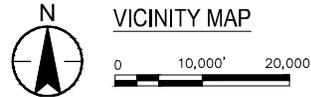
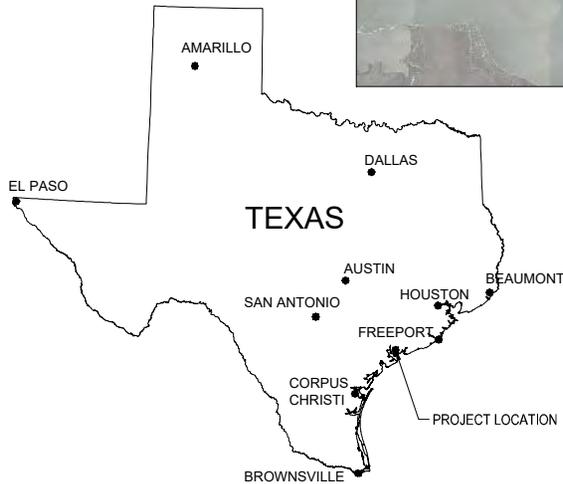


# CALHOUN COUNTY PORT ALTO SHORELINE RESTORATION AND HABITAT PROTECTION PROJECT

SHEET INDEX	
SHEET NO.	SHEET TITLE
1	LOCATION MAP
2	NOTES AND QUANTITIES
3	EXISTING SITE PLAN
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5	DREDGE AREA DETAILS
6	BEACH FILL DETAILS
7	BREAKWATER DETAILS
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**NATURE OF ACTIVITY:**  
 THE PURPOSE OF THIS PROJECT IS TO RESTORE BEACH ACCESS WITHIN THE PORT ALTO PARK, REDUCE EROSION, AND TO PROTECT EXISTING WETLAND HABITATS.



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**PERMIT DRAWINGS**

THESE PLANS ARE INTENDED FOR PERMITTING AND ARE NOT TO BE USED FOR BIDDING OR CONSTRUCTION

CLIENT:

CALHOUN COUNTY

DATE:

11/27/2023

PROJECT NO.

177311818

PROJECT:

PORT ALTO SHORELINE RESTORATION AND HABITAT PROTECTION PROJECT

SHEET 1 of 8

LOCATION MAP

VERIFY SCALES  
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GENERAL NOTES:

1. THIS DRAWING SET AMENDS EXISTING PERMIT SWG-2012-00493.
2. APPROXIMATE PROJECT LOCATION:  
28° 39' 55.32"N  
96° 24' 27.42"W
3. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) UNLESS OTHERWISE NOTED.
4. CONTOURS SHOWN DEVELOPED FROM SURVEY COLLECTED BY CIVLORP BETWEEN APRIL AND MAY 2023 USING HYDROGRAPHIC, TOPOGRAPHIC, AND LIDAR SURVEY METHODS.
5. AERIAL IMAGERY BASEMAP IS FROM MICROSOFT BING MAPS - MICROSOFT CORPORATION EARTHSTAR GEOGRAPHICS.
6. SENSITIVE HABITAT AND TIDAL ELEVATION SURVEYS CONDUCTED BY TRITON ENVIRONMENTAL SOLUTIONS, LLC FROM 4/4/23 - 4/5/23.

TIDAL ELEVATIONS (NAVD88)	
MEAN HIGH WATER (MHW):	+1.09 FT
ANNUAL HIGH TIDE (AHT)	+1.84 FT

REFERENCE NOAA STATION NO. 8773701: PORT O'CONNOR

ENVIRONMENTAL NOTES:

1. THE PROJECT IS WITHIN AND ADJACENT TO ENVIRONMENTALLY SENSITIVE AREAS. EXISTING WETLANDS WILL BE PHYSICALLY MARKED FOR AVOIDANCE AND BEST MANAGEMENT PRACTICES FOR TURBIDITY CONTROLS, DREDGING, AND PROTECTION OF THE ENVIRONMENT WILL BE IMPLEMENTED.
2. TEMPORARY ACCESS ROUTE SHOWN ON SHEET 4 SHALL MAINTAIN A 20 FOOT MAXIMUM WIDTH.
3. TIMBER MATS, OR EQUIVALENT SHALL BE UTILIZED TO MINIMIZE DISTURBANCE TO VEGETATION, IMMEDIATELY UPON COMPLETION OF WORK.

PROPOSED ACTIVITIES			
DESCRIPTION	MAX. AREA (ACRE)	MAX. VOLUME (CY)	MATERIAL
BORROW AREA	1.1	8,700	NATIVE SEDIMENT
BEACH FILL (NORTH)	3.7	20,500	NATIVE SEDIMENT AND IMPORTED SAND FILL
BEACH FILL (SOUTH)	4.4	19,500	NATIVE SEDIMENT AND IMPORTED SAND FILL
PROPOSED BREAKWATERS (ALTERNATIVE "A")	1.2	7,100	STONE
PROPOSED BREAKWATERS (ALTERNATIVE "B")	0.6	7,100	ARTIFICIAL REEF UNITS, STONE FILL GABIONS
CIRCULATION CHANNELS (EXCAVATION)	0.3	1,200	NATIVE SEDIMENT

MAXIMUM PROPOSED PROJECT IMPACTS			
PROJECT FEATURE	HABITAT	TYPE	QUANTITY
BEACH FILL (NORTH)	LIVE OYSTER	RELOCATED	0.16 ACRES
BORROW AREA AND CIRCULATION CHANNEL DREDGING	ESTUARINE WETLANDS	PERMANENT IMPACT	0.22 ACRES
BORROW AREA AND CIRCULATION CHANNEL DREDGING	WETLAND - SMOOTH CORDGRASS	PERMANENT IMPACT	0.07 ACRES
TEMPORARY ACCESS ROUTE	ESTUARINE WETLANDS	TEMPORARY IMPACT	0.09 ACRES

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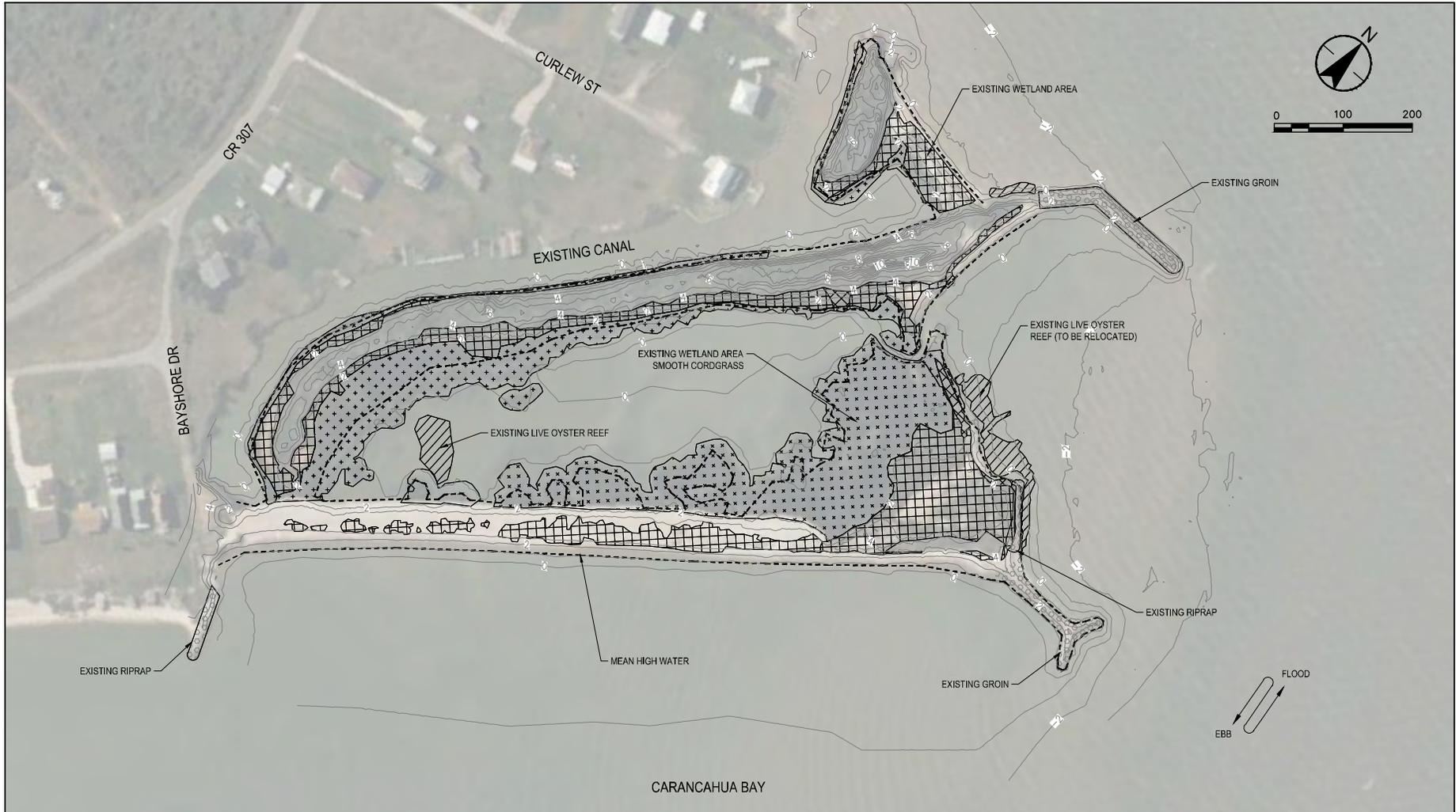
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SHEET 2 of 8

NOTES AND QUANTITIES

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**LEGEND:**

-  LIVE OYSTER
-  WETLAND AREA - SMOOTH CORDGRASS
-  WETLAND AREA
-  MEAN HIGH WATER LINE
-  EXISTING GROINS AND RIPRAP

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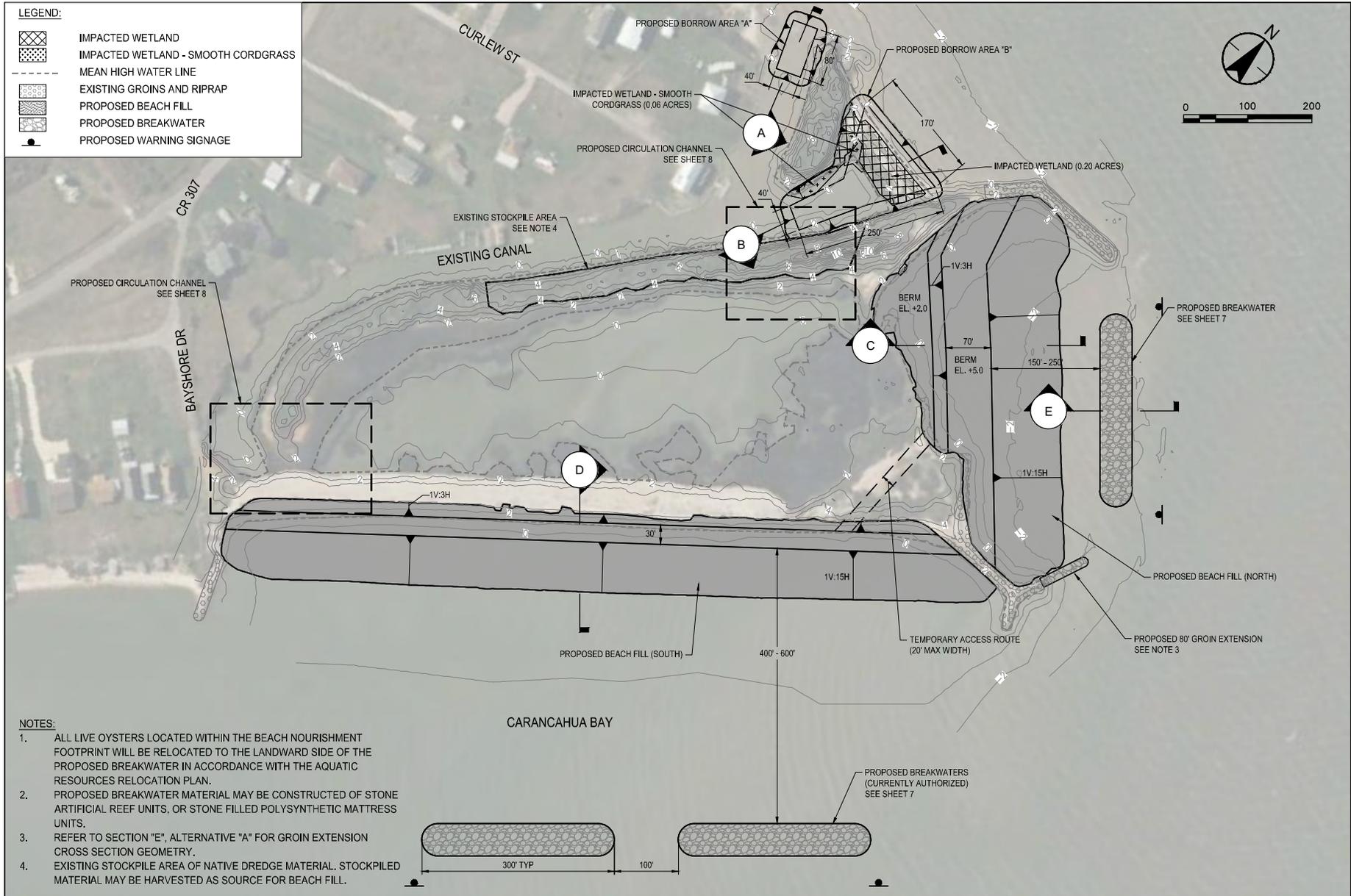
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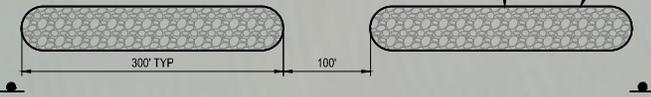
SHEET 3 of 8

EXISTING SITE PLAN

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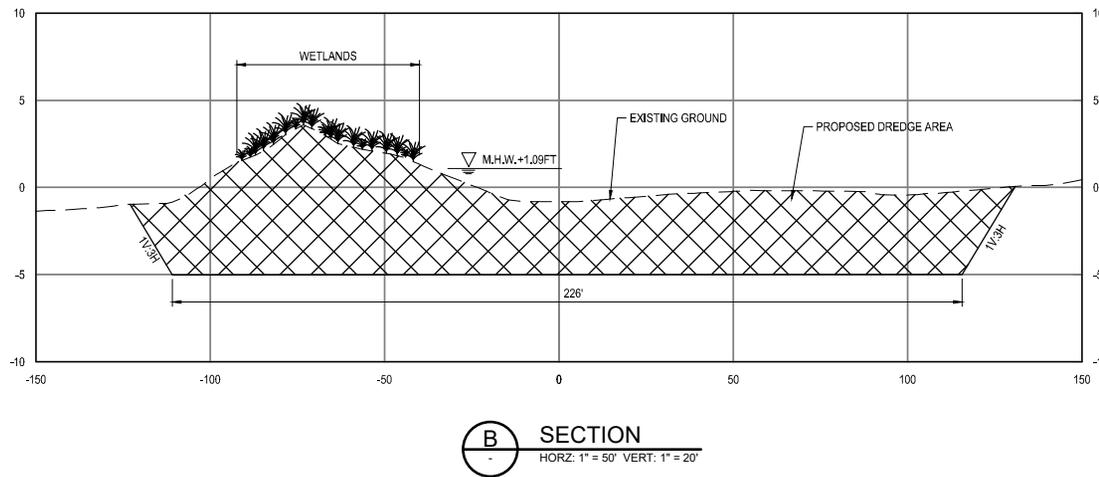
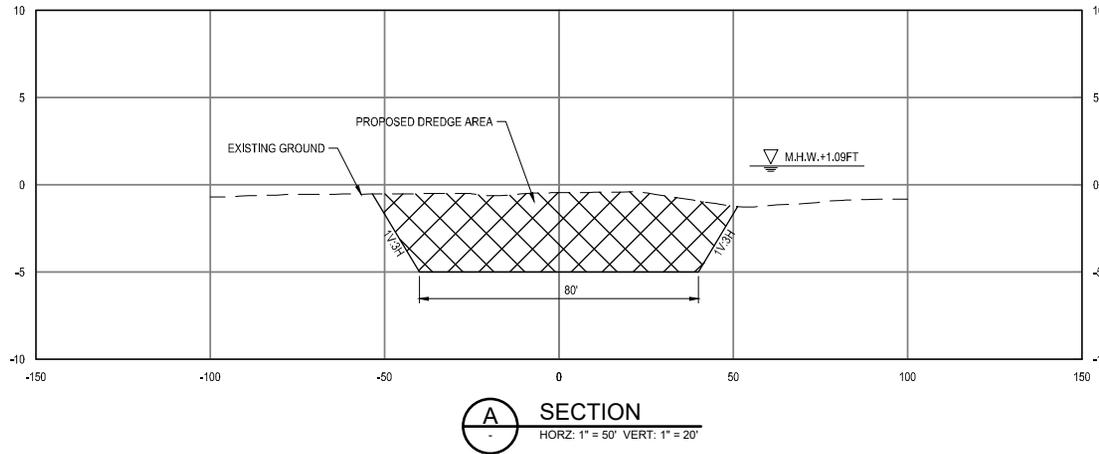


- NOTES:**
1. ALL LIVE OYSTERS LOCATED WITHIN THE BEACH NOURISHMENT FOOTPRINT WILL BE RELOCATED TO THE LANDWARD SIDE OF THE PROPOSED BREAKWATER IN ACCORDANCE WITH THE AQUATIC RESOURCES RELOCATION PLAN.
  2. PROPOSED BREAKWATER MATERIAL MAY BE CONSTRUCTED OF STONE ARTIFICIAL REEF UNITS, OR STONE FILLED POLYSYNTHETIC MATTRESS UNITS.
  3. REFER TO SECTION "E", ALTERNATIVE "A" FOR GROIN EXTENSION CROSS SECTION GEOMETRY.
  4. EXISTING STOCKPILE AREA OF NATIVE DREDGE MATERIAL. STOCKPILED MATERIAL MAY BE HARVESTED AS SOURCE FOR BEACH FILL.



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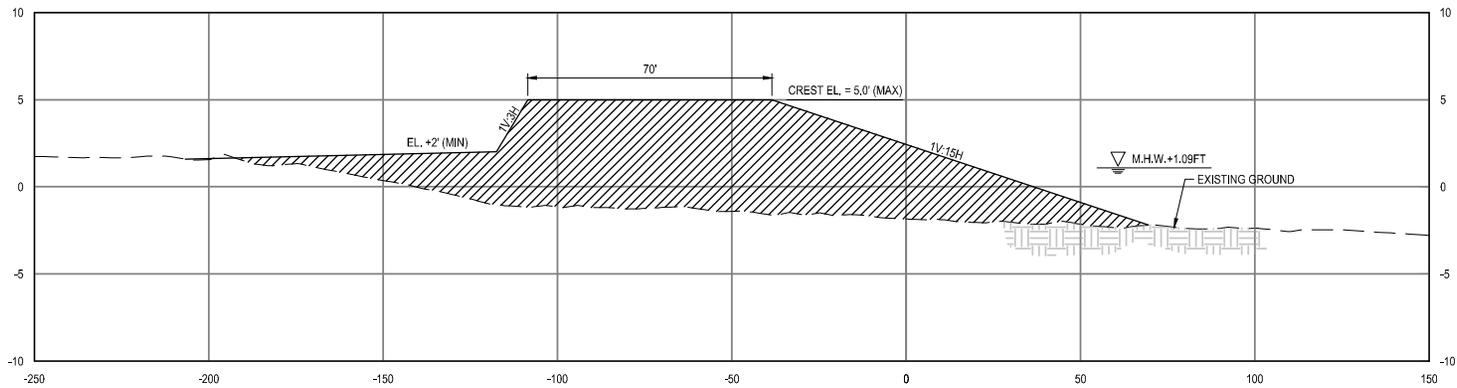
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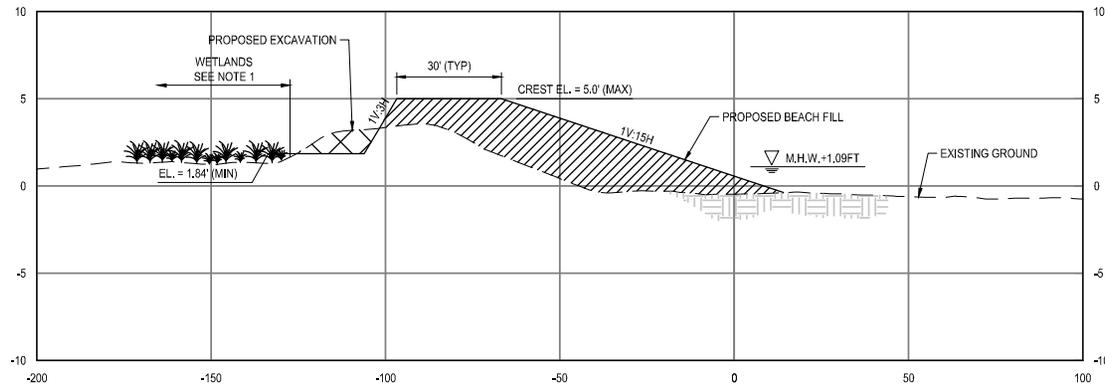
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SHEET 5 of 8

**DREDGE AREA DETAILS**



**C** SECTION  
 HORZ: 1" = 50' VERT: 1" = 20'



**D** SECTION  
 HORZ: 1" = 50' VERT: 1" = 20'

**NOTES:**

- EXISTING WETLANDS WILL BE PHYSICALLY MARKED AND AVOIDED DURING PROPOSED BEACH FILL ACTIVITIES.
- NATIVE SEDIMENT ANGLE OF REPOSE (AOR) IS APPROXIMATELY 1V:15H, BELOW WATERLINE PROPOSED BEACH FILL TEMPLATE WILL FOLLOW AOR.

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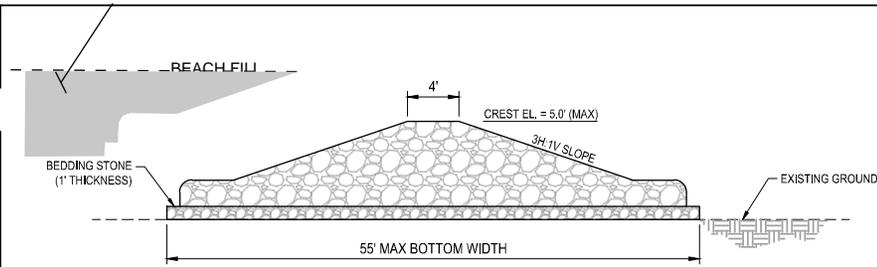
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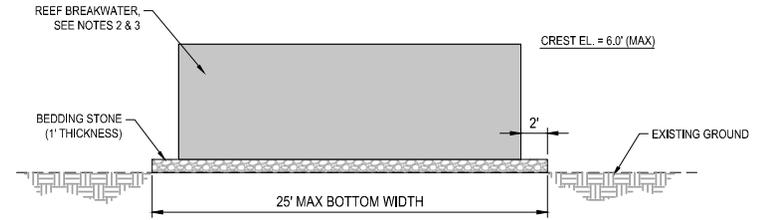
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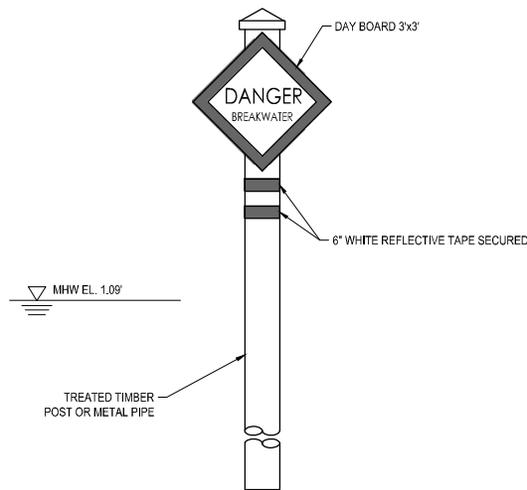
BEACH FILL DETAILS



**F** REVETEMENT  
 SCALE: NTS



**E** ALTERNATE B - REEF BREAKWATER SECTION  
 SCALE: NTS



**1** TYPICAL BREAKWATER WARNING SIGN  
 SCALE: NTS

**NOTES:**

1. PROPOSED BREAKWATER WILL BE CONSTRUCTED IN WATER DEPTHS BETWEEN -1.0' AND -2.5' NAVD88.
2. THE REEF BREAKWATER TOP ELEVATION WILL VARY BETWEEN +3 AND +6 FT NAVD 88.
3. REEF BREAKWATER WILL BE COMPOSED OF ROWS OF INDIVIDUAL GEOMETRIC CONCRETE UNITS, VERTICALLY INTERLOCKING CONCRETE UNITS, OR A MESH GEOGRID CONTAINING STONE (I.E. GABION / MARINE MATTRESS). THE UNITS WILL BE PLACED ON A STONE AND GEOTEXTILE / GEOGRID FOUNDATION.
4. TEMPORARY AND PERMANENT WARNING SIGNS TO BE LOCATED AS REQUIRED BY U.S. COAST GUARD (USCG). ALL SIGNAGE WILL MEET USCG STANDARDS.

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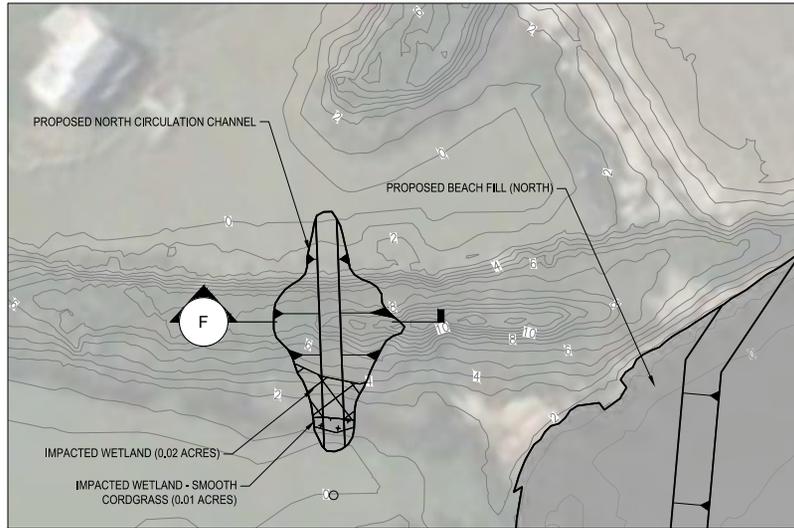
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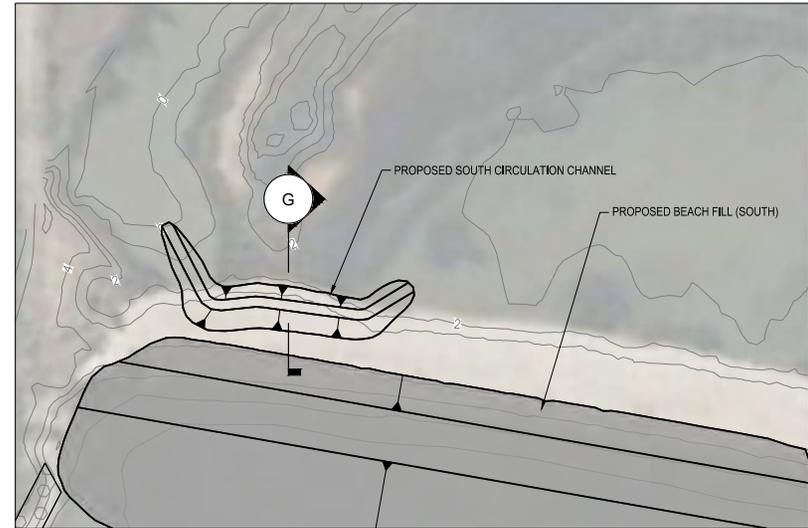
**BREAKWATER DETAILS**

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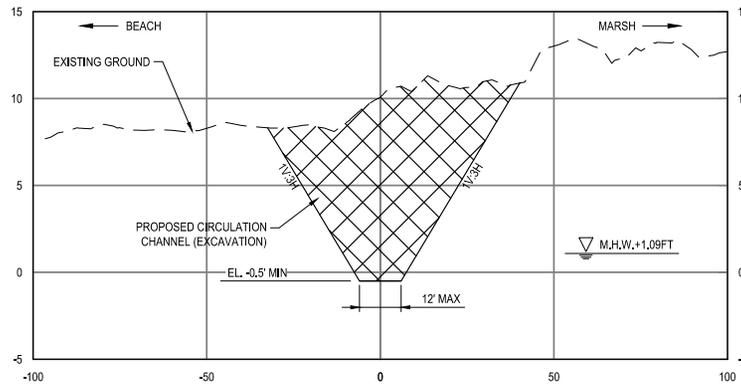


**DETAIL 1**  
 NORTH CIRCULATION CHANNEL  
 SCALE: 1" = 100'

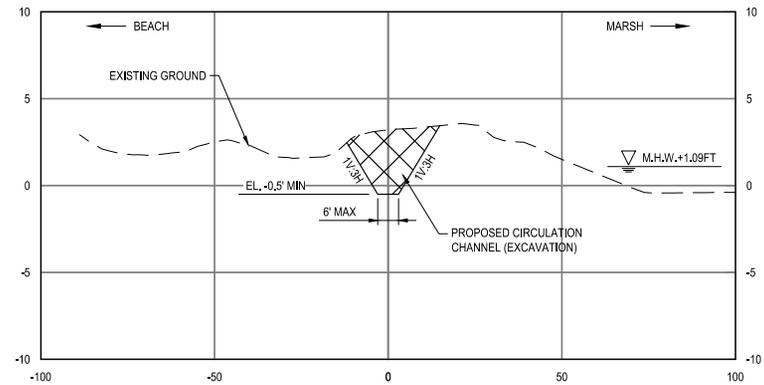


**DETAIL 2**  
 SOUTH CIRCULATION CHANNEL  
 SCALE: 1" = 100'

- NOTES:
1. BEACH QUALITY SEDIMENT EXCAVATED FROM CIRCULATION CHANNEL MAY BE BENEFICIALLY USED ALONG THE BEACH FILL (SOUTH) TEMPLATE.



**SECTION F**  
 HORZ: 1" = 50' VERT: 1" = 10'



**SECTION G**  
 HORZ: 1" = 50' VERT: 1" = 10'

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**MARSH CIRCULATION DETAILS**