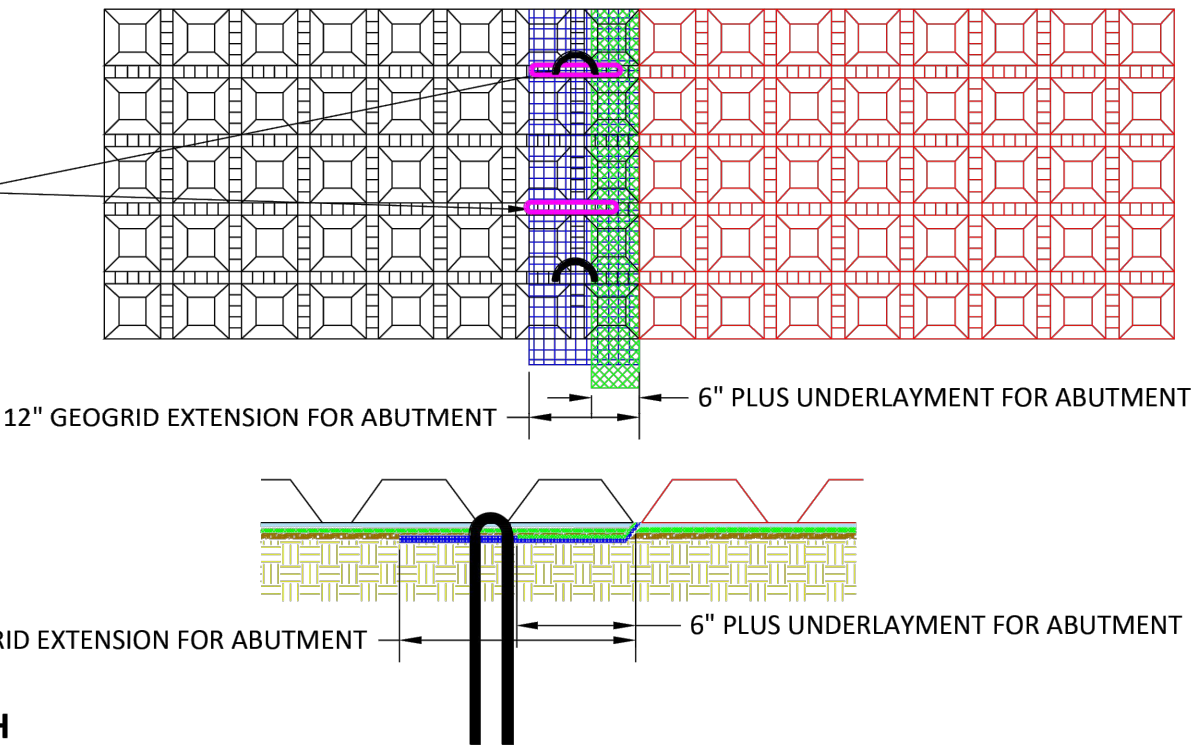
X

ABUTMENT METHOD FOR SHORELINE WIDTH LESS THAN 16'

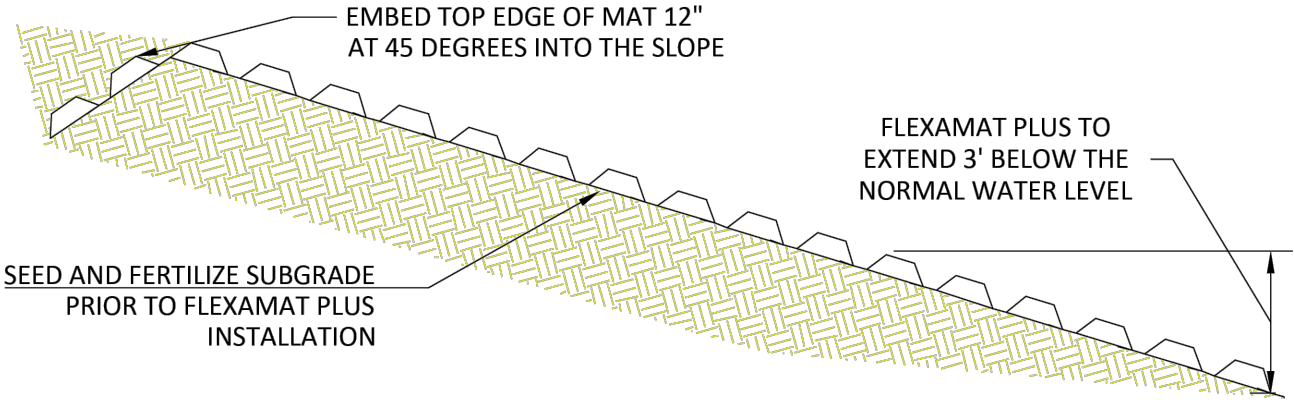
ABUTMENT METHOD FOR SHORELINE WIDTH GREATER THAN 16'



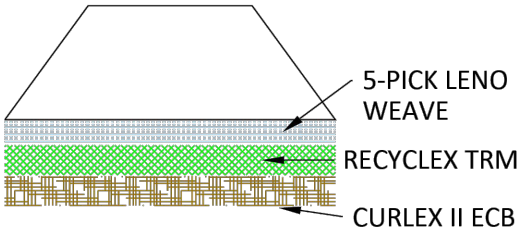
SECURE ABUTMENT SEAM WITH 20" STAINLESS STEEL ZIP TIES IN 1' INCREMENTS OR 18" U-ANCHORS IN 2' INCREMENTS THE LENGTH OF THE SEAM.



PROFILE VIEW OF SLOPE AND ANCHOR TRENCH



FLEXAMAT PLUS UNDERLAYMENT



FLEXAMAT PLUS - SHORELINE ARMORING

CONSTRUCTION NOTES:

1. AN ENGINEER OR MANUFACTURES REPRESENTATIVE SHALL BE ONSITE FOR THE START OF THE INSTALLATION.
2. ALL SUBGRADE SURFACES PREPARED FOR PLACEMENT OF MATS SHALL BE SMOOTH AND FREE OF ALL ROCKS, STICKS, ROOTS, OTHER PROTRUSIONS, OR DEBRIS OF ANY KIND.
3. PRIOR TO FLEXAMAT PLUS INSTALLATION, SEED AND FERTILIZE SUBGRADE WITH SITE SPECIFIC SEED MIX IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. .
4. INSTALL FLEXAMAT PLUS ROLLS, MATS SHALL BE CONTINUOUS FOR ENTIRE LENGTH OF SLOPE.
 - 4.1. MATTING SHALL EXTEND 3' BELOW ORDINARY WATER LEVEL.
5. AT MAT ABUTMENT SEAMS, INSTALL RECYCLEX TRM SEAMS EVENLY UNDER EACH MAT.
6. SECURE ABUTMENT SEAMS IN 2' INCREMENTS USING STAINLESS STEEL ZIP TIES OR #3 REBAR - 18" U-ANCHORS. ZIP TIES SHALL ENCOMPASS 3 CORDS OF GRID OF EACH ABUTTING MAT OR GEOGRID EXTENSION. U-ANCHORS SHALL ENCOMPASS 2 CORDS OF GEOGRID OF EACH ABUTTING MAT OR GEOGRID EXTENSIONS.
7. AT THE BEGINNING AND END OF THE SHORELINE PROTECTION, EMBED THE MAT 18" PAST THE ANTICIPATED SCOUR POINT. FILL AND COMPACT TERMINATION TRENCH WITH COHESIVE SOIL.
8. RECESS TOP TWO BLOCKS OF MAT INTO THE SLOPE.

MOTZ
ENTERPRISES, INC.
Flexamat
(513)772-6689
Info@Flexamat.com
Flexamat.com



REV - 1

NOT RELEASED
FOR
CONSTRUCTION

LEGEND

These standard symbols will be found in the drawing.

- DNR CMPA
- EXISTING CONTOURS
- PROPOSED CONTOURS

- RIP RAP
- FLEXAMAT
- DREDGE SOX
- COIRMAT
- COIR LOGS
- OYSTER BAGS
- OYSTER TABLES
- UPLAND VEG PLANTING
- MARSH VEG PLANTING

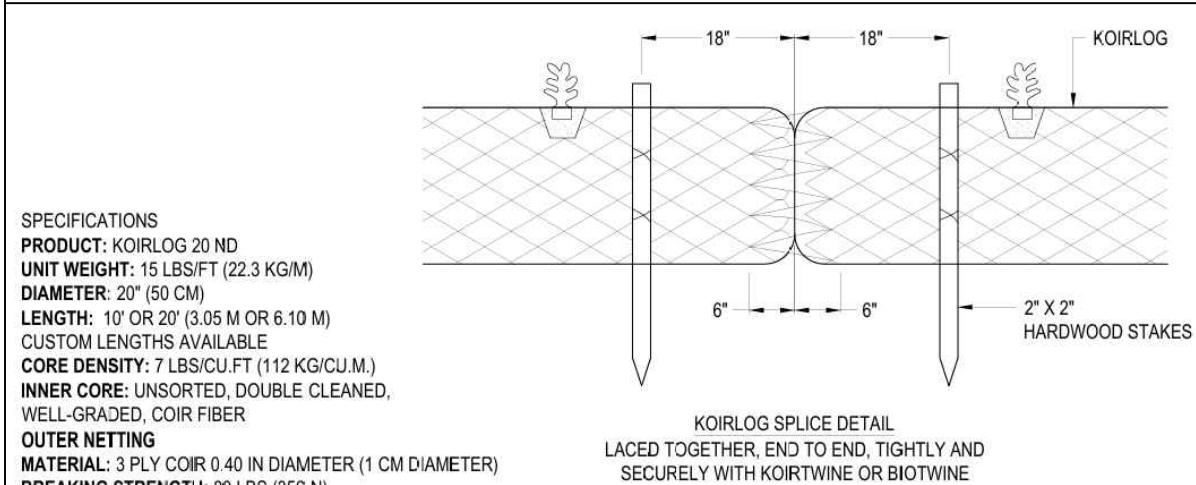
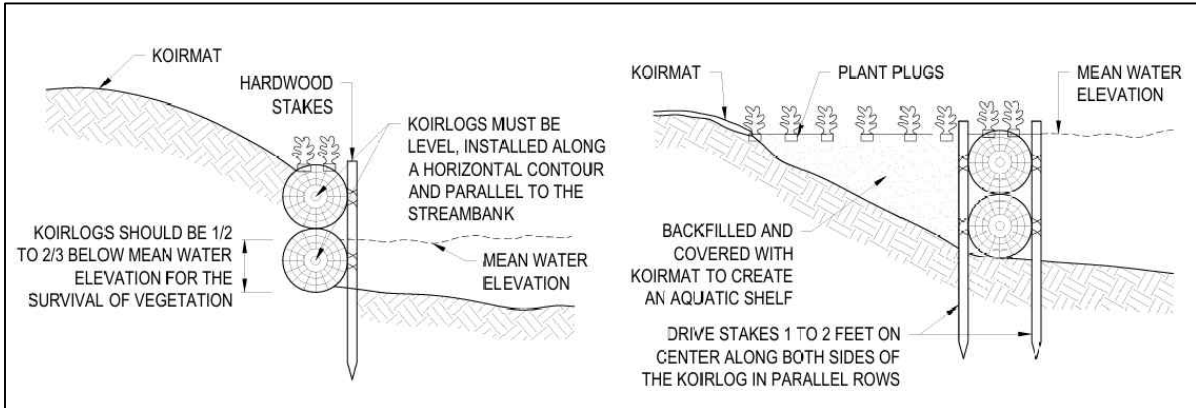
MATERIAL SHEET (FLEXAMAT)

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025
SCALE: NTS

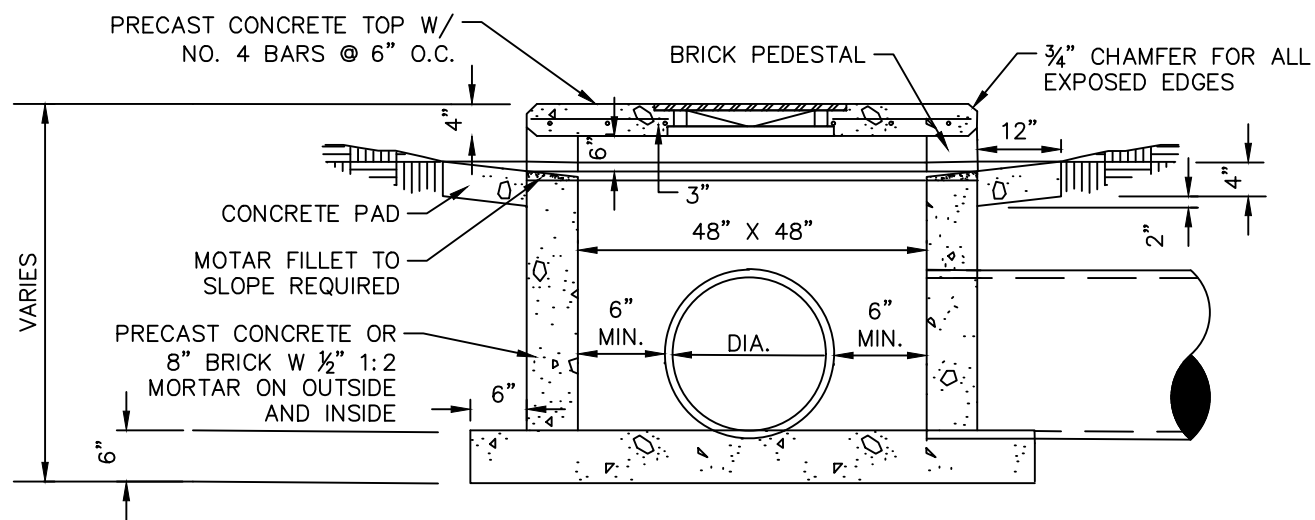
12

SHEET:



SPECIFICATIONS
PRODUCT: KOIRLOG 20 ND
UNIT WEIGHT: 15 LBS/FT (22.3 KG/M)
DIAMETER: 20" (50 CM)
LENGTH: 10' OR 20' (3.05 M OR 6.10 M)
CUSTOM LENGTHS AVAILABLE
CORE DENSITY: 7 LBS/CU.FT (112 KG/CU.M.)
INNER CORE: UNSORTED, DOUBLE CLEANED, WELL-GRADED, COIR FIBER
OUTER NETTING
MATERIAL: 3 PLY COIR 0.40 IN DIAMETER (1 CM DIAMETER)
BREAKING STRENGTH: 80 LBS (356 N)
MESH SIZE: 2" X 2" RHOMBIC MESH WITH HAND-KNOTTED JUNCTIONS

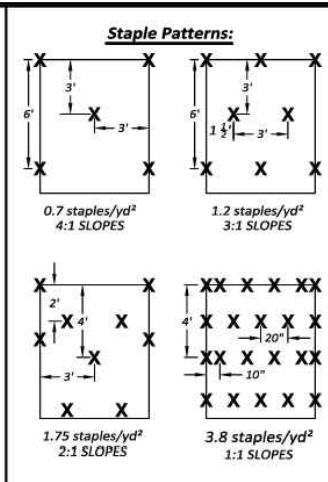
NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 5453-007.



STANDARD CONSTRUCTION DETAILS
ROOF INLET

Slope Installation Guidelines:
These guidelines are recommendations only. Any questions with the installation should be confirmed with your local distributor.

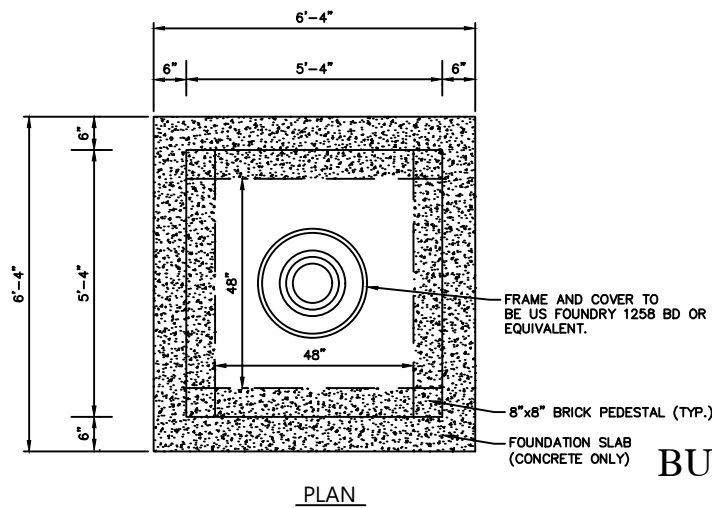
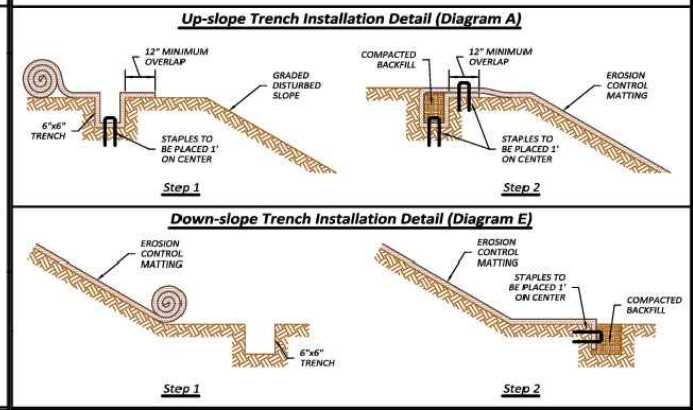
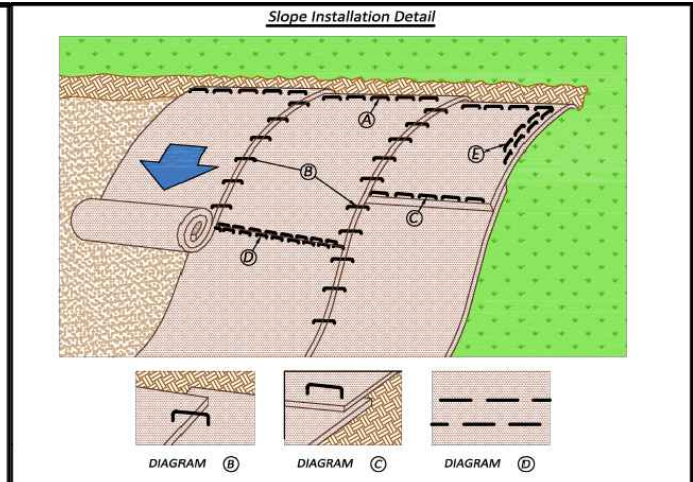
1. Dig a 6" by 6" trench both up-slope and down-slope of the area the matting is to be applied. Prepare the slope soil surface (raking, seeding and fertilizing).
2. Begin by placing the blanket a minimum of 12" down-slope of the up-slope trench. Secure the blanket at the bottom of the trench with staples placed 12" apart. Backfill and compact the trench. Apply seed, and fold the blanket over soil, secure with a row of staples placed 12" apart across the width of the blanket. (See Diagram A)
3. Roll the blanket vertically down the slope. Secure using the appropriate staple pattern below, specified by slope. (See Staple Patterns)
4. Parallel blankets must be overlapped by a minimum of 4", and secured with a row of staples placed approximately 3'-0" apart. (See Diagram B)
5. Additional vertical blankets can be joined using a minimum 4" overlapping or shingle style (See Diagrams C) in the direction of water flow. Connect the blankets by placing staples approximately 12" apart across the width of the blankets.
6. For maximum performance a check slot should be placed at 25'-40' intervals. Place a row of staples 4" apart along the entire width of the slope. A second row should be placed 4" below in a staggered pattern. Then continue with general installation. (See Diagrams D)
7. The end of blanket must be secured in a 6" x 6" trench with a row of staples placed at 12" intervals. (Diagram E)



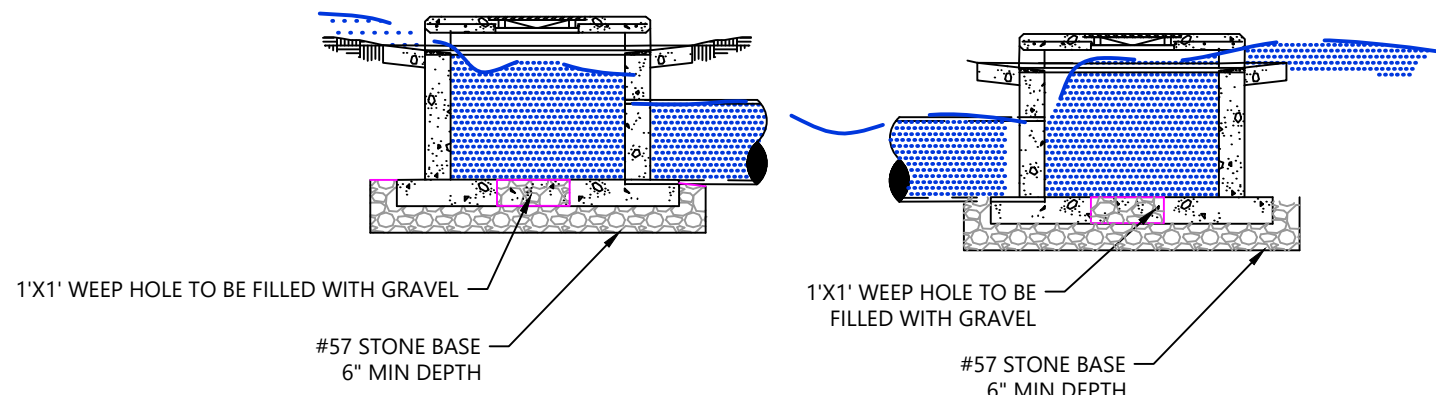
Specifications and Equivalency:
All product material and performance specifications are available from East Coast Erosion Blankets via the product specification sheet. Utilization of a 11 gauge staple, a minimum 6" long by 1" crown, is recommended. The tightly compressed blankets are wrapped and include a product label, code and installation guide.

In addition to meeting all data available on the specification sheet, equivalent products shall meet the following requirements:

- The product must be listed with the NTPEP database.
- The product must meet the Type 2.C specification requirements established by the Erosion Control Technology Council (ECTC).
- The product must meet the Federal Highway Administration's (FHWA) FP-03 Section 713.17 specification.



BUBBLER BOX TYPICAL LAYOUT



NOTE: YEARLY MAINTENANCE SHOULD CHECK AND CLEAR AND SEDIMENT IN THE BOX OR PIPE.

NOT RELEASED
FOR
CONSTRUCTION

LEGEND

These standard symbols will be found in the drawing.

— DNR CMPA
— EXISTING CONTOURS
— PROPOSED CONTOURS

■ RIP RAP
■ FLEXAMAT
■ DREDGE SOX
■ KOIRMAT
■ COIR LOGS
■ OYSTER BAGS
■ OYSTER TABLES
■ UPLAND VEG PLANTING
■ MARSH VEG PLANTING

MATERIAL SHEET (KOIR MAT, COIR LOGS,
AND BUBBLER BOX)
LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
CITY OF BRUNSWICK

DATE: 05/14/2025
SCALE: NTS