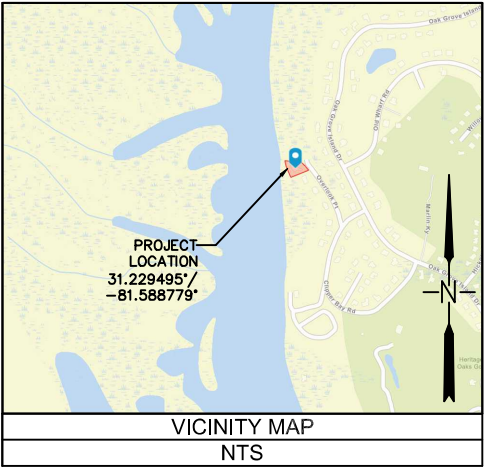


LIVING SHORLINE COASTAL MARSHLANDS PROTECTION ACT PERMIT APPLICATION



PREPARED FOR:
RAJ PATEL
330 CLIPPER BAY
BRUNSWICK, GA 31523

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

NOT RELEASED
FOR
CONSTRUCTION

LEGEND

These standard symbols will be found in the drawing.

- MEAN LOW WATER
- DNR CMPA/HTL
- PROJECT AREA
- RIP RAP
- FLEXAMAT
- FILTRESS GROSOXX
- MARSH VEG PLANTING
- UPLAND VEG PLANTING
- EROSIONAL AREA

COVER

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
RAJ PATEL

CONTENTS		
SHEET		DATE
1	COVER	6/23/2025
2	EXISTING CONDITIONS	6/23/2025
3	GRADING	6/23/2025
4	LIVING SHORELINE 1	6/23/2025
5	LIVING SHORELINE 2	6/23/2025
6	PROFILE	6/23/2025
7	FLEXAMAT DETAILS	6/23/2025
8	FILTREXX DETAILS	6/23/2025

DATE: 02/20/2025
SCALE: NTS

1

SHEET:

- NOTES:
1. BOUNDARY AND CMPA SURVEY PROVIDED BY BENNETT SURVEYING, INC.
 2. CONTOUR DATA OBTAINED FROM AERIAL DRONE IMAGE.
 3. MEAN LOW WATER (MLW) IS .19' AS DETERMINED BY NOAA STATION 8676808
 4. EXISTING EROSIONAL SHORELINE: (APPROX) 346 TOTAL LINEAR FEET.
 5. PROJECT AREA: 2,906.4 SF
MARSHLAND COMPONENT: 1,213.4 SF
UPLAND IMPACTS: 1,693 SF

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- EROSIONAL AREA

EXISTING CONDITIONS

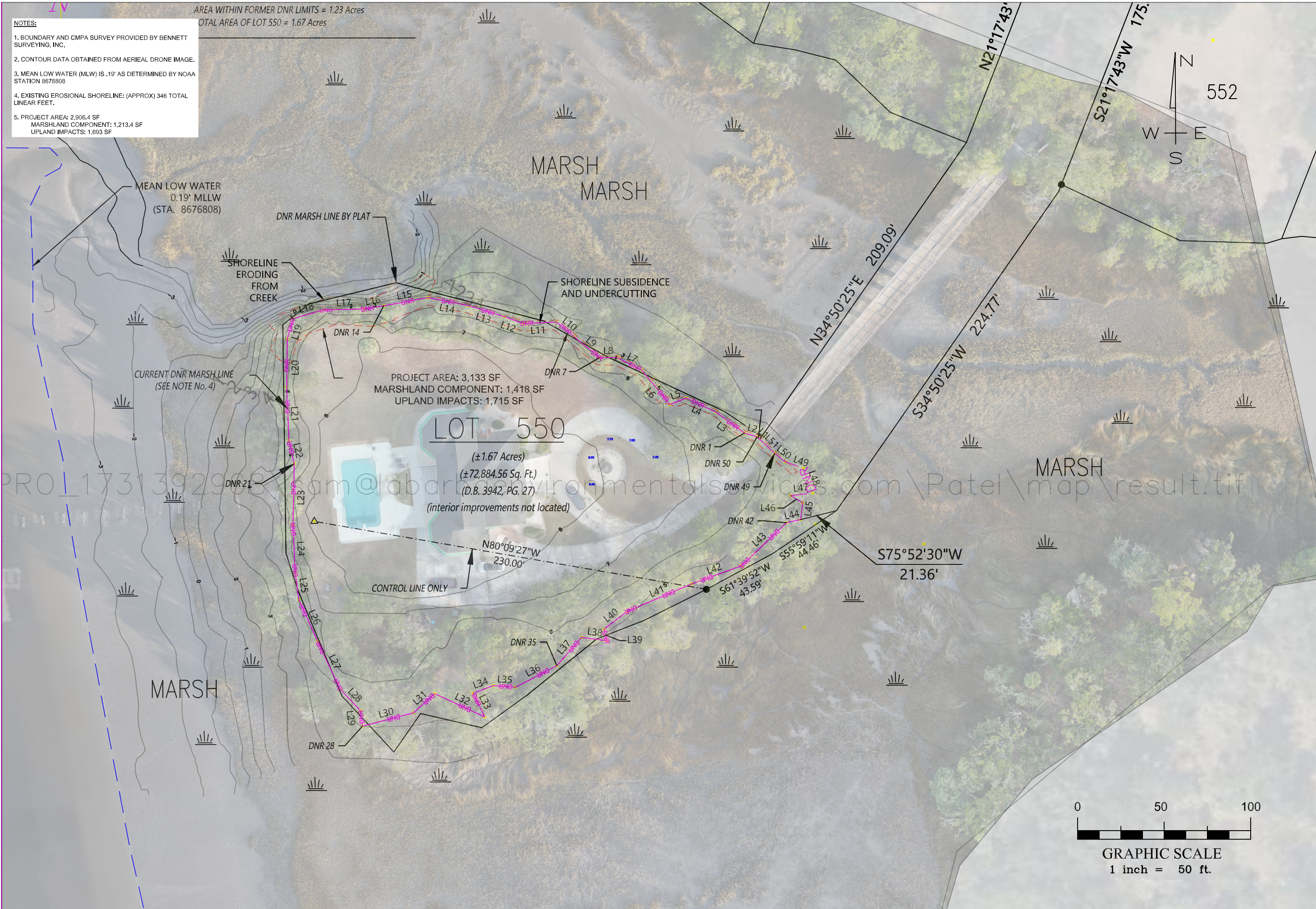
LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

PREPARED FOR:
RAJ PATEL

DATE: 02/20/2025
SCALE: 1" = 50'

2

SHEET:



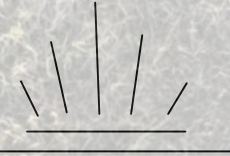
NOTES:

1. SLOPE ALONG THE CREEK TO BE GRADED TO A SLOPE OF 2:1.

2. NO GRADING PROPOSED IN AREAS NOT ALONG THE CREEK.

3. IMPACTS FROM GRADING (1,354 SF) (0 CY NET FILL)
MARSHLAND GRADING: 745 SF
UPLAND GRADING: 609 SF

3. ALL MATERIAL FOR GRADING WILL BE LOCALLY SOURCED FROM THE SITE, NO FILL WILL BE BROUGHT FROM OFF SITE.



NOT RELEASED
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CONSTRUCTION

LEGEND

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- UPLAND VEG PLANTING
- EROSIONAL AREA

GRADING

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

PREPARED FOR:
RAJ PATEL

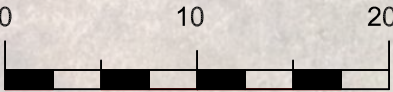
DATE: 02/20/2025
SCALE: 1" = 10'

3

SHEET:

SHORELINE SLOPED
TO 2:1

CMPA JURISDICTION LINE/
HIGH TIDE LINE



GRAPHIC SCALE
1 inch = 10 ft.

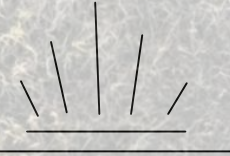
NOTES:
1. IMPACTS:
FLEXAMAT: 1,386 SF
MARSHLAND: 741 SF
UPLAND: 845 SF
RIP RAP: 225 SF (+9 CY) (MARSHLAND IMPACTS)
FILTREXX GREENLOXX: 1,423.4 SF
MARSHLAND: 375.4 SF
UPLAND: 1,048 SF
MARSH PLANTING: 1,338.4 SF
UPLAND PLANTING: 1,302.45 SF

NOT RELEASED
FOR
CONSTRUCTION

LEGEND

These standard symbols will
be found in the drawing.

- MEAN LOW WATER
- DNR CMPA/HTL
- PROJECT AREA
- RIP RAP
- FLEXAMAT
- FILTRESS GROSOXX
- MARSH VEG PLANTING
- UPLAND VEG PLANTING
- EROSIONAL AREA



MARSH VEGETATION PLANTING
1,330 SF

RIP RAP TOE AND
EDGE PROTECTION
225 SF

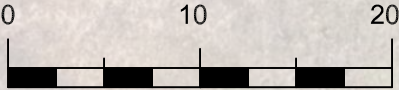
FILTREXX GREENLOXX
1318.4 SF
234 LF

UPLAND VEGETATION PLANTING
1246.78 SF

SINGLE LAYER
FLEXAMAT
1,386 SF
86 LF

FILTREXX GREENLOXX
105 SF
17 LF

CMPA JURISDICTION LINE/
HIGH TIDE LINE



GRAPHIC SCALE
1 inch = 10 ft.

LIVING SHORELINE (1)

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

PREPARED FOR:
RAJ PATEL

DATE: 02/20/2025
SCALE: 1" = 10'

4

SHEET:

NOTES:
1. IMPACTS:
FLEXAMAT: 1,386 SF
MARSHLAND: 741 SF
UPLAND: 845 SF
RIP RAP: 225 SF (+9 CY) (MARSHLAND IMPACTS)
FILTREXX GREENLOXX: 1,423.4 SF
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NOT RELEASED
FOR
CONSTRUCTION

LEGEND
These standard symbols will
be found in the drawing.

- MEAN LOW WATER
- DNR CMPA/HTL
- PROJECT AREA
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- FLEXAMAT
- FILTRESS GROSOXX
- MARSH VEG PLANTING
- UPLAND VEG PLANTING
- EROSIONAL AREA



LIVING SHORELINE (2)
LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
RAJ PATEL

DATE: 02/20/2025
SCALE: 1" = 20'

5

SHEET:

LEGEND

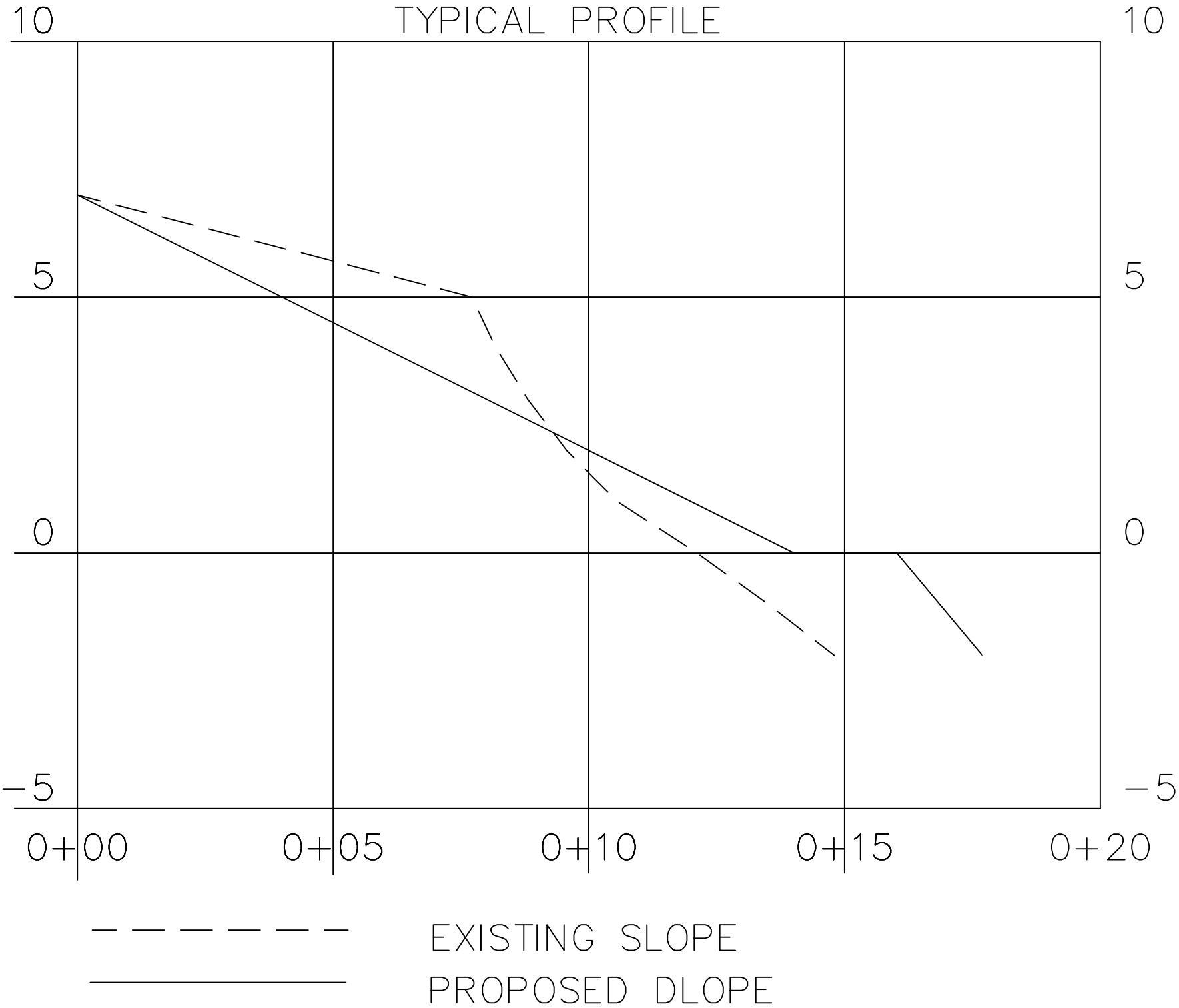
These standard symbols will
be found in the drawing.

- MEAN LOW WATER
- DNR CMPA/HTL
- PROJECT AREA
- RIP RAP
- FLEXAMAT
- FILTRESS GROSOXX
- MARSH VEG PLANTING
- UPLAND VEG PLANTING
- EROSIONAL AREA

PROFILE

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
RAJ PATEL

DATE: 02/20/2025
SCALE: NTS

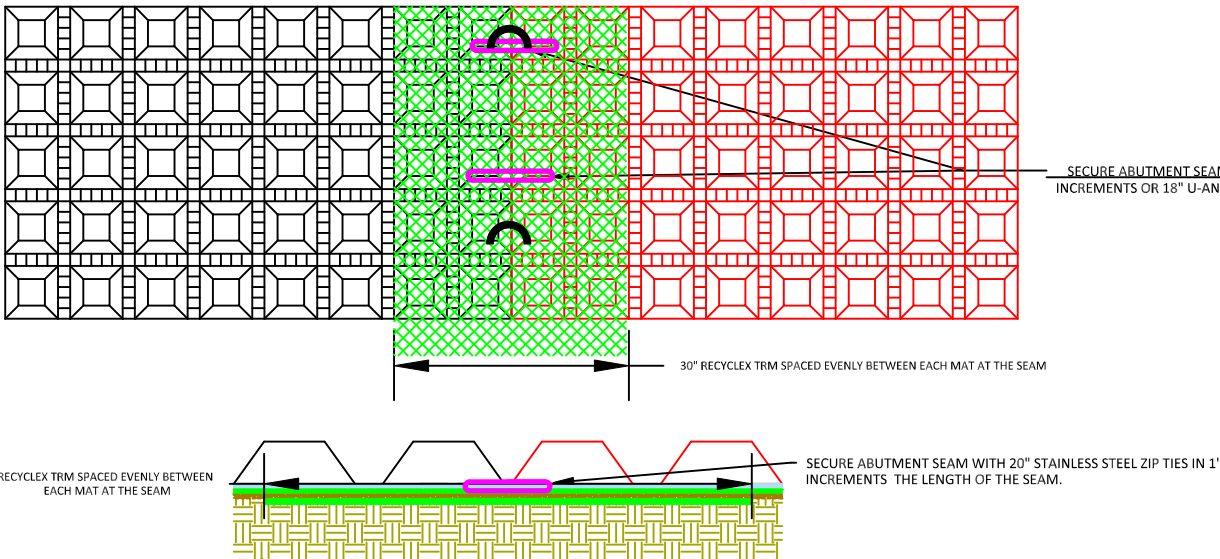


LEGEND

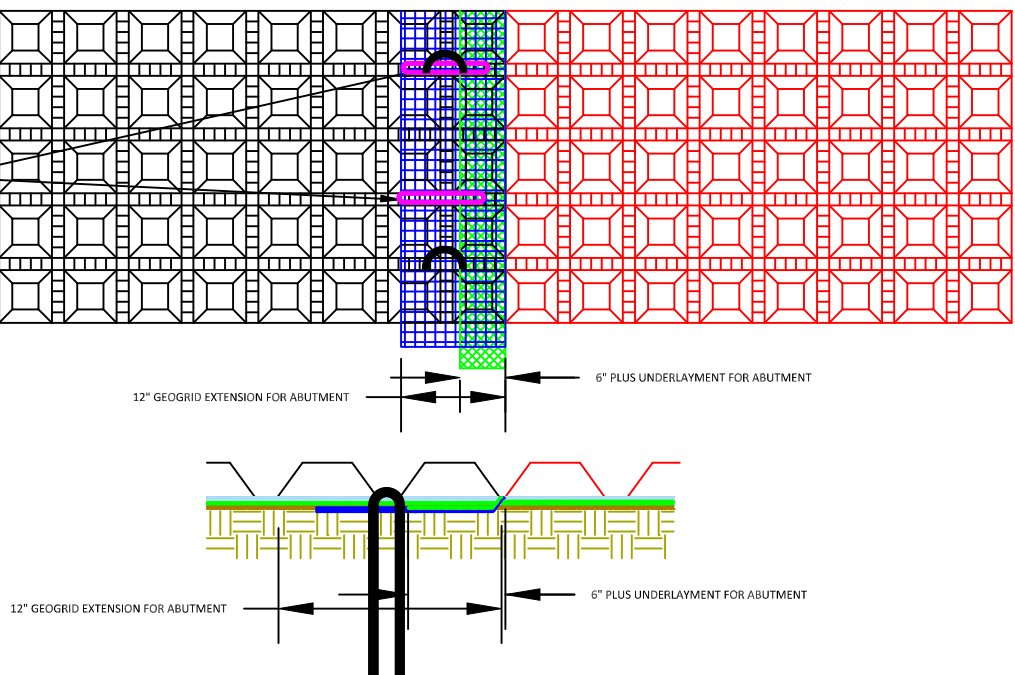
These standard symbols will
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- MEAN LOW WATER
--- DNR CMPA/HTL
- PROJECT AREA
RIP RAP
FLEXAMAT
FILTRESS GROSOXX
MARSH VEG PLANTING
UPLAND VEG PLANTING
EROSIONAL AREA

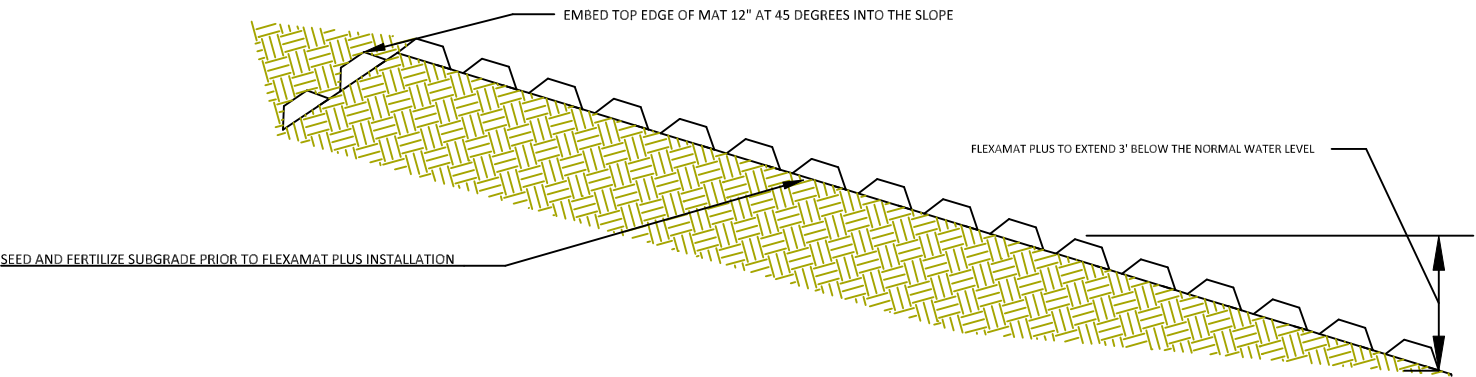
ABUTMENT METHOD FOR SHORELINE WIDTH LESS THAN 16'



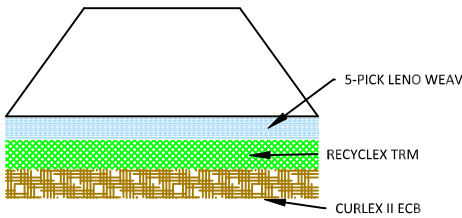
ABUTMENT METHOD FOR SHORELINE WIDTH GREATER THAN 16'



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 - 2

PROFILE

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA
PREPARED FOR:
RAJ PATEL

DATE: 02/20/2025
SCALE: NTS

7

SHEET:

LEGEND

These standard symbols will be found in the drawing.

- MEAN LOW WATER
DNR CMPA/HTL
- PROJECT AREA
RIP RAP
FLEXAMAT
FILTRESS GROSOXX
MARSH VEG PLANTING
UPLAND VEG PLANTING
EROSIONAL AREA

FILTREXX DETAILS

LABARBA ENVIRONMENTAL SERVICES
BRUNSWICK, GA

PREPARED FOR:
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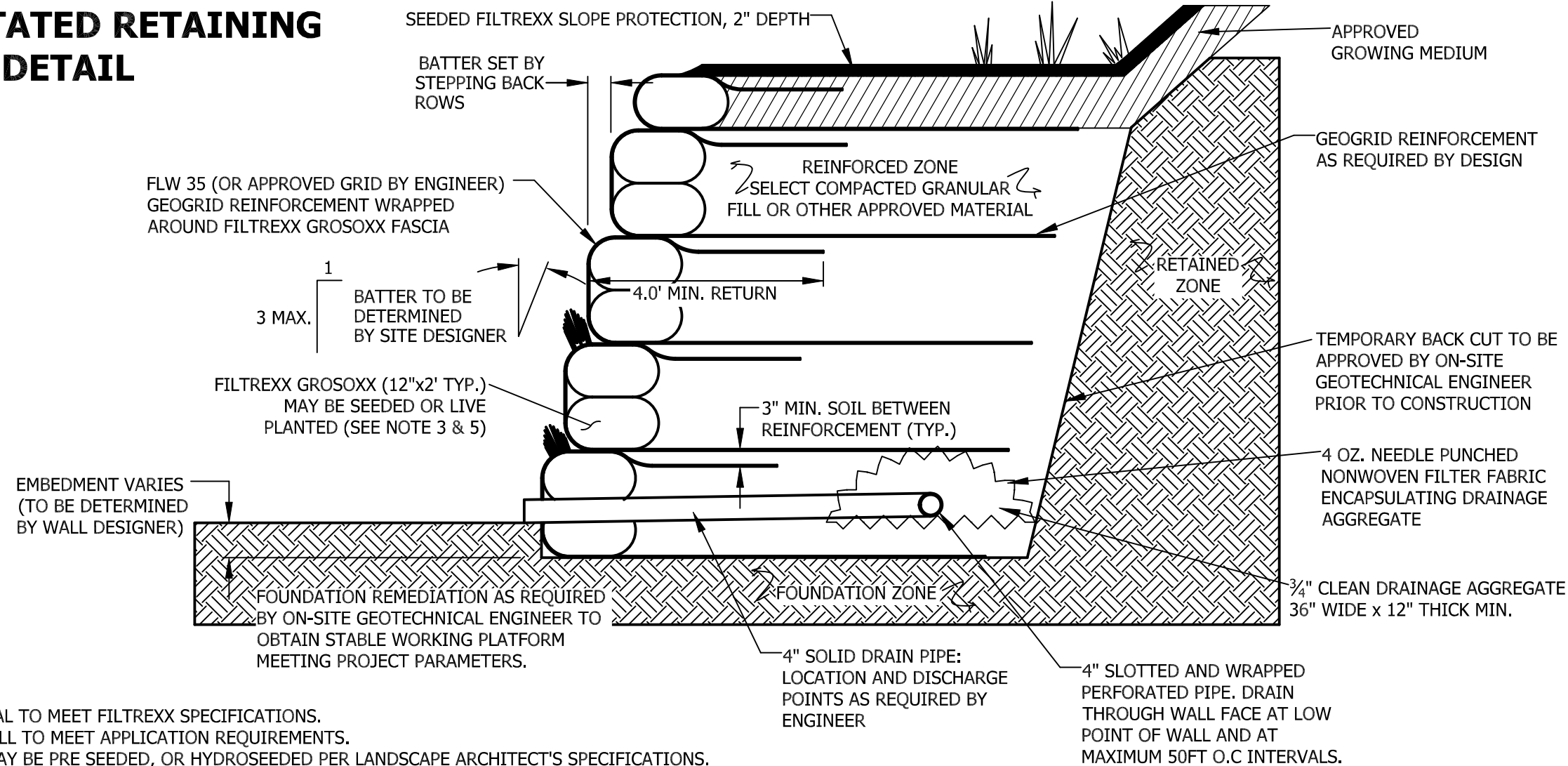
DATE: 02/20/2025

SCALE: NTS

8

SHEET:

GREENLOXX MSE VEGETATED RETAINING WALL DETAIL



NOTES:

1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. GROSOXX FILL TO MEET APPLICATION REQUIREMENTS.
3. GROSOXX MAY BE PRE SEED, OR HYDROSEED PER LANDSCAPE ARCHITECT'S SPECIFICATIONS.
4. BACKFILL TO BE PLACED PER ENGINEER'S REQUIREMENTS.
5. GEOGRID STRENGTH, LENGTH, AND VERTICAL SPACING TO BE DETERMINED BY ENGINEER. GEOGRID--NO STRANDS ARE TO BE CUT DURING PLANTING, ETC. WE RECOMMEND BI-DIRECTIONAL STRENGTH FOR CONSTRUCTION EASE.
6. NATIVE AND DRAINAGE BACKFILL TO BE SEPARATED BY NON-WOVEN FILTER FABRIC.

THESE GRAPHIC REPRESENTATIONS ARE INTENDED FOR PRELIMINARY DESIGN PURPOSES ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION WITHOUT THE SIGNATURE OF A REGISTERED PROFESSIONAL ENGINEER.

DRAWN		FILTREXX LIVING WALLS	
CHECKED		TITLE	
QA		GREENLOXX MSE VEGETATED	
WFG		RETAINING WALL DETAIL	
APPROVED		SIZE	DWG NO
		D	GREENLOXX MSE VEGETATED
		SCALE	N/A
			SHEET 1 OF 1

RETAINING WALL DETAIL