

**APPENDIX A**  
**TE-0176 NARRATIVE SCOPE OF WORK AND 90 PERCENT**  
**DESIGN PLANS**

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**TE-176 NARRATIVE SCOPE OF WORK**

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## **WEST BELLE HEADLAND REPAIR PROJECT (TE-0176) NARRATIVE**

### **1.0 INTRODUCTION**

The West Belle Headland (WBH) Repair Project (TE-0176) Area is located in Lafourche and Terrebonne Parishes, Louisiana, and is part of the Terrebonne Basin. The Terrebonne Basin consists of four contiguous water bodies, from west to east, named Caillou Bay, Lake Pelto, Terrebonne Bay, and Timbalier Bay, separated from the open Gulf of Mexico by a series of barrier islands. WBH is located on the far eastern side of the Terrebonne Basin (Figure 1).

The purpose of TE-0176 includes reestablishment of the geomorphic and ecological form and function (GEFF) of WBH that were constructed under the TE-0118 project and eroded by Hurricane Zeta, through beach, dune, and intertidal marsh habitat creation and reinforcing the shoreline through fill placement utilizing offshore sand sources. Restoration of the GEFF will provide the buffer to reduce the forces and effects of wave action, saltwater intrusion, storm surge, and tidal currents on the WBH as well as adjacent wetlands and estuary and provide a marsh platform to capture overwash sediments during episodic events, serving as a roll-over platform. TE-0176 will also provide protection and sustain significant and unique foraging and nesting areas for threatened, endangered and protected species.

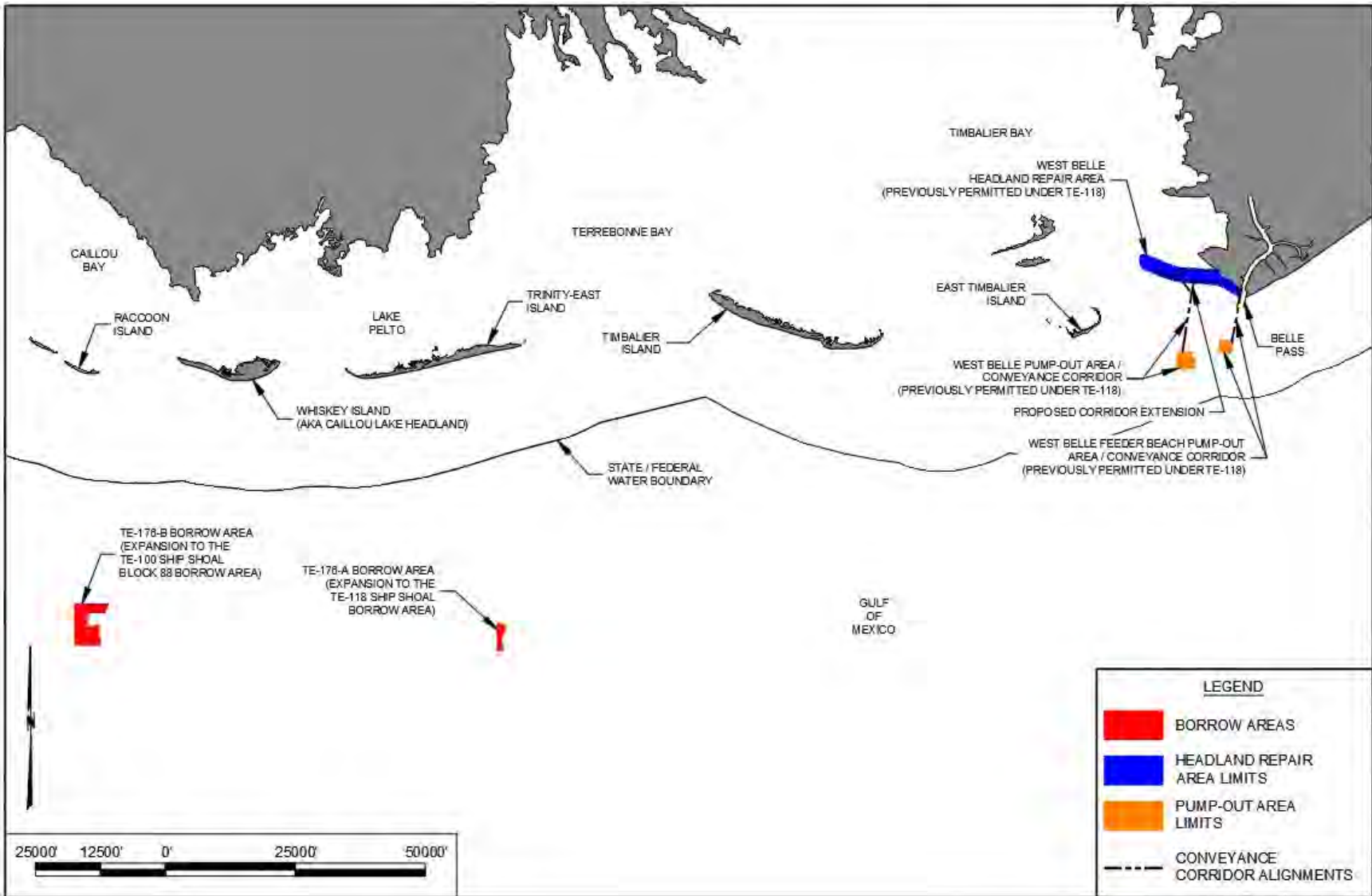


Figure 1. Project Overview

## **2.0 POST-STORM REPAIR PROJECT DESCRIPTION**

### **2.1 REPAIR PROJECT**

The Project Area template is approximately 17,500 linear feet in length and has essentially the same footprint as the constructed TE-0118 project footprint. The target elevation of the dune will be +7.5 feet (ft) NAVD88, with fore- and back-slopes of 1V:25H and a typical width of 100 ft at the crest. The target elevation of the beach will be +5.0 ft NAVD88, with a slope of 1V:25H from the beach berm crest extending seaward to the intersection with the existing grade, and a typical width of 290 ft. The beach and dune feature will extend from Station 45+00 to 220+00.

The TE-0176 marsh feature is approximately 8,500 linear ft in length and involves placement of sand to create intertidal marsh habitat. The marsh platform target elevation is +3.0 ft NAVD88 with an average width of 1,145 ft. The marsh feature will extend from Station XX+130 to YY+190+00.

### **2.2 SAND SOURCES**

Two sand borrow areas for TE-0176 are located on the Outer Continental Shelf within the South Pelto Lease Blocks 12 and Ship Shoal Block 88 that were identified from previous sediment geophysical/geotechnical surveys. Both areas investigated have been deemed clear of cultural resources through analysis of the detailed geophysical surveys by the Bureau of Ocean Energy Management and the State Historical Preservation Office of Louisiana.

#### **2.3.1 TE-0176-A Borrow Area**

A westward expansion of the Ship Shoal Borrow Area (SSBA) utilized for the TE-0118 project, now designated as the TE-0176-A Borrow Area, is possible following the clearing of two avoidance areas on the western perimeter of the original SSBA Borrow Area. The dredge cut design was extended into the expansion area based on the current adjacent cuts. The average percent sand and grain size were computed to be 95% and 0.166 mm, respectively (CEC-Stantec, 2019). The TE-0176-A Borrow Area contains an estimated volume of 2.31 MCY of beach, dune and marsh compatible sand.

#### **2.3.2 TE-0176-B Borrow Area**

The TE-0176-B Borrow Area is a westward expansion of the Ship Shoal Block 88 Borrow Area (SS88) utilized for the Caillou Lake Headlands Restoration Project (TE-0100). During the

design phase of the TE-0100 borrow area, SS88 was delineated in the eastern portion of the geophysical/geotechnical survey area, thus allowing for westward expansion. Sediment analyses performed during the design phase indicated good quality sand containing an average grain size of 0.19 mm classified as very fine sand in the Wentworth scale and fine sand in ASTM soil size ranges and comprised of over 96% sand (CEC, 2013). The TE-0176-B Borrow Area dredge cut designs were based on the previous TE-0100 adjacent cuts ranging from -27 ft NAVD88 to -34 ft NAVD88. The estimated volume of beach, dune and marsh compatible sand available within TE-0176-B is 8.14 MCY.

## 2.3 CONSTRUCTION METHODS

### 2.4.1 Dredging

The two anticipated possible construction methods for excavating and transporting sand from the Borrow Areas to the Repair Project Area are hopper dredging and cutterhead-scow dredging. Hopper dredges are self-propelled seagoing vessels that retrieve sediment by loosening it hydraulically and pumping it to the surface from a suction head on the end of a long pipe called a drag arm that is suspended from the side of the vessel (Figure 2). Depending on the configuration, the hopper dredge can have one or two drag arms. The excavated sand will be discharged into the hopper within the hull. The hopper dredge will sail to either the same West Belle Pump-Out Area or the West Belle Feeder Beach Pump-Out Area, both of which were previously utilized for the TE-0118 Project. The hopper dredge shall suspend the sand within the hopper and directly pump out the sand to the fill site through a submerged sediment pipeline. The dredged sand will exit the Gulf and come onto the dry beach, then discharge into the fill template, where it will be graded using conventional earth moving equipment. Multiple booster pumps may be required for the process.

The second method involves use of a conventional cutterhead dredge, which suspends the sand mechanically with a rotating cutter, pumps it to the surface using a large suction pump, and transfer it through a spider barge distribution system into scow barges. The scow barges, each tended by a tug, will be towed to the designated pump-out areas and hydraulically unloaded directly from the scow barges into a submerged sediment pipeline to the fill site (Figure 3).

### 2.4.2 Pump-Out Areas and Conveyance Corridors

Two pump-out areas and conveyance corridors have been designated to convey the sand from the hopper dredges or scow barges to the repair template. Both pump-out areas and conveyance corridors have been previously permitted and utilized for the TE-0118 project. The West Belle Pump-Out Area is located approximately 2.3 nautical miles (NM) south of the Repair Project in Louisiana State waters. The West Belle Conveyance Corridor is

300 ft in width. A proposed bifurcation and extension of the West Belle Conveyance Corridor is also being permitted. This bifurcation will allow the construction contractor to install the sediment pipeline within the conveyance corridor with bends of 90 degrees or less when constructing the fill template to the east of the conveyance corridor landing. The West Belle Feeder Beach Pump-Out Area is south of the fill template and just west of the Belle Pass Navigation Channel. The West Belle Feeder Beach Conveyance Corridor is 200 ft in width, approximately 2.1 NM in length, and terminates at the eastern side of the previously constructed West Belle Feeder Beach.

#### 2.4.3 Water-Based Construction Equipment

In-water work will be conducted using barge/vessel-based heavy equipment (vessel draft: 4 ft to 8 ft offshore, 3 ft to 4 ft inshore) with no bottom disturbance allowed other than anchoring in the permitted allowable areas.

#### 2.4.4 Land-Based Construction Equipment

Land-based work will be conducted by bulldozers, excavators, front-end loaders, marsh buggies, and off-road vehicles. Land-based equipment will access the Project Area via the excavation of an access channel from approximately the -9.0 ft NAVD88 contour to the fill template or along the West Belle Feeder Beach from Belle Pass. The alignment of the access channel will be the same as that permitted and utilized for the TE-0118 project.



Magdalen Pump-Out



B.E. Lindholm Pump-Out



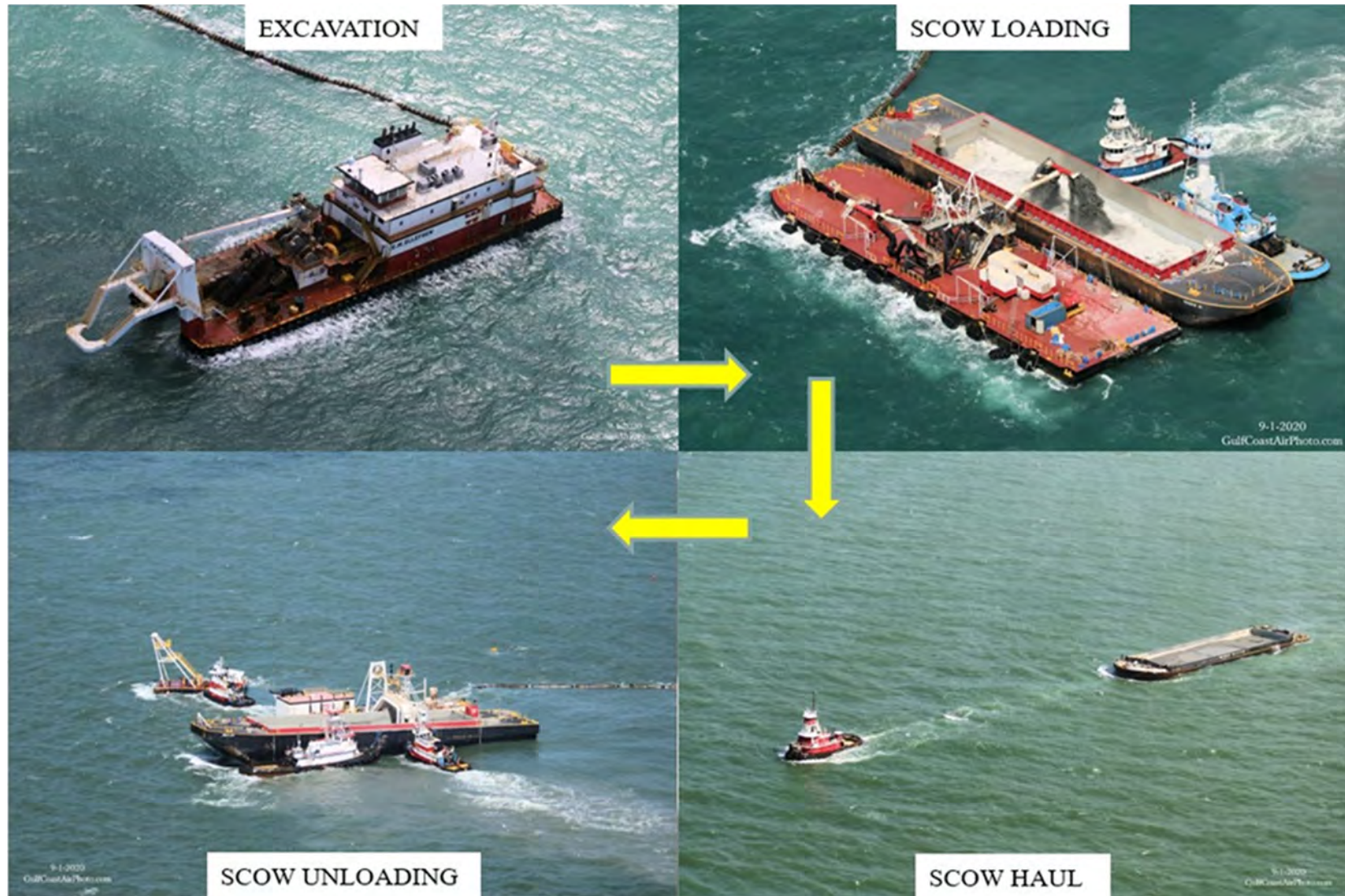
Magdalen



R.N. Weeks

Figure 2. Typical Hopper Dredges.





**Figure 3. Typical Cutterhead Dredging, Scow Barge Transport, and Hydraulic Unloading**

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## **90 PERCENT DESIGN PLANS**

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**GENERAL NOTES**

1. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE WORK AREA, CONSTRUCTION PLANS, AND CONTRACT DOCUMENTS AND SHALL CONDUCT WORK IN STRICT ACCORDANCE WITH ALL PERMITS AND APPROVALS OBTAINED FOR THIS PROJECT. THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY ERRORS OR DISCREPANCIES IN THE CONSTRUCTION PLANS PRIOR TO BIDDING.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING PIPELINE AND UTILITY OPERATORS THREE (3) WORKING DAYS PRIOR TO ANY WORK AT THE RESTORATION AREA AND AT LEAST FOUR (4) WEEKS PRIOR TO ANY WORK AT THE BORROW AREAS OR WITHIN THE CONVEYANCE CORRIDORS. ALL PIPELINES AND UNDERGROUND UTILITIES SHALL BE FIELD LOCATED AND MARKED BY CONTRACTOR PRIOR TO MOBILIZATION.
3. THE CONTRACTOR SHALL CONTACT LOUISIANA ONE CALL AT 1-800-272-3020 FIVE (5) WORKING DAYS PRIOR TO EXCAVATION TO LOCATE PIPELINES AND UTILITIES. THE CONTRACTOR SHALL WORK COOPERATIVELY WITH THE OWNER TO ADDRESS THE NOTIFICATION AND COORDINATION REQUIREMENTS WITH THE LANDOWNERS, UTILITY OPERATORS, AND PIPELINE COMPANIES. ALL KNOWN UTILITY OPERATORS, AND PIPELINE COMPANIES WITHIN THE PROJECT AREA ARE SHOWN AND LISTED IN THE APPENDICES OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REFER TO THE GENERAL PROVISIONS AND SPECIAL PROVISIONS OF THE CONTRACT DOCUMENTS FOR COORDINATION REQUIREMENTS WITH THESE LANDOWNERS, UTILITY OPERATORS, AND PIPELINE COMPANIES PRIOR TO AND DURING CONSTRUCTION.
4. LOCATIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO MOBILIZATION, THE CONTRACTOR SHALL VERIFY AND BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS/HER FAILURE TO EXACTLY LOCATE AND PRESERVE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING HIS/HER WORK. ANYTHING NOT SHOWN ON THESE PLANS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND SHALL NOT SERVE AS A BASIS FOR ADDITIONAL COMPENSATION, UNLESS APPROVED BY THE ENGINEER.
5. WATER BOTTOMS SHALL NOT BE DISTURBED DURING ACCESS TO WORK LOCATION OR BY AUTHORIZED ACTIVITIES WHETHER IT BE BY DREDGING, WHEEL WASHING, PROPWASHING, JETTING, MUCKING, PLOWING, BULL DOZING OR ANY MEANS OF MOVING BOTTOM MATERIAL, EXCEPT AS DEPICTED ON PLANS OR BY SPECIFICATIONS.
6. ALL LOGS, STUMPS, AND OTHER DEBRIS UNEARTHED DURING DREDGING SHALL BE REMOVED TO APPROVED OFFSITE DISPOSAL AREA.
7. THE CONTRACTOR MUST INSTALL AND MAINTAIN ANY SAFETY LIGHTS, SIGNS, AND SIGNALS ON AUTHORIZED FACILITIES, PLANT, AND EQUIPMENT AS PRESCRIBED BY U.S. COAST GUARD THROUGH REGULATIONS OR OTHERWISE.
8. ANY DAMAGE TO EXISTING U.S. COAST GUARD NAVIGATION AIDS OR PRIVATE NAVIGATION AIDS SHALL BE REPAIRED BY THE CONTRACTOR TO U.S. COAST GUARD STANDARDS AT THE EXPENSE OF THE CONTRACTOR.
9. WORK INVOLVING USE OF FLOATING CONSTRUCTION EQUIPMENT, INCLUDING BUT NOT LIMITED TO, BARGE MOUNTED CRANES, BARGE MOUNTED PILE DRIVING EQUIPMENT, FLOATING DREDGE EQUIPMENT, AND DREDGE DISCHARGE PIPELINES IN WATERS WITHIN U.S. COAST GUARD JURISDICTION SHALL REQUIRE NOTIFICATION BY THE CONTRACTOR TO THE U.S. COAST GUARD SUCH THAT A NOTICE TO MARINERS, IF REQUIRED, MAY BE PREPARED. NOTIFICATION, WITH A COPY OF PERMIT APPROVAL AND DRAWINGS, SHALL BE SUBMITTED TO THE OWNER AND ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
10. SEDIMENT PIPELINES IN OPEN WATER AND/OR NAVIGABLE WATERS SHALL BE MARKED WITH BUOYS BY THE CONTRACTOR IN ACCORDANCE WITH U.S. COAST GUARD REGULATIONS. THE CONTRACTOR SHALL MAINTAIN MARKER BUOYS DURING CONSTRUCTION OR HAVE ADEQUATE NAVIGATIONAL EQUIPMENT ON THE DREDGE TO AVOID DREDGING IN RESTRICTED AREAS. THE CONTRACTOR SHALL CONTAIN ALL ANCHORING WITHIN THE LIMITS OF THE ALLOWABLE ANCHOR AREAS. THE CONTRACTOR SHALL NOT ANCHOR OR EXCAVATE WITHIN 1,000 FEET (FT) OF PIPELINES NEAR THE TE-176-A AND TE-176-B BORROW AREAS. NO EXCAVATION SHALL BE PERMITTED WITHIN 50 FEET OF PIPELINES IN THE FILL AREAS.
11. THE CONTRACTOR SHALL BE REQUIRED TO CONFINE HIS/HER PLANT, EQUIPMENT, AND OPERATIONS OF PERSONNEL TO AREAS PERMITTED BY LAW, ORDINANCES, PERMITS, AND REQUIREMENTS OF CONSTRUCTION CONTRACT DOCUMENTS, AND SHALL NOT UNREASONABLY ENCUMBER PREMISES WITH PLANT, EQUIPMENT, OR MATERIALS. THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A CONSTRUCTION ACCESS PLAN AND A CONSTRUCTION ACCESS RESTORATION PLAN PRIOR TO ITS USAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION AND RESTORATION OF CONSTRUCTION ACCESS AREAS. CONSTRUCTION ACCESS AREAS THAT FALL OUTSIDE OF THE WORK AREA SHALL BE APPROVED BY THE OWNER AND ENGINEER PRIOR TO USE AND RESTORED TO PRE-CONSTRUCTION CONDITIONS AS PART OF DEMOBILIZATION.
12. THE CONTRACTOR SHALL FOLLOW CONVEYANCE CORRIDORS, REMAIN WITHIN APPROVED CONSTRUCTION ACCESS AREAS, AND/OR FILL TEMPLATES, AND SHALL NOT AT ANY TIME TRAVEL ON EXISTING MARSH OR VEGETATED WETLANDS UNLESS SPECIFIED IN THE PERMIT OR THROUGH WRITTEN DIRECTION FROM ENGINEER.
13. PLANS AND SPECIFICATIONS ARE COMPLEMENTARY. WHAT IS REQUIRED BY ONE IS BINDING AS IF REQUIRED BY ALL. CLARIFICATIONS, INTERPRETATIONS, AND/OR NOTIFICATIONS OF MINOR VARIATIONS AND DEVIATIONS IN THE CONTRACT DOCUMENTS WILL BE ISSUED BY THE ENGINEER.
14. THE RESTORATION AREA, ACCESS CORRIDOR, BORROW AREAS, AND/OR CONVEYANCE CORRIDORS MAY BE REVISED BY THE ENGINEER AT THE TIME OF CONSTRUCTION TO REFLECT CHANGES IN FIELD CONDITIONS.
15. ESTIMATED FILL QUANTITIES AND LINEAR LENGTHS SHOWN ARE FOR BIDDING PURPOSES ONLY AND WERE CALCULATED ACCORDING TO CONDITIONS AT THE TIME OF THE SURVEYS SPECIFIED IN THE SURVEY NOTES.


**SURVEY NOTES**

1. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), GEOID 12B) U. S. SURVEY FEET. ALL HORIZONTAL COORDINATES ARE GIVEN IN THE NORTH AMERICAN DATUM OF 1983 (NAD 83), LOUISIANA STATE PLANE, SOUTH ZONE, U.S. SURVEY FEET. ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC SURVEY AND LOUISIANA DEPARTMENT OF NATURAL RESOURCES MONUMENTS. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEY MONUMENT DATA SHEETS.

MONUMENTS	ELEVATION	NORTHING	EASTING
TE23-SM-01	7.30'	224,296.33	3,645,688.77

2. TE-118 CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OCEAN SURVEYS, INC. (OSI), MAY 2015. TE-118 AS-BUILT SURVEY PERFORMED BY EMC, INC. JULY 2022. TE-100 CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI, JUNE 2012. TE-100 AS-BUILT SURVEY PERFORMED BY HYDROTERRA TECHNOLOGIES, INC. (HTI), MAY 2018.
3. WEST BELLE CONVEYANCE CORRIDOR SURVEY PERFORMED BY EMC, APRIL 2020. WEST BELLE FEEDER BEACH CONVEYANCE CORRIDOR SURVEY PERFORMED BY DELTA COAST CONSULTANTS, LLC (DCC), MAY 2021.
4. WEST BELLE HEADLAND SURVEY PERFORMED BY DCC, DECEMBER 2021.
5. VIBRACORE COLLECTION IN TE-118/TE-176-A BORROW AREA PERFORMED BY OSI, 2015. VIBRACORE COLLECTION IN TE-100/TE-176-B BORROW AREA PERFORMED BY STE 2005.
6. INFORMATION SHOWN HEREON REFLECTS CONDITIONS AS THEY EXISTED ON SURVEY DATES SHOWN AND CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS AT THAT TIME.
7. MEAN HIGH WATER (MHW) AND MEAN LOW WATER (MLW) ARE BASED ON TIDAL DATUM OBTAINED FROM THE NOAA OPERATED TIDE STATION, "PORT FOURCHON, BELLE PASS, LA", STATION DESIGNATION 8762075. TIDAL EPOCH REFERENCED AT TIDE STATION IS 1983 - 2001. TIDAL DATUM IS BASED ON 5-YEAR RECORD FROM 2002 - 2006. MHW AND MLW ARE REFERENCED TO NAVD88, GEOID 12B THROUGH ANALYSIS OF SURFACE WATER ELEVATIONS AT EAST TIMBALIER ISLAND.
8. THE CONTRACTOR SHALL PERFORM THE REQUIRED SURVEYS IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS. THE CONTRACTOR SHALL PROVIDE DRAWINGS SHOWING THE MAGNETOMETER SURVEY TRACK LINES AND COORDINATES, AMPLITUDE, SIGNATURE TYPE, AND SIGNATURE WIDTH OF ALL MAGNETOMETER HITS TO THE ENGINEER PRIOR TO ANY EXCAVATION AS PER SPECIFICATIONS.

**PRELIMINARY**  
**90% DESIGN**

BY					
DESCRIPTION					
DATE					
REV.					
					
<p align="center"><b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802</p>					
<p align="center"><b>WEST BELLE HEADLAND REPAIR</b></p> <p align="center">DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.</p>					
<p align="center">GENERAL AND SURVEY NOTES</p> <p align="center">STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTIZ</p>					
DATE: MARCH 2023					
SHEET 2 OF 38					



**SUMMARY OF ESTIMATED QUANTITIES**

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	MOBILIZATION / DEMOBILIZATION - WEST BELLE HEADLAND	LUMP SUM	1
2	PRE-CONSTRUCTION/POST-CONSTRUCTION SURVEYING	LUMP SUM	1
3	CONSTRUCTION PROGRESS SURVEYING	LUMP SUM	1
4	HYDRAULIC FILL - WEST BELLE HEADLAND	CUBIC YARD	2,612,700
5	SAND FENCING	LINEAR FOOT	10,000
6	SETTLEMENT AND OVERWASH MONITORING SYSTEMS	EACH	7
7	SEA TURTLE RELOCATION TRAWLING - HOPPER DREDGING	DAY	180
8	SEA TURTLE TISSUE SAMPLING - HOPPER DREDGING	EACH	30
9	SEA TURTLE OBSERVATIONS - HOPPER DREDGING	DAY	170
10	DAILY BIRD ABATEMENT	DAY	200

**PRELIMINARY  
90% DESIGN**



**COASTAL  
ENGINEERING  
CONSULTANTS, INC.**  
PH: (225) 768-1982  
8570 ANSELMO LANE  
BATON ROUGE, LA  
70810

**COASTAL PROTECTION  
AND RESTORATION  
AUTHORITY**  
150 TERRACE AVENUE  
BATON ROUGE, LOUISIANA 70802

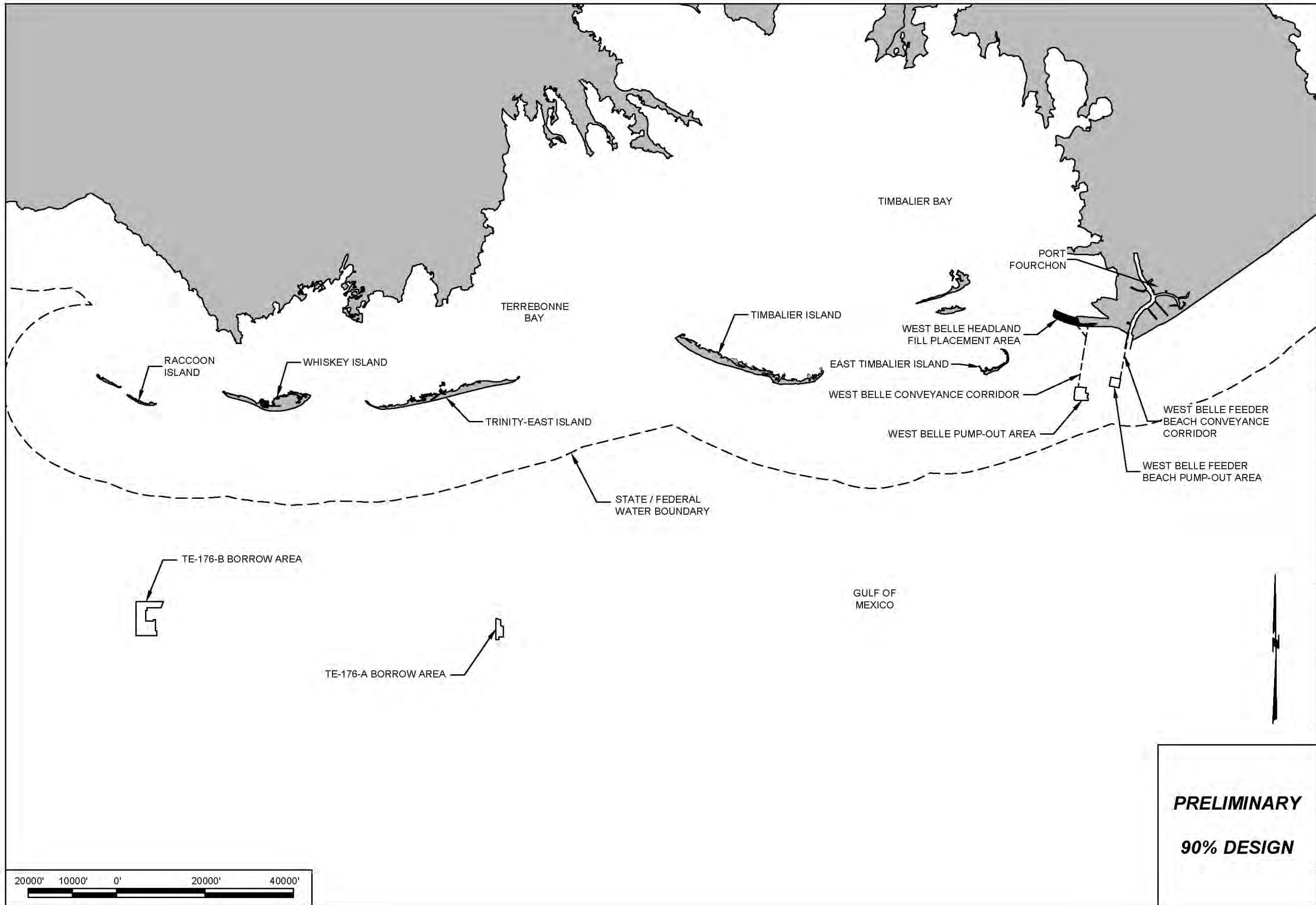
**WEST BELLE HEADLAND  
REPAIR**  
DESIGNED BY: BRETT BORNE, P.E.  
APPROVED BY: MICHAEL POTT, P.E.

**SUMMARY OF ESTIMATED  
QUANTITIES**  
STATE PROJECT NUMBER: TE-0176  
DRAWN BY: STEVE DARTIEZ

DATE: MARCH 2023

SHEET 3 OF 38

REV.	DATE	DESCRIPTION	BY

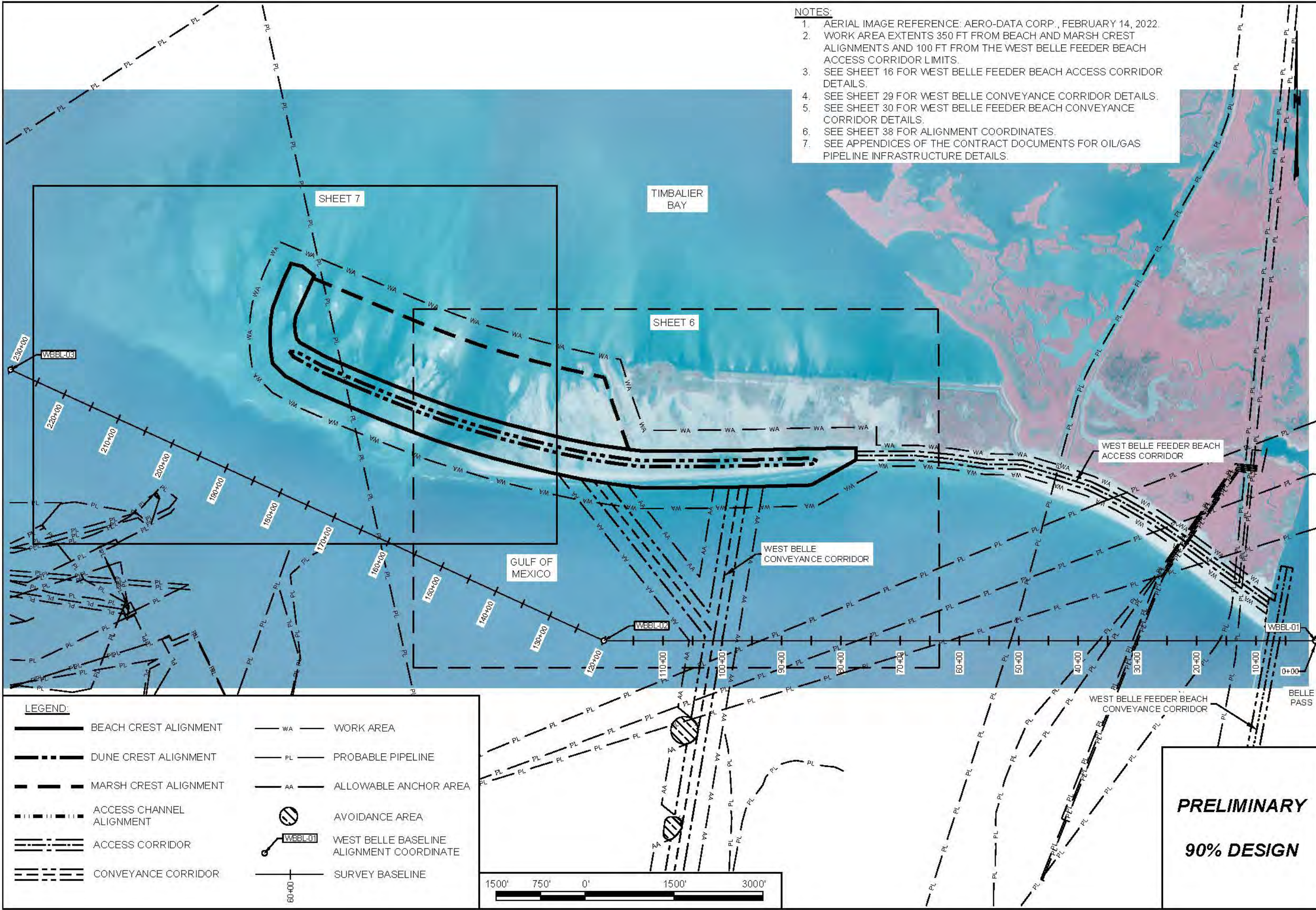


<p><b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b>          150 TERRACE AVENUE          BATON ROUGE, LOUISIANA 70802</p>		<p><b>COASTAL ENGINEERING CONSULTANTS, INC.</b>          PH: (225) 523-7403          1211 N. RANGE AVE          SUITE E          DENHAM SPRINGS, LA          70726</p>	
<p>WEST BELLE HEADLAND REPAIR</p>	<p>DESIGNED BY: BRETT BORNE, P.E.</p>	<p>APPROVED BY: MICHAEL POFF, P.E.</p>	<p>PROJECT OVERVIEW</p>
<p>STATE PROJECT NUMBER: TE-0176</p>	<p>DRAWN BY: STEVE DARTIZ</p>	<p>DATE: MARCH 2023</p>	<p>DATE</p>
<p>SHEET 4 OF 38</p>	<p>DESCRIPTION</p>	<p>REV.</p>	<p>BY</p>

**PRELIMINARY**  
**90% DESIGN**



- NOTES:**
1. AERIAL IMAGE REFERENCE: AERO-DATA CORP., FEBRUARY 14, 2022.
  2. WORK AREA EXTENTS 350 FT FROM BEACH AND MARSH CREST ALIGNMENTS AND 100 FT FROM THE WEST BELLE FEEDER BEACH ACCESS CORRIDOR LIMITS.
  3. SEE SHEET 16 FOR WEST BELLE FEEDER BEACH ACCESS CORRIDOR DETAILS.
  4. SEE SHEET 29 FOR WEST BELLE CONVEYANCE CORRIDOR DETAILS.
  5. SEE SHEET 30 FOR WEST BELLE FEEDER BEACH CONVEYANCE CORRIDOR DETAILS.
  6. SEE SHEET 38 FOR ALIGNMENT COORDINATES.
  7. SEE APPENDICES OF THE CONTRACT DOCUMENTS FOR OIL/GAS PIPELINE INFRASTRUCTURE DETAILS.

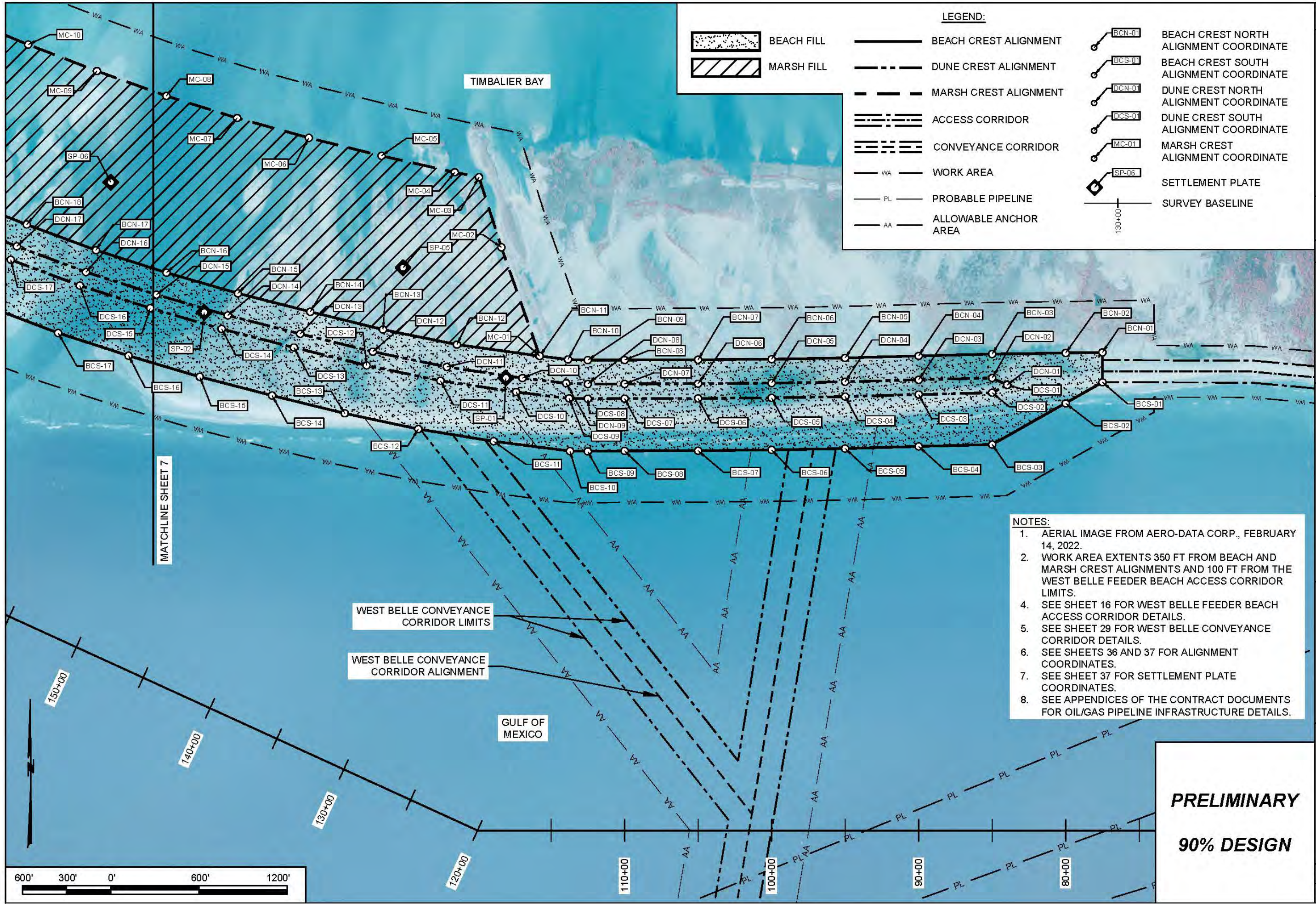


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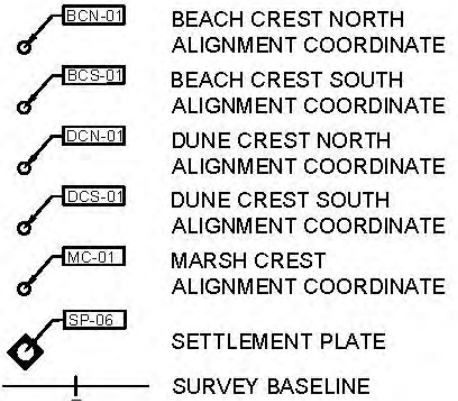
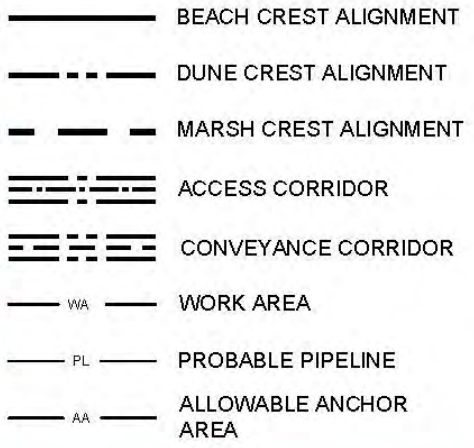
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|--|--------------------------|--|--|
|  | BEACH CREST ALIGNMENT    |  | WORK AREA                                |
|  | DUNE CREST ALIGNMENT     |  | PROBABLE PIPELINE                        |
|  | MARSH CREST ALIGNMENT    |  | ALLOWABLE ANCHOR AREA                    |
|  | ACCESS CHANNEL ALIGNMENT |  | AVOIDANCE AREA                           |
|  | ACCESS CORRIDOR          |  | WEST BELLE BASELINE ALIGNMENT COORDINATE |
|  | CONVEYANCE CORRIDOR      |  | SURVEY BASELINE                          |

 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	
<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	
WEST BELLE HEADLAND REPAIR	DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.
WEST BELLE HEADLAND OVERVIEW STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTZ	<b>PRELIMINARY</b>  <b>90% DESIGN</b>
DATE: MARCH 2023 SHEET 5 OF 39	REV. DATE DESCRIPTION BY





**LEGEND:**



MATCHLINE SHEET 7

WEST BELLE CONVEYANCE CORRIDOR LIMITS

WEST BELLE CONVEYANCE CORRIDOR ALIGNMENT

GULF OF MEXICO

TIMBALIER BAY

- NOTES:**
1. AERIAL IMAGE FROM AERO-DATA CORP., FEBRUARY 14, 2022.
  2. WORK AREA EXTENTS 350 FT FROM BEACH AND MARSH CREST ALIGNMENTS AND 100 FT FROM THE WEST BELLE FEEDER BEACH ACCESS CORRIDOR LIMITS.
  4. SEE SHEET 16 FOR WEST BELLE FEEDER BEACH ACCESS CORRIDOR DETAILS.
  5. SEE SHEET 29 FOR WEST BELLE CONVEYANCE CORRIDOR DETAILS.
  6. SEE SHEETS 36 AND 37 FOR ALIGNMENT COORDINATES.
  7. SEE SHEET 37 FOR SETTLEMENT PLATE COORDINATES.
  8. SEE APPENDICES OF THE CONTRACT DOCUMENTS FOR OIL/GAS PIPELINE INFRASTRUCTURE DETAILS.

**PRELIMINARY  
90% DESIGN**




**COASTAL ENGINEERING CONSULTANTS, INC.**  
 PH: (225) 523-7403  
 1211 N. RANGE AVE  
 SUITE E  
 DENHAM SPRINGS, LA  
 70726

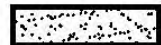




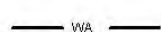


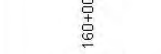
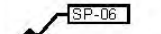




**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 150 TERRACE AVENUE  
 BATON ROUGE, LOUISIANA 70802

WEST BELLE HEADLAND REPAIR  
 DESIGNED BY: BRETT BORNE, P.E.  
 APPROVED BY: MICHAEL POFF, P.E.

WEST BELLE HEADLAND PLAN VIEW  
 STATE PROJECT NUMBER: TE-0176  
 DRAWN BY: STEVE DARTIEZ

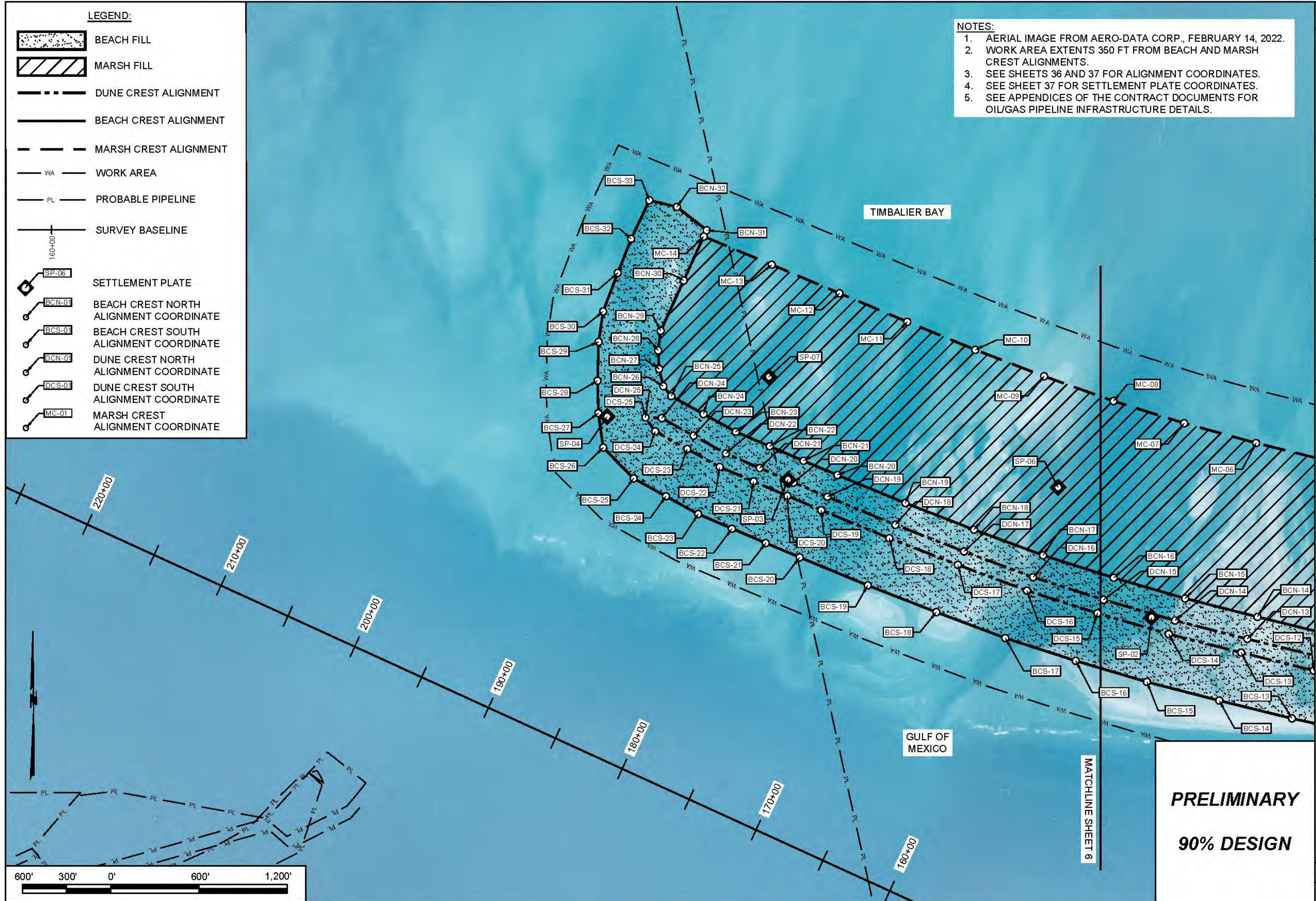


**LEGEND:**

-  BEACH FILL
-  MARSH FILL
-  DUNE CREST ALIGNMENT
-  BEACH CREST ALIGNMENT
-  MARSH CREST ALIGNMENT
-  WORK AREA
-  PROBABLE PIPELINE
-  SURVEY BASELINE
-  SETTLEMENT PLATE
-  BEACH CREST NORTH ALIGNMENT COORDINATE
-  BEACH CREST SOUTH ALIGNMENT COORDINATE
-  DUNE CREST NORTH ALIGNMENT COORDINATE
-  DUNE CREST SOUTH ALIGNMENT COORDINATE
-  MARSH CREST ALIGNMENT COORDINATE

**NOTES:**

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3. SEE SHEETS 36 AND 37 FOR ALIGNMENT COORDINATES.
4. SEE SHEET 37 FOR SETTLEMENT PLATE COORDINATES.
5. SEE APPENDICES OF THE CONTRACT DOCUMENTS FOR OIL/GAS PIPELINE INFRASTRUCTURE DETAILS.



**PRELIMINARY  
90% DESIGN**

 COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 623-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802			
WEST BELLE HEADLAND REPAIR DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.	WEST BELLE HEADLAND PLAN VIEW STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTIEZ			
DATE: MARCH 2023				
SHEET 7 OF 38				
REV.	DATE	DESCRIPTION	BY	

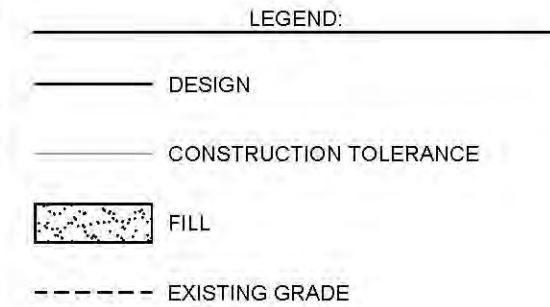
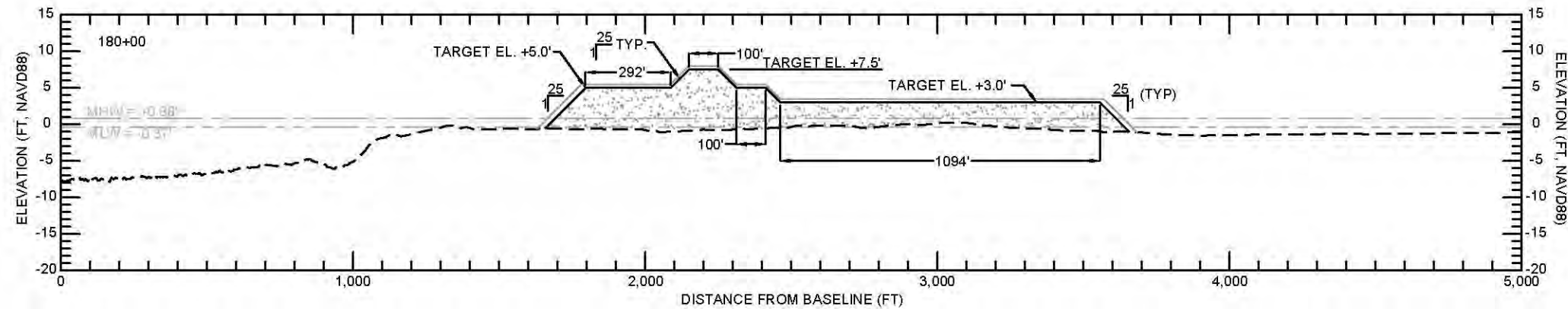
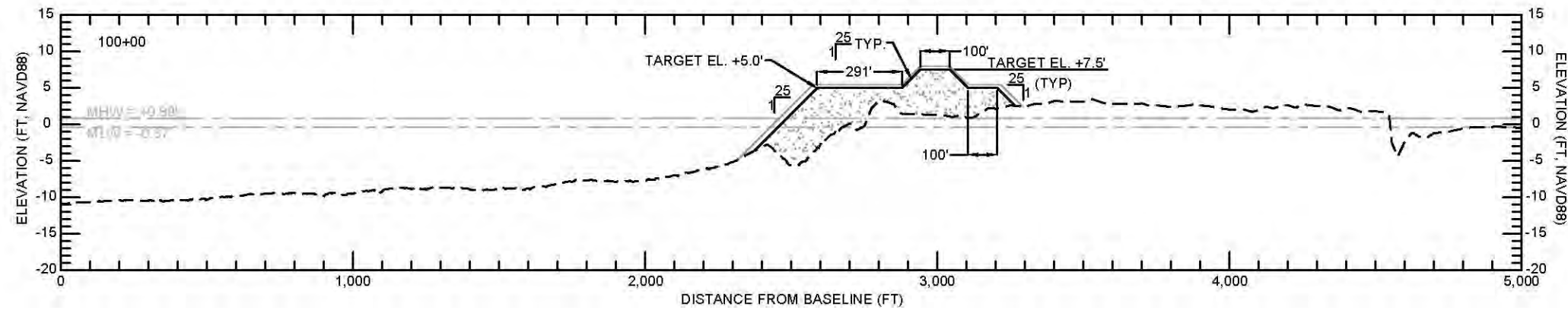


**NOTES:**

1. SECTIONS ARE VIEWED AS LOOKING WEST.
2. SURVEY CONDUCTED BY DCC IN DECEMBER 2021.
3. SEE SHEET 36 FOR WEST BELLE HEADLAND BASELINE ALIGNMENT.

**DESIGN ELEMENTS:**

1. DESIGN DIMENSIONS ARE MEASURED FROM THE CREST LINES OF THE RESPECTIVE FEATURES.
2. DUNE DESIGN ELEVATION = +7.5 FT NAVD88.
3. BEACH DESIGN ELEVATION = +5.0 FT NAVD88.
4. BEACH AND DUNE DESIGN SLOPES ARE 1V:25H.
5. A +1.0 FT VERTICAL CONSTRUCTION TOLERANCE IS INCLUDED TO ACCOUNT FOR CONSTRUCTION METHODS AND CONSOLIDATION / SETTLEMENT OF THE FILL.



**SCALE:**  
 H: 1" = 500'  
 V: 1" = 20'

**PRELIMINARY**  
**90% DESIGN**

**COASTAL ENGINEERING CONSULTANTS, INC.**  
 PH: (225) 523-7403  
 1211 N. RANGE AVE  
 SUITE E  
 DENHAM SPRINGS, LA 70726

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 150 TERRACE AVENUE  
 BATON ROUGE, LOUISIANA 70802

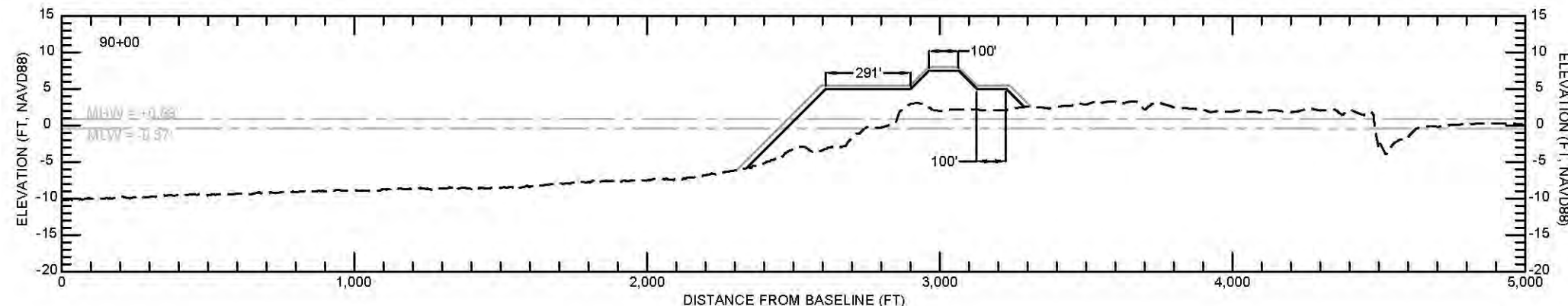
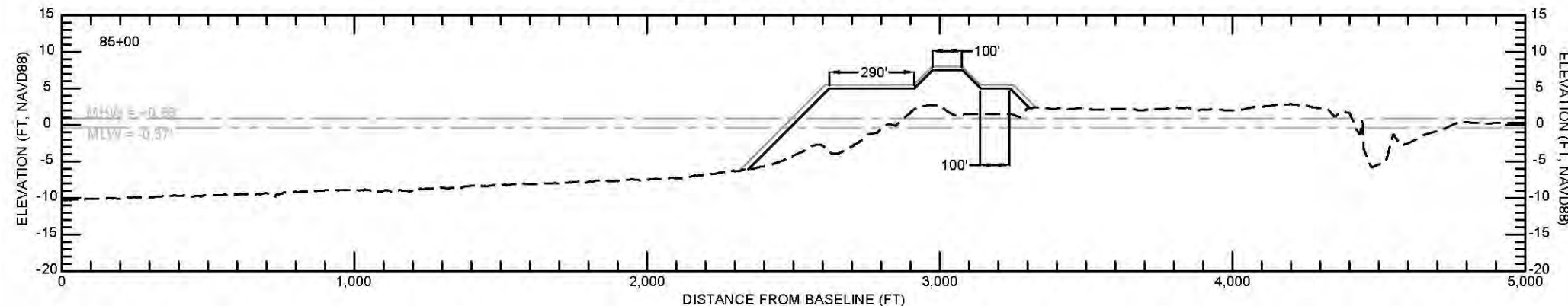
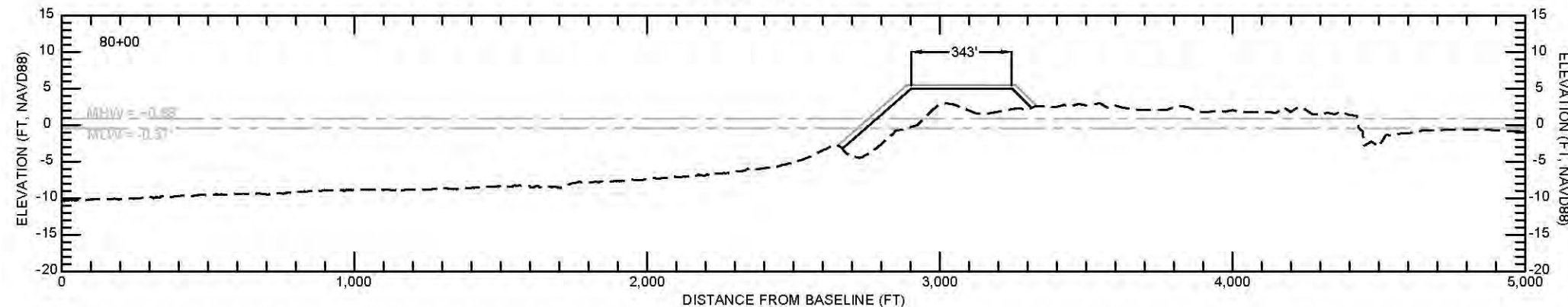
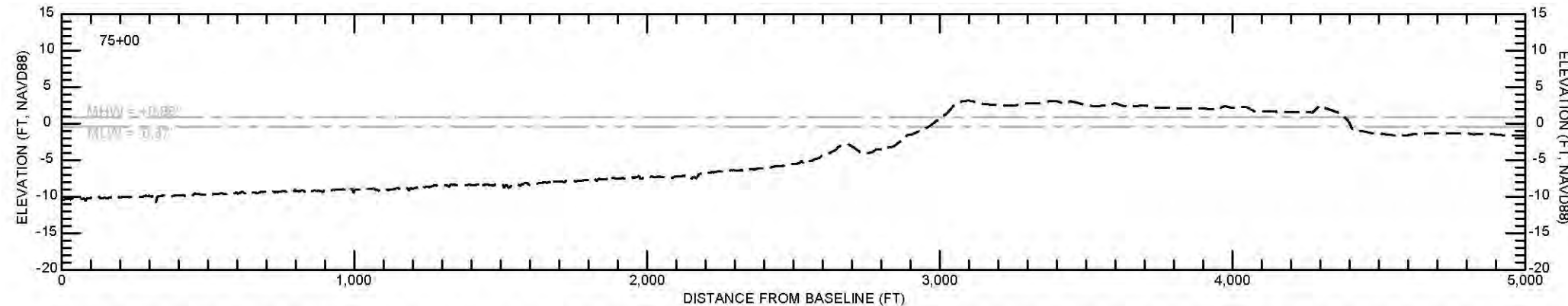
**WEST BELLE HEADLAND REPAIR**  
 DESIGNED BY: BRETT BORNE, P.E.  
 APPROVED BY: MICHAEL POFF, P.E.

**WEST BELLE HEADLAND TYPICAL SECTIONS**  
 STATE PROJECT NUMBER: TE-0176  
 DRAWN BY: STEVE DARTEZ

DATE: MARCH 2023

SHEET 8 OF 38

REV.	DATE	DESCRIPTION	BY



- NOTES:**
1. SECTIONS ARE VIEWED AS LOOKING WEST.
  2. SURVEY CONDUCTED BY DCC IN DECEMBER 2021.
  3. SEE SHEET 36 FOR WEST BELLE HEADLAND BASELINE ALIGNMENT.

- DESIGN ELEMENTS:**
1. DESIGN DIMENSIONS ARE MEASURED FROM THE CREST LINES OF THE RESPECTIVE FEATURES.
  2. DUNE DESIGN ELEVATION = +7.5 FT NAVD88.
  3. BEACH DESIGN ELEVATION = +5.0 FT NAVD88.
  4. BEACH AND DUNE DESIGN SLOPES ARE 1V:25H.
  5. A +1.0 FT VERTICAL CONSTRUCTION TOLERANCE IS INCLUDED TO ACCOUNT FOR CONSTRUCTION METHODS AND CONSOLIDATION / SETTLEMENT OF THE FILL.

**LEGEND:**

———— DESIGN

———— CONSTRUCTION TOLERANCE

----- EXISTING GRADE

**SCALE:**  
 H: 1" = 500'  
 V: 1" = 20'

**PRELIMINARY  
 PRELIMINARY  
 90% DESIGN**

REV.	DATE	DESCRIPTION	BY

<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	
WEST BELLE HEADLAND REPAIR	WEST BELLE HEADLAND CROSS SECTIONS STA 65+00 TO 80+00
DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.	STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTEZ
DATE: MARCH 2023	
SHEET 9 OF 38	



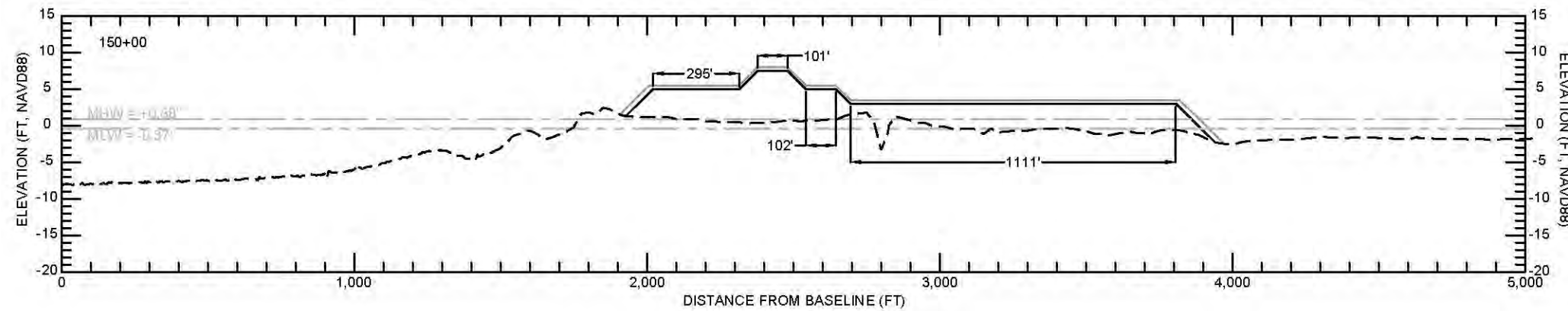
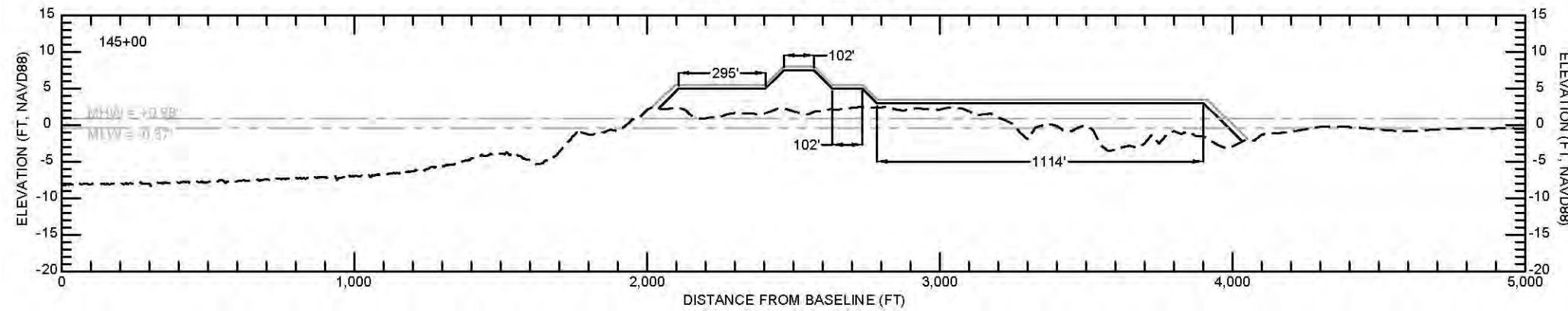
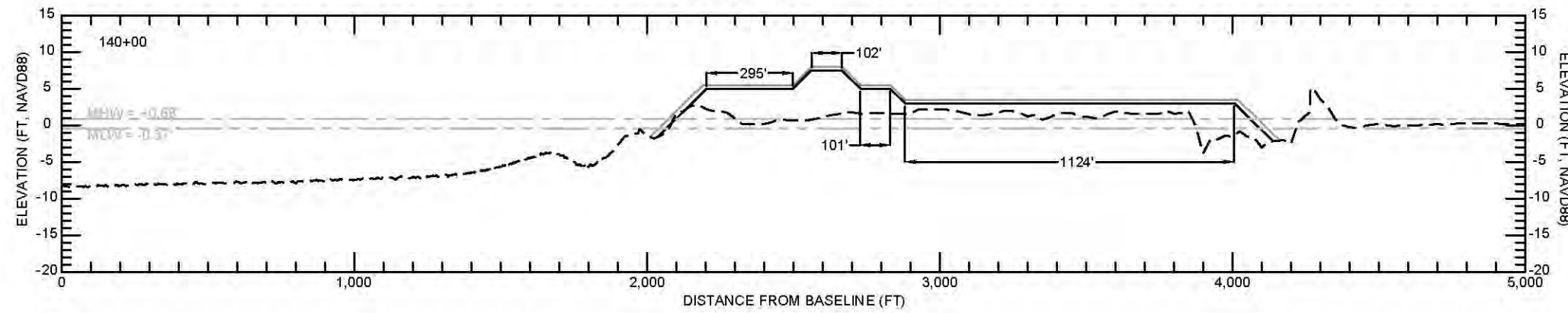
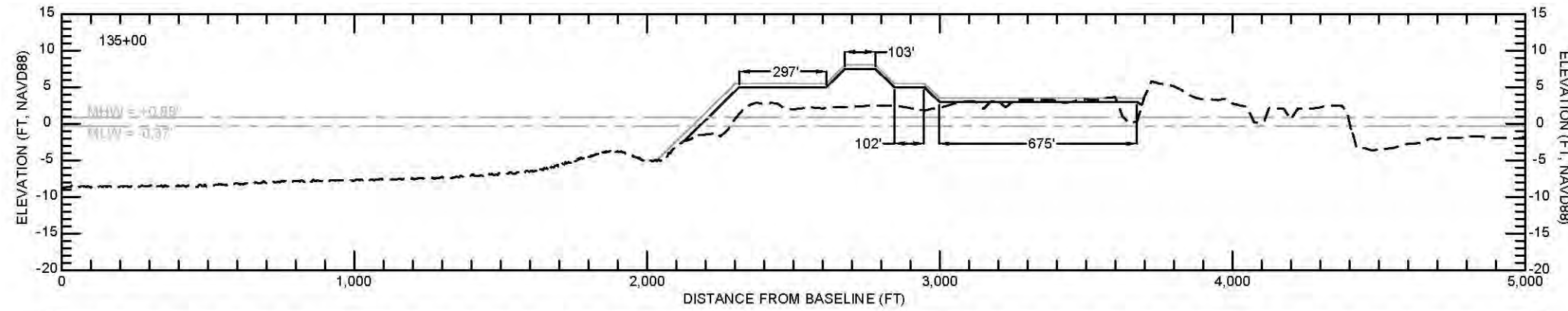












- NOTES:**
1. SECTIONS ARE VIEWED AS LOOKING WEST.
  2. SURVEY CONDUCTED BY DCC IN DECEMBER 2021.
  3. SEE SHEET 36 FOR WEST BELLE HEADLAND BASELINE ALIGNMENT.

- DESIGN ELEMENTS:**
1. DESIGN DIMENSIONS ARE MEASURED FROM THE CREST LINES OF THE RESPECTIVE FEATURES.
  2. DUNE DESIGN ELEVATION = +7.5 FT NAVD88.
  3. BEACH DESIGN ELEVATION = +5.0 FT NAVD88.
  4. MARSH DESIGN ELEVATION = +3.0 FT NAVD88.
  5. BEACH, DUNE, AND MARSH DESIGN SLOPES ARE 1V:25H.
  6. A +1.0 FT VERTICAL CONSTRUCTION TOLERANCE IS INCLUDED TO ACCOUNT FOR CONSTRUCTION METHODS AND CONSOLIDATION / SETTLEMENT OF THE FILL.



**SCALE:**  
H: 1" = 500'  
V: 1" = 20'

**PRELIMINARY**  
**90% DESIGN**



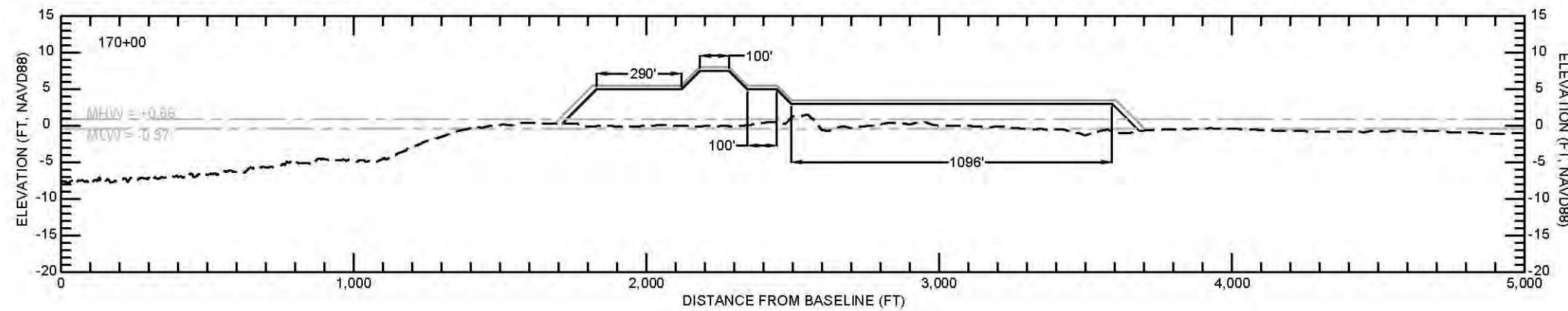
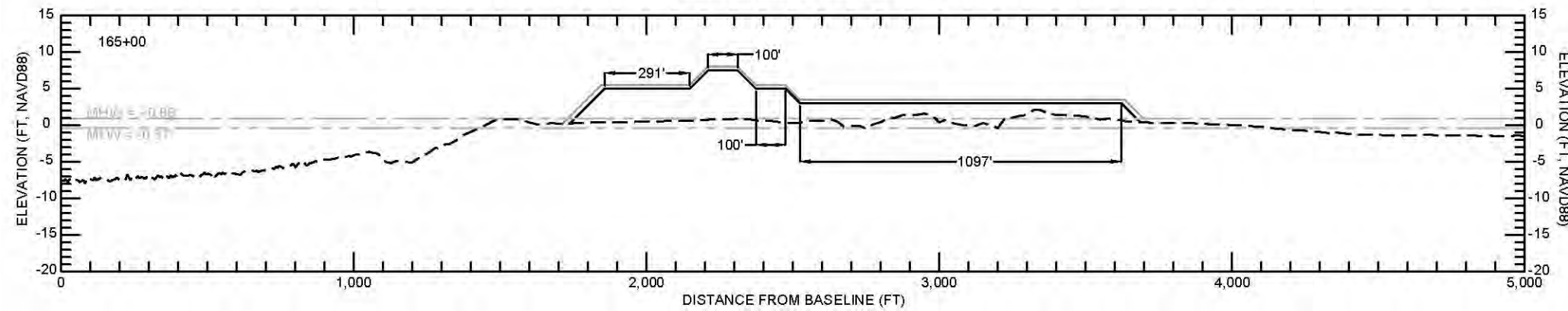
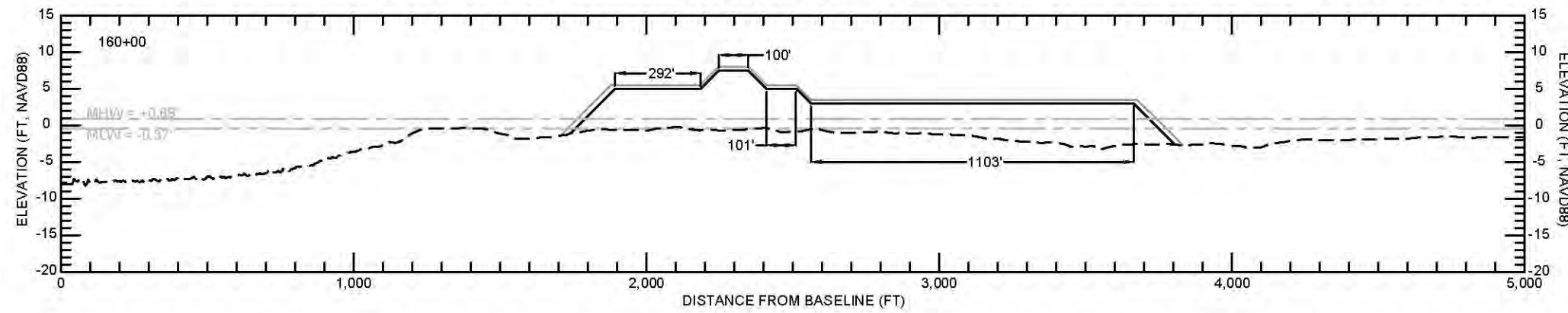
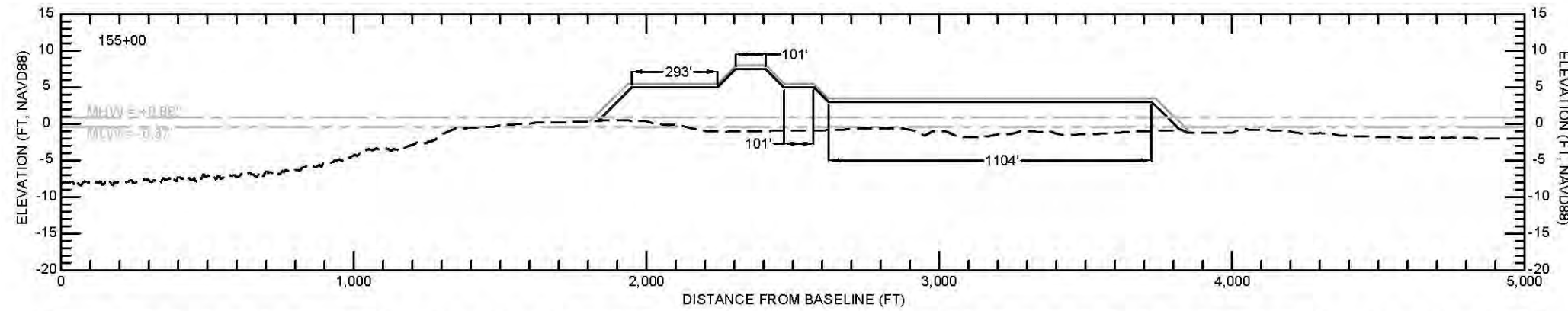
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
150 TERRACE AVENUE  
BATON ROUGE, LOUISIANA 70802

WEST BELLE HEADLAND REPAIR  
DESIGNED BY: BRETT BORNE, P.E.  
APPROVED BY: MICHAEL POFF, P.E.

WEST BELLE HEADLAND CROSS SECTIONS STA 125+00 TO 140+00  
STATE PROJECT NUMBER: TE-0176  
DRAWN BY: STEVE DARTEZ

REV.	DATE	DESCRIPTION	BY





- NOTES:**
1. SECTIONS ARE VIEWED AS LOOKING WEST.
  2. SURVEY CONDUCTED BY DCC IN DECEMBER 2021.
  3. SEE SHEET 36 FOR WEST BELLE HEADLAND BASELINE ALIGNMENT.

- DESIGN ELEMENTS:**
1. DESIGN DIMENSIONS ARE MEASURED FROM THE CREST LINES OF THE RESPECTIVE FEATURES.
  2. DUNE DESIGN ELEVATION = +7.5 FT NAVD88.
  3. BEACH DESIGN ELEVATION = +5.0 FT NAVD88.
  4. MARSH DESIGN ELEVATION = +3.0 FT NAVD88.
  5. BEACH, DUNE, AND MARSH DESIGN SLOPES ARE 1V:25H.
  6. A +1.0 FT VERTICAL CONSTRUCTION TOLERANCE IS INCLUDED TO ACCOUNT FOR CONSTRUCTION METHODS AND CONSOLIDATION / SETTLEMENT OF THE FILL.



**SCALE:**  
 H: 1" = 500'  
 V: 1" = 20'

**PRELIMINARY**  
**90% DESIGN**

**COASTAL ENGINEERING CONSULTANTS, INC.**  
 PH: (225) 523-7403  
 1211 N. RANGE AVE  
 SUITE E  
 DENHAM SPRINGS, LA 70726

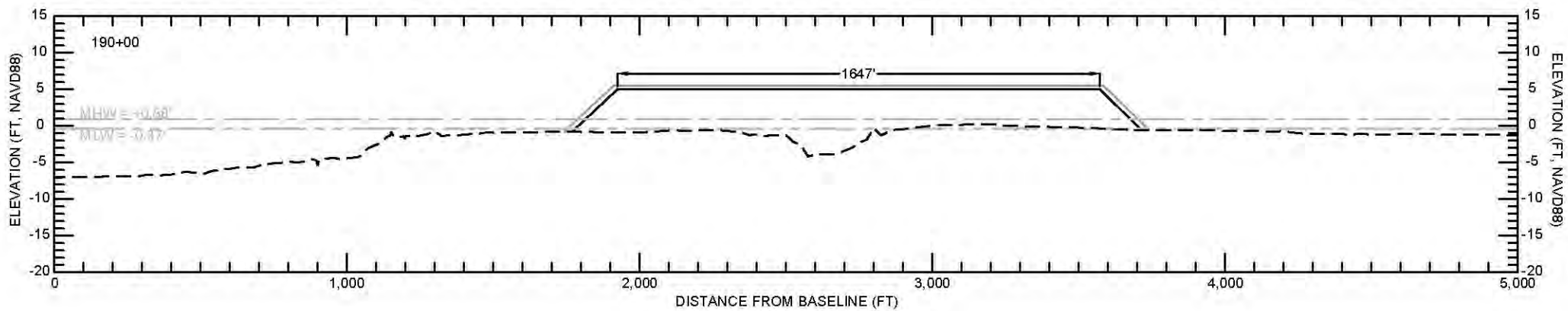
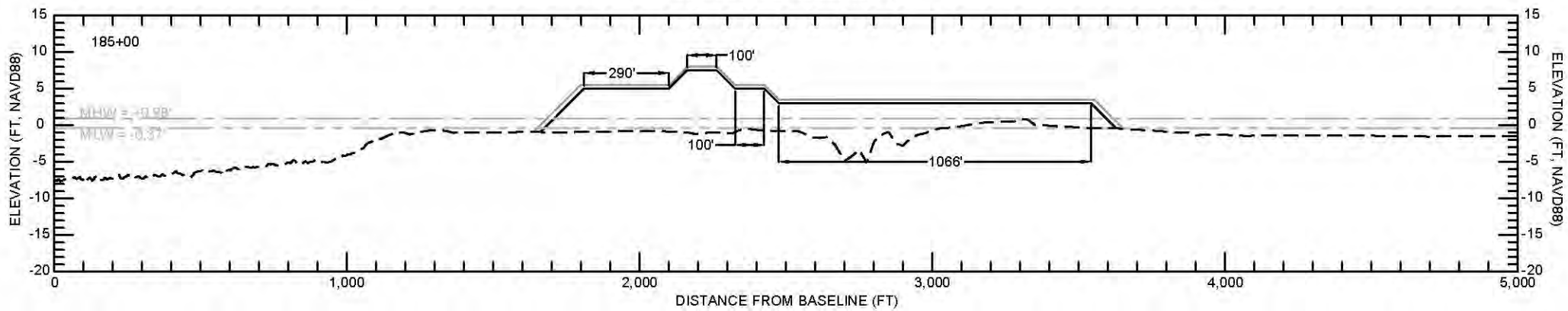
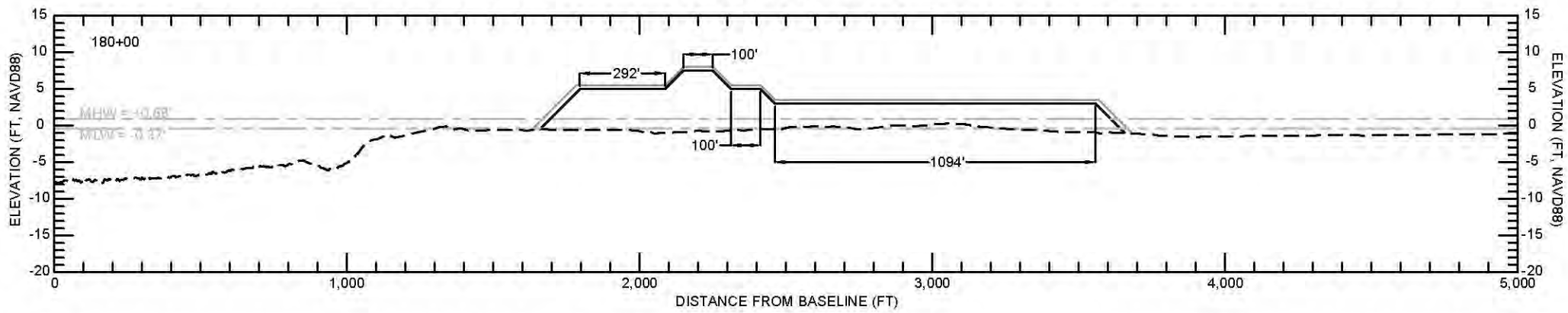
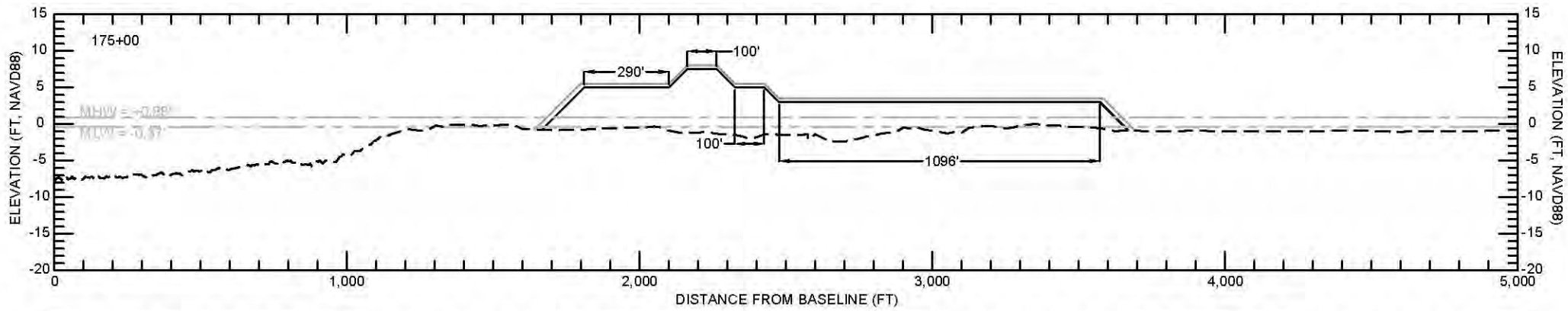
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 150 TERRACE AVENUE  
 BATON ROUGE, LOUISIANA 70802

WEST BELLE HEADLAND REPAIR  
 DESIGNED BY: BRETT BORNE, P.E.  
 APPROVED BY: MICHAEL POFF, P.E.

WEST BELLE HEADLAND CROSS SECTIONS STA 145+00 TO 160+00  
 STATE PROJECT NUMBER: TE-0176  
 DRAWN BY: STEVE DARTIZ

REV.	DATE	DESCRIPTION	BY





- NOTES:**
1. SECTIONS ARE VIEWED AS LOOKING WEST.
  2. SURVEY CONDUCTED BY DCC IN DECEMBER 2021.
  3. SEE SHEET 36 FOR WEST BELLE HEADLAND BASELINE ALIGNMENT.

- DESIGN ELEMENTS:**
1. DESIGN DIMENSIONS ARE MEASURED FROM THE CREST LINES OF THE RESPECTIVE FEATURES.
  2. DUNE DESIGN ELEVATION = +7.5 FT NAVD88.
  3. BEACH DESIGN ELEVATION = +5.0 FT NAVD88.
  4. MARSH DESIGN ELEVATION = +3.0 FT NAVD88.
  5. BEACH, DUNE, AND MARSH DESIGN SLOPES ARE 1V:25H.
  6. A +1.0 FT VERTICAL CONSTRUCTION TOLERANCE IS INCLUDED TO ACCOUNT FOR CONSTRUCTION METHODS AND CONSOLIDATION / SETTLEMENT OF THE FILL.



**SCALE:**  
H: 1" = 500'  
V: 1" = 20'

**PRELIMINARY**  
**90% DESIGN**

**COASTAL ENGINEERING CONSULTANTS, INC.**  
PH: (225) 523-7403  
1211 N. RANGE AVE  
SUITE E  
DENHAM SPRINGS, LA  
70726

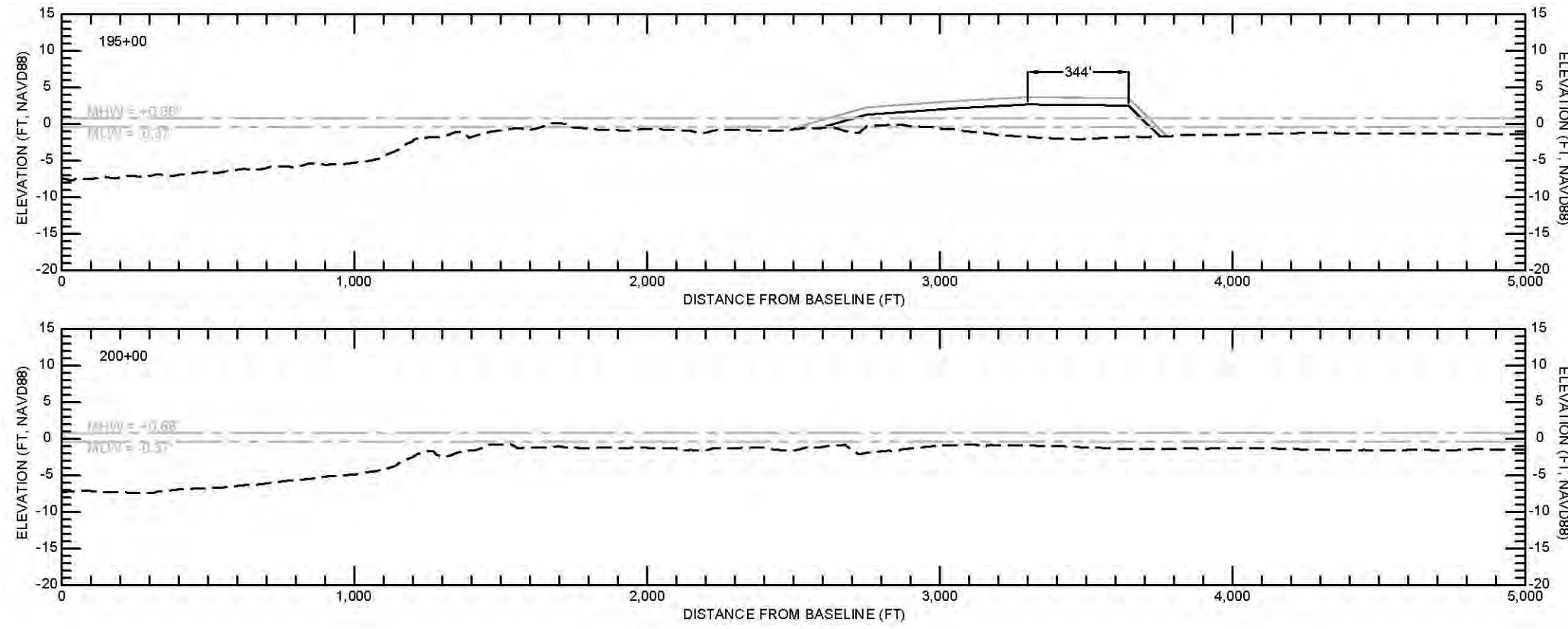
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
150 TERRACE AVENUE  
BATON ROUGE, LOUISIANA 70802

WEST BELLE HEADLAND REPAIR  
DESIGNED BY: BRETT BORNE, P.E.  
APPROVED BY: MICHAEL POFF, P.E.

WEST BELLE HEADLAND CROSS SECTIONS STA 165+00 TO 180+00  
STATE PROJECT NUMBER: TE-0176  
DRAWN BY: STEVE DARTIZ

REV.	DATE	DESCRIPTION	BY





- NOTES:**
1. SECTIONS ARE VIEWED AS LOOKING WEST.
  2. SURVEY CONDUCTED BY DCC IN DECEMBER 2021.
  3. SEE SHEET 36 FOR WEST BELLE HEADLAND BASELINE ALIGNMENT.

- DESIGN ELEMENTS:**
1. A +1.0 FT VERTICAL CONSTRUCTION TOLERANCE IS INCLUDED TO ACCOUNT FOR CONSTRUCTION METHODS AND CONSOLIDATION / SETTLEMENT OF THE FILL.

**LEGEND:**

———— DESIGN

———— CONSTRUCTION TOLERANCE

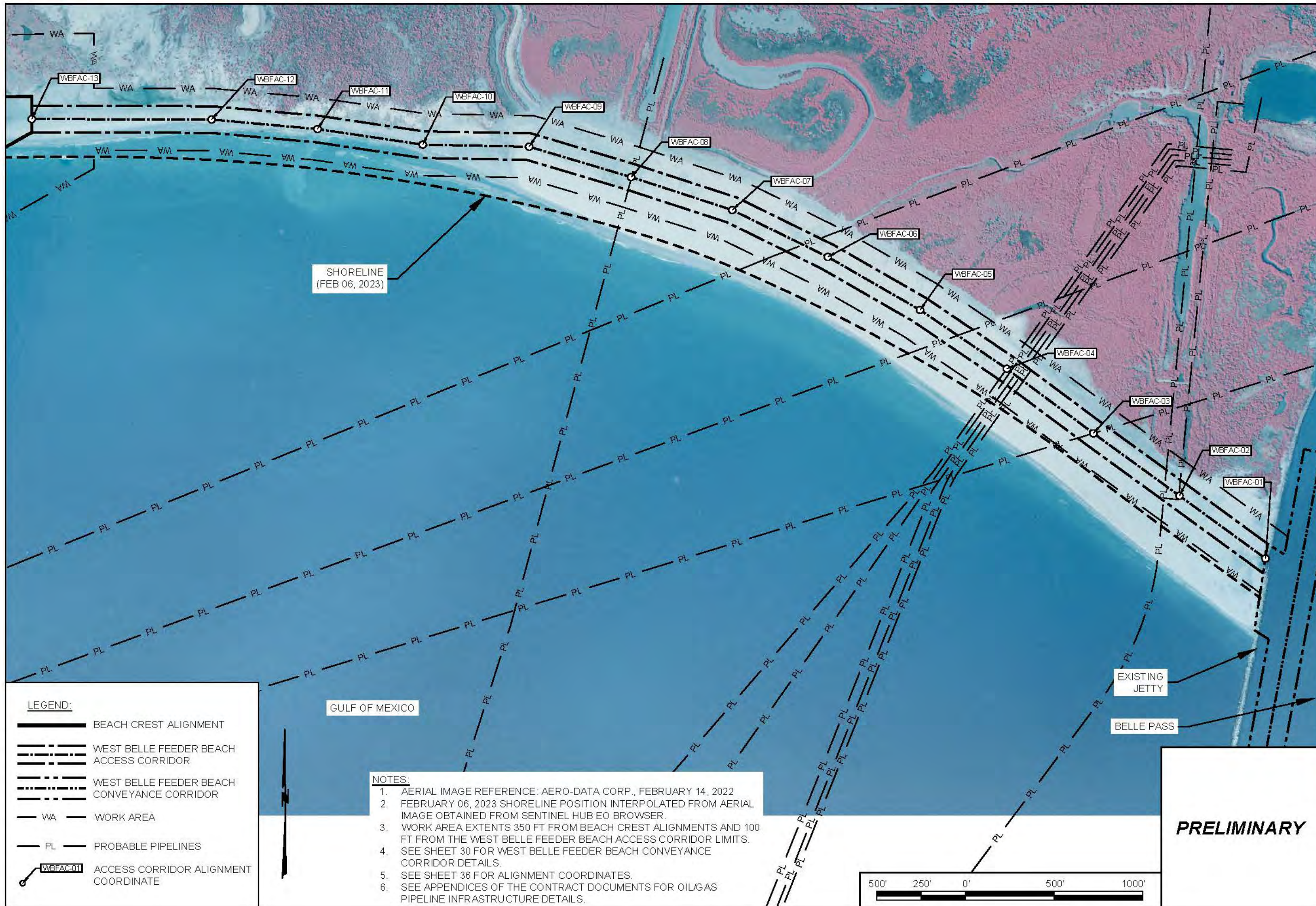
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**SCALE:**  
H: 1" = 500'  
V: 1" = 20'

**PRELIMINARY**  
**90% DESIGN**

COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802		WEST BELLE HEADLAND REPAIR		WEST BELLE HEADLAND CROSS SECTIONS STA 185+00 TO 200+00	
COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726		DESIGNED BY: BRETT BORNE, P.E.		STATE PROJECT NUMBER: TE-0176	
		APPROVED BY: MICHAEL POFF, P.E.		DRAWN BY: STEVE DARTEZ	
REV.	DATE	DESCRIPTION	BY		





**LEGEND:**

- BEACH CREST ALIGNMENT
- WEST BELLE FEEDER BEACH ACCESS CORRIDOR
- WEST BELLE FEEDER BEACH CONVEYANCE CORRIDOR
- WA WORK AREA
- PL PROBABLE PIPELINES
- WBFAC-01 ACCESS CORRIDOR ALIGNMENT COORDINATE

**NOTES:**

1. AERIAL IMAGE REFERENCE: AERO-DATA CORP., FEBRUARY 14, 2022
2. FEBRUARY 06, 2023 SHORELINE POSITION INTERPOLATED FROM AERIAL IMAGE OBTAINED FROM SENTINEL HUB EO BROWSER.
3. WORK AREA EXTENTS 350 FT FROM BEACH CREST ALIGNMENTS AND 100 FT FROM THE WEST BELLE FEEDER BEACH ACCESS CORRIDOR LIMITS.
4. SEE SHEET 30 FOR WEST BELLE FEEDER BEACH CONVEYANCE CORRIDOR DETAILS.
5. SEE SHEET 38 FOR ALIGNMENT COORDINATES.
6. SEE APPENDICES OF THE CONTRACT DOCUMENTS FOR OIL/GAS PIPELINE INFRASTRUCTURE DETAILS.

REV.	DATE	DESCRIPTION	BY

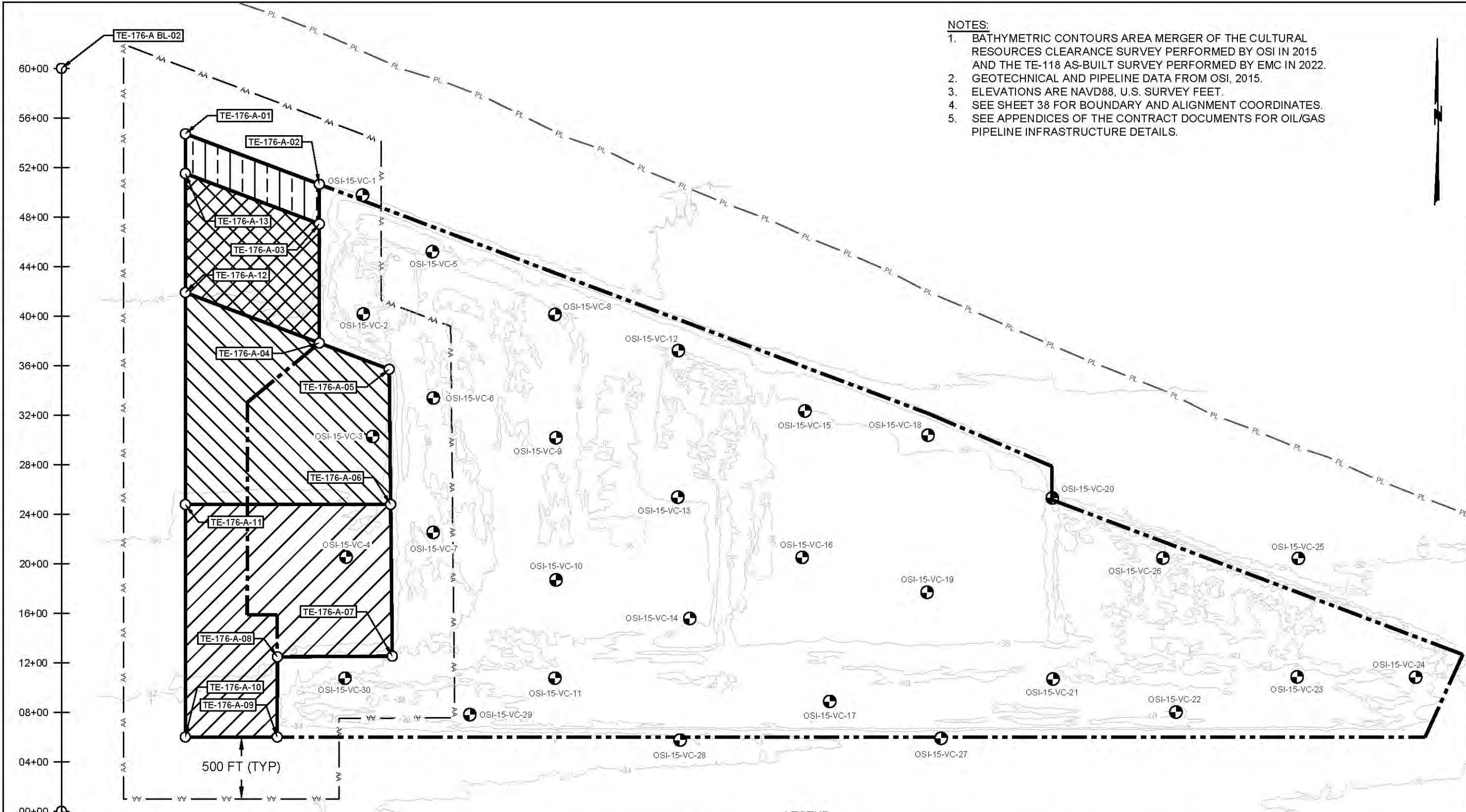


**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 150 TERRACE AVENUE  
 BATON ROUGE, LOUISIANA 70802

<b>WEST BELLE FEEDER BEACH ACCESS CORRIDOR PLAN VIEW</b>	<b>WEST BELLE HEADLAND REPAIR</b>
STATE PROJECT NUMBER: TE-0176	DESIGNED BY: BRETT BORNE, P.E.
DRAWN BY: STEVE DARTZ	APPROVED BY: MICHAEL POFF, P.E.
DATE: MARCH 2023	
SHEET 16 OF 38	

**PRELIMINARY**





- NOTES:
- BATHYMETRIC CONTOURS AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2015 AND THE TE-118 AS-BUILT SURVEY PERFORMED BY EMC IN 2022.
  - GEOTECHNICAL AND PIPELINE DATA FROM OSI, 2015.
  - ELEVATIONS ARE NAVD88, U.S. SURVEY FEET.
  - SEE SHEET 38 FOR BOUNDARY AND ALIGNMENT COORDINATES.
  - SEE APPENDICES OF THE CONTRACT DOCUMENTS FOR OIL/GAS PIPELINE INFRASTRUCTURE DETAILS.

REV.	DATE	DESCRIPTION	BY

**COASTAL ENGINEERING CONSULTANTS, INC.**  
 PH: (225) 523-7403  
 1211 N. RANGE AVE  
 SUITE E  
 DENHAM SPRINGS, LA 70726

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 150 TERRACE AVENUE  
 BATON ROUGE, LOUISIANA 70802

**WEST BELLE HEADLAND REPAIR**  
 DESIGNED BY: BRETT BORNE, P.E.  
 APPROVED BY: MICHAEL POFF, P.E.

**TE-176-A BORROW AREA PLAN VIEW**  
 STATE PROJECT NUMBER: TE-0176  
 DRAWN BY: STEVE DARTZ

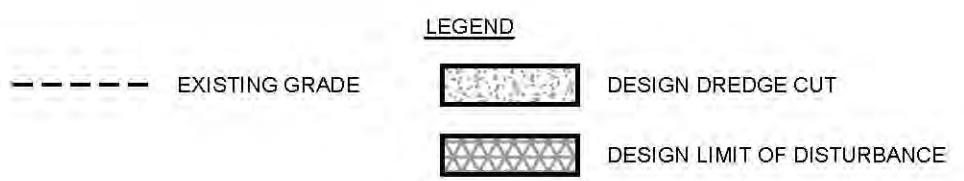
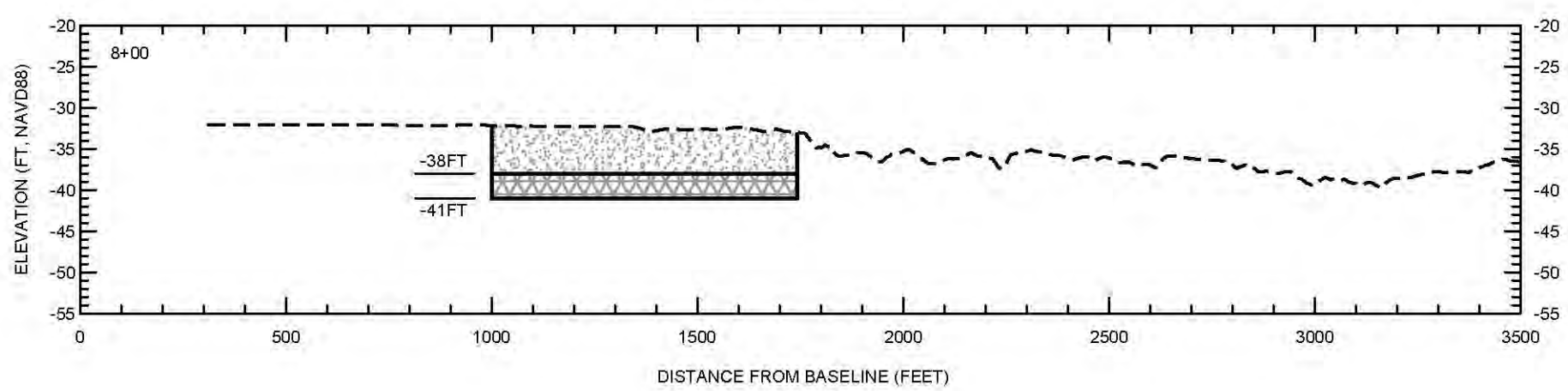
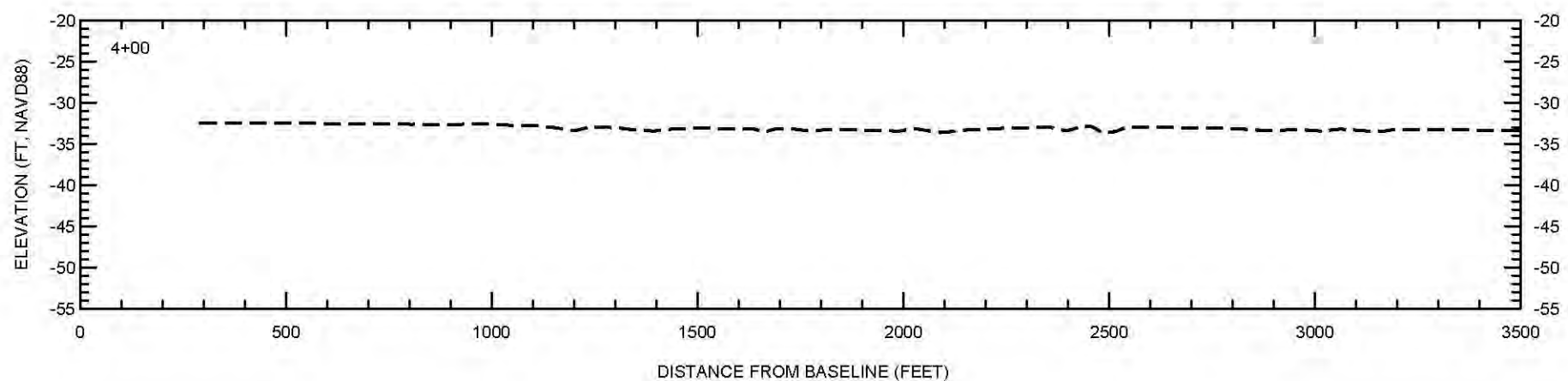
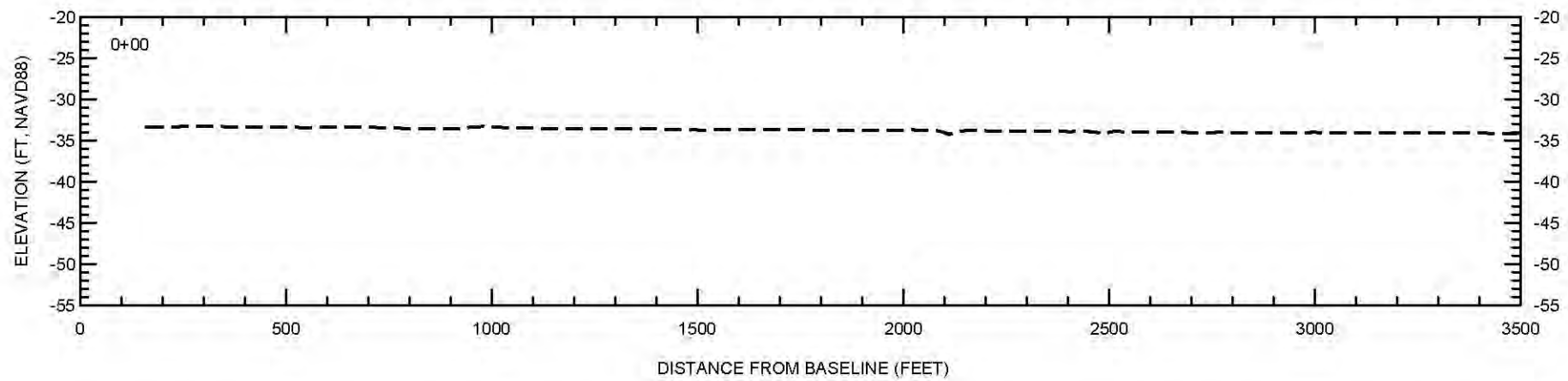
LEGEND

- |  |   |  |   |  |   |
|--|---|--|---|--|---|
|  | DESIGN CUT TOE                              |  | DESIGN CUT: -39FT<br>MAX DISTURBANCE: -42FT             |  | TE-176-A-BL-1<br>BASELINE ALIGNMENT COORDINATE  |
|  | TE-118 BORROW AREA                          |  | DESIGN CUT: -40FT<br>MAX DISTURBANCE: -43FT             |  | TE-176-A-01<br>BORROW AREA ALIGNMENT COORDINATE |
|  | DESIGN CUT: -37FT<br>MAX DISTURBANCE: -40FT |  | BATHYMETRIC CONTOUR<br>(MERGE OF OSI, 2015 & EMC, 2022) |  | AA<br>ALLOWABLE ANCHOR AREA                     |
|  | DESIGN CUT: -38FT<br>MAX DISTURBANCE: -41FT |  | SURVEY BASELINE   |  | PL<br>PROBABLE PIPELINE                         |
|  |   |  | OSI-15-VC-1<br>GEOTECHNICAL VIBRACORE (OSI, 2015)       |  |   |



**PRELIMINARY**  
**90% DESIGN**





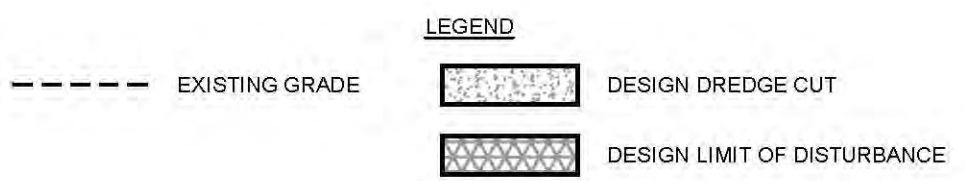
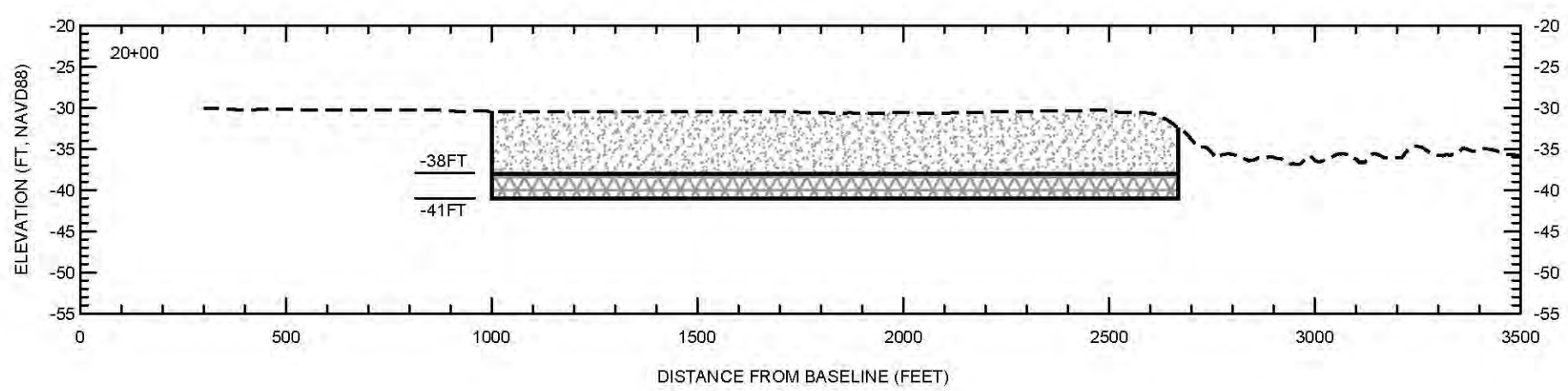
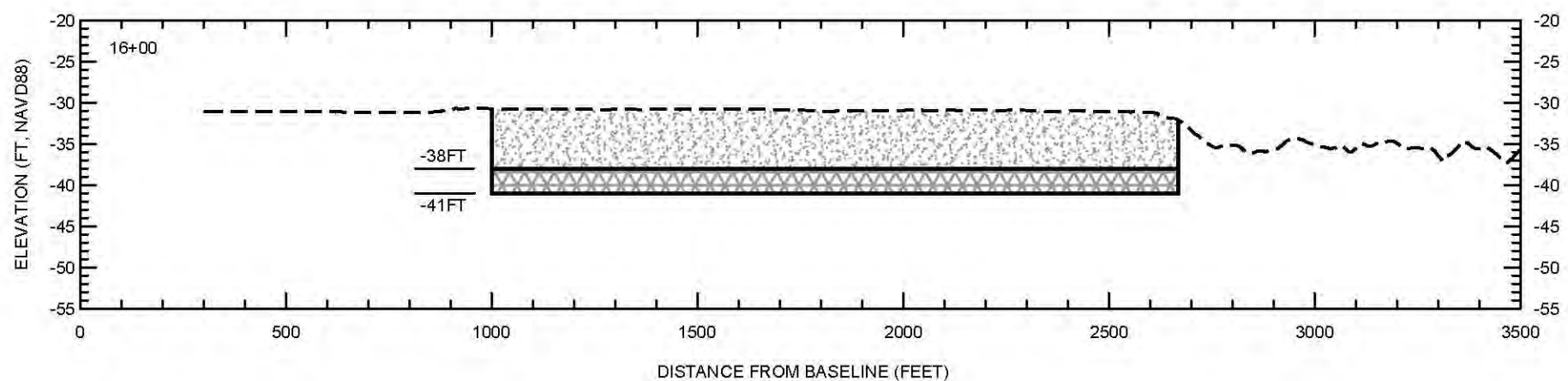
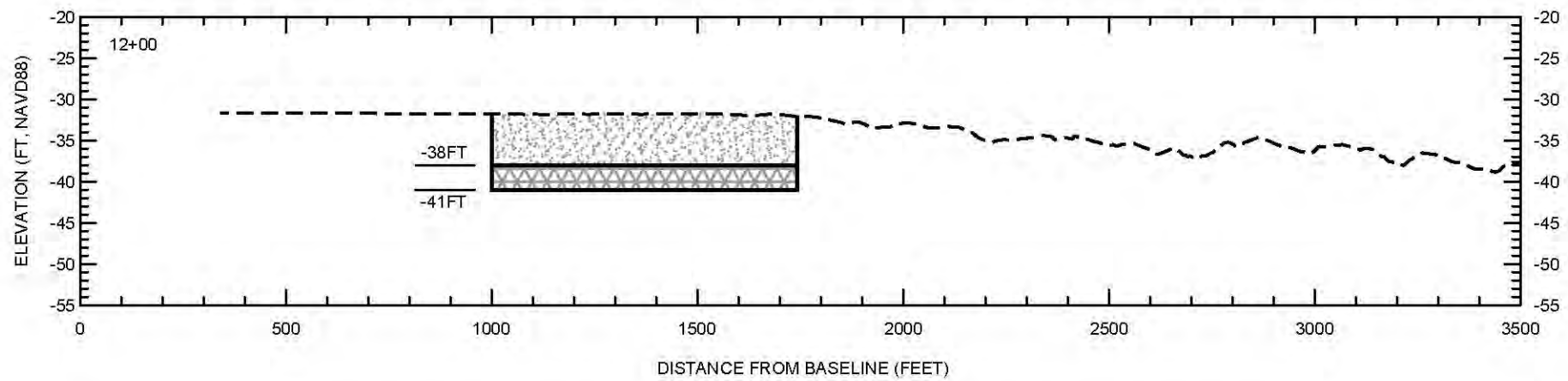
**SCALE:**  
H: 1" = 400'  
V: 1" = 20'

- NOTES:**
1. SECTIONS ARE VIEWED LOOKING WEST.
  2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2015 AND THE TE-118 AS-BUILT SURVEY PERFORMED BY EMC IN 2022.
  3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

**PRELIMINARY**

**90% DESIGN**

COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726		REV.	DATE	DESCRIPTION	BY
COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802					
WEST BELLE HEADLAND REPAIR	DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.				
TE-176-A BORROW AREA SECTIONS STA 0+00 TO 8+00	STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTIEZ				
DATE: MARCH 2023					
SHEET 18 OF 38					



**SCALE:**  
H: 1" = 400'  
V: 1" = 20'

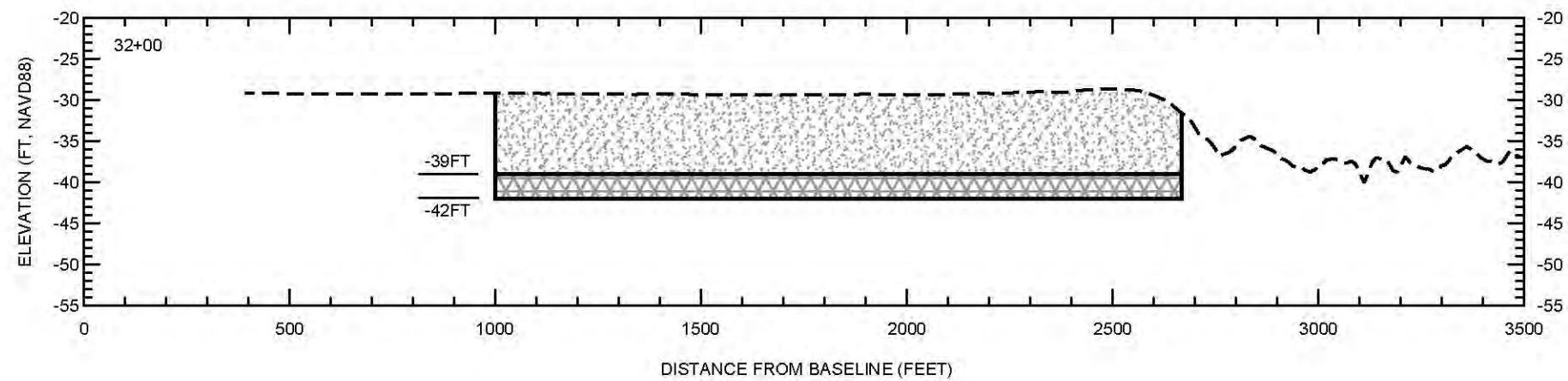
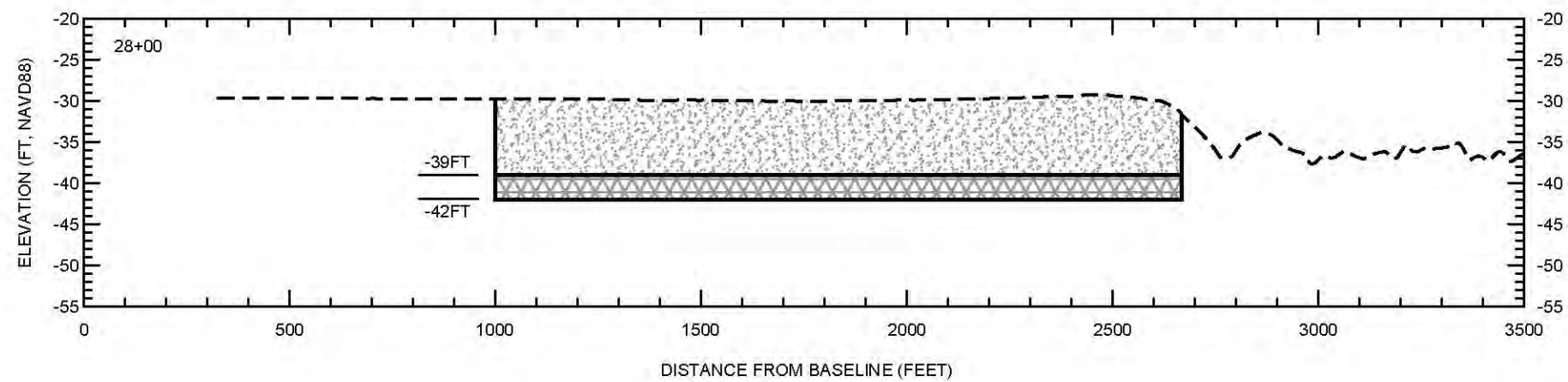
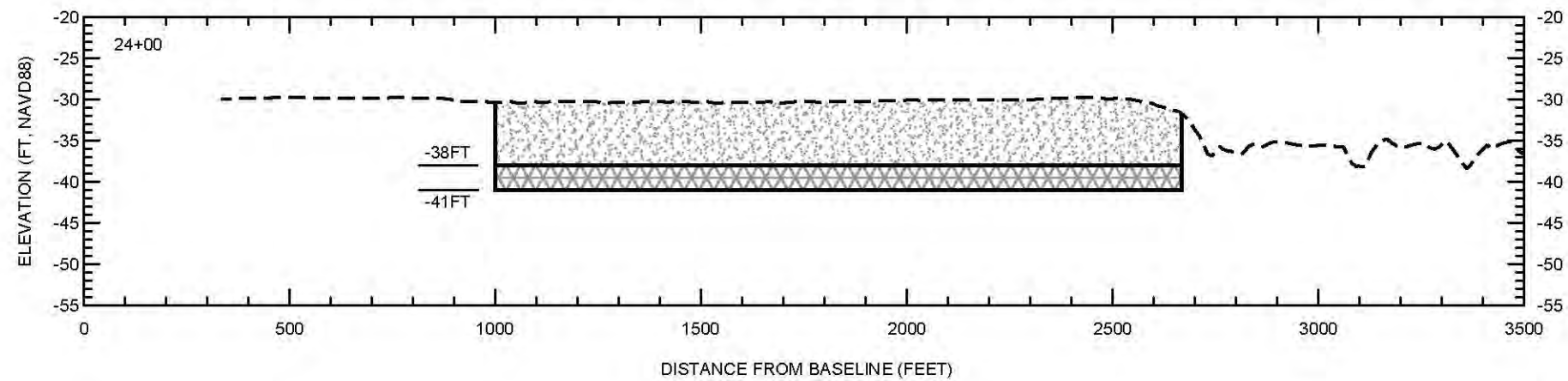
- NOTES:**
1. SECTIONS ARE VIEWED LOOKING WEST.
  2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2015 AND THE TE-118 AS-BUILT SURVEY PERFORMED BY EMC IN 2022.
  3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

**PRELIMINARY**

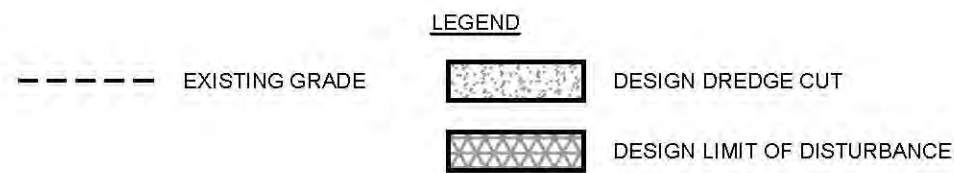
**90% DESIGN**

<b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	
<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	
WEST BELLE HEADLAND REPAIR	DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.
TE-176-A BORROW AREA SECTIONS STA 12+00 TO 20+00	STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTIEZ
DATE: MARCH 2023	SHEET 19 OF 38
REV.	DATE
DESCRIPTION	BY





- NOTES:
1. SECTIONS ARE VIEWED LOOKING WEST.
  2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2015 AND THE TE-118 AS-BUILT SURVEY PERFORMED BY EMC IN 2022.
  3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

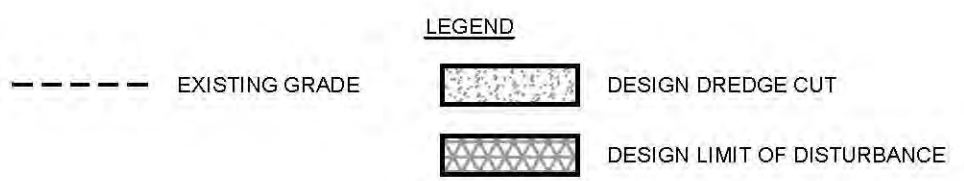
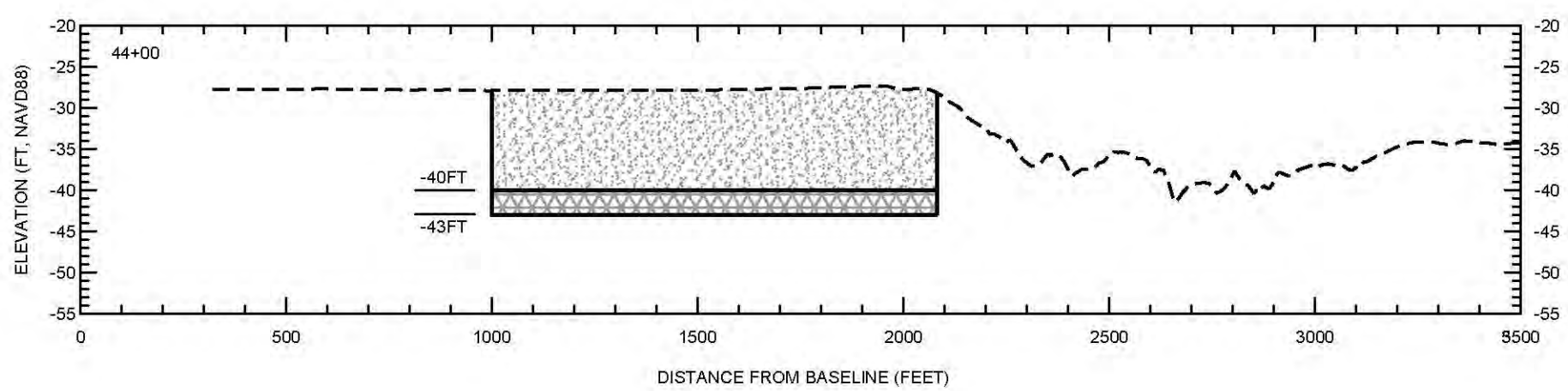
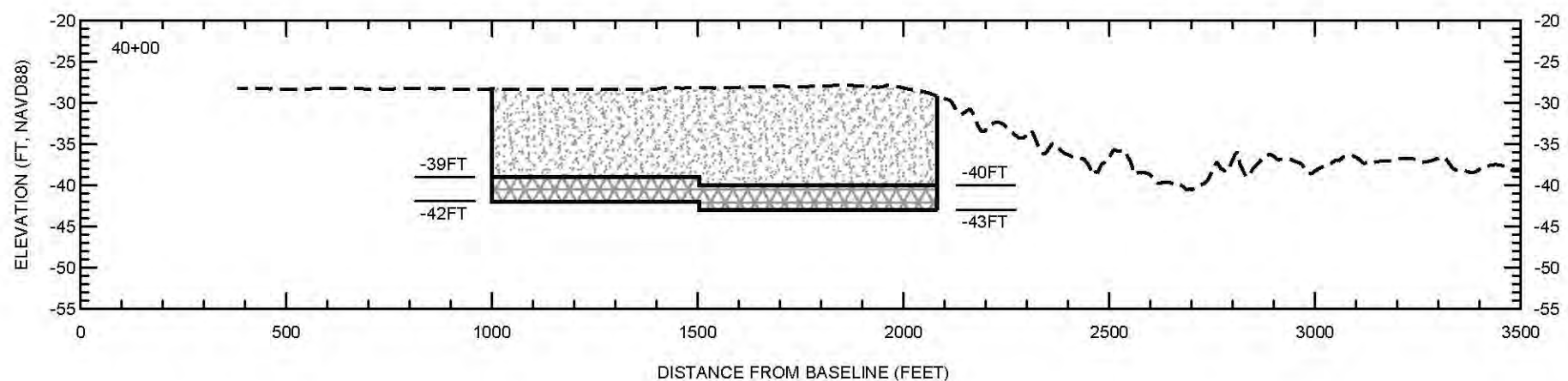
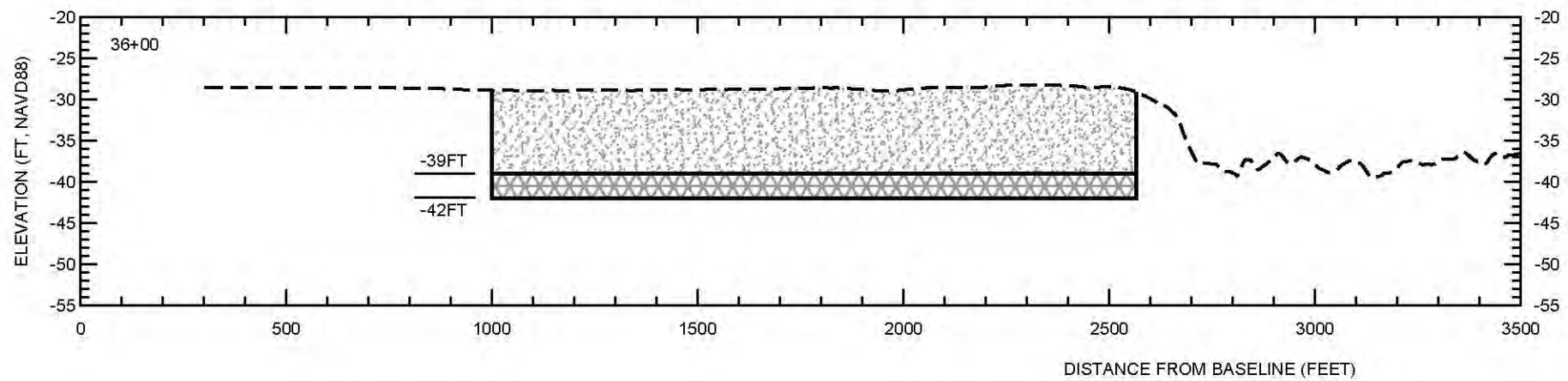


SCALE:  
H: 1" = 400'  
V: 1" = 20'

**PRELIMINARY**  
  
**90% DESIGN**

<b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	
<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	
WEST BELLE HEADLAND REPAIR	DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.
TE-176-A BORROW AREA SECTIONS STA 24+00 TO 32+00	STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTEZ
DATE: MARCH 2023	SHEET 20 OF 38

REV.	DATE	DESCRIPTION	BY



**SCALE:**  
H: 1" = 400'  
V: 1" = 20'

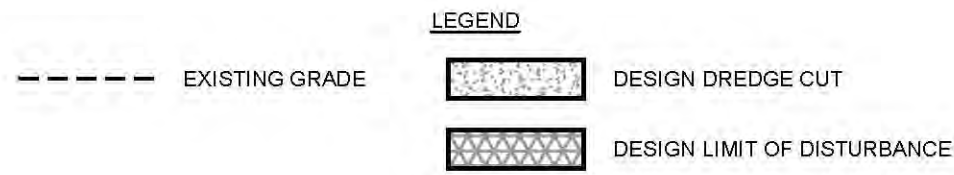
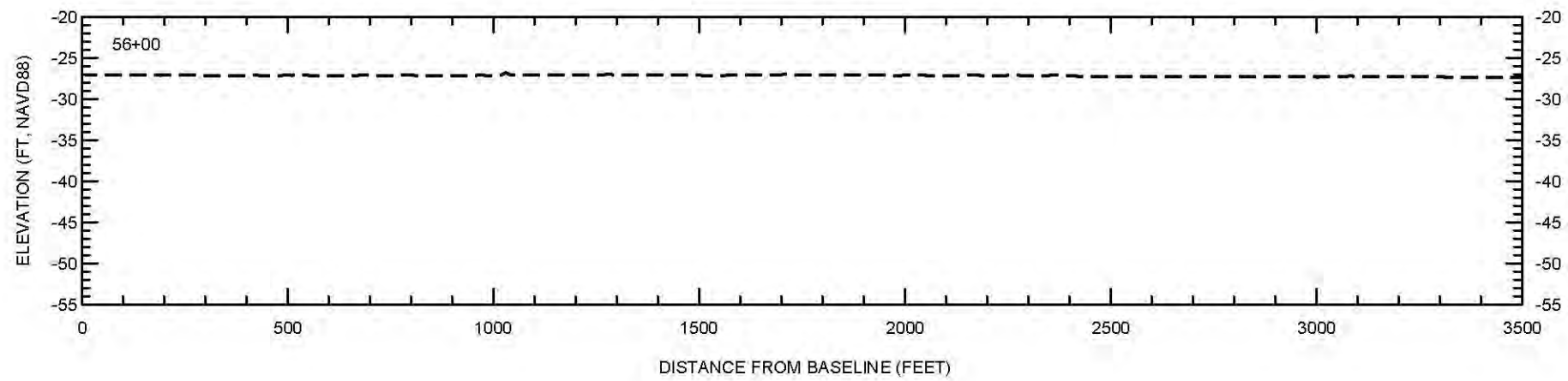
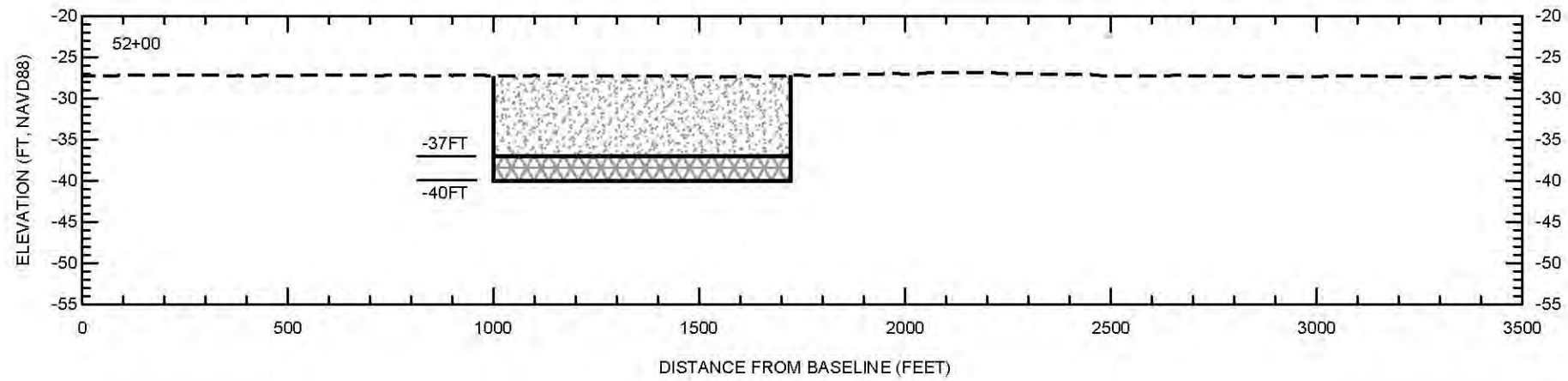
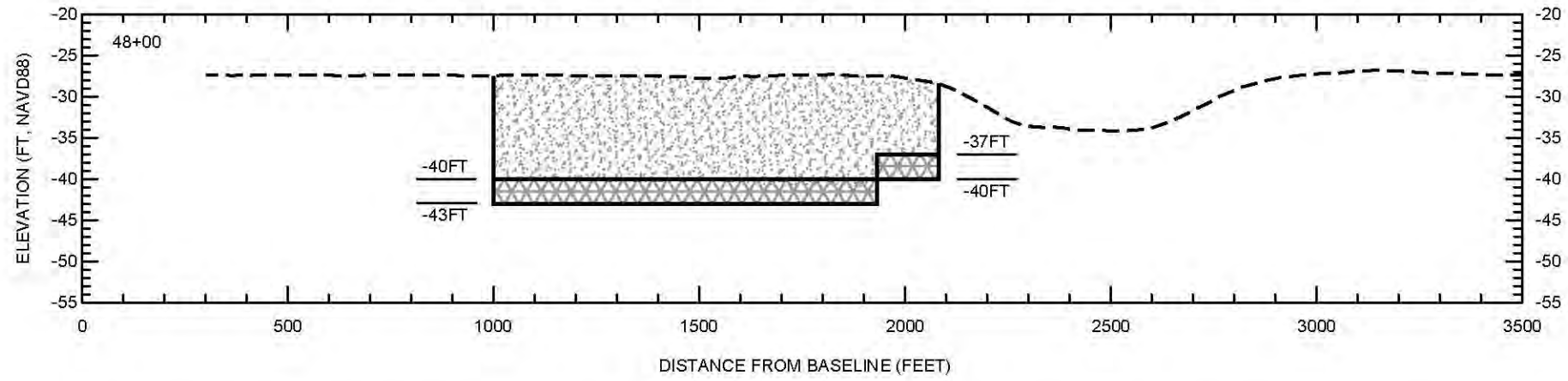
- NOTES:**
1. SECTIONS ARE VIEWED LOOKING WEST.
  2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2015 AND THE TE-118 AS-BUILT SURVEY PERFORMED BY EMC IN 2022.
  3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

**PRELIMINARY**

**90% DESIGN**

<b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	
<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	
WEST BELLE HEADLAND REPAIR	DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.
TE-176-A BORROW AREA SECTIONS STA 36+00 TO 44+00	STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTIEZ
DATE: MARCH 2023	SHEET 21 OF 38
REV.	DATE
DESCRIPTION	BY





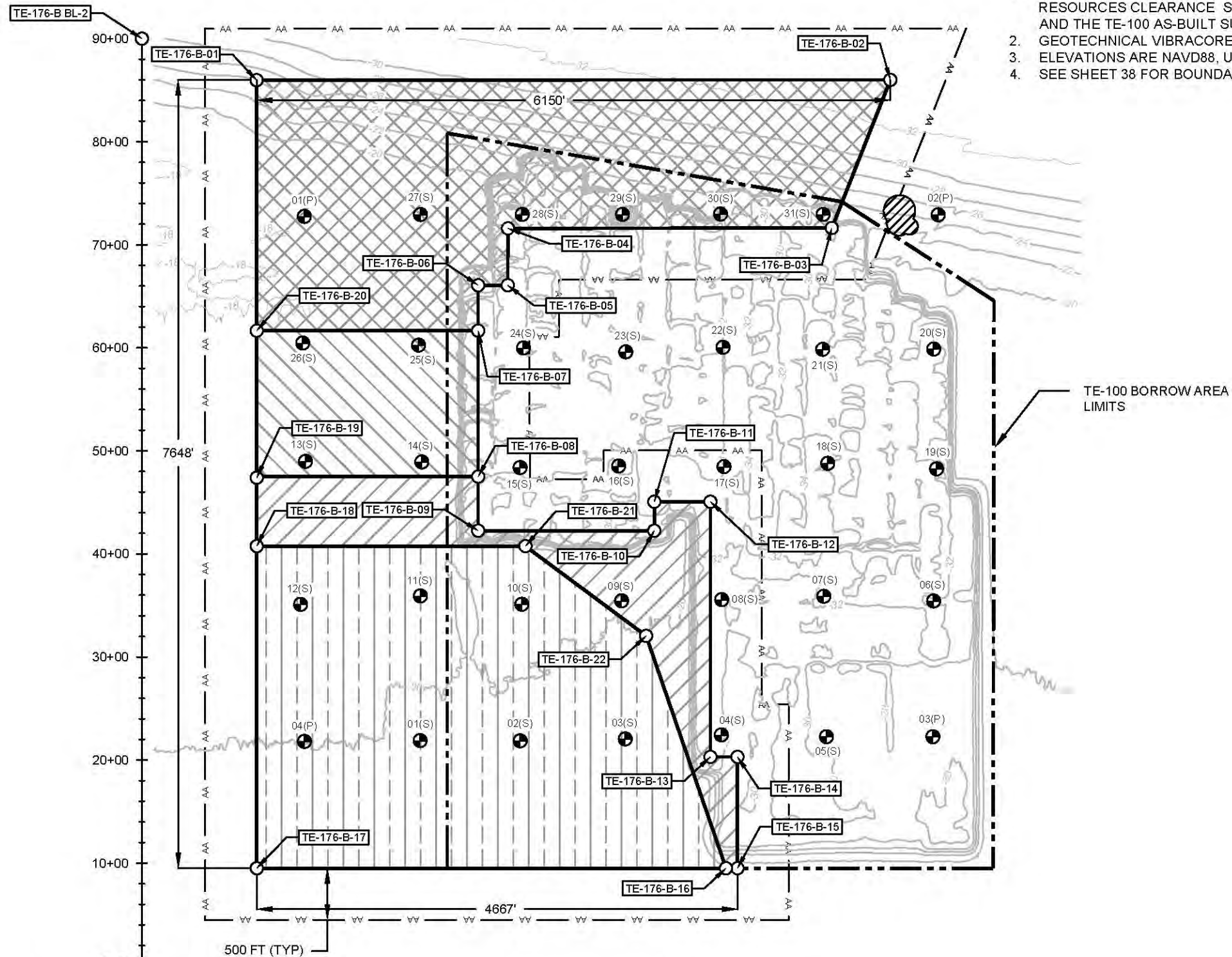
SCALE:  
H: 1" = 400'  
V: 1" = 20'

- NOTES:
1. SECTIONS ARE VIEWED LOOKING WEST.
  2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2015 AND THE TE-118 AS-BUILT SURVEY PERFORMED BY EMC IN 2022.
  3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

**PRELIMINARY**  
**90% DESIGN**

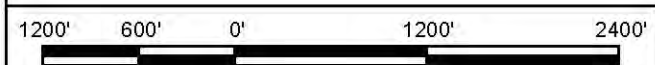
COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802		COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	
TE-176-A BORROW AREA SECTIONS STA 48+00 TO 56+00	STATE PROJECT NUMBER: TE-0176	DESIGNED BY: BRETT BORNE, P.E.	APPROVED BY: MICHAEL POFF, P.E.
DATE: MARCH 2023		REV.	DATE
SHEET 22 OF 38		DESCRIPTION	BY





- NOTES:
1. BATHYMETRIC CONTOURS AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2012 AND THE TE-100 AS-BUILT SURVEY PERFORMED BY HTI IN 2018.
  2. GEOTECHNICAL VIBRACORES COLLECTED BY STE, 2005.
  3. ELEVATIONS ARE NAVD88, U.S. SURVEY FEET.
  4. SEE SHEET 38 FOR BOUNDARY COORDINATES.

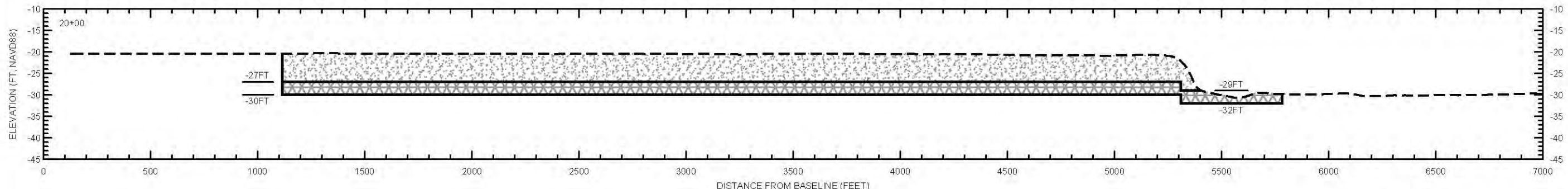
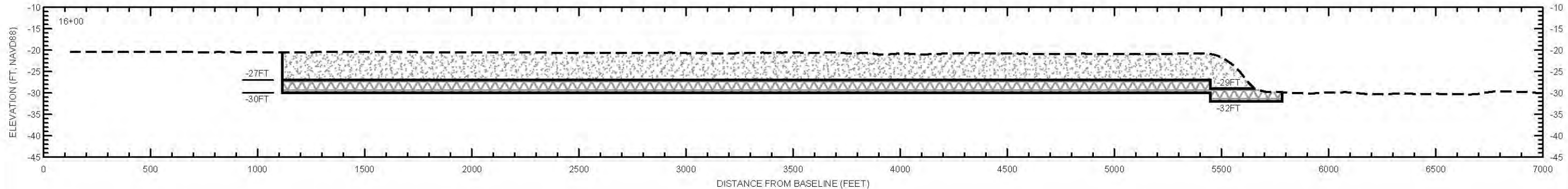
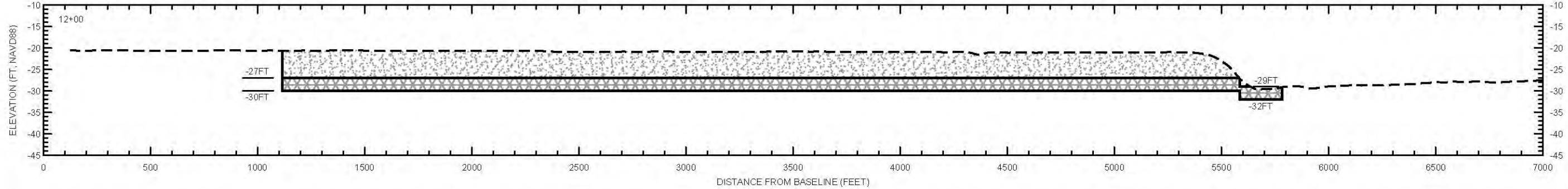
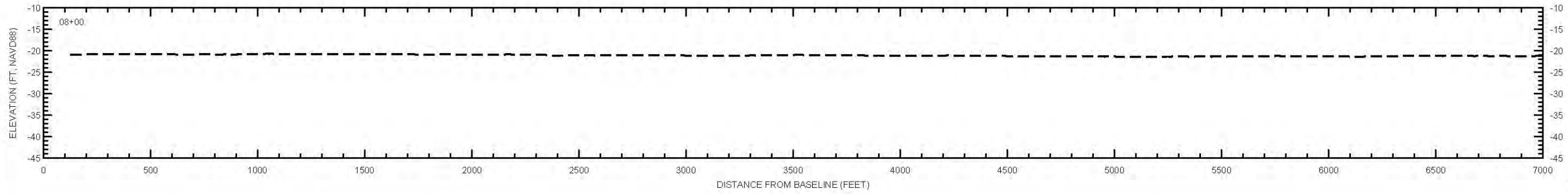
LEGEND			
	DESIGN CUT TOE		DESIGN CUT: -32.5FT MAX DISTURBANCE -35.5FT
	TE-100 BORROW AREA LIMITS		DESIGN CUT: -31FT MAX DISTURBANCE: -34FT
	DESIGN CUT: -27FT MAX DISTURBANCE: -30FT		BATHYMETRIC CONTOUR (MERGE OF OSI, 2012 & HTI, 2016)
	DESIGN CUT: -29FT MAX DISTURBANCE: -32FT		VIBRACORE (STE 2005) (ALL PREFIXED 04-SS88)
	AVOIDANCE AREA		TE-176-B-BL-1 BASELINE ALIGNMENT COORDINATE
			TE-176-B-01 BORROW AREA ALIGNMENT COORDINATE
			ALLOWABLE ANCHOR AREA
			SURVEY BASELINE



**PRELIMINARY**  
**90% DESIGN**

COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726			REV.	DATE	BY
COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802					
WEST BELLE HEADLAND REPAIR DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.					
TE-176-B BORROW AREA PLAN VIEW STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTZ					
DATE: MARCH 2023					
SHEET 23 OF 38					







- NOTES:
1. SECTIONS ARE VIEWED LOOKING WEST.
  2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2012 AND THE TE-100 AS-BUILT SURVEY PERFORMED BY HTI IN 2018.
  3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

**LEGEND**

----- EXISTING GRADE

 DESIGN DREDGE CUT

 DESIGN LIMIT OF DISTURBANCE

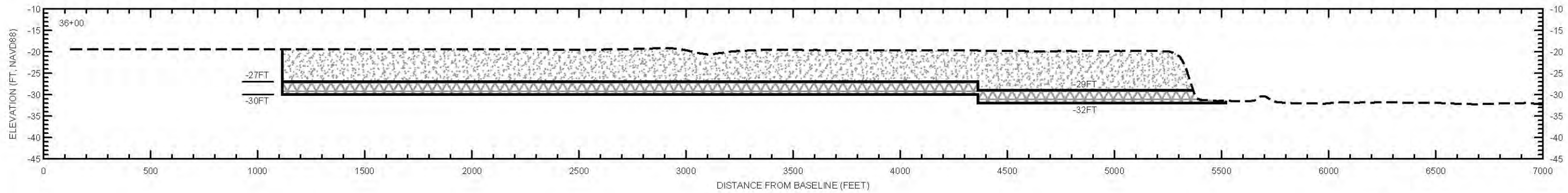
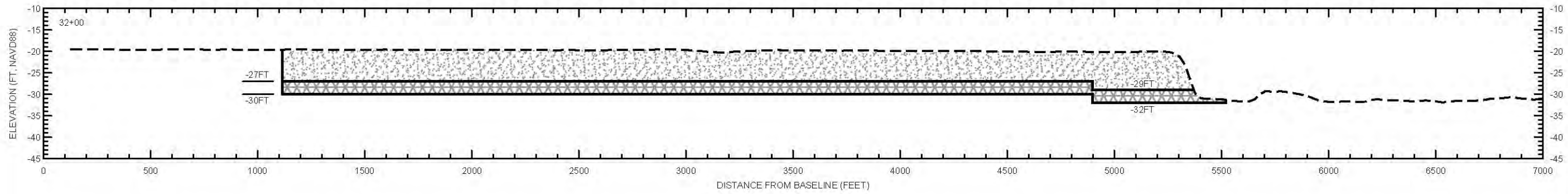
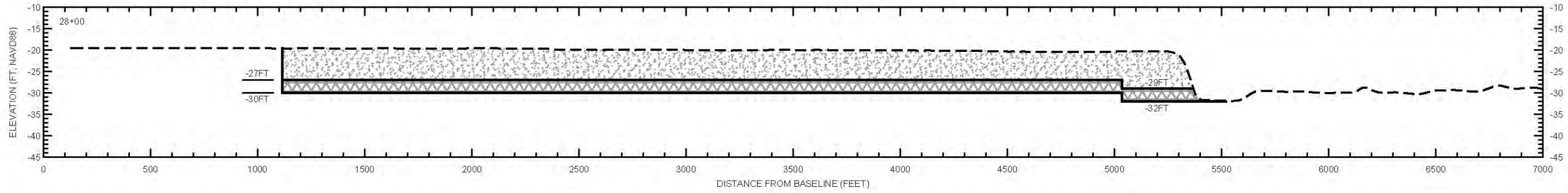
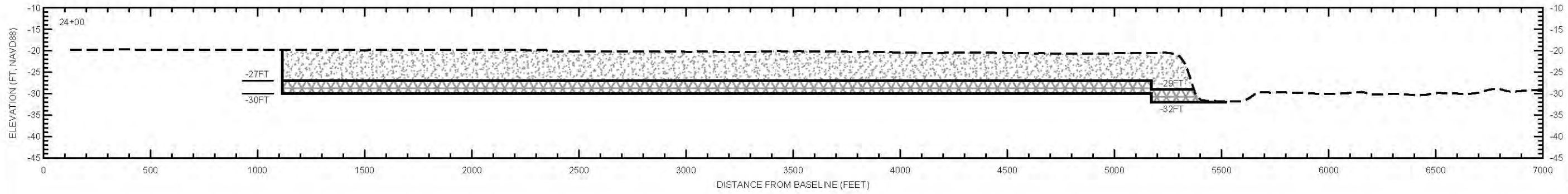
SCALE:  
H: 1" = 500'  
V: 1" = 20'

**PRELIMINARY**

**90% DESIGN**

TE-176-B BORROW AREA SECTIONS STA 08+00 TO STA 20+00		STATE PROJECT NUMBER: TE-0176	DRAWN BY: STEVE DARTEZ
WEST BELLE HEADLAND REPAIR		DESIGNED BY: BRETT BORNE, P.E.	APPROVED BY: MICHAEL POFF, P.E.
COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802		COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	
REV.	DATE	DESCRIPTION	BY





**NOTES:**

1. SECTIONS ARE VIEWED LOOKING WEST.
2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2012 AND THE TE-100 AS-BUILT SURVEY PERFORMED BY HTI IN 2018.
3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

--- EXISTING GRADE

**LEGEND**



DESIGN DREDGE CUT



DESIGN LIMIT OF DISTURBANCE

**SCALE:**

H: 1" = 500'

V: 1" = 20'

**PRELIMINARY**

**90% DESIGN**

**COASTAL ENGINEERING CONSULTANTS, INC.**  
 PH: (225) 523-7403  
 1211 N. RANGE AVE  
 SUITE E  
 DENHAM SPRINGS, LA  
 70726

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 150 TERRACE AVENUE  
 BATON ROUGE, LOUISIANA 70802

WEST BELLE HEADLAND REPAIR

DESIGNED BY: BRETT BORNE, P.E.  
 APPROVED BY: MICHAEL POFF, P.E.

TE-176-B  
 BORROW AREA SECTIONS  
 STA 24+00 TO STA 36+00

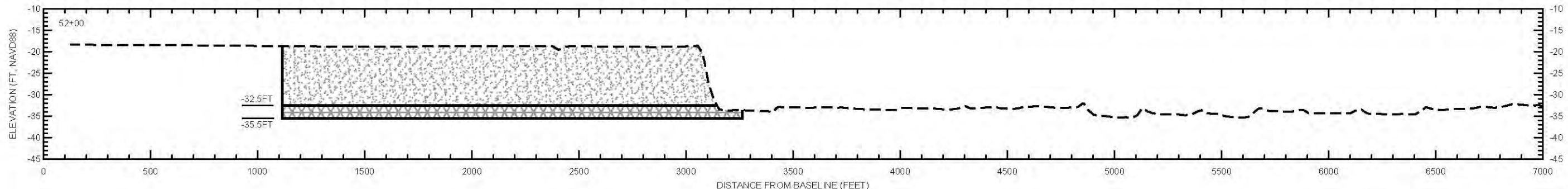
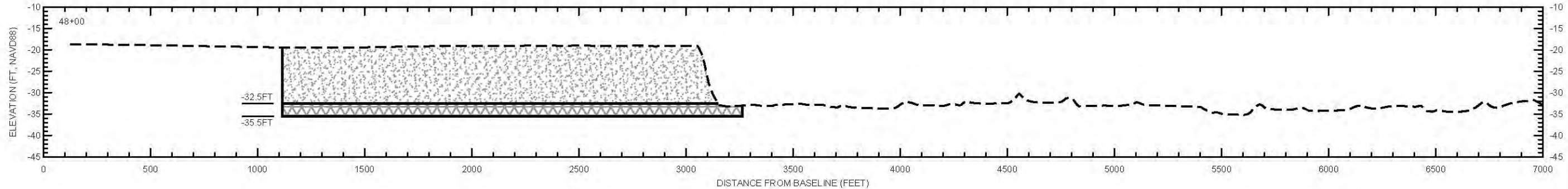
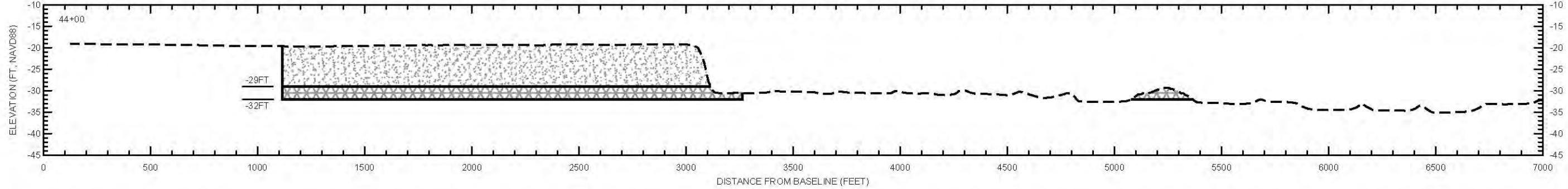
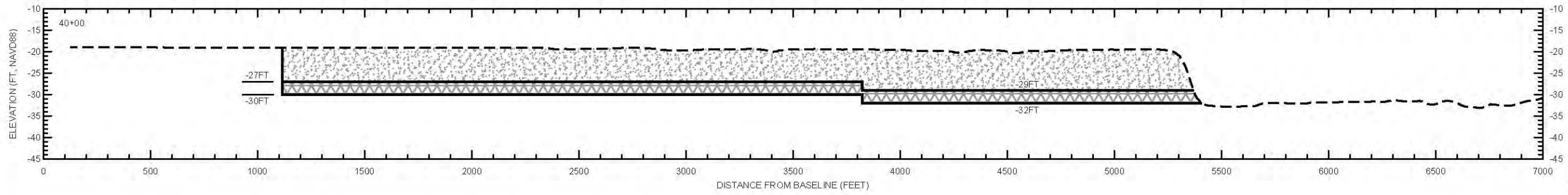
STATE PROJECT NUMBER: TE-0176  
 DRAWN BY: STEVE DARTZ

DATE: MARCH 2023

SHEET 25 OF 38

REV.	DATE	DESCRIPTION	BY





- NOTES:
1. SECTIONS ARE VIEWED LOOKING WEST.
  2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2012 AND THE TE-100 AS-BUILT SURVEY PERFORMED BY HTI IN 2018.
  3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

**LEGEND**

--- EXISTING GRADE

[Stippled Box] DESIGN DREDGE CUT

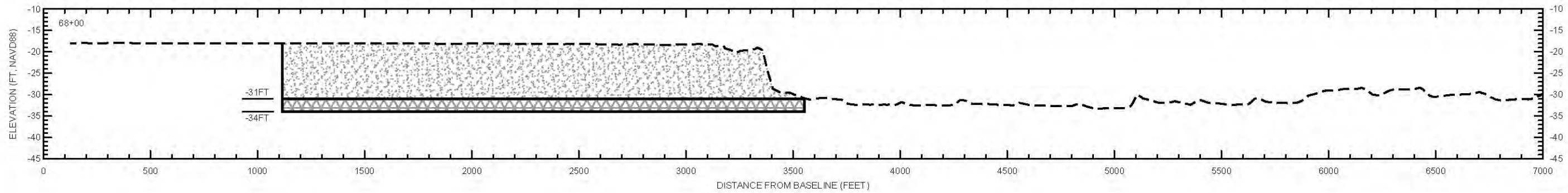
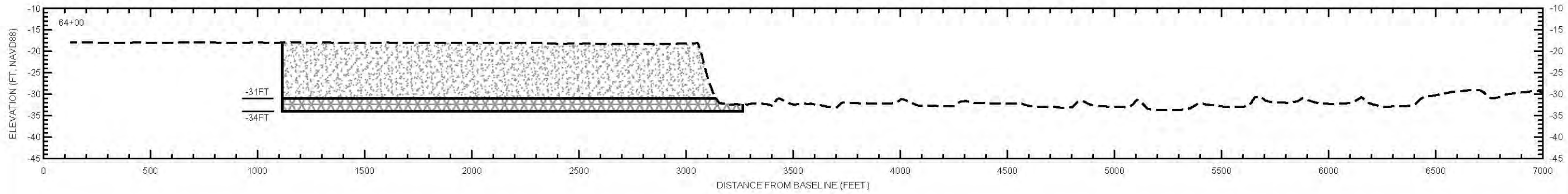
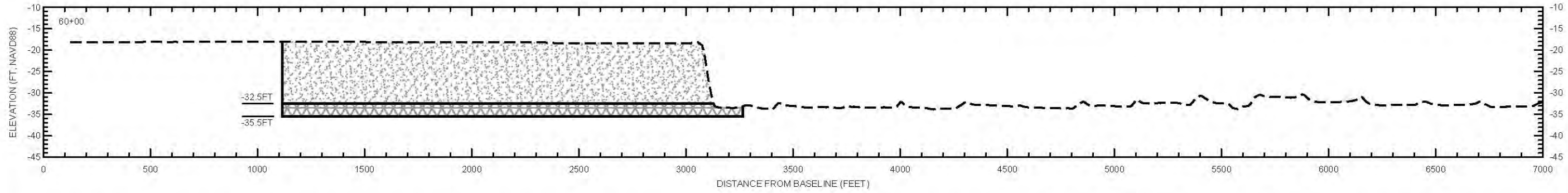
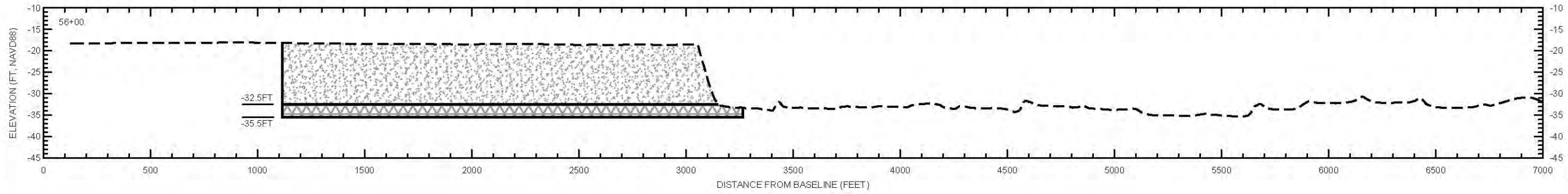
[Cross-hatched Box] DESIGN LIMIT OF DISTURBANCE

SCALE:  
H: 1" = 500'  
V: 1" = 20'

**PRELIMINARY**  
**90% DESIGN**

TE-176-B BORROW AREA SECTIONS STA 40+00 TO STA 52+00	STATE PROJECT NUMBER: TE-0176	DRAWN BY: STEVE DARTEZ
WEST BELLE HEADLAND REPAIR	DESIGNED BY: BRETT BORNE, P.E.	APPROVED BY: MICHAEL POFF, P.E.
COASTAL PROTECTION AND RESTORATION AUTHORITY	150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	
COASTAL ENGINEERING CONSULTANTS, INC.	PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	
	REV.	DATE
		DESCRIPTION
		BY





**NOTES:**

1. SECTIONS ARE VIEWED LOOKING WEST.
2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2012 AND THE TE-100 AS-BUILT SURVEY PERFORMED BY HTI IN 2018.
3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

----- EXISTING GRADE

**LEGEND**



DESIGN DREDGE CUT



DESIGN LIMIT OF DISTURBANCE

SCALE:  
H: 1" = 500'  
V: 1" = 20'

**PRELIMINARY**  
**90% DESIGN**

**COASTAL ENGINEERING CONSULTANTS, INC.**  
PH: (225) 523-7403  
1211 N. RANGE AVE  
SUITE E  
DENHAM SPRINGS, LA 70726

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
150 TERRACE AVENUE  
BATON ROUGE, LOUISIANA 70802

**WEST BELLE HEADLAND REPAIR**  
DESIGNED BY: BRETT BORNE, P.E.  
APPROVED BY: MICHAEL POFF, P.E.

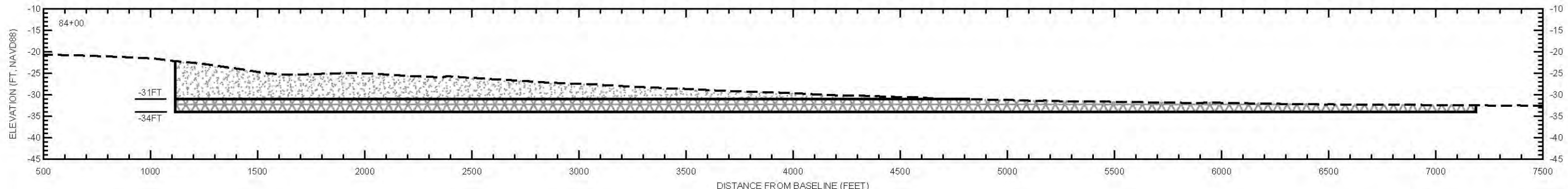
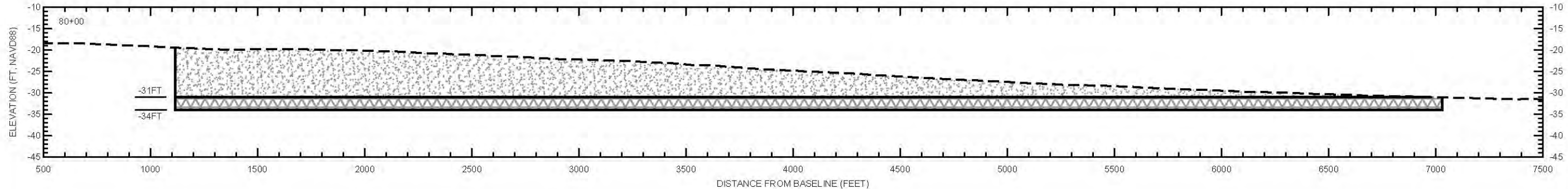
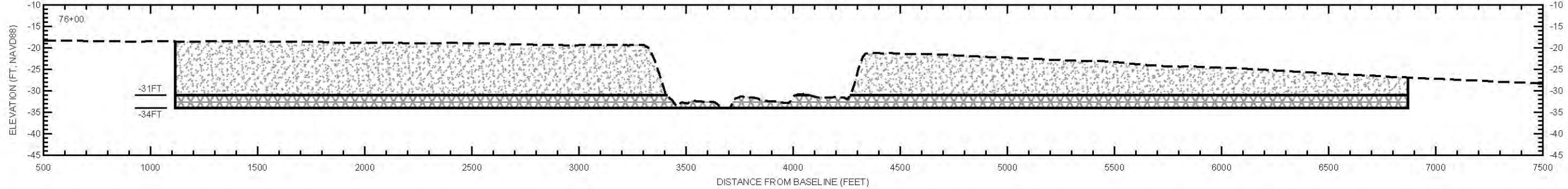
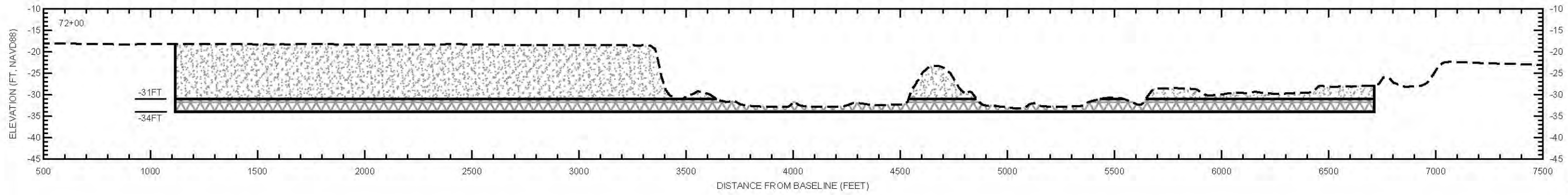
TE-176-B  
BORROW AREA SECTIONS  
STA 56+00 TO STA 68+00  
STATE PROJECT NUMBER: TE-0176  
DRAWN BY: STEVE DARTZ

DATE: MARCH 2023

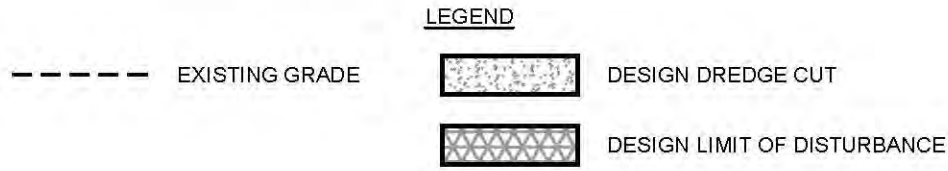
SHEET 27 OF 38

REV.	DATE	DESCRIPTION	BY





- NOTES:
1. SECTIONS ARE VIEWED LOOKING WEST.
  2. BATHYMETRIC PROFILES AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OSI IN 2012 AND THE TE-100 AS-BUILT SURVEY PERFORMED BY HTI IN 2018.
  3. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  4. SEE SHEET 38 FOR BORROW AREA BASELINE ALIGNMENT.

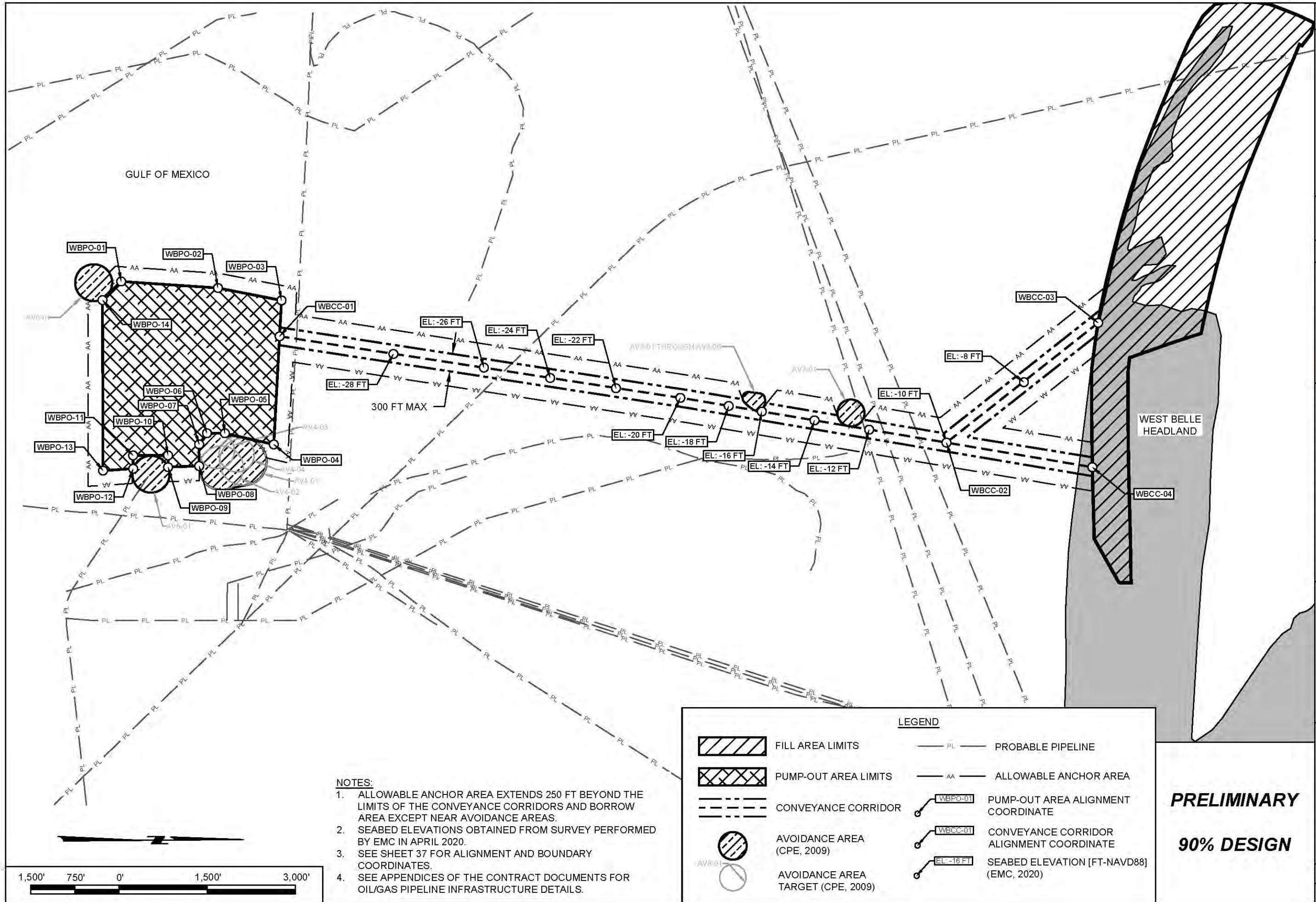


SCALE:  
H: 1" = 500'  
V: 1" = 20'

**PRELIMINARY**  
**90% DESIGN**

TE-176-B BORROW AREA SECTIONS STA 72+00 TO STA 84+00		STATE PROJECT NUMBER: TE-0176	DRAWN BY: STEVE DARTEZ
WEST BELLE HEADLAND REPAIR		DESIGNED BY: BRETT BORNE, P.E.	APPROVED BY: MICHAEL POFF, P.E.
COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802		COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	
REV.	DATE	DESCRIPTION	BY





**NOTES:**

1. ALLOWABLE ANCHOR AREA EXTENDS 250 FT BEYOND THE LIMITS OF THE CONVEYANCE CORRIDORS AND BORROW AREA EXCEPT NEAR AVOIDANCE AREAS.
2. SEABED ELEVATIONS OBTAINED FROM SURVEY PERFORMED BY EMC IN APRIL 2020.
3. SEE SHEET 37 FOR ALIGNMENT AND BOUNDARY COORDINATES.
4. SEE APPENDICES OF THE CONTRACT DOCUMENTS FOR OIL/GAS PIPELINE INFRASTRUCTURE DETAILS.

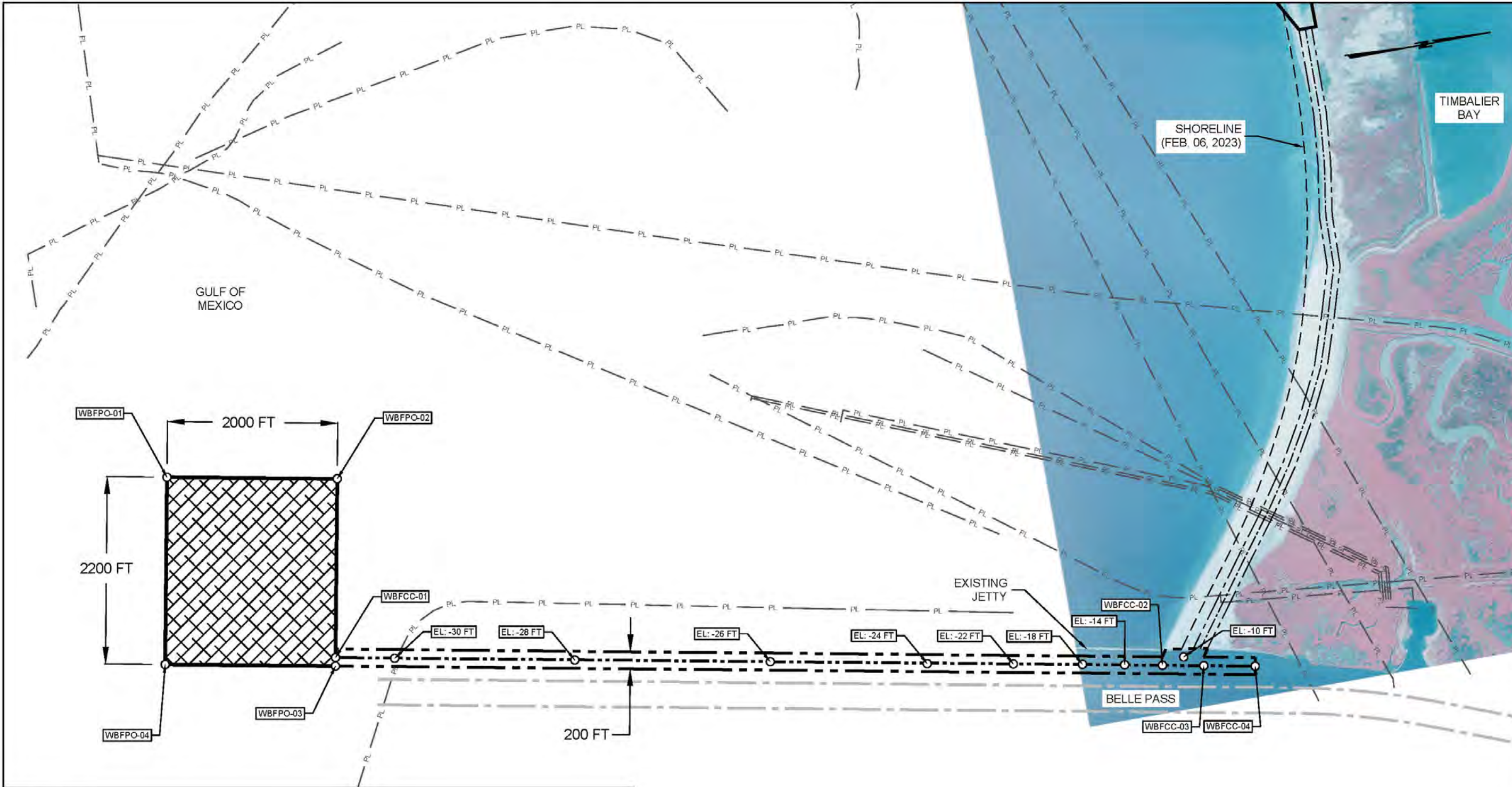
**LEGEND**

	FILL AREA LIMITS		PROBABLE PIPELINE
	PUMP-OUT AREA LIMITS		ALLOWABLE ANCHOR AREA
	CONVEYANCE CORRIDOR		PUMP-OUT AREA ALIGNMENT COORDINATE
	AVOIDANCE AREA (CPE, 2009)		CONVEYANCE CORRIDOR ALIGNMENT COORDINATE
	AVOIDANCE AREA TARGET (CPE, 2009)		SEABED ELEVATION [FT-NAVD88] (EMC, 2020)



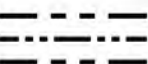
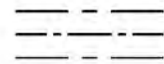
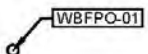

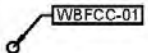
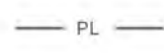
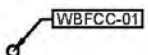
**PRELIMINARY**  
**90% DESIGN**

COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802		COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	REV. DATE DESCRIPTION BY
WEST BELLE HEADLAND REPAIR	WEST BELLE PUMP-OUT AREA AND CONVEYANCE CORRIDOR PLAN VIEW	DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POTFF, P.E.	STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTZ
DATE: MARCH 2023 SHEET 29 OF 38			



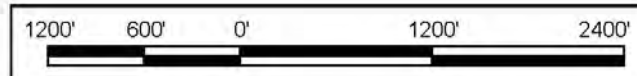


**LEGEND:**

- |   |   |
|---|---|
|  PUMP-OUT AREA                                     |  WEST BELLE FILL TEMPLATE                |
|  WEST BELLE FEEDER BEACH CONVEYANCE CORRIDOR       |  WEST BELLE FEEDER BEACH ACCESS CORRIDOR |
|  WBFP0-01 PUMP-OUT AREA BOUNDARY COORDINATE        |  USACE FEDERAL CHANNEL LIMITS            |
|  WBFC0-01 CONVEYANCE CORRIDOR ALIGNMENT COORDINATE |  PL PROBABLE PIPELINES                   |
|  WBFC0-01 SEABED ELEVATION [FT-NAVD88] (DCC, 2021) |   |

**NOTES:**

1. AERIAL IMAGE REFERENCE: AERO-DATA CORP., FEBRUARY 14, 2022
2. FEBRUARY 06, 2023 SHORELINE POSITION INTERPOLATED FROM AERIAL IMAGE OBTAINED FROM SENTINEL HUB EO BROWSER.
3. SEABED ELEVATIONS OBTAINED FROM SURVEY PERFORMED BY DCC IN MAY 2021.
4. SEE SHEET 18 FOR ACCESS CORRIDOR DETAILS.
5. SEE SHEET 31 FOR CONVEYANCE CORRIDOR AND JETTY CROSSING DETAILS.
6. SEE SHEET 37 FOR ALIGNMENT COORDINATES.
7. SEE APPENDICES OF THE CONTRACT DOCUMENTS FOR OIL/GAS PIPELINE INFRASTRUCTURE DETAILS.

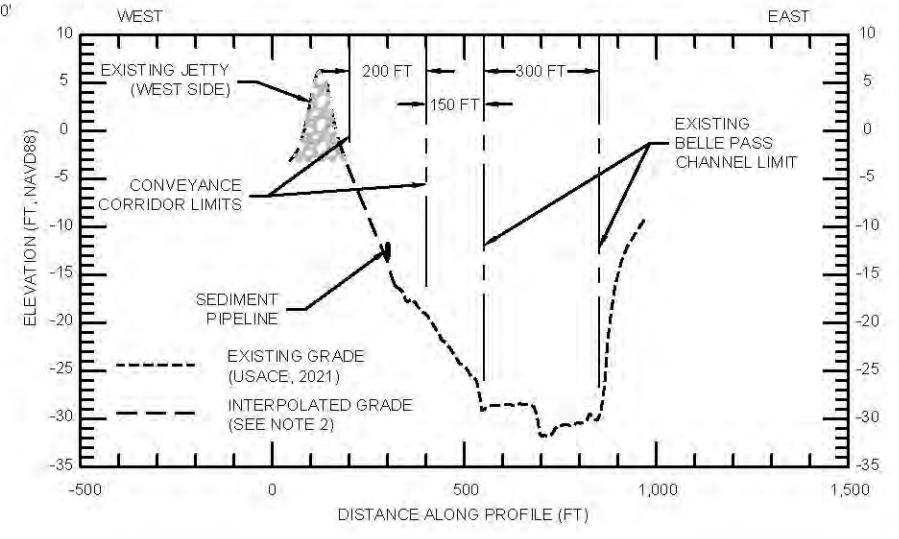


**PRELIMINARY**  
**90% DESIGN**

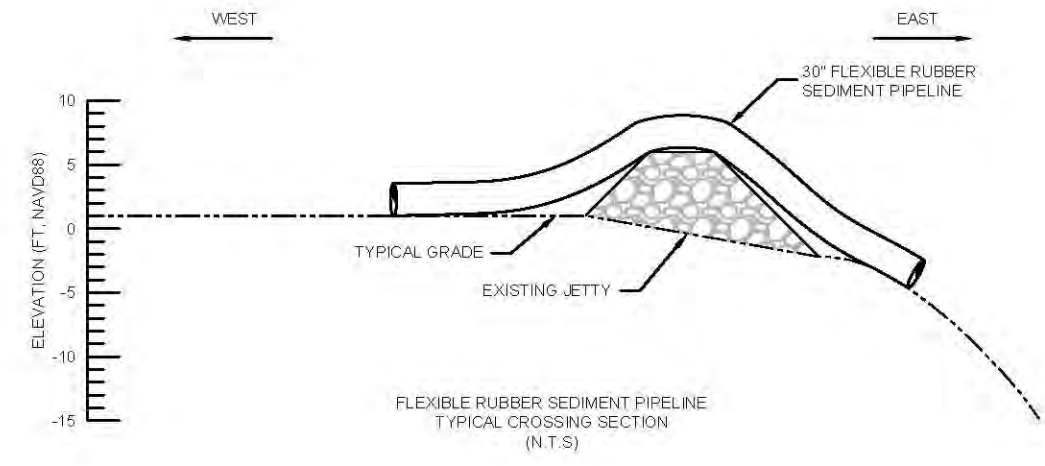
COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802		COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	
WEST BELLE HEADLAND REPAIR	DESIGNED BY: BRETT BORNE, P.E.	DATE	DESCRIPTION
WEST BELLE FEEDER BEACH PUMP-OUT & CONVEYANCE CORRIDOR PLAN VIEW	APPROVED BY: MICHAEL POFF, P.E.	REV.	BY
STATE PROJECT NUMBER: TE-0176	DRAWN BY: STEVE DARTEZ		
DATE: MARCH 2023			
SHEET 30 OF 38			



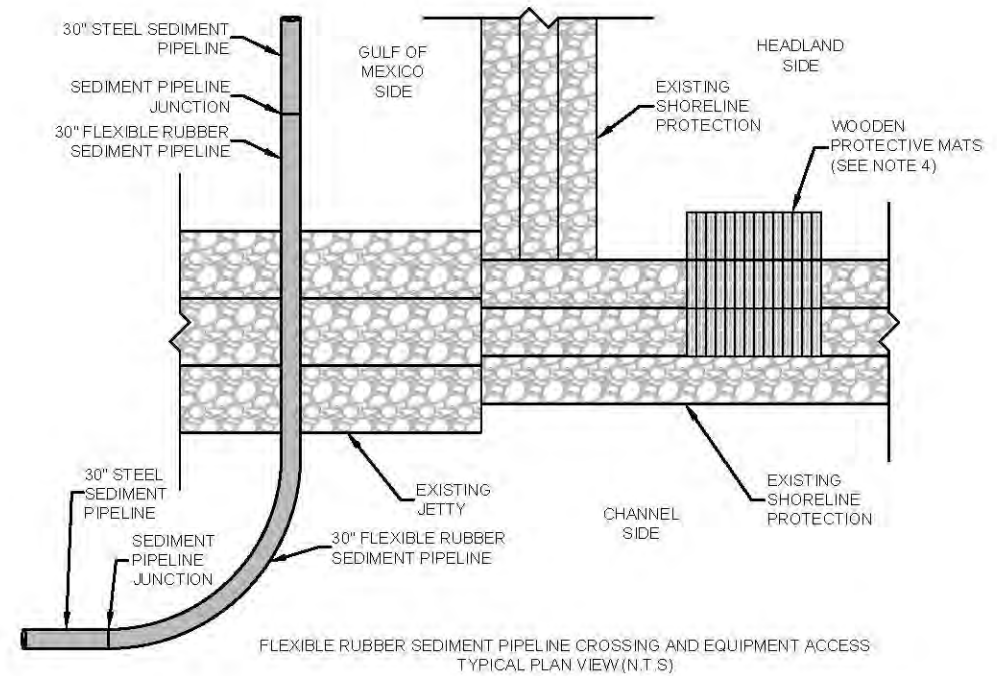
SCALE:  
H: 1" = 500'  
V: 1" = 20'



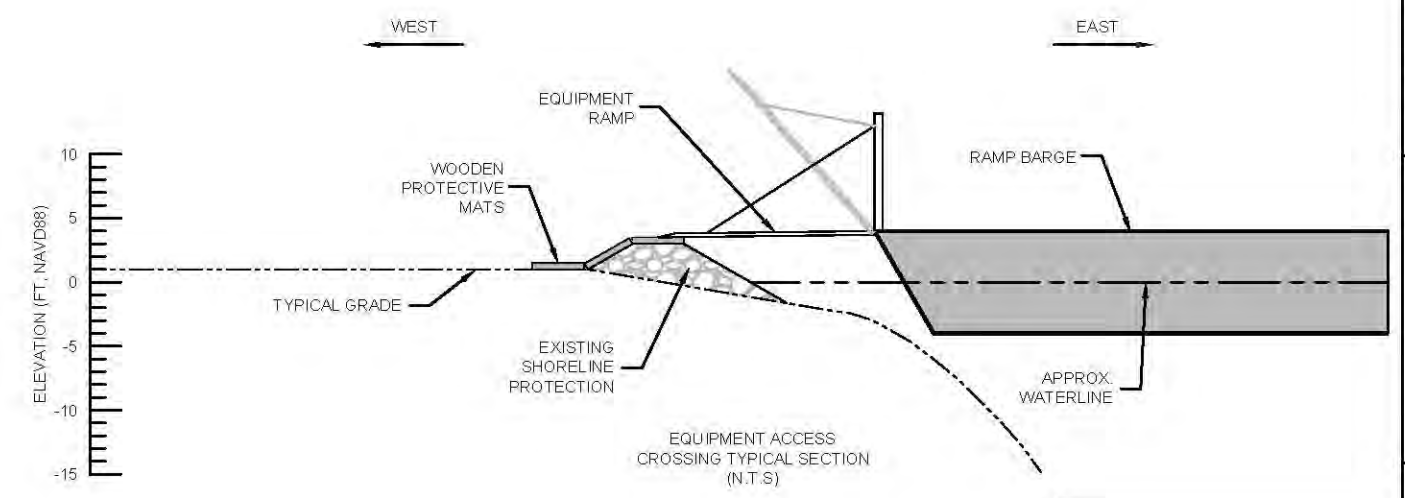
WEST BELLE FEEDER BEACH CONVEYANCE CORRIDOR  
TYPICAL CROSSING SECTION



FLEXIBLE RUBBER SEDIMENT PIPELINE  
TYPICAL CROSSING SECTION  
(N.T.S)



FLEXIBLE RUBBER SEDIMENT PIPELINE CROSSING AND EQUIPMENT ACCESS  
TYPICAL PLAN VIEW (N.T.S)



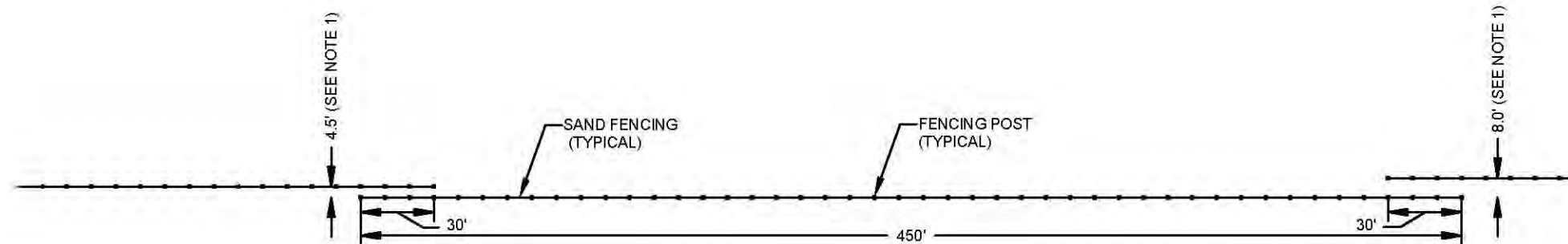
EQUIPMENT ACCESS  
CROSSING TYPICAL SECTION  
(N.T.S)

**NOTES:**

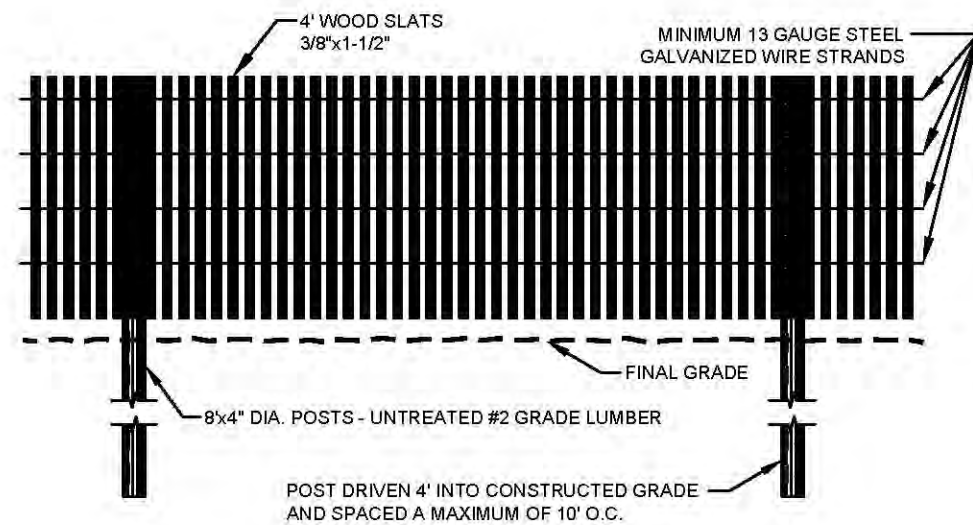
- BELLE PASS CHANNEL SURVEY AND CHANNEL LIMITS OBTAINED FROM USACE PORT FOURCHON NAV. CHANNEL MAINTENANCE CHANNEL DREDGING (W912P820C0070), 2021 POST-DREDGE SURVEY.
- INTERPOLATED GRADE (JETTY DIMENSIONS) BASED ON USACE EAST JETTY EXTENSION FILE H-16-47797.
- FLEXIBLE RUBBER SEDIMENT PIPELINE TO CROSS EXISTING JETTY WITHIN THE CONVEYANCE CORRIDOR LIMITS.
- EXISTING SHORELINE PROTECTION TO BE PROTECTED BY WOODEN PROTECTIVE MATS (OR APPROVED EQUIVALENT) DURING EQUIPMENT ACCESS. WIDTH OF MATS SHALL BE OF SUFFICIENT SIZE TO PROTECT ROCK SHORELINE PROTECTION FROM DAMAGE BY THE EQUIPMENT RAMP.
- MEAN HIGH WATER = +0.88 FT NAVD88, MEAN LOW WATER = -0.33 FT NAVD88.
- NO EXCAVATIONS OR FILLS ARE REQUIRED FOR THE CONVEYANCE CORRIDOR.
- SEDIMENT PIPELINE SHALL BE LIGHTED AND MARKED IN ACCORDANCE WITH U.S. COAST GUARD REGULATIONS.

**PRELIMINARY**  
**90% DESIGN**

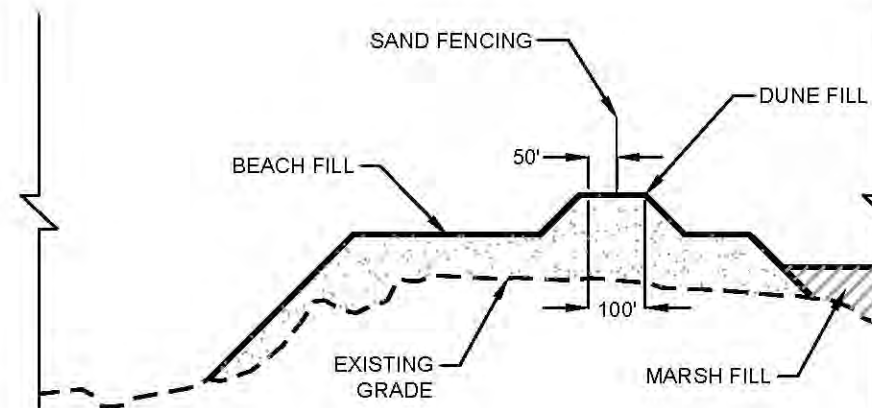
COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	WEST BELLE HEADLAND REPAIR DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.	WEST BELLE FEEDER BEACH CONVEYANCE CORRIDOR TYPICAL SECTIONS STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTZ
BY	DATE	REV.	DESCRIPTION



FENCING GAPPING DIMENSIONS  
NOT TO SCALE



FENCING DETAIL  
NOT TO SCALE



WEST BELLE HEADLAND FENCING SECTION TYPICAL  
NOT TO SCALE

NOTES:

1. THE DISTANCE BETWEEN FENCES INCREASES FROM 4.5 FT TO 8.0 FT AT EVERY FIFTH GAP TO ALLOW ALL-TERRAIN VEHICLE ACCESS.
2. ACTUAL SAND FENCING ALIGNMENT COORDINATES WILL BE PROVIDED TO CONTRACTOR PRIOR TO SAND FENCING INSTALLATION.

COASTAL  
ENGINEERING  
CONSULTANTS, INC.  
P.H. (225) 768-1982  
8570 ANSELMO LANE  
BATON ROUGE, LA  
70810

COASTAL PROTECTION  
AND RESTORATION  
AUTHORITY  
150 TERRACE AVENUE  
BATON ROUGE, LOUISIANA 70802

WEST BELLE HEADLAND  
REPAIR

DESIGNED BY: BRETT BORNE, P.E.  
APPROVED BY: MICHAEL POFF, P.E.

SAND FENCING DETAILS

STATE PROJECT NUMBER: TE-0176  
DRAWN BY: STEVE DARTIZ

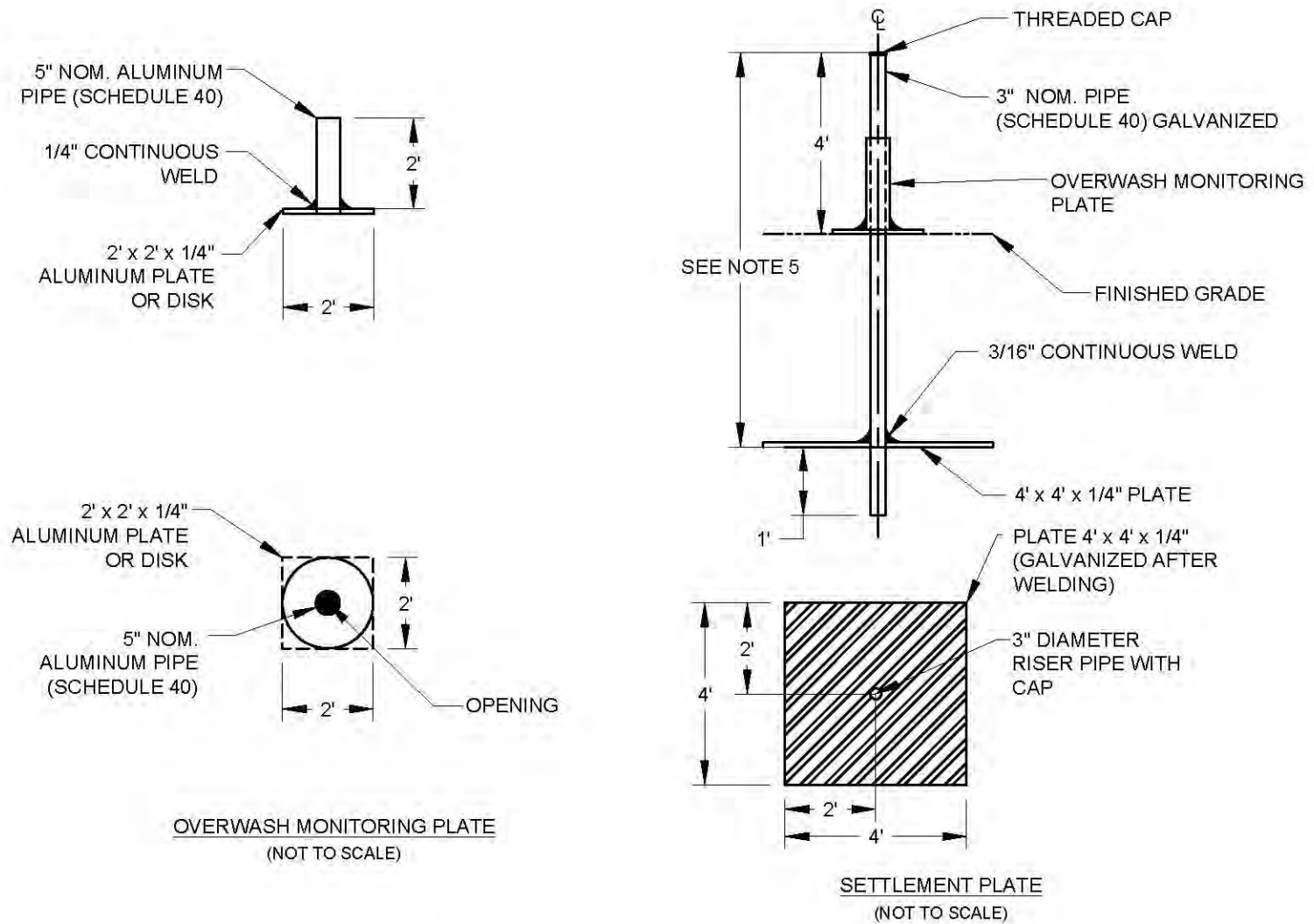
**PRELIMINARY**  
**90% DESIGN**

DATE: MARCH 2023

SHEET 32 OF 38

REV.	DATE	DESCRIPTION	BY





OVERWASH MONITORING PLATE  
(NOT TO SCALE)

SETTLEMENT PLATE  
(NOT TO SCALE)

SETTLEMENT AND OVERWASH MONITORING SYSTEM

SETTLEMENT AND OVERWASH MONITORING SYSTEM NOTES:

1. SETTLEMENT PLATES SHALL BE CONSTRUCTED USING ASTM A36 STEEL AND HOT-DIPPED GALVANIZED AFTER FABRICATION PER CONTRACT SPECIFICATIONS.
2. ALL SETTLEMENT PLATES SHALL BE SURVEYED UNDER THE SUPERVISION OF THE RESIDENT PROJECT REPRESENTATIVE WITHIN A DAY OF INSTALLATION AND WEEKLY THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
3. ALL SETTLEMENT PLATES MUST BE INSTALLED AND MAINTAINED WITHIN 10.5 DEGREES OF VERTICAL.
4. ALL SETTLEMENT PLATES SHALL BE MARKED WITH SURVEY FLAGGING.
5. LENGTH OF THE SETTLEMENT PLATE RISER PIPE SHALL BE SUCH THAT THE ELEVATION OF THE TOP CAP BE NO LESS THAN 4 FT ABOVE MAXIMUM FINAL DESIGN GRADE FOR ITS LOCATION.
6. OVERWASH MONITORING PLATES SHALL BE FABRICATED USING 6061-TS GRADE ALUMINUM PER THE CONTRACT SPECIFICATIONS.
7. OVERWASH MONITORING PLATE SHALL BE INSTALLED AND SURVEYED IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.

**PRELIMINARY**  
**90% DESIGN**

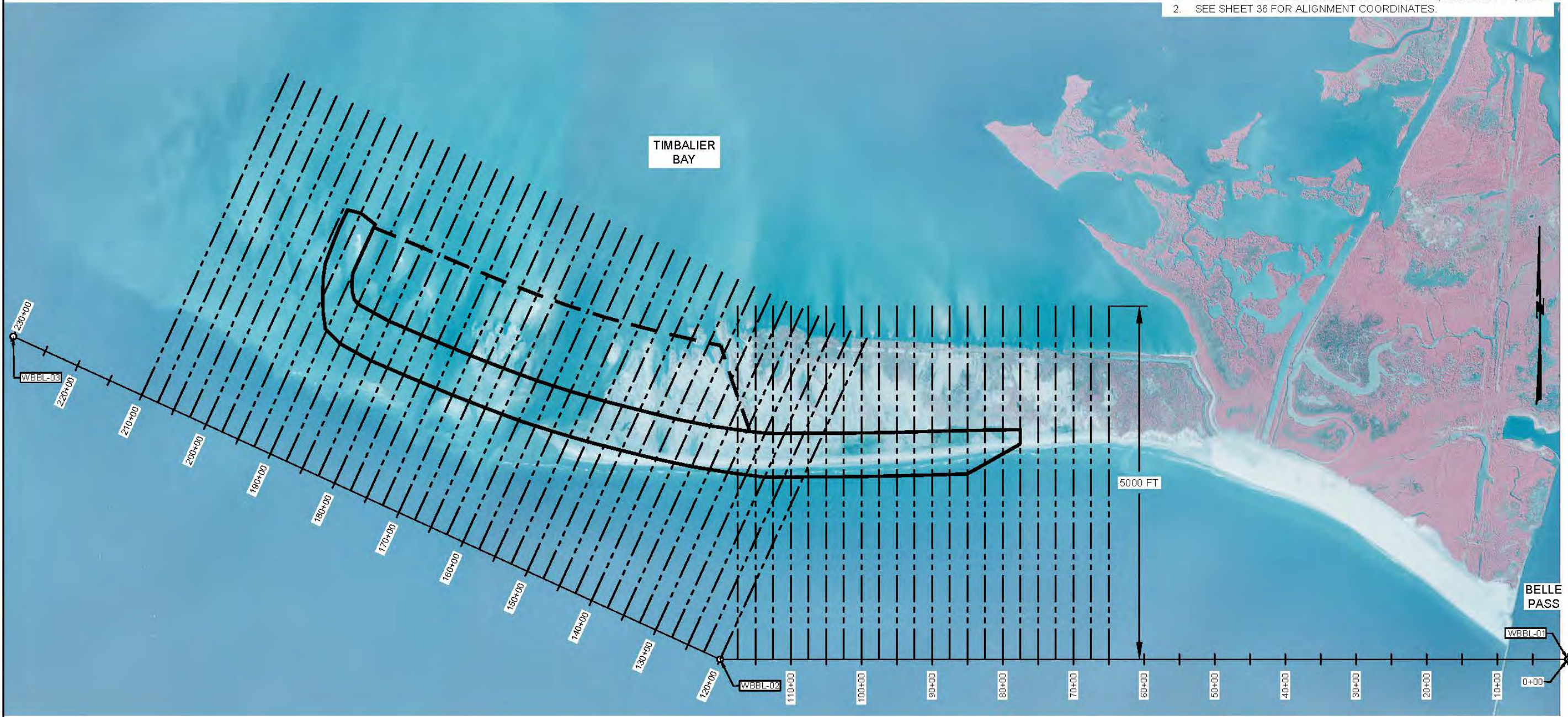
DATE: MARCH 2023	STATE PROJECT NUMBER: TE-0176	DESIGNED BY: BRETT BORNE, P.E.	APPROVED BY: MICHAEL POFF, P.E.
SHEET 33 OF 38	SETTLEMENT AND OVERWASH MONITORING SYSTEM DETAILS	WEST BELLE HEADLAND REPAIR	COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802
REV.	DATE	DESCRIPTION	BY

COASTAL ENGINEERING CONSULTANTS, INC.  
P.H. (225) 768-1982  
8570 ANSELMO LANE  
BATON ROUGE, LA 70810





NOTES:  
 1. AERIAL IMAGE REFERENCE: AERO-DATA CORP., FEBRUARY 14, 2022.  
 2. SEE SHEET 36 FOR ALIGNMENT COORDINATES.



TIMBALIER BAY

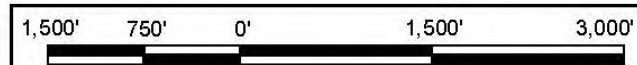
GULF OF MEXICO

BELLE PASS

5000 FT

**LEGEND:**

- SURVEY TRANSECT
- BEACH CREST ALIGNMENT
- MARSH CREST ALIGNMENT
- BASELINE ALIGNMENT POINT
- SURVEY BASELINE



**PRELIMINARY**  
**90% DESIGN**

COASTAL ENGINEERING CONSULTANTS, INC.  
 P.H.: (225) 768-1982  
 8570 ANSELMO LANE  
 BATON ROUGE, LA 70810

COASTAL PROTECTION AND RESTORATION AUTHORITY  
 150 TERRACE AVENUE  
 BATON ROUGE, LOUISIANA 70802

WEST BELLE HEADLAND REPAIR  
 DESIGNED BY: BRETT BORNE, P.E.  
 APPROVED BY: MICHAEL POFF, P.E.

WEST BELLE HEADLAND FILL TEMPLATE SURVEY LAYOUT  
 STATE PROJECT NUMBER: TE-0176  
 DRAWN BY: STEVE DARTEZ

DATE: MARCH 2023

SHEET 35 OF 38

REV.	DATE	DESCRIPTION	BY



WEST BELLE HEADLAND BEACH CREST - NORTH ALIGNMENT		
PI NUMBER	NORTHING	EASTING
BCN-01	218,354.00	3,627,159.20
BCN-02	218,350.25	3,626,909.20
BCN-03	218,342.75	3,626,409.20
BCN-04	218,330.29	3,625,909.20
BCN-05	218,316.43	3,625,409.20
BCN-06	218,307.68	3,624,909.20
BCN-07	218,303.92	3,624,409.20
BCN-08	218,302.19	3,623,909.20
BCN-09	218,301.79	3,623,659.20
BCN-10	218,306.26	3,623,524.64
BCN-11	218,329.11	3,623,332.27
BCN-12	218,407.09	3,622,769.25
BCN-13	218,509.04	3,622,266.13
BCN-14	218,630.32	3,621,771.83
BCN-15	218,755.74	3,621,279.42
BCN-16	218,896.04	3,620,793.81
BCN-17	219,049.19	3,620,314.08
BCN-18	219,223.29	3,619,843.91
BCN-19	219,404.58	3,619,377.02
BCN-20	219,594.96	3,618,914.29
BCN-21	219,692.07	3,618,683.81
BCN-22	219,790.65	3,618,453.99
BCN-23	219,889.24	3,618,224.17
BCN-24	220,010.34	3,618,004.65
BCN-25	220,131.56	3,617,785.17
BCN-26	220,199.16	3,617,730.70
BCN-27	220,316.46	3,617,702.39
BCN-28	220,442.58	3,617,695.89
BCN-29	220,576.25	3,617,713.46
BCN-30	220,918.27	3,617,869.70
BCN-31	221,260.23	3,618,025.91
BCN-32	221,418.47	3,617,823.35

WEST BELLE HEADLAND BEACH CREST - SOUTH ALIGNMENT		
PI NUMBER	NORTHING	EASTING
BCS-01	218,151.11	3,627,159.20
BCS-02	218,007.31	3,626,909.20
BCS-03	217,727.52	3,626,409.20
BCS-04	217,714.49	3,625,909.20
BCS-05	217,700.22	3,625,409.20
BCS-06	217,691.11	3,624,909.20
BCS-07	217,685.43	3,624,409.20
BCS-08	217,684.49	3,623,909.20
BCS-09	217,681.16	3,623,659.20
BCS-10	217,683.22	3,623,537.98
BCS-11	217,749.69	3,623,018.64
BCS-12	217,832.76	3,622,506.89
BCS-13	217,939.48	3,622,005.94
BCS-14	218,060.94	3,621,511.73
BCS-15	218,187.98	3,621,020.07
BCS-16	218,331.47	3,620,535.92
BCS-17	218,485.98	3,620,056.80
BCS-18	218,662.73	3,619,587.84
BCS-19	218,844.77	3,619,121.30
BCS-20	219,035.15	3,618,658.57
BCS-21	219,132.36	3,618,428.12
BCS-22	219,229.56	3,618,197.68
BCS-23	219,329.61	3,617,968.53
BCS-24	219,450.77	3,617,749.03
BCS-25	219,571.93	3,617,529.53
BCS-26	219,781.78	3,617,322.29
BCS-27	220,015.45	3,617,289.24
BCS-28	220,236.61	3,617,283.46
BCS-29	220,501.07	3,617,291.56
BCS-30	220,707.80	3,617,321.76
BCS-31	220,969.85	3,617,421.37
BCS-32	221,201.62	3,617,512.68
BCS-33	221,463.97	3,617,636.08

WEST BELLE HEADLAND DUNE CREST - NORTH ALIGNMENT		
PI NUMBER	NORTHING	EASTING
DCN-01	218,132.41	3,626,511.06
DCN-02	218,180.20	3,626,409.20
DCN-03	218,167.74	3,625,909.20
DCN-04	218,153.87	3,625,409.20
DCN-05	218,145.16	3,624,909.20
DCN-06	218,141.42	3,624,409.20
DCN-07	218,139.69	3,623,909.20
DCN-08	218,139.20	3,623,659.20
DCN-09	218,144.08	3,623,512.34
DCN-10	218,179.30	3,623,214.90
DCN-11	218,255.30	3,622,699.92
DCN-12	218,358.41	3,622,197.32
DCN-13	218,479.88	3,621,703.11
DCN-14	218,605.52	3,621,210.80
DCN-15	218,746.76	3,620,725.62
DCN-16	218,900.18	3,620,246.01
DCN-17	219,075.16	3,619,776.24
DCN-18	219,256.70	3,619,309.47
DCN-19	219,447.04	3,618,846.72
DCN-20	219,544.19	3,618,616.25
DCN-21	219,642.77	3,618,386.44
DCN-22	219,741.36	3,618,156.62
DCN-23	219,862.58	3,617,937.15
DCN-24	219,981.97	3,617,721.00
DCN-25	219,986.52	3,617,609.29

WEST BELLE HEADLAND DUNE CREST - SOUTH ALIGNMENT		
PI NUMBER	NORTHING	EASTING
DCS-01	218,132.41	3,626,511.06
DCS-02	218,080.03	3,626,409.20
DCS-03	218,067.58	3,625,909.20
DCS-04	218,053.72	3,625,409.20
DCS-05	218,045.03	3,624,909.20
DCS-06	218,041.30	3,624,409.20
DCS-07	218,039.58	3,623,909.20
DCS-08	218,039.11	3,623,659.20
DCS-09	218,040.98	3,623,532.25
DCS-10	218,084.54	3,623,171.61
DCS-11	218,161.31	3,622,656.98
DCS-12	218,265.47	3,622,154.86
DCS-13	218,387.30	3,621,660.82
DCS-14	218,513.35	3,621,168.70
DCS-15	218,655.01	3,620,683.71
DCS-16	218,808.78	3,620,204.26
DCS-17	218,984.01	3,619,734.60
DCS-18	219,165.59	3,619,267.85
DCS-19	219,356.02	3,618,805.14
DCS-20	219,453.20	3,618,574.68
DCS-21	219,551.73	3,618,344.85
DCS-22	219,650.26	3,618,115.01
DCS-23	219,772.28	3,617,893.81
DCS-24	219,892.52	3,617,675.98
DCS-25	219,986.46	3,617,609.26

WEST BELLE HEADLAND BASELINE ALIGNMENT		
PI NUMBER	NORTHING	EASTING
WBBL-01	215,103.43	3,634,909.20
WBBL-02	215,103.43	3,622,909.20
WBBL-03	219,673.64	3,612,904.60

**PRELIMINARY**  
**90% DESIGN**

COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	WEST BELLE HEADLAND REPAIR	ALIGNMENT AND COORDINATE TABLES	STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTEZ	DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.	DATE: MARCH 2023	SHEET 36 OF 38	DESCRIPTION	DATE	REV.	BY
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WEST BELLE HEADLAND MARSH CREST ALIGNMENT		
PI NUMBER	NORTHING	EASTING
MC-01	218,329.11	3,623,332.27
MC-02	219,068.60	3,623,071.44
MC-03	219,545.05	3,622,918.97
MC-04	219,578.67	3,622,754.75
MC-05	219,690.39	3,622,256.08
MC-06	219,812.65	3,621,762.24
MC-07	219,947.24	3,621,274.02
MC-08	220,097.92	3,620,793.15
MC-09	220,266.96	3,620,320.67
MC-10	220,446.82	3,619,853.13
MC-11	220,637.20	3,619,390.40
MC-12	220,831.08	3,618,929.27
MC-13	221,025.78	3,618,468.51
MC-14	221,217.34	3,618,006.32

WEST BELLE FEEDER BEACH ACCESS CORRIDOR ALIGNMENT		
PI NUMBER	NORTHING	EASTING
WBFAC-01	215,749.07	3,634,116.79
WBFAC-02	216,102.49	3,633,631.92
WBFCC-03	216,454.89	3,633,146.31
WBFCC-04	216,818.52	3,632,657.91
WBFCC-05	217,150.15	3,632,168.60
WBFCC-06	217,449.00	3,631,648.32
WBFCC-07	217,713.21	3,631,109.63
WBFCC-08	217,899.06	3,630,539.14
WBFCC-09	218,070.34	3,629,964.10
WBFCC-10	218,081.77	3,629,364.21
WBFCC-11	218,169.70	3,628,770.69
WBFCC-12	218,223.40	3,628,173.10
WBFCC-13	218,226.11	3,627,159.20

WEST BELLE FEEDER BEACH PUMP-OUT AREA BOUNDARY		
PI NUMBER	NORTHING	EASTING
WBFPO-01	204,146.05	3,630,027.63
WBFPO-02	206,112.34	3,630,393.30
WBFPO-03	205,710.08	3,632,556.22
WBFPO-04	203,743.80	3,632,190.54

WEST BELLE CONVEYANCE CORRIDOR ALIGNMENT		
PI NUMBER	NORTHING	EASTING
WBCC-01	203,877.18	3,622,967.24
WBCC-02	215,215.95	3,624,775.01
WBCC-03	217,795.09	3,622,738.92
WBCC-04	217,696.29	3,625,193.31

WEST BELLE HEADLAND SETTLEMENT PLATE COORDINATES		
PI NUMBER	NORTHING	EASTING
SP-01	218,180.00	3,623,102.12
SP-02	218,626.72	3,621,051.40
SP-03	219,563.91	3,618,579.51
SP-04	219,992.09	3,617,348.85
SP-05	218,929.82	3,622,402.61
SP-06	219,510.60	3,620,415.79
SP-07	220,262.86	3,618,448.40

WEST BELLE CONVEYANCE CORRIDOR ALIGNMENT		
PI NUMBER	NORTHING	EASTING
WBCC-01	203,877.18	3,622,967.24
WBCC-02	215,215.95	3,624,775.01
WBCC-03	218,112.49	3,622,488.35
WBCC-04	217,971.51	3,625,239.75

WEST BELLE PUMP-OUT AREA BOUNDARY COORDINATES		
PI NUMBER	NORTHING	EASTING
WBPO-01	201,184.00	3,622,035.00
WBPO-02	202,830.00	3,622,147.00
WBPO-03	203,910.00	3,622,358.00
WBPO-04	203,779.00	3,624,807.00
WBPO-05	202,948.00	3,624,616.00
WBPO-06	202,642.13	3,624,616.00
WBPO-07	202,510.00	3,624,804.00
WBPO-08	202,510.00	3,625,174.00
WBPO-09	201,981.82	3,625,194.39
WBPO-10	201,982.00	3,624,993.00
WBPO-11	201,387.00	3,624,993.00
WBPO-12	201,388.78	3,625,220.86
WBPO-13	200,875.00	3,625,251.00
WBPO-14	200,867.00	3,622,353.00

**PRELIMINARY**  
**90% DESIGN**

WEST BELLE HEADLAND REPAIR	ALIGNMENT AND COORDINATE TABLES	COASTAL PROTECTION AND RESTORATION AUTHORITY	COASTAL ENGINEERING CONSULTANTS, INC.	REV.	DATE	DESCRIPTION	BY
DESIGNED BY: BRETT BORNE, P.E.	STATE PROJECT NUMBER: TE-0176	150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	PH: (225) 768-1982 8570 ANSELMO LANE BATON ROUGE, LA 70810				
APPROVED BY: MICHAEL POFF, P.E.	DRAWN BY: STEVE DARTEZ						
DATE: MARCH 2023							
SHEET 37 OF 38							

TE-176-A BORROW AREA BOUNDARY		
PI NUMBER	NORTHING	EASTING
TE-176-A-01	151,615.43	3,491,238.73
TE-176-A-02	151,207.87	3,492,320.70
TE-176-A-03	150,887.27	3,492,320.75
TE-176-A-04	149,925.54	3,492,320.75
TE-176-A-05	149,713.06	3,492,884.84
TE-176-A-06	148,621.44	3,492,896.53
TE-176-A-07	147,396.09	3,492,909.66
TE-176-A-08	147,391.06	3,491,982.13
TE-176-A-09	146,743.44	3,491,980.64
TE-176-A-10	146,743.44	3,491,238.73
TE-176-A-11	148,621.44	3,491,238.73
TE-176-A-12	150,333.12	3,491,238.73
TE-176-A-13	151,294.86	3,491,238.73

TE-176-B BORROW AREA BOUNDARY		
PI NUMBER	NORTHING	EASTING
TE-176-B-01	155,370.32	3,409,857.71
TE-176-B-02	155,372.32	3,416,011.99
TE-176-B-03	153,935.20	3,415,443.30
TE-176-B-04	153,931.20	3,412,298.71
TE-176-B-05	153,379.91	3,412,296.71
TE-176-B-06	153,379.91	3,412,009.17
TE-176-B-07	152,938.45	3,412,009.17
TE-176-B-08	151,522.79	3,412,009.17
TE-176-B-09	150,997.32	3,412,009.17
TE-176-B-10	150,997.32	3,413,719.67
TE-176-B-11	151,279.09	3,413,719.67
TE-176-B-12	151,279.09	3,414,264.67
TE-176-B-13	148,803.18	3,414,264.67
TE-176-B-14	148,803.18	3,414,526.66
TE-176-B-15	147,722.32	3,414,526.66
TE-176-B-16	147,722.32	3,414,415.76
TE-176-B-17	147,722.32	3,409,859.71
TE-176-B-18	150,847.32	3,409,859.71
TE-176-B-19	151,511.66	3,409,859.71
TE-176-B-20	152,938.45	3,409,859.71
TE-176-B-21	150,847.32	3,412,468.08
TE-176-B-22	149,976.61	3,413,640.88

TE-176-A BORROW AREA BASELINE ALIGNMENT		
PI NUMBER	NORTHING	EASTING
TE-176-A BL-01	146,143.51	3,490,238.66
TE-176-A-BL 02	152,143.51	3,490,238.79

TE-176-B BORROW AREA BASELINE ALIGNMENT		
PI NUMBER	NORTHING	EASTING
TE-176-B BL-01	146,772.32	3,408,744.72
TE-176-B BL-02	155,772.32	3,408,744.72

**PRELIMINARY**  
**90% DESIGN**

COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LOUISIANA 70802	COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE SUITE E DENHAM SPRINGS, LA 70726	DATE	DESCRIPTION	BY
WEST BELLE HEADLAND REPAIR	DESIGNED BY: BRETT BORNE, P.E. APPROVED BY: MICHAEL POFF, P.E.	REV.		
ALIGNMENT AND COORDINATE TABLES	STATE PROJECT NUMBER: TE-0176 DRAWN BY: STEVE DARTEZ			
DATE: MARCH 2023				
SHEET 38 OF 38				



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**APPENDIX B**  
**AGENCY CORRESPONDENCE AND PERMITTING**



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**LOUISIANA DEPARTMENT OF NATURAL RESOURCES**



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**DEPARTMENT OF NATURAL RESOURCES  
OFFICE OF COASTAL MANAGEMENT**

P.O. BOX 44487  
BATON ROUGE, LOUISIANA 70804-4487  
(225)342-7591  
1-800-267-4019

**COASTAL USE PERMIT/CONSISTENCY DETERMINATION**

**C.U.P. No.:** P20230206

**C.O.E. No.:** MVN- 2015- 00895- CQ

**NAME:** CPRA  
P.O. BOX 44027  
BATON ROUGE, LA 70804  
Attn: Sydney Dobson

**LOCATION:** Lafourche Parish, LA  
Lat 29-4-1.823N, Long -90-19-20.08W(See plats for additional information); Port Fourchon, 70357

**DESCRIPTION:** Proposed Coastal Protection and Restoration Authority (CPRA) TE-176 West Belle Headland Repair Project. Proposal includes restoring West Belle Headland through marsh, beach, and dune fill placement utilizing offshore sand resources. Approx. 10,520,978 cy of native material will be excavated and placed onsite.

In accordance with the rules and regulations of the Louisiana Coastal Resources Program and Louisiana R.S. 49, Sections 214.21 to 214.41, the State and Local Coastal Resources Management Act of 1978, as amended, the permittee agrees to:

1. Carry out, perform, and/or operate the use in accordance with the permit conditions, plans and specifications approved by the Department of Natural Resources.
2. Comply with any permit conditions imposed by the Department of Natural Resources.
3. Adjust, alter or remove any structure or other physical evidence of the permitted use if, in the opinion of the Department of Natural Resources, it proves to be beyond the scope of the use as approved or is abandoned.
4. Provide, if required by the Department of Natural Resources, an acceptable surety bond in an appropriate amount to ensure adjustment, alteration, or removal should the Department of Natural Resources determine it necessary.
5. Hold and save the State of Louisiana, the local government, the department, and their officers and employees harmless from any damage to persons or property which might result from the use, including the work, activity, or structure permitted.
6. Certify that the use has been completed in an acceptable and satisfactory manner and in accordance with the plans and specifications approved by the Department of Natural Resources. The Department of Natural Resources may, when appropriate, require such certification to be given by a registered professional engineer.
7. All terms of the permit shall be subject to all applicable federal and state laws and regulations.
8. This permit, or a copy thereof, shall be available for inspection at the site of work at all times during operations.
9. The applicant will notify the Office of Coastal Management of the date on which initiation of the permitted activity described under the "Coastal Use Description" began. The applicant shall notify the Office of Coastal Management by entering a commencement date through the online system, or by mailing said information to OCM.
10. Unless specified elsewhere in this permit, this permit authorizes the initiation of the coastal use described under "Coastal Use Description" for two (2) years from the date of the signature of the Secretary or his designee on the original permit which was July 19, 2023. If the coastal use is not initiated within this two (2) year period, then this permit will expire and the applicant will be required to submit a new application. Initiation of the coastal use, for the purposes of this permit, means the actual physical beginning of the use of activity for which the permit is required. Initiation does not include preparatory activities, such as movement of equipment onto the coastal use site, expenditure of funds, contracting out of work, or performing activities which by themselves do not require a permit. In addition, the permittee must, in good faith, and with due diligence, reasonably progress toward completion of the project once the coastal use has been initiated.
11. The following special conditions must also be met in order for the use to meet the guidelines of the Coastal Resources Program:
  - a. This permit does not convey any property rights, mineral rights, or exclusive privileges; nor does it authorize injury to property.
  - b. If archaeological, historical or other cultural resources are encountered during authorized activities, work shall cease and the permittee shall immediately notify the Division of Archaeology, Louisiana Department of Culture, Recreation, and Tourism (CRT, P. O. Box 44247, Baton Rouge, LA 70804; (225) 342-8200) and OCM (P. O. Box 44487, Baton Rouge, LA 70804-4487; (225) 342-7591). Work may not resume until written approval is obtained from CRT.





- c. The area where the project is located is all part of the aboriginal homelands of the Chitimacha Tribe of Louisiana. As such, large villages, burial sites, and sacred sites were in place in that entire area. If at any time during the course of the work, any traditional cultural properties are discovered, Permittee shall immediately contact Kimberly S. Walden (Cultural Director) or Melanie Aymond (Research Coordinator) at (337) 923-9923 or (337) 923-4395. Office hours are Monday through Thursday from 7:30 A.M. - 5:00 P.M. and on Friday between 7:30 A.M. - 11:30 A.M. If traditional cultural properties are discovered on the weekend or after business hours, the notification shall be made the next business morning.
- d. The applicant shall adhere to all state statutes (R.S. 56:2011 et seq.) and LDWF regulations (LAC 76:XIII.101 et seq.) concerning dredging of fill sand and fill material from water bottoms of the state of Louisiana and severance royalties. For more information, contact Mr. Dave Butler at 504-286-4173.
- e. The Louisiana Department of Wildlife and Fisheries (LDWF) Wildlife Diversity Program (WDP) database indicates that the following rare and threatened species occur within the project area.

Piping Plover (*Charadrius melodus*). This shorebird species is federally listed as THREATENED in Louisiana, and its federally designated Critical Habitat occurs along the Louisiana coast. The Piping Plover spends the nonbreeding season in Louisiana, where it arrives in late July and may be present for 8 to 10 months of the year. The Piping Plover feeds on intertidal beaches, mudflats, and sand flats with little or no emergent vegetation; it also requires unvegetated or sparsely vegetated areas for roosting. Primary threats to the Piping Plover in Louisiana include habitat loss/degradation due to coastal development, beach stabilization and renourishment, sediment diversion, disturbance by humans, and environmental contaminants. We recommend that you take the necessary precautions to protect the nonbreeding habitat of this species. For more information on Piping Plover Critical Habitat, visit the UFWs website: <http://endangered.fws.gov>.

Red Knot (*Calidris canutus rufa*). Federally listed as THREATENED, the *rufa* subspecies of Red Knot may be found in coastal Louisiana throughout the year, with the greatest number of knots migrating through each spring. Red Knots forage on intertidal beaches, mudflats, marsh edges, and sand flats with sparse emergent vegetation. Primary threats to this species are anthropogenic destruction and degradation of nonbreeding habitat and food resources, habitat loss from shoreline erosion and subsidence, and human disturbance of foraging birds.

Snowy Plover (*Charadrius nivosus*). This species is considered imperiled to critically imperiled (S1B, S2N) in Louisiana. This species may be found year round in Louisiana, but is more abundant outside the summer months. However, the Snowy Plover, a solitary nesting species, has been documented nesting in Louisiana, and any projects on Louisiana beaches occurring from early April to August should consider possible impacts to nesters. Like other beach birds, threats to the Snowy Plover include habitat loss/degradation due to coastal development, beach stabilization and re-nourishment, sediment diversion, disturbance by humans, environmental contaminants, and problematic native and nonnative species of plants and animals. We recommend that you take the necessary precautions to protect the breeding and wintering habitat of this species.

Wilson's Plover (*Charadrius wilsonia*). This shorebird species is imperiled to critically imperiled (S2B, S1N) in Louisiana. It may be found year round in Louisiana, but is more abundant during spring and summer. The Wilson's Plover, a solitary nester, breeds along the Gulf coast from early April to August and may be found on beaches, sand flats, and freshly dredged-material. Threats to the Wilson's Plover include habitat loss/degradation due to coastal development, beach stabilization and re-nourishment, sediment diversion, disturbance by humans, environmental contaminants, and problematic native and nonnative species of plants and animals. We recommend that you take the necessary precautions to protect the breeding and nonbreeding habitat of this species.

- f. The LDWF WDP database conditions continued below:

Waterbird Nesting Colony. Please be aware that entry into or disturbance of active breeding colonies is prohibited by the Louisiana Department of Wildlife and Fisheries (LDWF). In addition, LDWF prohibits work within a certain radius of an active nesting colony.



Nesting colonies can move from year to year, and no current information is available on the status of these colonies. If work for the proposed project will commence during the nesting season, conduct a field visit to the worksite to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the project begins. If no nesting colonies are found within 1000 feet (2000 feet for Brown Pelicans) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed project, further consultation with LDWF will be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies. Provide LDWF with a survey report which is to include the following information:

1. qualifications of survey personnel;
2. survey methodology including dates, site characteristics, and size of survey area;
3. species of birds present, activity, estimates of number of nests present, and general vegetation type including digital photographs representing the site; and
4. topographic maps and ArcGIS shapefiles projected in UTM NAD83 Zone 15 to illustrate the location and extent of the colony.

Please mail survey reports on CD to:

Wildlife Diversity Program  
La. Dept. of Wildlife & Fisheries  
P.O. Box 98000  
Baton Rouge, LA 70898-9000

To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- For colonies containing nesting wading birds (e.g., herons, egrets, night-herons, ibis, Roseate Spoonbills) or Anhingas or cormorants, all project activity occurring within 1000 feet of an active nesting colony should be restricted to the non-nesting period (i.e., September 1 through February 15).
- For colonies containing nesting gulls, terns, or Black Skimmers, all project activity occurring within 650 feet (2000 feet for Brown Pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e., September 16 through April 1).

If you have any questions or need additional information on birds, please contact Rob Dobbs at 337-735-8675.

No other impacts to rare, threatened or endangered species or critical habitats are anticipated from the proposed project. No state or federal parks, wildlife refuges, wildlife management areas or scenic rivers are known at the specified site or within ¼ mile of the proposed project.

The Wildlife Diversity Program (WDP) reports summarize the existing information known at the time of the request regarding the location in question. WDP reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. If at any time WDP tracked species are encountered within the project area, please contact our biologist at 225-763-3554.

- g. All equipment utilized to perform activities authorized under this permit shall stay within the access routes and work areas designated on the permit plats utilizing the least damaging route and/or open water areas.
- h. Benefits to offset impacts are based on the proposed creation of marsh achieving 80% vegetative coverage and fisheries access re-established by year 3 of the project life, and shall be determined after the third full growing season (March 1 to November 1) following the completion of permitted activities. This assessment shall include both primary impacts and secondary impacts which may result from the permitted activities.





Permittee shall notify OCM of the date of completion of permitted activities within 5 working days of completion.

Should the permitted project not provide the anticipated benefits, OCM may determine that compensatory mitigation is required, permittee shall submit a compensatory mitigation plan for approval within 30 days of notification of the compensatory mitigation requirements by OCM. All necessary approvals shall be obtained for the compensatory mitigation plan and the plan shall be implemented as directed by OCM. Permittee should be aware that compensatory mitigation projects may be required to be maintained for as many as 20 years for marsh mitigation projects and 50 years for forested wetland mitigation projects. A processing fee will be assessed for the determination of compensatory mitigation requirements and evaluation of the proposed compensatory mitigation plan in accordance with LAC Title 43, Part I, Chapter 7, §724.D. This fee shall apply regardless of which compensatory mitigation option is selected and does not include the cost incurred to implement the required compensatory mitigation.

- i. All logs, stumps and other debris encountered during dredging activities shall be removed from the site during or immediately after the activity and disposed of in accordance with all applicable laws and regulations.
- j. Structures must be marked/lighted in accordance with U. S. Coast Guard regulations.
- k. All fill material shall be clean and free of contaminants and shall not contain hazardous materials such as asbestos or asbestos residue, shingles, tires, oil/grease residue, exposed rebar, protruding objects, etc.
- l. The permittee shall ensure that all sanitary sewage and/or related domestic wastes generated during the subject project activity and at the site, thereafter, as may become necessary shall not be discharged into any of the streams or adjacent waters of the area without authorization from DH and/or DEQ or, in the case of total containment, shall be disposed of in approved sewerage and sewage treatment facilities, as is required by the State Sanitary Code and DEQ regulations. Such opinion as may be served by those comments offered herein shall not be construed to suffice as any more formal approval(s) which may be required of possible sanitary details (i.e. provisions) scheduled to be associated with the subject activity. Such shall generally require that appropriate plans and specifications be submitted to DH for purpose of review and approval prior to any utilization of such provisions.
- m. Dredged material shall be marked in accordance with USCG regulations until such time that the dredged material is 6" or less above surrounding water bottom elevation, or has become 80% vegetated.
- n. All structures built under the authorization and conditions of this permit shall be removed from the site within 120 days of abandonment of the facilities for the herein permitted use, or when these structures fall into a state of disrepair such that they can no longer function as intended. This condition does not preclude the necessity for revising the current permit or obtaining a separate Coastal Use Permit, should one be required, for such removal activities.
- o. Permittee is subject to all applicable state laws related to damages which are demonstrated to have been caused by this action.
- p. Permittee shall allow representatives of the Office of Coastal Management or authorized agents to make periodic, unannounced inspections to assure the activity being performed is in accordance with the conditions of this permit.
- q. Permittee shall comply with all applicable state laws regarding the need to contact the Louisiana One Call (LOC) system (1-800-272-3020) to locate any buried cables and pipelines.
- r. This permit authorizes the initiation of the Coastal Use described under "Coastal Use Description" for two (2) years from the date of the signature of the Secretary or his designee on the original permit which was July 19, 2023. Initiation of the Coastal Use, for purposes of this permit, means the actual physical beginning of the use or activity for



which the permit is required. Initiation does not include preparatory activities, such as movement of equipment onto the Coastal Use site, expenditure of funds, contracting out of work, or performing activities which by themselves do not require a permit. In addition, Permittee must, in good faith and with due diligence, reasonably progress toward completion of the project once the Coastal Use has been initiated. If the Coastal Use is not initiated within this two (2) year period, an extension may be granted pursuant to the requirements contained in the Rules and Procedures for Coastal Use Permits (Title 43:1.723.D.). Please note that a request for permit extension MUST be made no sooner than one hundred eighty (180) days and no later than sixty (60) days prior to the expiration of the permit.

The expiration date of this permit is five (5) years from the date of the signature of the Secretary or his designee on the original permit which was July 19, 2023. If the Coastal Use is not completed within this five (5) year period, an extension may be granted pursuant to the requirements contained in the Rules and Procedures for Coastal Use Permits (LAC 43:1.723(D)).

Upon expiration of this permit, a new Coastal Use Permit will be required for completion of any unfinished or uncommenced work items and for any maintenance activities involving dredging or fill that may become necessary. Other types of maintenance activities may also require a new Coastal Use Permit.

- s. This determination does not eliminate the need to obtain a permit from the United States Army, Corps of Engineers or any other Federal, state or local approval that may be required by law. The drawings submitted with your referenced application are attached hereto and made a part of the record.

\*\*\*\*\* End of Conditions \*\*\*\*\*

By accepting this permit the applicant agrees to its terms and conditions.

I affix my signature and issue this permit this 19th day of July, 2023.

THE DEPARTMENT OF NATURAL RESOURCES

A handwritten signature in black ink, appearing to read "Kyle F. Balkum".

Kyle F. Balkum, Administrator  
Office of Coastal Management

This agreement becomes binding when signed by Administrator of the Office of Coastal Management Permits/Mitigation Division, Department of Natural Resources.

Attachments





**Final Plats:**

1) [P20230206](#) [Final Plats](#) [06/13/2023](#)

cc: Martin Mayer, COE w/attachments  
Dave Butler, LDWF w/attachments  
Coastal Protection and Restoration Authority, CPRA w/attachments  
Jordan Cobbs, OCM w/attachments  
Rod Pierce, OCM/FI w/attachments  
Lafourche Parish w/attachments

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**LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES**

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JOHN BEL EDWARDS  
GOVERNOR



ROBERT SHADOIN  
SECRETARY

PO BOX 98000 | BATON ROUGE LA | 70898

**Date** July 13, 2023  
**Name** Tiffany Spann-Winfield  
**Company** FEMA  
**Street Address** 1500 Main Street  
**City, State Zip** Baton Rouge, La  
**Project** West Belle Headland SOV - DR 4577/PW 00337  
**Project ID**  
**Invoice Number** 23071305

Personnel of the Louisiana Wildlife Diversity Program (WDP) have reviewed the preliminary data for the captioned project.

The following rare and threatened bird species may occur within the project area.

**Piping Plover (*Charadrius melodus*).** This shorebird species is federally listed as THREATENED in Louisiana, and its federally designated Critical Habitat occurs along the Louisiana coast. The Piping Plover spends the nonbreeding season in Louisiana, where it arrives in late July and may be present for 8 to 10 months of the year. The Piping Plover feeds on intertidal beaches, mudflats, and sand flats with little or no emergent vegetation; it also requires unvegetated or sparsely vegetated areas for roosting. Primary threats to the Piping Plover in Louisiana include habitat loss/degradation due to coastal development, beach stabilization and re-nourishment, sediment diversion, disturbance by humans, and environmental contaminants. We recommend that you take the necessary precautions to protect the nonbreeding habitat of this species. For more information on Piping Plover Critical Habitat, visit the UFWs website: <http://endangered.fws.gov>.

**Red Knot (*Calidris canutus rufa*).** Federally listed as THREATENED, the rufa subspecies of Red Knot may be found in coastal Louisiana throughout the year, with the greatest number of knots migrating through each spring. The Red Knot forages on intertidal beaches, mudflats, marsh edges, and sand flats with sparse emergent vegetation. Primary threats to this species are anthropogenic destruction and degradation of nonbreeding habitat and food resources, habitat loss from shoreline erosion and subsidence, and human disturbance of foraging birds.

**Wilson's Plover (*Charadrius wilsonia*).** This shorebird species is imperiled to critically imperiled (S2B, S1N) in Louisiana. It may be found year round in Louisiana, but is more abundant during spring and summer. The Wilson's Plover, a solitary nester, breeds along the Gulf coast from early April to August and may be found on beaches, sand flats, and freshly dredged-material. Threats to the Wilson's Plover include habitat loss/degradation due to coastal development, beach stabilization and re-nourishment, sediment diversion, disturbance by humans, environmental contaminants, and

problematic native and nonnative species of plants and animals. We recommend that you take the necessary precautions to protect the breeding and nonbreeding habitat of this species.

**Snowy Plover (*Charadrius nivosus*).** This species is considered imperiled to critically imperiled (S1B, S2N) in Louisiana. This species may be found year round in Louisiana, but is more abundant outside the summer months. However, the Snowy Plover, a solitary nesting species, has been documented nesting in Louisiana, and any projects on Louisiana beaches occurring from early April to August should consider possible impacts to nesters. Like other beach birds, threats to the Snowy Plover include habitat loss/degradation due to coastal development, beach stabilization and re-nourishment, sediment diversion, disturbance by humans, environmental contaminants, and problematic native and nonnative species of plants and animals. We recommend that you take the necessary precautions to protect the breeding and nonbreeding habitat of this species. If you have any questions or need additional information, please call Rob Dobbs at 337-735-8675.

**Waterbird Nesting Colony.** Please be aware that entry into or disturbance of active breeding colonies is prohibited by the Louisiana Department of Wildlife and Fisheries (LDWF). In addition, LDWF prohibits work within a certain radius of an active nesting colony.

Nesting colonies can move from year to year, and no current information is available on the status of these colonies. If work for the proposed project will commence during the nesting season, conduct a field visit to the worksite to look for evidence of nesting colonies. This field visit should take place no more than two weeks before the project begins. If no nesting colonies are found within 1000 feet (2000 feet for Brown Pelicans) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found within the previously stated distances of the proposed project, further consultation with LDWF will be required. In addition, colonies should be surveyed by a qualified biologist to document species present and the extent of colonies. Provide LDWF with a survey report which is to include the following information:

1. qualifications of survey personnel;
2. survey methodology including dates, site characteristics, and size of survey area;
3. species of birds present, activity, estimates of number of nests present, and general vegetation type including digital photographs representing the site; and
4. topographic maps and ArcGIS shapefiles projected in UTM NAD83 Zone 15 to illustrate the location and extent of the colony.

Please mail survey reports on CD to:

Wildlife Diversity Program  
La. Dept. of Wildlife & Fisheries  
P.O. Box 98000  
Baton Rouge, LA 70898-9000

To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- For colonies containing nesting wading birds (e.g., herons, egrets, night-herons, ibis, Roseate Spoonbills) or Anhingas or cormorants, all project activity occurring within 1000 feet of an active nesting colony should be restricted to the non-nesting period (i.e., September 1 through February 15).

- For colonies containing nesting gulls, terns, or Black Skimmers, all project activity occurring within 650 feet (2000 feet for Brown Pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e., September 16 through April 1).

If you have any questions or need additional information regarding the above mentioned birds, please contact Rob Dobbs at 337-735-8675.



After careful review of our database, no other impacts to rare, threatened, or endangered species or critical habitats are anticipated for the proposed project. The Wildlife Diversity Program (WDP) has compiled data on rare, endangered, or otherwise significant plant and animal species, plant communities, and other natural features throughout the state of Louisiana. WDP reports summarize the existing information known at the time of the request regarding the location in question. The quantity and quality of data collected by the WDP are dependent on the research and observations of many individuals. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Louisiana have not been surveyed. This report does not address the occurrence of wetlands at the site in question. WDP reports should not be considered final statements on the biological elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. WDP requires that this office be acknowledged in all reports as the source of all data provided here. If at any time WDP tracked species are encountered within the project area, please contact the WDP Data Manager at 225-763-3554. If you have any questions, or need additional information, please call 337-735-8734.

Sincerely,



Nicole Lorenz, Program Manager  
Wildlife Diversity Program

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**NATURAL RESOURCES CONSERVATION SERVICE**

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June 23, 2023

Shannon Cauley  
FEMA Environmental Protection Specialist  
Louisiana Integration and Recovery Office  
1500 Main Street  
Baton Rouge, LA 70802

RE: Scoping Notification/Solicitation of Views  
Coastal Protection Restoration Authority – CPRA Beach Repairs  
Office of Risk Management, Terrebonne Parish, and Lafourche Louisiana  
FEMA Public Assistance Program PW# 00337 Version 1 FEMA-DR-4577-LA

Shannon:

I have reviewed the above referenced project for potential requirements of the Farmland Protection Policy Act (FPPA) and potential impact to Natural Resources Conservation Service projects in the immediate vicinity.

Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements can be forest land, pastureland, cropland, or other land, but not water or urban built-up land.

The project map and narrative submitted with your request indicates that the proposed repairs associated with this project will not impact prime farmland and therefore are exempt from the rules and regulations of the Farmland Protection Policy Act (FPPA)—Subtitle I of Title XV, Section 1539-1549. Furthermore, we do not predict impacts to NRCS work in the vicinity. For specific information about the soils found in the project area, please visit our Web Soil Survey at the following location: <http://websoilsurvey.nrcs.usda.gov/>

Please direct all future correspondence to me at the address shown below.

Respectfully,



Brandon Waltman  
Assistant State Soil Scientist

Attachment



Natural Resources Conservation Service  
State Office  
3737 Government Street  
Alexandria, Louisiana 71302  
Voice: (337) 290-4720 Fax: (844) 325-6947

*Helping People Help the Land*

**FARMLAND CONVERSION IMPACT RATING  
FOR CORRIDOR TYPE PROJECTS**

<b>PART I (To be completed by Federal Agency)</b>	3. Date of Land Evaluation Request <b>6/15/23</b>	4. Sheet 1 of _____
---	--	---------------------

1. Name of Project <b>CPRA Beach Repairs - FEMA Public Assistance</b>	5. Federal Agency Involved <b>FEMA</b>
---	--

2. Type of Project <b>Repair of West Belle Pass Barrier Headland d</b>	6. County and State <b>Terrebonne and Lafourche Parishes, LA</b>
--	--

<b>PART II (To be completed by NRCS)</b>	1. Date Request Received by NRCS <b>6/15/23</b>	2. Person Completing Form <b>Brandon Waltman</b>
--	--	---

3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form).	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	4. Acres Irrigated   Average Farm Size
--	---	--

5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: _____ %	7. Amount of Farmland As Defined in FPPA Acres: _____ %
------------------	---	--

8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System	10. Date Land Evaluation Returned by NRCS <b>6/23/23</b>
--	---	---

<b>PART III (To be completed by Federal Agency)</b>	<b>Alternative Corridor For Segment</b>			
	Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres in Corridor				

<b>PART IV (To be completed by NRCS) Land Evaluation Information</b>				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				

**PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)**

<b>PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))</b>	Maximum Points				
1. Area in Nonurban Use	15				
2. Perimeter in Nonurban Use	10				
3. Percent Of Corridor Being Farmed	20				
4. Protection Provided By State And Local Government	20				
5. Size of Present Farm Unit Compared To Average	10				
6. Creation Of Nonfarmable Farmland	25				
7. Availability Of Farm Support Services	5				
8. On-Farm Investments	20				
9. Effects Of Conversion On Farm Support Services	25				
10. Compatibility With Existing Agricultural Use	10				
<b>TOTAL CORRIDOR ASSESSMENT POINTS</b>	<b>160</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<b>PART VII (To be completed by Federal Agency)</b>					
Relative Value Of Farmland (From Part V)	100	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Total Corridor Assessment (From Part VI above or a local site assessment)	160	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL POINTS (Total of above 2 lines)</b>	<b>260</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used?  YES <input type="checkbox"/> NO <input type="checkbox"/>
-----------------------	---	-----------------------	--

5. Reason For Selection:

Signature of Person Completing this Part: \_\_\_\_\_ DATE \_\_\_\_\_

**NOTE: Complete a form for each segment with more than one Alternate Corridor**



**UNITED STATES ARMY CORPS OF ENGINEERS**

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DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT  
7400 LEAKE AVENUE  
NEW ORLEANS LA 70118-3651

November 8, 2023

Regulatory Division  
Central Evaluation Branch

SUBJECT: MVN 2015-00895-CQ

CPRA  
Post Office Box 44027  
Baton Rouge, Louisiana 70804

Gentlemen:

The proposed work, consisting of the implementation of the West Belle Headland Repair Project (TE-176), located in Timbalier Bay, near Port Fourchon, Louisiana, in Lafourche Parish, as shown on the enclosed drawings, is authorized under **Category II** of the **Programmatic General Permit** provided that all conditions of the permit are met.

This authorization has a blanket water quality certification from the Louisiana Department of Environmental Quality (DEQ); therefore, no additional authorization from DEQ is required.

However, prior to commencing work on your project, you must obtain approvals from state and local agencies as required by law and by terms of this permit. These approvals include, but are not limited to, a permit, consistency determination or determination of "no direct or significant impact (NDSI) on coastal waters" from the Louisiana Department of Natural Resources, Office of Coastal Management.

In addition to the enclosed standard PGP general conditions located on the PGP document within section D dated 1 June 2022, the following special conditions are being made a part of this authorization:

1. Permittee shall ensure that all contractors and workers on this project are made fully aware of the limits of the authorized work, adhere to and comply with all state and regional conditions. Permittee shall also ensure that all contractors and workers comply with all general conditions listed in the attached PGP Special Conditions, as well as the permit's special conditions. Non-compliance with permit terms and conditions may result in permit suspension or revocation.
2. The permittee shall limit clearing, excavation and the placement of fill material to areas essential to the project. The jurisdictional remainder of the property shall be left in its natural state. If the authorized project requires any additional work not expressly permitted herein, the permittee must obtain an amendment to this authorization prior to commencement of work.

3. The permittee shall assure that all material used during construction shall be pollutant free in accordance with the EPA Guidelines for Discharge of Dredged or Fill Material, found in 40 CFR 230. The material may be obtained offsite or from site preparation. Offsite material shall not be obtained from wetlands or from areas that may adversely affect adjacent wetlands. Any excess material shall be placed in an upland area and property contained or stabilized to prevent entry into adjacent wetlands of other waters.
4. Permittees that discover any previously unknown historic, cultural, or archeological remains and artifacts while accomplishing the permitted activity must immediately notify the US Army Corps of Engineers, New Orleans District Regulatory Division (CEMVN-RG), halt all construction activity at the location of discovery, and avoid construction activities within a fifty 50-foot buffer zone of the location of discovery until the required coordination has been completed. CEMVN-RG will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.
5. If abandoned cemeteries, unmarked graves, or human remains are discovered during the permitted activity, the permittee will stop work immediately and comply with the Louisiana Unmarked Human Burial Sites Preservation Act (La. R.S. 8:671 et seq.). The permittee will notify local law enforcement, CEMVN-RG, and the Louisiana Division of Archaeology (LDOA), within the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, by telephone at 225-342-8170 to assess the nature and age of the human skeletal remains within twenty-four (24) hours of the discovery of unmarked human remains and will accompany local law enforcement personnel during all field investigations. If the appropriate local law enforcement official determines that the remains are not a crime scene, and the remains are more than 50 years old, LDOA has jurisdiction over the remains. In no instance will human remains be removed from the discovery site until jurisdiction is established. In cases where the LDOA assumes jurisdiction and the remains are determined to be American Indian, LDOA will consult with Tribes, CEMVN-RG, and the permittee to determine the appropriate course of action.
6. Permittee shall obtain all local, state and parish approvals prior to the commencement of work at the project site. Any changes in the project configuration as a result of local approvals must be documented and appropriate drawings provided to this District office for incorporation into the permit file.
7. The permittee is aware that future site visits and inspections of the project site may be conducted by personnel of CEMVN-RG and/or other resource agencies in order to assess project compliance with the requirements of this authorization.



8. The permittee shall adhere to the special conditions contained in the enclosed US Fish and Wildlife document, titled "Standard Manatee Conditions for In-Water Activities", to help avoid and/or minimize project related adverse effects to the West Indian manatee.
9. The permittee is advised of the requirements set forth in the attached Section 408 Permission and the associated special conditions. The point of contact for enforcing such Section 408 conditions in the Section 10 permit is Jane Brown, 504-862-1297, Jane.L.Brown@usace.army.mil or Ray Newman, 504-862-2050, Raymond.C.Newman@usace.army.mil. Should you have any questions on the requirements and restrictions stipulated, you shall contact Ms. Brown who may be reached at 504-862-1297 or jane.l.brown@usace.army.mil .
10. This project is located in waters known to be utilized by Sea Turtles and Giant Manta Ray, which are protected species under the jurisdiction of NOAA Fisheries Southeast Regional Office (SERO). The permittee shall adhere to the enclosed Protected Species Construction Conditions and Vessel Strike Avoidance Measures as required by the SERO Protected Resources Division.

This approval to perform work is valid for **5 years** from the date of this letter.

Permittee is aware that this office may reevaluate its decision on this permit at any time the circumstances warrant.

Should you have any further questions concerning this matter, please call Kenny Blanke at (504) 862-1217.

Sincerely,  
**John M.  
Herman**  
*for* Martin S. Mayer  
Chief, Regulatory Division

 Digitally signed by John  
M. Herman  
Date: 2023.11.08 10:09:59  
-06'00'

Enclosure

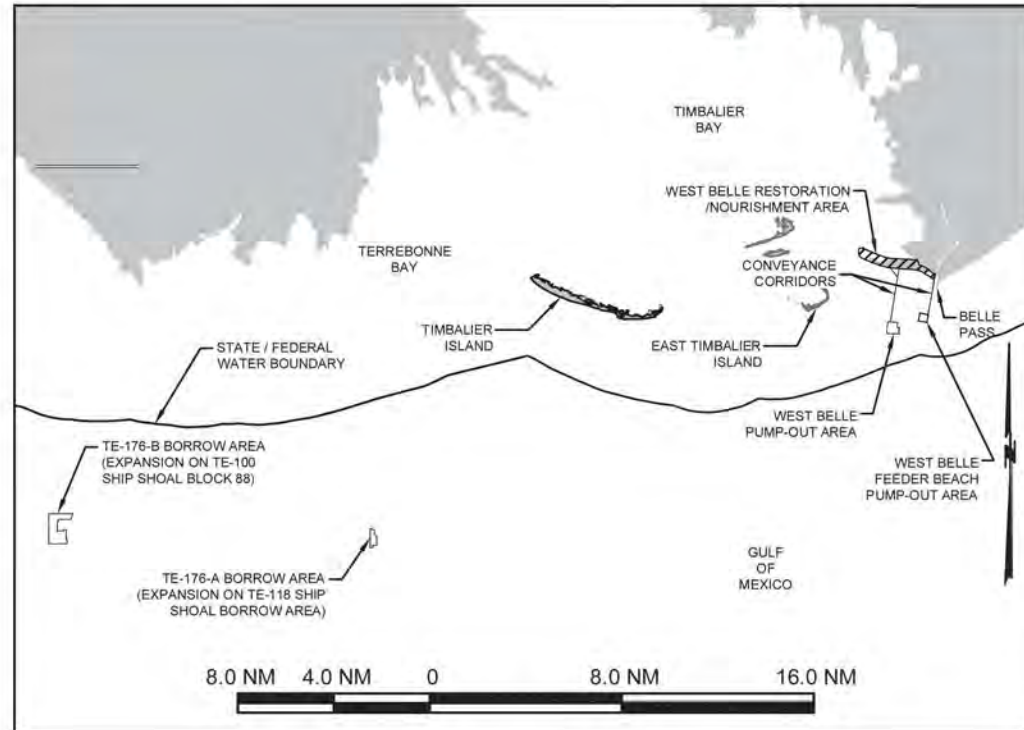
STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION AUTHORITY

WEST BELLE HEADLAND REPAIR  
STATE PROJECT NO. TE-176  
LAFOURCHE PARISH, LOUISIANA



INDEX TO SHEETS


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1	TITLE SHEET
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3	GENERAL AND SURVEY NOTES
4	WEST BELLE HEADLAND OVERVIEW MAP
5	WEST BELLE HEADLAND RESTORATION AREA MAP
6	WEST BELLE HEADLAND RESTORATION TYPICAL SECTIONS
7	WEST BELLE HEADLAND RESTORATION ACCESS CHANNEL
8	WEST BELLE HEADLAND RENOURISHMENT / FEEDER BEACH AREA MAP
9	WEST BELLE HEADLAND RENOURISHMENT TYPICAL SECTIONS
10	WEST BELLE HEADLAND FEEDER BEACH TYPICAL SECTION
11	TE-176-A BORROW AREA PLAN VIEW
12	TE-176-A BORROW AREA TYPICAL SECTIONS
13	TE-176-B BORROW AREA PLAN VIEW
14	TE-176-B BORROW AREA TYPICAL SECTIONS
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18	OPTIONAL SEDIMENT PIPELINE CROSSING TYPICAL DETAILS
19	SETTLEMENT AND OVERWASH MONITORING DETAILS
20	SAND FENCING DETAILS
21	WEST BELLE HEADLAND VEGETATIVE PLANTING DETAILS
22 - 23	ALIGNMENT AND COORDINATE TABLES



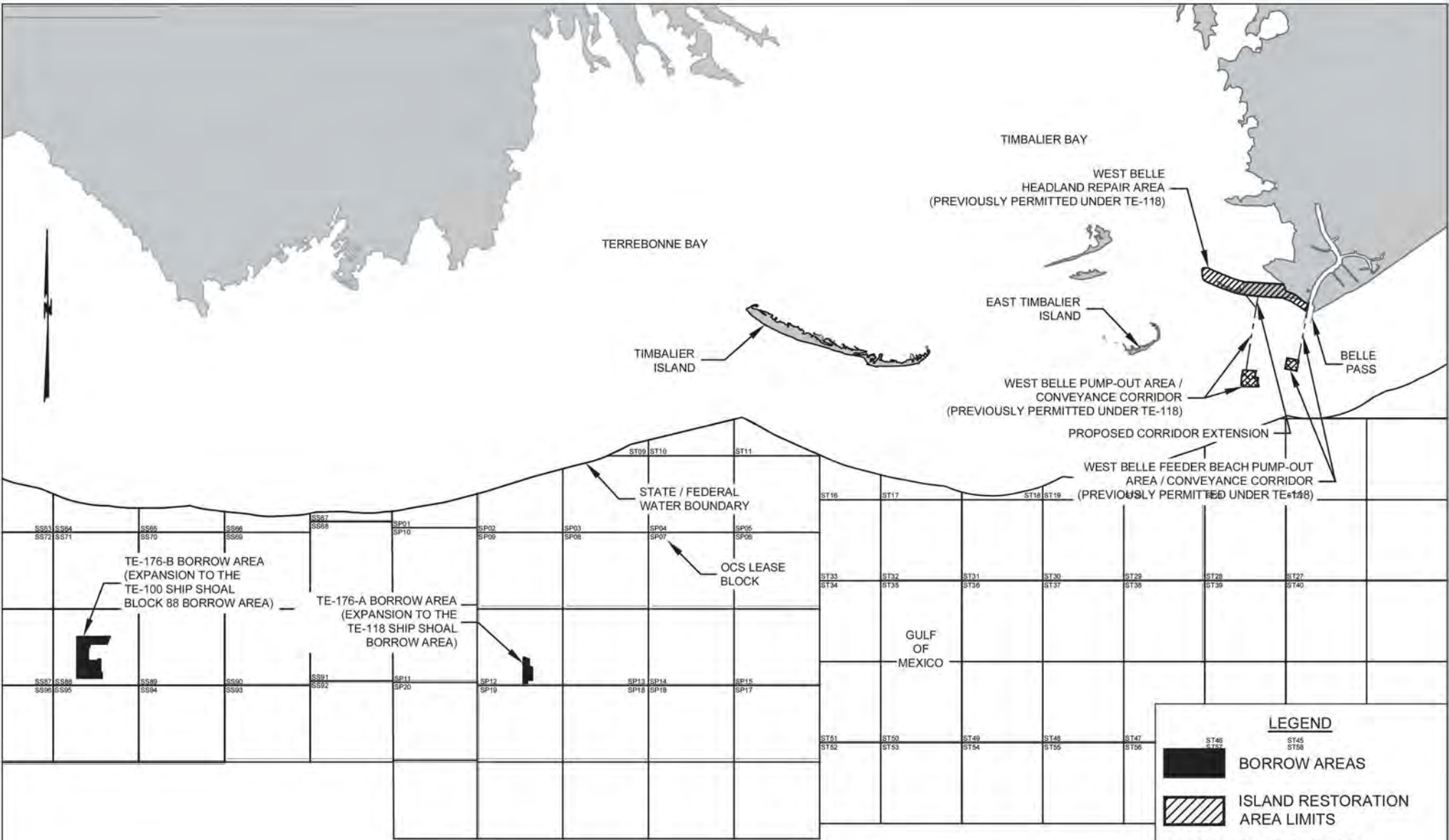
NOTES:

1. FOR PERMITTING PURPOSES ONLY. NOT TO BE USED FOR CONSTRUCTION.
2. RETAIN ENTIRE SET AS ONE, INDIVIDUAL SHEETS SHOULD NOT BE REMOVED.



BY	DESCRIPTION	DATE				
			 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH. (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	TITLE SHEET
					STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ	DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.			FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 1 OF 23





- NOTES:**
1. ALL ELEMENTS EXCEPT THE BORROW AREAS AND THE PROPOSED CORRIDOR EXTENSION WERE PREVIOUSLY PERMITTED UNDER THE TE-118 PROJECT.
  2. TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043.
  3. TE-100 PERMITS: MVN 2013-0266-CQ, CUP - P20161010.
  4. ALL COORDINATES ARE NAD83, LOUISIANA STATE PLANE, U.S. SURVEY FEET.

**LEGEND**

- BORROW AREAS
- ISLAND RESTORATION AREA LIMITS
- PUMP-OUT AREA LIMITS
- CONVEYANCE CORRIDOR ALIGNMENTS

BY	DESCRIPTION	DATE



**COASTAL ENGINEERING CONSULTANTS, INC.**  
 PH: (225) 523-7403  
 1211 N. RANGE AVE, STE. E  
 DENHAM SPRINGS, LA 70726

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY  
 150 TERRACE AVENUE  
 BATON ROUGE, LA 70802

WEST BELLE HEADLAND REPAIR  
 STATE PROJECT NUMBER: TE-176

PROJECT OVERVIEW MAP  
 DATE: MARCH 2023

DRAWN BY: STEVE DARTEZ

DESIGNED BY: MICHAEL T. POFF, P.E.  
 LICENSE NUMBER: 30048

APPROVED BY: SHANNON HAYNES, P.E.

FEDERAL PROJECT NUMBER: MULTIPLE

SHEET 2 OF 23



**GENERAL NOTES:**


1. ANY EXCAVATED MATERIAL WILL BE, TO THE BEST OF KNOWLEDGE, FREE OF CONTAMINANTS AND/OR WILL BE DISPOSED OF IN AN APPROVED LANDFILL.
2. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE SITE, CONSTRUCTION PLANS, AND CONTRACT DOCUMENTS AND SHALL CONDUCT WORK IN STRICT ACCORDANCE WITH ALL PERMITS AND APPROVALS OBTAINED FOR THIS PROJECT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ERRORS OR DISCREPANCIES IN THE PLANS PRIOR TO BIDDING.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING PIPELINE AND UTILITY OPERATORS AT TIME OF CONSTRUCTION. ALL PIPELINES AND UNDERGROUND UTILITIES SHALL BE FIELD LOCATED AND MARKED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING LOUISIANA ONE CALL SYSTEM (1-800-272-3020) A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION (DIGGING, DREDGING, JETTING, ETC.) OR DEMOLITION ACTIVITY. THE CONTRACTOR SHALL ALSO NOTIFY PIPELINE AND UTILITY OPERATORS 72 HOURS PRIOR TO ANY EXCAVATION.
5. THE WATER BOTTOM SHALL NOT BE DISTURBED DURING ACCESS TO THE PROPOSED WORK LOCATION, OR BY THE AUTHORIZED ACTIVITIES WHETHER IT BE BY DREDGING, WHEEL WASHING, PROPWASHING, JETTING, MUCKING, PLOWING, BULL DOZING OR ANY MEANS OF MOVING BOTTOM MATERIAL, EXCEPT AS DEPICTED ON THE PERMIT SHEETS. POWERED VESSELS SHALL BE OPERATED SO AS NOT TO DISTURB THE WATER BOTTOM BY PROPELLER OR JET ACTION.
6. ALL LOGS, STUMPS, AND OTHER DEBRIS UNEARTHED DURING DREDGING SHALL BE REMOVED TO AN APPROVED OFFSITE DISPOSAL AREA.
7. THE CONTRACTOR MUST INSTALL AND MAINTAIN ANY SAFETY LIGHTS, SIGNS, AND SIGNALS PRESCRIBED BY THE U.S. COAST GUARD, THROUGH REGULATIONS OR OTHERWISE ON THE AUTHORIZED FACILITIES.
8. ANY DAMAGE TO EXISTING U.S. COAST GUARD NAVIGATION AIDS OR PRIVATE NAVIGATION AIDS SHALL BE REPAIRED BY THE CONTRACTOR TO U.S. COAST GUARD STANDARDS AT THE EXPENSE OF THE CONTRACTOR.
9. PIPELINES IN OPEN WATER AND/OR NAVIGABLE WATERS SHALL BE MARKED WITH BUOYS BY THE CONTRACTOR IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN BUOYS DURING CONSTRUCTION OR HAVE ADEQUATE NAVIGATIONAL EQUIPMENT ON THE DREDGE TO AVOID DREDGING IN RESTRICTED AREAS.
10. THE PROPOSED PROJECT AND ANY FUTURE MAINTENANCE WORK INVOLVING THE USE OF FLOATING CONSTRUCTION EQUIPMENT (BARGE MOUNTED CRANES, BARGE MOUNTED PILE DRIVING EQUIPMENT, FLOATING DREDGE EQUIPMENT, DREDGE DISCHARGE PIPELINES, ETC.) IN FEDERAL WATERS, SHALL NOTIFY THE U.S. COAST GUARD SO THAT A NOTICE TO MARINERS, IF REQUIRED, MAY BE PREPARED. NOTIFICATION, WITH A COPY OF THE PERMIT APPROVAL AND DRAWINGS, SHALL BE MAILED TO THE U.S. COAST GUARD, SECTOR NEW ORLEANS COMMAND CENTER, 201 HAMMOND HIGHWAY, METAIRIE, LOUISIANA 70005, 30 DAYS BEFORE COMMENCEMENT OF WORK.
11. THE OFFSHORE WORK AREAS SHALL CONSIST OF THE BORROW AREAS AND CONVEYANCE CORRIDORS. THE INSHORE WORK AREA IS DEFINED BY A 150' OFFSET FROM THE OUTER LIMITS OF THE ACCESS CHANNELS AND TEMPORARY SIDECAST DISPOSAL AREAS AND 300' OFFSET FROM THE SECONDARY BORROW CHANNEL AND THE TOE OF THE BEACH FILL TEMPLATE. THE CONTRACTOR SHALL BE REQUIRED TO CONFINE HIS/HER PLANT, EQUIPMENT, AND OPERATIONS OF PERSONNEL WITHIN THE LIMITS OF THE WORK AREA, AREAS PERMITTED BY LAW, ORDINANCES, PERMITS, AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT UNREASONABLY ENCUMBER THE PREMISES WITH PLANT OR EQUIPMENT.
12. THE CONTRACTOR SHALL FOLLOW CONVEYANCE CORRIDORS, ACCESS CHANNELS, AND / OR FILL TEMPLATES, AND SHALL NOT, AT ANY TIME, TRAVEL ON EXISTING MARSH OR VEGETATED WETLANDS UNLESS SPECIFIED IN THE PERMIT OR THROUGH WRITTEN DIRECTION FROM ENGINEER.
13. THE CONTRACTOR SHALL WORK COOPERATIVELY WITH THE OWNER TO ADDRESS THE NOTIFICATION AND COORDINATION REQUIREMENTS WITH THE LANDOWNERS, UTILITY OPERATORS, AND PIPELINE COMPANIES.
14. AS-BUILT DRAWINGS AND/OR PLATS SHALL HAVE WRITTEN ON THEM THE DATE OF COMPLETION OF SAID ACTIVITIES AND SHALL BE SUBMITTED TO THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, OFFICE OF COASTAL MANAGEMENT, P.O. BOX 44487, BATON ROUGE, LA 70804-4487 WITHIN 30 DAYS FOLLOWING PROJECT COMPLETION.
15. THIS DRAWING SET IS FOR PERMITTING PURPOSES ONLY AND IS NOT TO BE USED FOR CONSTRUCTION.

**SURVEY NOTES:**

1. ALL COORDINATES ARE NORTH AMERICAN DATUM OF 1983 (NAD 83 - GEOID 12A), LOUISIANA STATE PLANE, SOUTHERN ZONE, U.S. SURVEY FEET. ALL RESTORATION AREA ELEVATIONS ARE BASED ON NATIONAL GEODETIC SURVEY AND LOUISIANA DEPARTMENT OF NATURAL RESOURCES MONUMENTS.

MONUMENTS	ELEVATION	NORTHING	EASTING
TE23-SM-01	7.30'	224,296.33	3,645,688.77
TE118-SM-01	2.16'	207,570.44	3,601,096.02
TE118-SM-02	3.06'	207,952.34	3,604,313.92
TE118-SM-03	1.56'	228,233.63	3,597,696.59

2. ALL ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88 - 2004.65), U.S. SURVEY FEET UNLESS OTHERWISE SPECIFIED.
3. WEST BELLE PUMP-OUT AREA AND CONVEYANCE CORRIDOR SURVEYS PERFORMED BY EMC, INC. IN APRIL 2020 AS PART OF THE TE-118 PROJECT. WEST BELLE FEEDER BEACH PUMP-OUT AREA AND CONVEYANCE CORRIDOR SURVEY PERFORMED BY DELTA COAST CONSULTANTS, LLC, MAY 2021 AS PART OF THE TE-118 PROJECT.
4. TE-118 SHIP SHOAL BORROW AREA CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OCEANS SURVEYS, INC., 2015. TE-118 SOUTH PELTO AND SHIP SHOAL BORROW AREAS AS-BUILT SURVEYS PERFORMED BY EMC, INC. JULY 2022. TE-100 SHIP SHOAL BLOCK 88 BORROW AREA CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OCEAN SURVEYS, INC., 2012. TE-100 SHIP SHOAL BLOCK 88 BORROW AREA AS-BUILT SURVEY PERFORMED BY HYDROTERRA TECHNOLOGIES, LLC., MAY 2018.
5. WEST BELLE HEADLAND SURVEY PERFORMED BY DELTA COAST CONSULTANTS, LLC, DECEMBER 2021 AS PART OF THE TE-118 PROJECT. WEST BELLE FEEDER BEACH SURVEY PERFORMED BY DELTA COAST CONSULTANTS, LLC, JANUARY 2022 AS PART OF THE TE-188 PROJECT.
6. BELLE PASS CHANNEL SURVEY OBTAINED FROM USACE PORT FOURCHON NAV. CHANNEL MAINTENANCE CHANNEL DREDGING (W912P820C0070), POST-DREDGE SURVEY.
7. INFORMATION SHOWN HERE IN REFLECTS CONDITIONS AS THEY EXISTED ON THE SURVEY DATE SHOWN AND CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS AT THAT TIME.

BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	GENERAL AND SURVEY NOTES
					STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ	DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 3 OF 23		



**NOTES:**

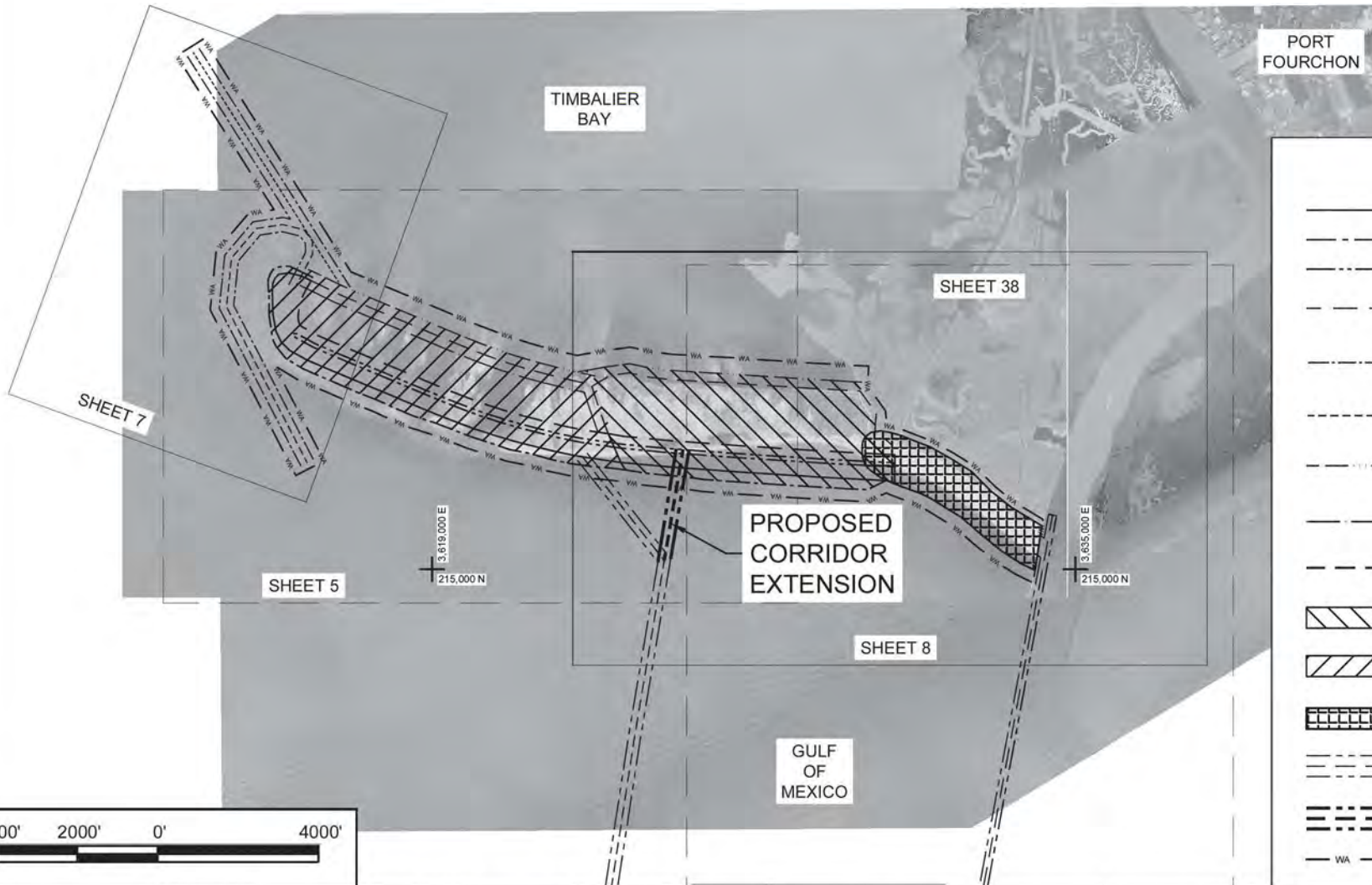
1. ALL ELEMENTS EXCEPT THE PROPOSED CORRIDOR EXTENSION WERE PREVIOUSLY PERMITTED UNDER THE TE-118 PROJECT. ALL ELEMENTS TO BE RE-PERMITTED.
2. TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043.
3. ALL COORDINATES ARE NAD83, LOUISIANA STATE PLANE, U.S. SURVEY FEET.
4. BACKGROUND AERIAL IMAGE REFERENCE: NOAA, OCTOBER 29, 2020. INSET AERIAL IMAGE REFERENCE: AERO-DATA CORP., FEBRUARY 14, 2022.

3,619,000 E  
231,000 N

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**LEGEND**

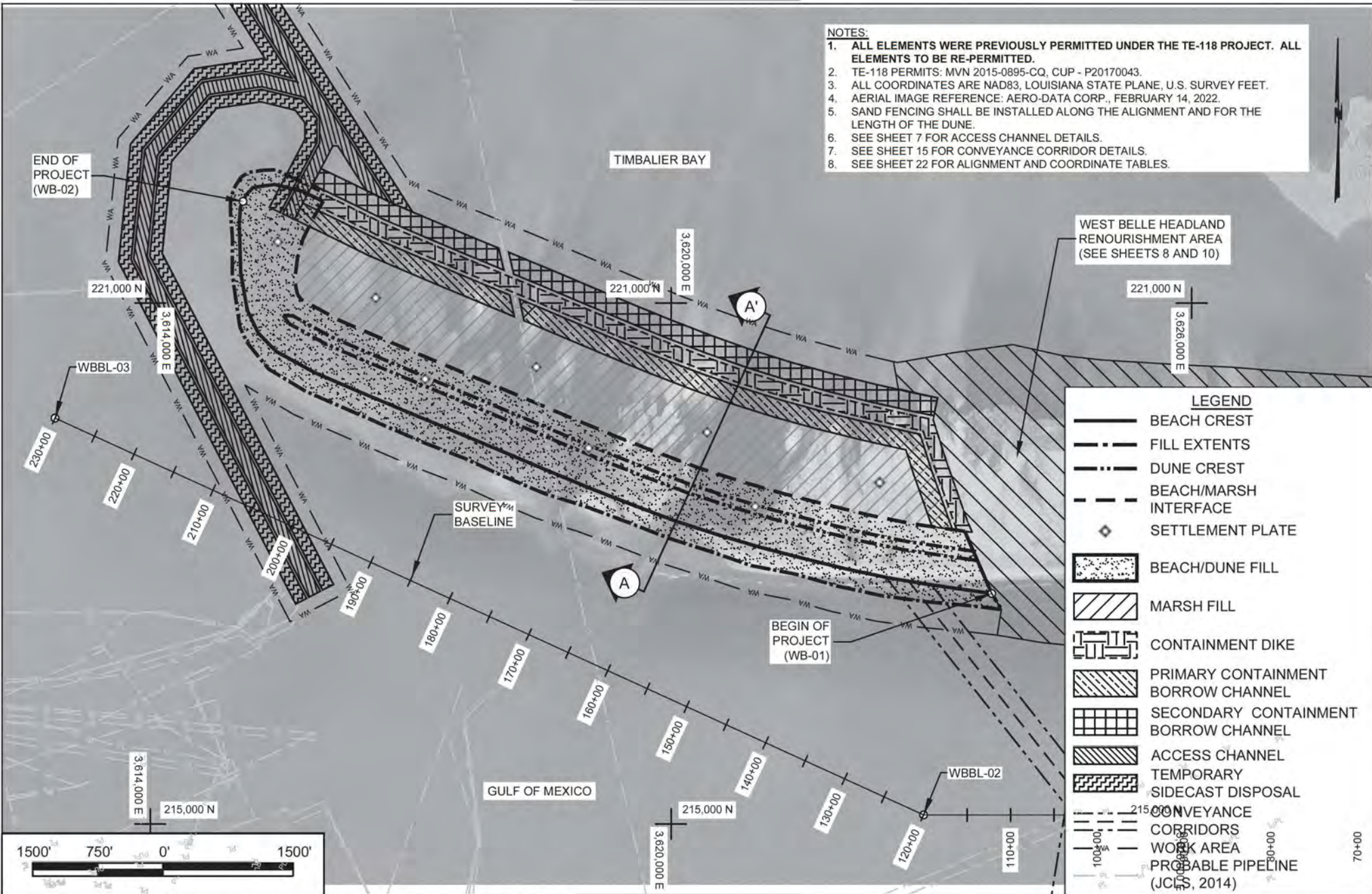
- BEACH CREST
- - - - FILL EXTENTS
- · - · - DUNE CREST
- · - · - BEACH/MARSH INTERFACE
- · - · - TEMPORARY SIDECAST DISPOSAL ALIGNMENT
- · - · - ACCESS CHANNEL ALIGNMENT
- · - · - EXTERIOR BORROW CHANNEL ALIGNMENT
- · - · - INTERIOR BORROW CHANNEL ALIGNMENT
- · - · - CONTAINMENT DIKE ALIGNMENT
- ▨ WEST BELLE HEADLAND RENOURISHMENT AREA
- ▩ WEST BELLE HEADLAND RESTORATION AREA
- ▧ FEEDER BEACH
- · - · - CONVEYANCE CORRIDORS
- · - · - PROPOSED CONVEYANCE CORRIDOR EXTENSION
- WA - WORK AREA



BY	DESCRIPTION	DATE	COASTAL ENGINEERING CONSULTANTS, INC. PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726		LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	WEST BELLE HEADLAND OVERVIEW MAP
						STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048		APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 4 OF 23

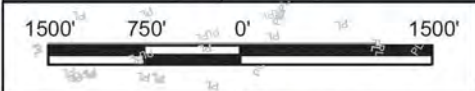


- NOTES:**
1. ALL ELEMENTS WERE PREVIOUSLY PERMITTED UNDER THE TE-118 PROJECT. ALL ELEMENTS TO BE RE-PERMITTED.
  2. TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043.
  3. ALL COORDINATES ARE NAD83, LOUISIANA STATE PLANE, U.S. SURVEY FEET.
  4. AERIAL IMAGE REFERENCE: AERO-DATA CORP., FEBRUARY 14, 2022.
  5. SAND FENCING SHALL BE INSTALLED ALONG THE ALIGNMENT AND FOR THE LENGTH OF THE DUNE.
  6. SEE SHEET 7 FOR ACCESS CHANNEL DETAILS.
  7. SEE SHEET 15 FOR CONVEYANCE CORRIDOR DETAILS.
  8. SEE SHEET 22 FOR ALIGNMENT AND COORDINATE TABLES.



**LEGEND**

	BEACH CREST
	FILL EXTENTS
	DUNE CREST
	BEACH/MARSH INTERFACE
	SETTLEMENT PLATE
	BEACH/DUNE FILL
	MARSH FILL
	CONTAINMENT DIKE
	PRIMARY CONTAINMENT BORROW CHANNEL
	SECONDARY CONTAINMENT BORROW CHANNEL
	ACCESS CHANNEL
	TEMPORARY SIDECAST DISPOSAL
	CONVEYANCE CORRIDORS
	WORK AREA
	PROBABLE PIPELINE (JCS, 2014)



BY	DESCRIPTION	DATE	<b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	<b>LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 150 TERRACE AVENUE BATON ROUGE, LA 70802	<b>WEST BELLE HEADLAND REPAIR</b>	<b>WEST BELLE HEADLAND RESTORATION AREA MAP</b>
JSD	CORRECTED LEGEND FOR ACCESS CHANNEL AND TEMPORARY SIDECAST DISPOSAL	06/13 2023				
DRAWN BY: STEVE DARTEZ			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.	STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
					FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 5 OF 23










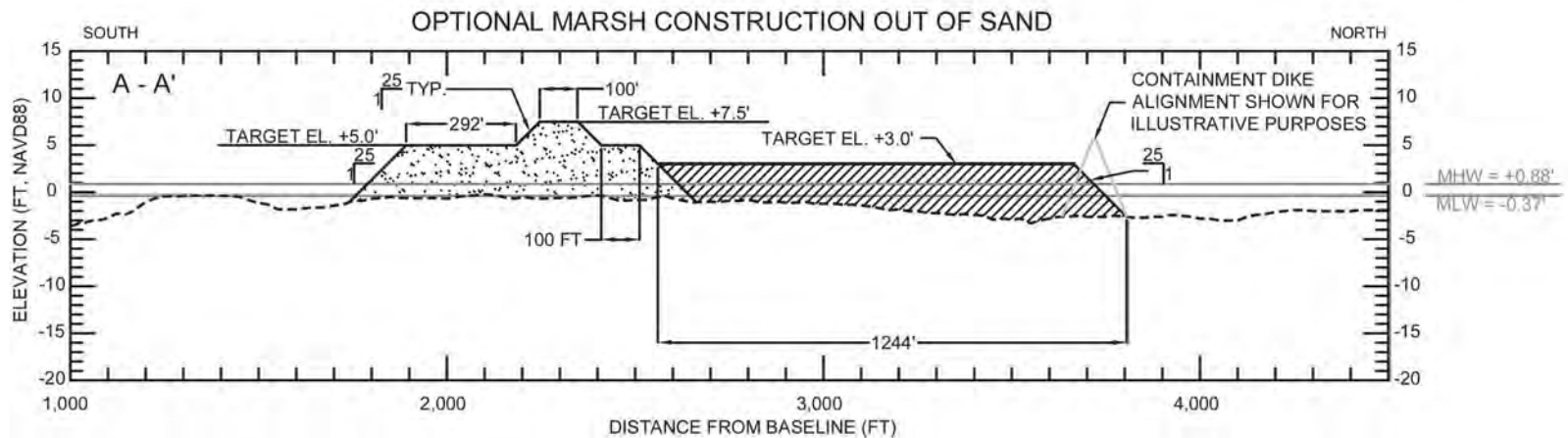
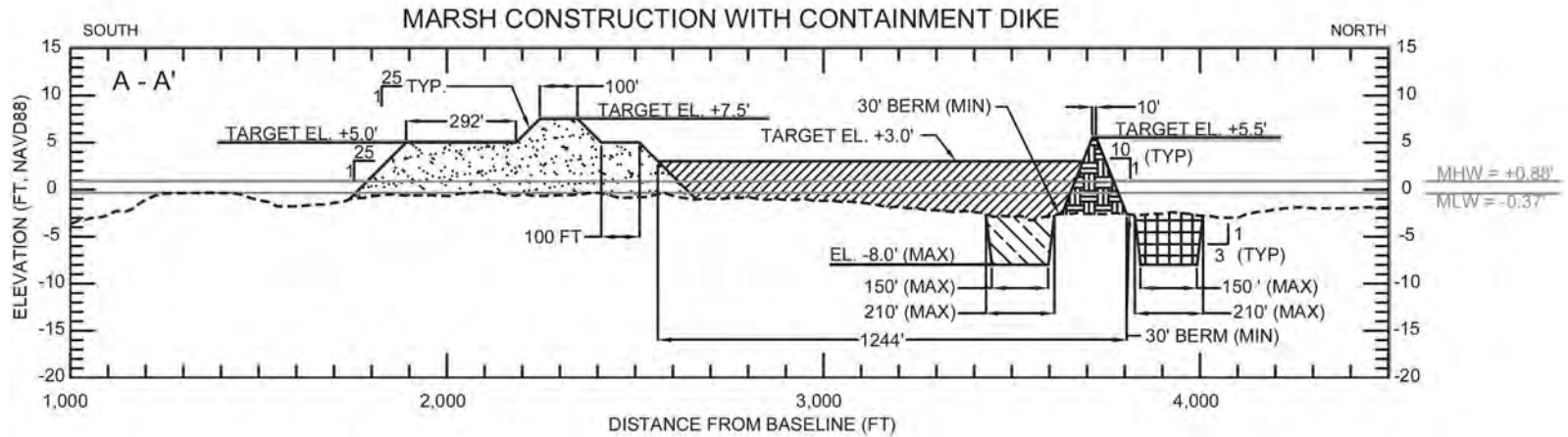
**NOTES:**


1. SECTIONS ARE VIEWED AS LOOKING NORTHWEST.
2. EXISTING GRADE SURVEY PERFORMED BY DELTA COAST CONSULTANTS, LLC IN 2021.
3. DIMENSIONS ARE PROVIDED FOR DESIGN PURPOSES AND DO NOT MEASURE ALONG THE SURVEY BASELINE.
4. A +1.0 FT ELEVATION CONSTRUCTION TOLERANCE SHALL BE ACCOMMODATED FOR CONSTRUCTION PURPOSES.

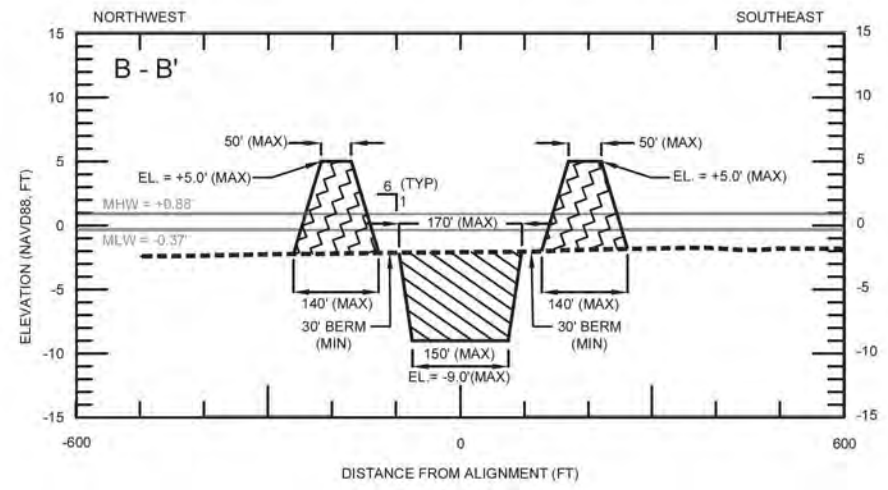
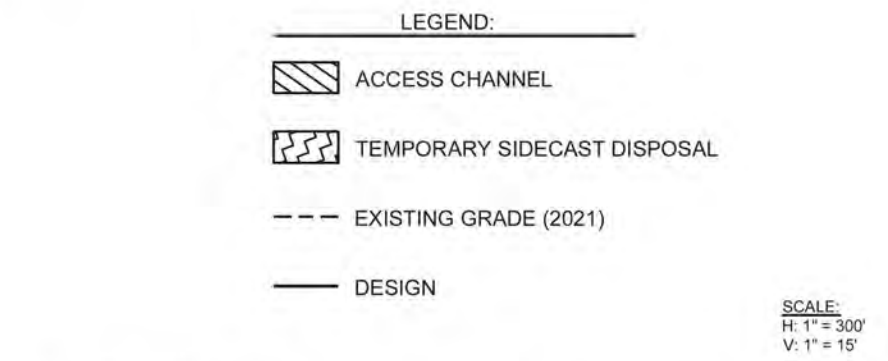
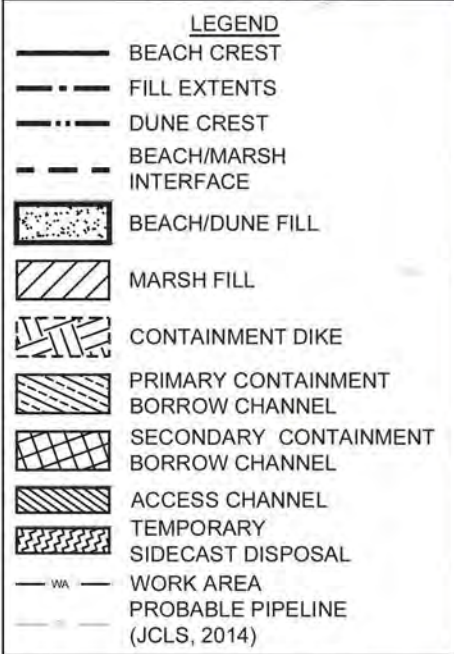
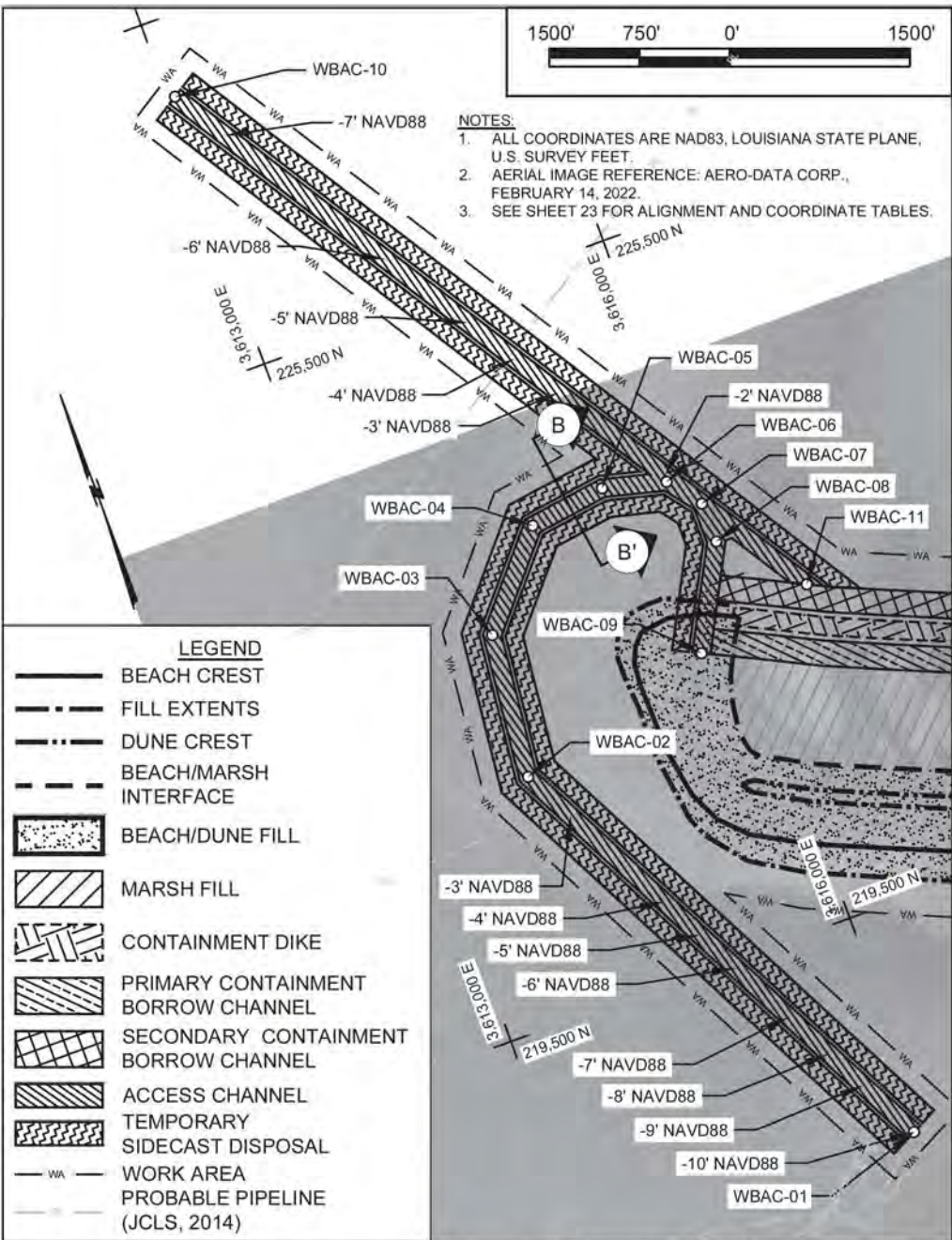
**SCALE:**  
 H: 1" = 500'  
 V: 1" = 25'

**LEGEND**


 EXISTING GRADE (2021)	 BEACH & DUNE FILL	 CONTAINMENT DIKE FILL
 DESIGN	 MARSH FILL	 PRIMARY CONTAINMENT BORROW CHANNEL
		 SECONDARY CONTAINMENT BORROW CHANNEL



BY	DESCRIPTION	DATE			WEST BELLE HEADLAND REPAIR	WEST BELLE HEADLAND RESTORATION TYPICAL SECTIONS
			 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH. (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ	DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.			FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 6 OF 23



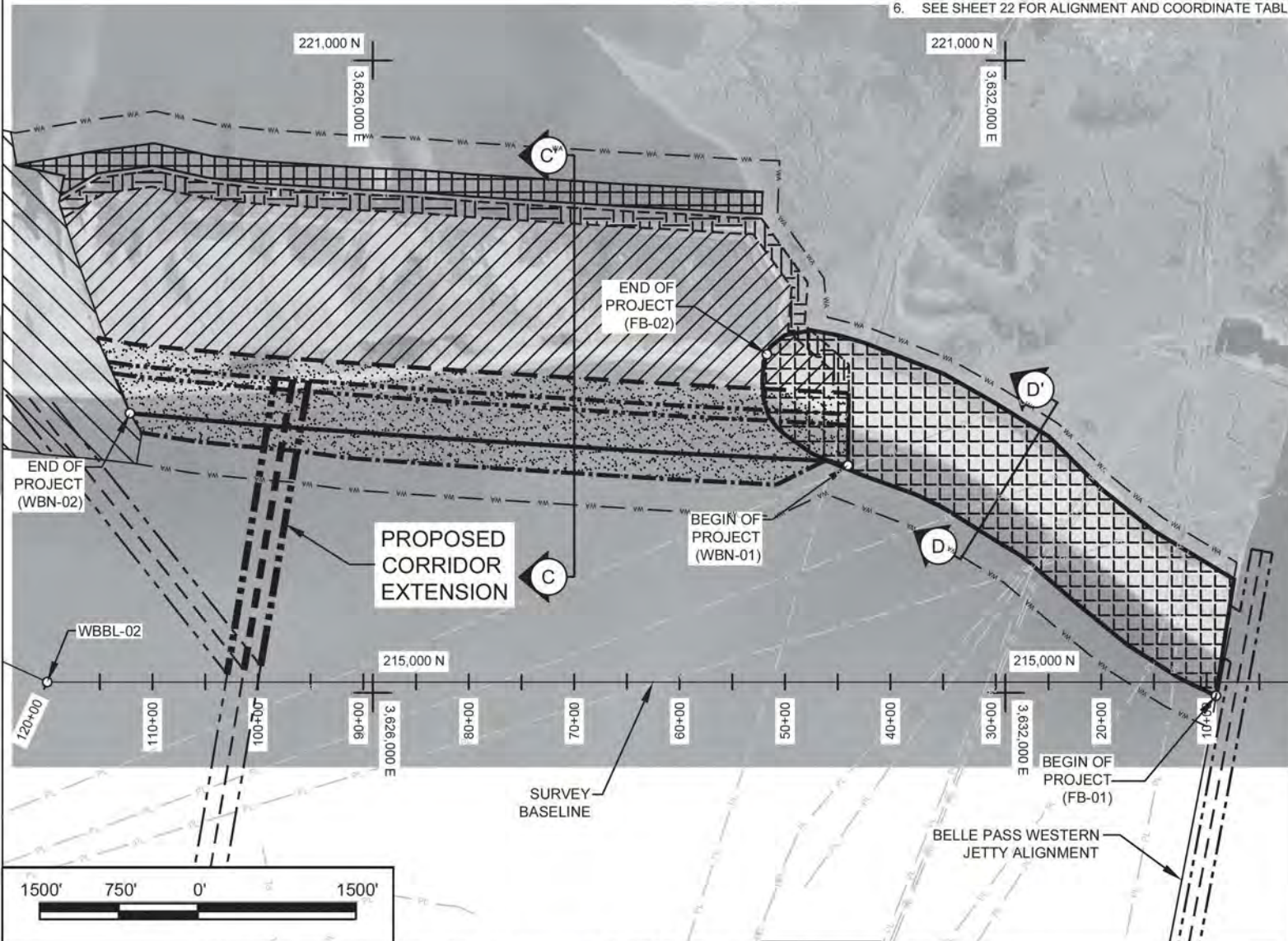
- NOTES:**
1. ALL ELEMENTS WERE PREVIOUSLY PERMITTED UNDER THE TE-118 PROJECT. ALL ELEMENTS TO BE RE-PERMITTED.
  2. TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043. MATERIAL REMAINING IN THE TEMPORARY SIDECAST DISPOSAL AREAS SHALL BE REWORKED TO ±0.5 FEET OF THE PRE-CONSTRUCTION ELEVATIONS PRIOR TO DEMOBILIZATION.
  3. ELEVATIONS IN THE ACCESS CHANNEL RESULTING FROM BACKFILLING OPERATIONS SHALL BE NO HIGHER THAN +0.5 FEET OF THE PRE-CONSTRUCTION ELEVATION.
  4. EXISTING GRADE SURVEY PERFORMED BY DELTA COAST CONSULTANTS, LLC IN 2021.

BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH. (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR  STATE PROJECT NUMBER: TE-176	WEST BELLE HEADLAND RESTORATION ACCESS CHANNEL  DATE: MARCH 2023			
DRAWN BY: STEVE DARTEZ			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 7 OF 24			




**NOTES:**

1. ALL ELEMENTS EXCEPT THE PROPOSED CORRIDOR EXTENSION WERE PREVIOUSLY PERMITTED UNDER THE TE-118 PROJECT. ALL ELEMENTS TO BE RE-PERMITTED.
2. TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043. ALL COORDINATES ARE NAD83, LOUISIANA STATE PLANE, U.S. SURVEY FEET.
3. AERIAL IMAGE REFERENCE: AERO-DATA CORP., FEBRUARY 14, 2022.
4. SAND FENCING SHALL BE INSTALLED ALONG THE ALIGNMENT AND FOR THE LENGTH OF THE DUNE.
5. SEE SHEETS 15 AND 16 FOR CONVEYANCE CORRIDOR DETAILS.
6. SEE SHEET 22 FOR ALIGNMENT AND COORDINATE TABLES.



**LEGEND**


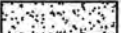




- BEACH CREST
- FILL EXTENTS
- DUNE CREST
- BEACH/MARSH INTERFACE
- BEACH/DUNE FILL
- MARSH FILL
- CONTAINMENT DIKE
- EXTERIOR CONTAINMENT BORROW CHANNEL
- FEEDER BEACH FILL EXTENTS
- WEST BELLE HEADLAND RESTORATION AREA
- WORK AREA
- PROBABLE PIPELINE (JCLS, 2014)
- CONVEYANCE CORRIDORS
- PROPOSED CONVEYANCE CORRIDOR EXTENSION

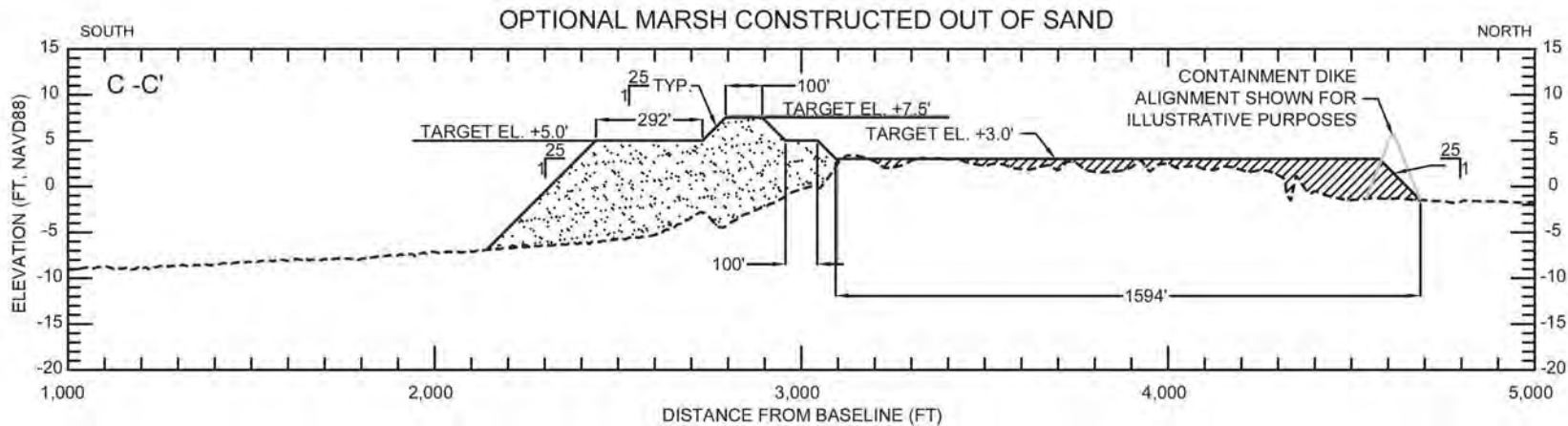
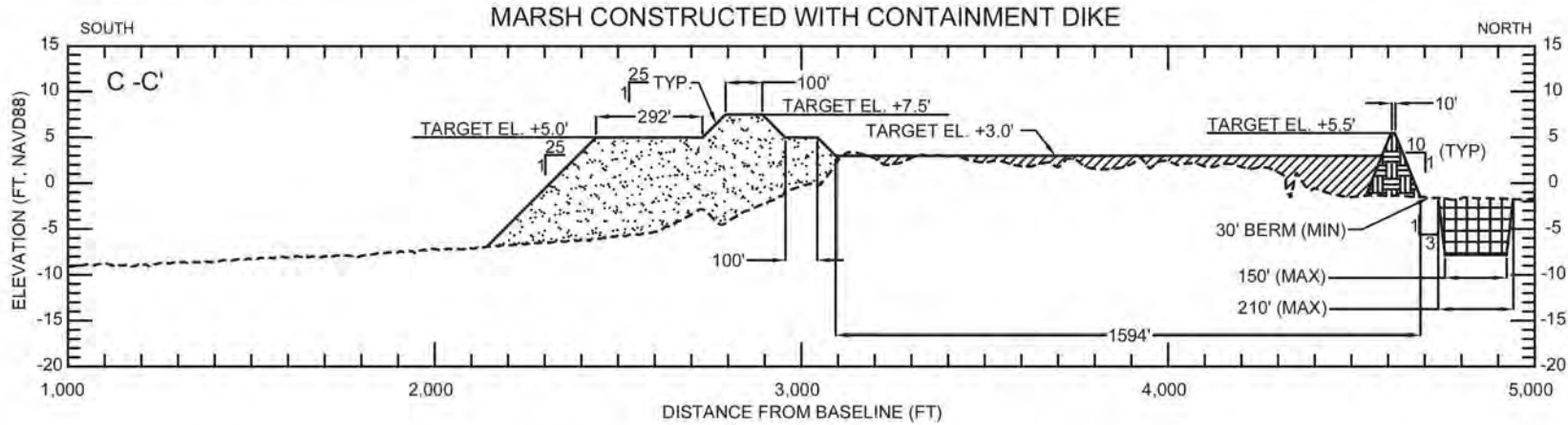
BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR  STATE PROJECT NUMBER: TE-176	WEST BELLE HEADLAND RENOURISHMENT / FEEDER BEACH AREA MAP  DATE: MARCH 2023		
DRAWN BY: STEVE DARTEZ	DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.					FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 8 OF 23


**NOTES:**

1. SECTIONS ARE VIEWED AS LOOKING NORTHWEST.
2. EXISTING GRADE SURVEY PERFORMED BY DELTA COAST CONSULTANTS, LLC IN 2021.
3. DIMENSIONS ARE PROVIDED FOR DESIGN PURPOSES AND DO NOT MEASURE ALONG THE SURVEY BASELINE.
4. A +1.0 FT ELEVATION CONSTRUCTION TOLERANCE SHALL BE ACCOMMODATED FOR CONSTRUCTION PURPOSES.

**SCALE:**  
 H: 1" = 500'  
 V: 1" = 25'

LEGEND			
	EXISTING GRADE (2021)		BEACH & DUNE FILL
	DESIGN		MARSH FILL
			CONTAINMENT DIKE FILL
			EXTERIOR CONTAINMENT BORROW CHANNEL



BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	WEST BELLE HEADLAND RENOURISHMENT TYPICAL SECTIONS
					STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 9 OF 23



**NOTES:**

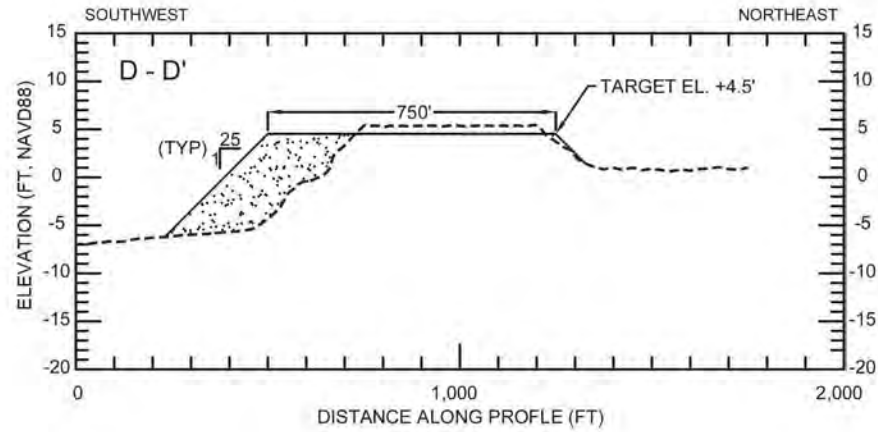
1. SECTIONS ARE VIEWED AS LOOKING WEST.
2. EXISTING GRADE SURVEY PERFORMED BY DELTA COAST CONSULTANTS, LLC IN 2022.
3. DIMENSIONS ARE PROVIDED FOR DESIGN PURPOSES AND DO NOT MEASURE ALONG THE SURVEY BASELINE.
4. A +1.0 FT ELEVATION CONSTRUCTION TOLERANCE SHALL BE ACCOMMODATED FOR CONSTRUCTION PURPOSES.


**SCALE:**

H: 1" = 500'  
V: 1" = 25'

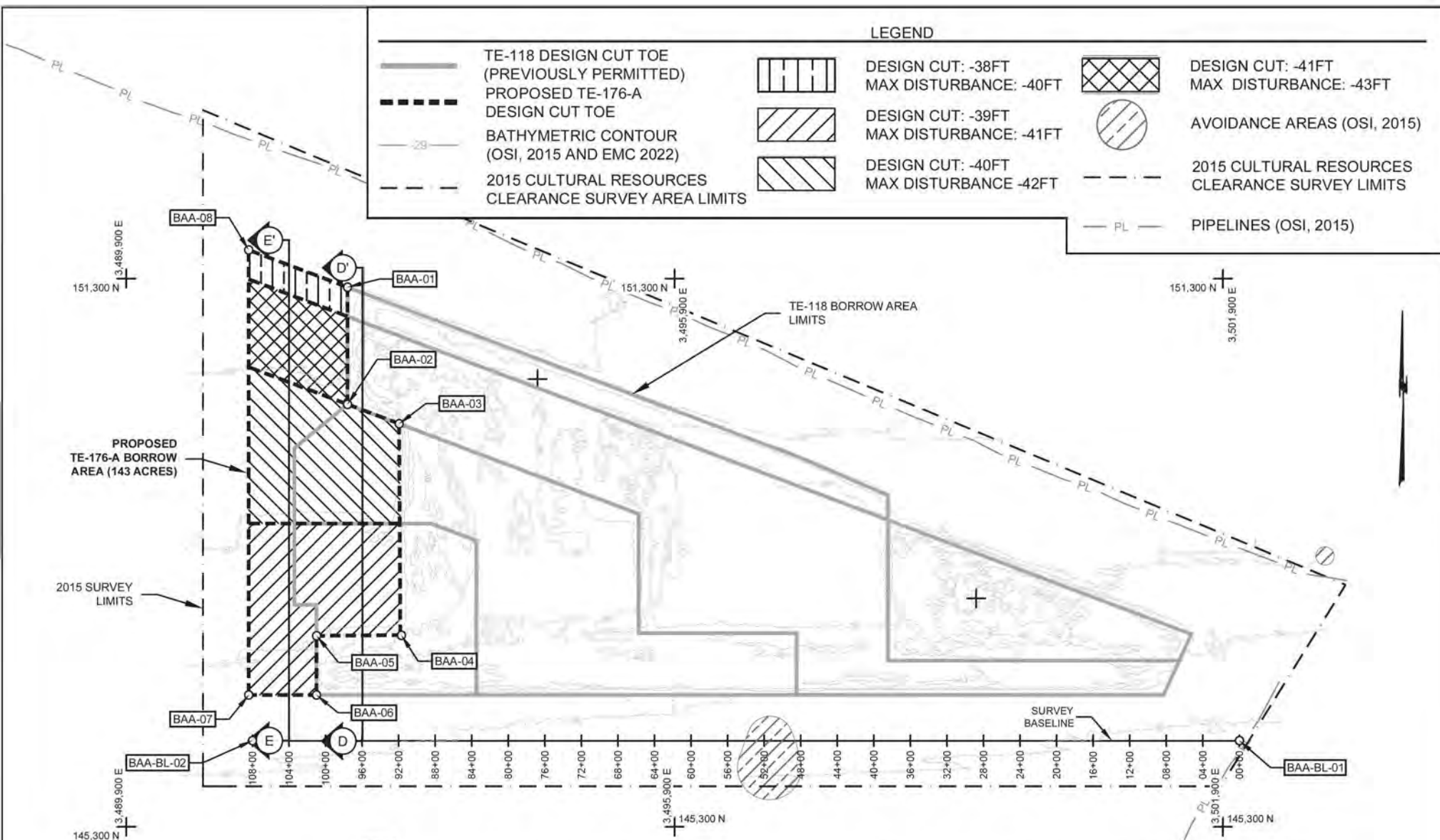
**LEGEND**

- EXISTING GRADE (2022)
- DESIGN
-  FEEDER BEACH FILL

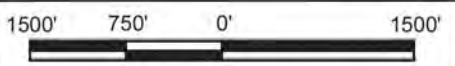


BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH. (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	WEST BELLE HEADLAND FEEDER BEACH TYPICAL SECTION
					STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ	DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.			FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 10 OF 23

LEGEND			
	TE-118 DESIGN CUT TOE (PREVIOUSLY PERMITTED)		DESIGN CUT: -38FT MAX DISTURBANCE: -40FT
	PROPOSED TE-176-A DESIGN CUT TOE		DESIGN CUT: -39FT MAX DISTURBANCE: -41FT
	BATHYMETRIC CONTOUR (OSI, 2015 AND EMC 2022)		DESIGN CUT: -40FT MAX DISTURBANCE: -42FT
	2015 CULTURAL RESOURCES CLEARANCE SURVEY AREA LIMITS		DESIGN CUT: -41FT MAX DISTURBANCE: -43FT
			AVOIDANCE AREAS (OSI, 2015)
			2015 CULTURAL RESOURCES CLEARANCE SURVEY LIMITS
			PIPELINES (OSI, 2015)



- NOTES:**
- BATHYMETRIC CONTOURS AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OCEAN SURVEY, 2015 AND THE TE-118 AS-BUILT SURVEY PERFORMED BY EMC IN 2022.
  - GEOTECHNICAL AND PIPELINE DATA FROM OSI, 2015.
  - ELEVATIONS ARE NAVD88, U.S. SURVEY FEET. COORDINATES ARE NAD83, LA STATE PLANE, U.S. SURVEY FEET.
  - SEE SHEET 23 FOR ALIGNMENT AND COORDINATE TABLES.
  - TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043.



BY	DESCRIPTION	DATE	<b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH. (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	TE-176-A BORROW AREA PLAN VIEW				
JSD	TE-176-A BORROW AREA AVOIDANCE AREAS ADDED	05/08 2023								
JSD	TE-176-A BORROW AREA AVOIDANCE AREAS REMOVED THAT HAVE BEEN DEEMED CLEAR	06/13 2023								
DRAWN BY: STEVE DARTEZ			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	STATE PROJECT NUMBER: TE-176 DATE: MARCH 2023				
						FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 11 OF 23			



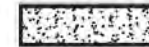
**NOTES:**

1. BATHYMETRIC PROFILES ARE A MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OCEAN SURVEY, 2015 AND THE TE-118 AS-BUILT SURVEY PERFORMED BY EMC IN 2022.
2. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
3. MEAN HIGH WATER = +0.88FT NAVD88, MEAN LOW WATER = -0.33 FT NAVD88.

**LEGEND:**

----- EXISTING GRADE (2022)

----- EXISTING GRADE (2015)

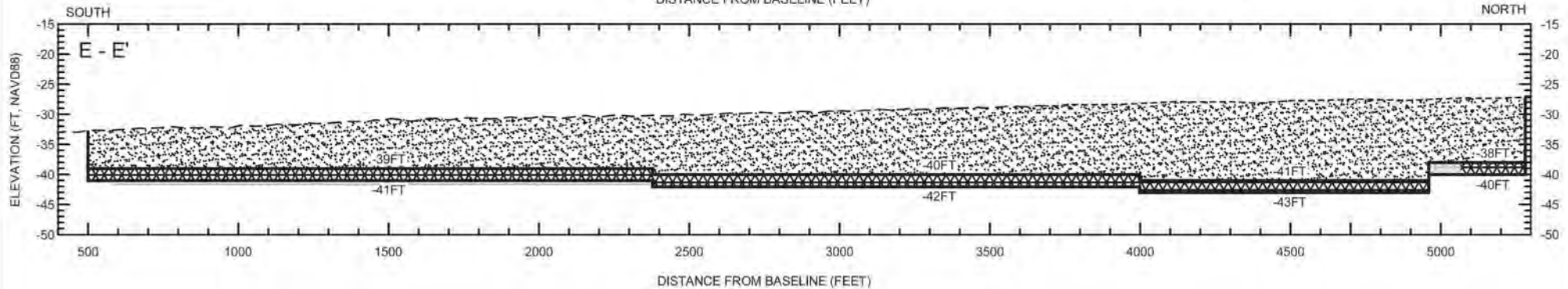
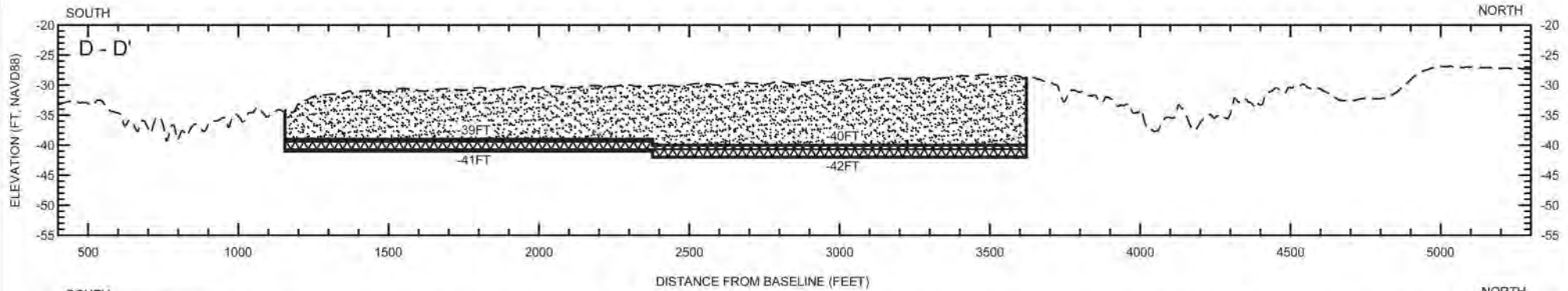



DESIGN DREDGE CUT








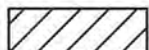
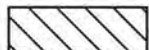

DESIGN LIMIT OF DISTURBANCE

SCALE  
H: 1" = 500'  
V: 1" = 25'

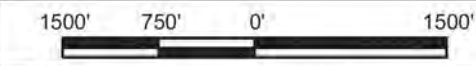


BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	TE-176-A BORROW AREA TYPICAL SECTIONS
JSD	TE-176-A BORROW AREA AVOIDANCE AREAS ADDED	05/08/2023				
JSD	TE-176-A BORROW AREA AVOIDANCE AREAS REMOVED THAT HAVE BEEN DEEMED CLEAR	06/13/2023			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.
DRAWN BY: STEVE DARTEZ						


**LEGEND**

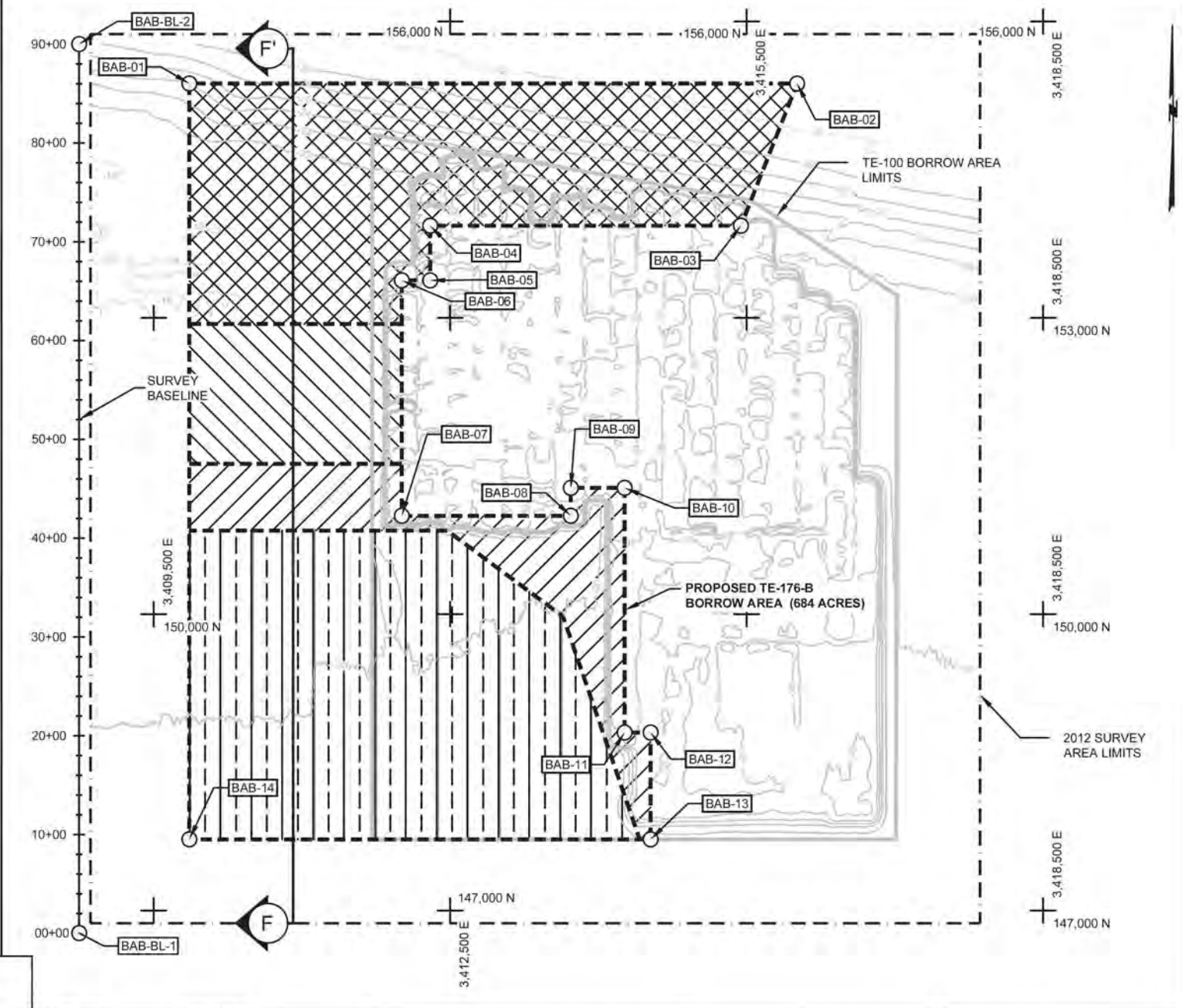
-  BATHYMETRIC CONTOUR (2012/2018)
-  2012 CULTURAL RESOURCES CLEARANCE SURVEY AREA LIMITS
-  TE-100 DESIGN CUT TOE (PREVIOUSLY PERMITTED)
-  PROPOSED TE-176-B DESIGN CUT TOE
-  DESIGN CUT: -27FT  
MAX DISTURBANCE: -30FT
-  DESIGN CUT: -29FT  
MAX DISTURBANCE: -32FT
-  DESIGN CUT: -32.5FT  
MAX DISTURBANCE: -35.5FT
-  DESIGN CUT: -31FT  
MAX DISTURBANCE: -34FT

- NOTES:**
1. ALL COORDINATES ARE IN NAD 83, STATE PLANE - LOUISIANA SOUTH, U.S. SURVEY FEET.
  2. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  3. BATHYMETRIC CONTOURS AREA MERGER OF THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OCEAN SURVEY, 2012 AND THE TE-100 AS-BUILT SURVEY PERFORMED BY HYDROTERRA TECHNOLOGIES IN 2018.
  4. GEOTECHNICAL VIBRACORES COLLECTED BY STE, 2005.
  5. SEE SHEET 23 FOR BORROW AREA BOUNDARY COORDINATES.
  6. TE-100 PERMITS: MVN 2013-0266-CQ, CUP - P20161010.




BY	DESCRIPTION	DATE

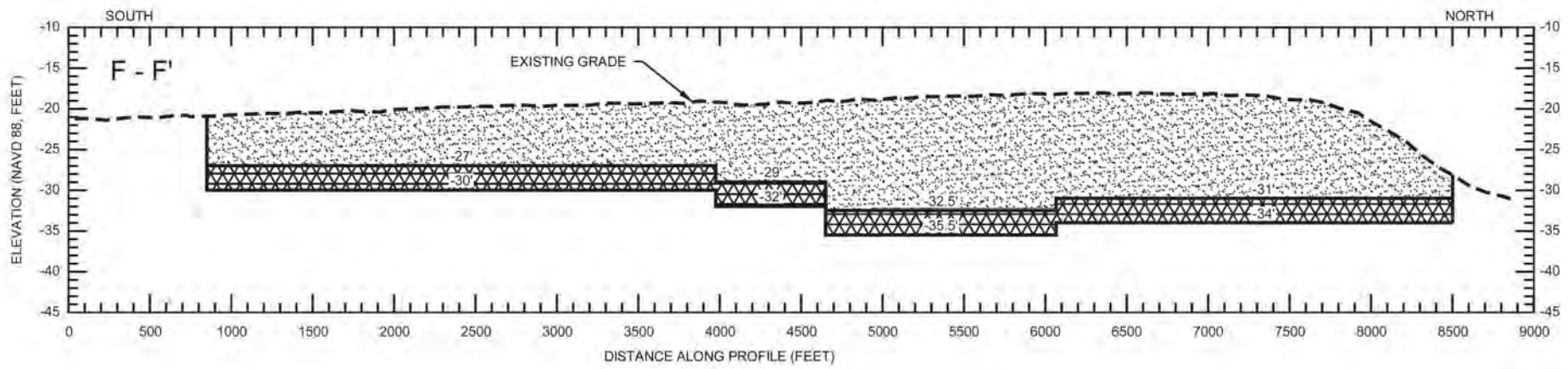
	<b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	TE-176-B BORROW AREA PLAN VIEW
	DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.	STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023






LEGEND:

- EXISTING GRADE (2012)
-  DESIGN DREDGE CUT
-  DESIGN LIMIT OF DISTURBANCE



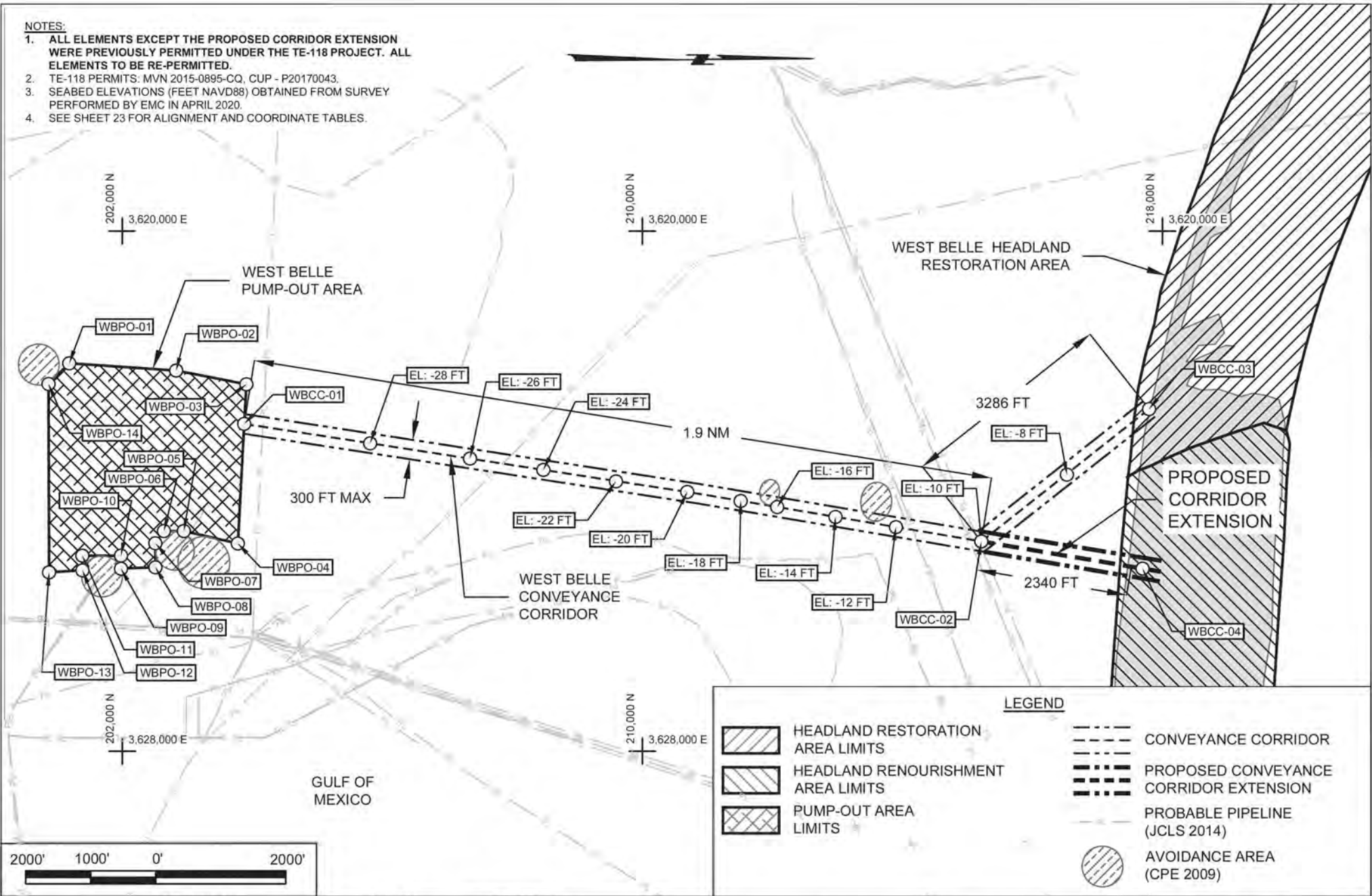
SCALE:  
H: 1" = 1000'  
V: 1" = 20'

- NOTES:
1. ELEVATIONS ARE SHOWN IN NAVD88 U.S. SURVEY FEET.
  2. BATHYMETRIC PROFILE FROM THE CULTURAL RESOURCES CLEARANCE SURVEY PERFORMED BY OCEAN SURVEY, 2012.
  3. MEAN HIGH WATER = +1.70' (NAVD88), MEAN LOW WATER = +0.66' (NAVD88)

BY	DESCRIPTION	DATE				
			 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	TE-176-B BORROW AREA TYPICAL SECTION
					STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 14 OF 23

**NOTES:**

1. ALL ELEMENTS EXCEPT THE PROPOSED CORRIDOR EXTENSION WERE PREVIOUSLY PERMITTED UNDER THE TE-118 PROJECT. ALL ELEMENTS TO BE RE-PERMITTED.
2. TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043.
3. SEABED ELEVATIONS (FEET NAVD88) OBTAINED FROM SURVEY PERFORMED BY EMC IN APRIL 2020.
4. SEE SHEET 23 FOR ALIGNMENT AND COORDINATE TABLES.



BY	DESCRIPTION	DATE

**COASTAL ENGINEERING CONSULTANTS, INC.**  
 PH: (225) 523-7403  
 1211 N. RANGE AVE, STE. E  
 DENHAM SPRINGS, LA 70726

LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY  
 150 TERRACE AVENUE  
 BATON ROUGE, LA 70802

WEST BELLE HEADLAND REPAIR  
 STATE PROJECT NUMBER: TE-176

WEST BELLE PUMP-OUT AREA & CONVEYANCE CORRIDOR PLAN VIEW  
 DATE: MARCH 2023

DRAWN BY: STEVE DARTEZ

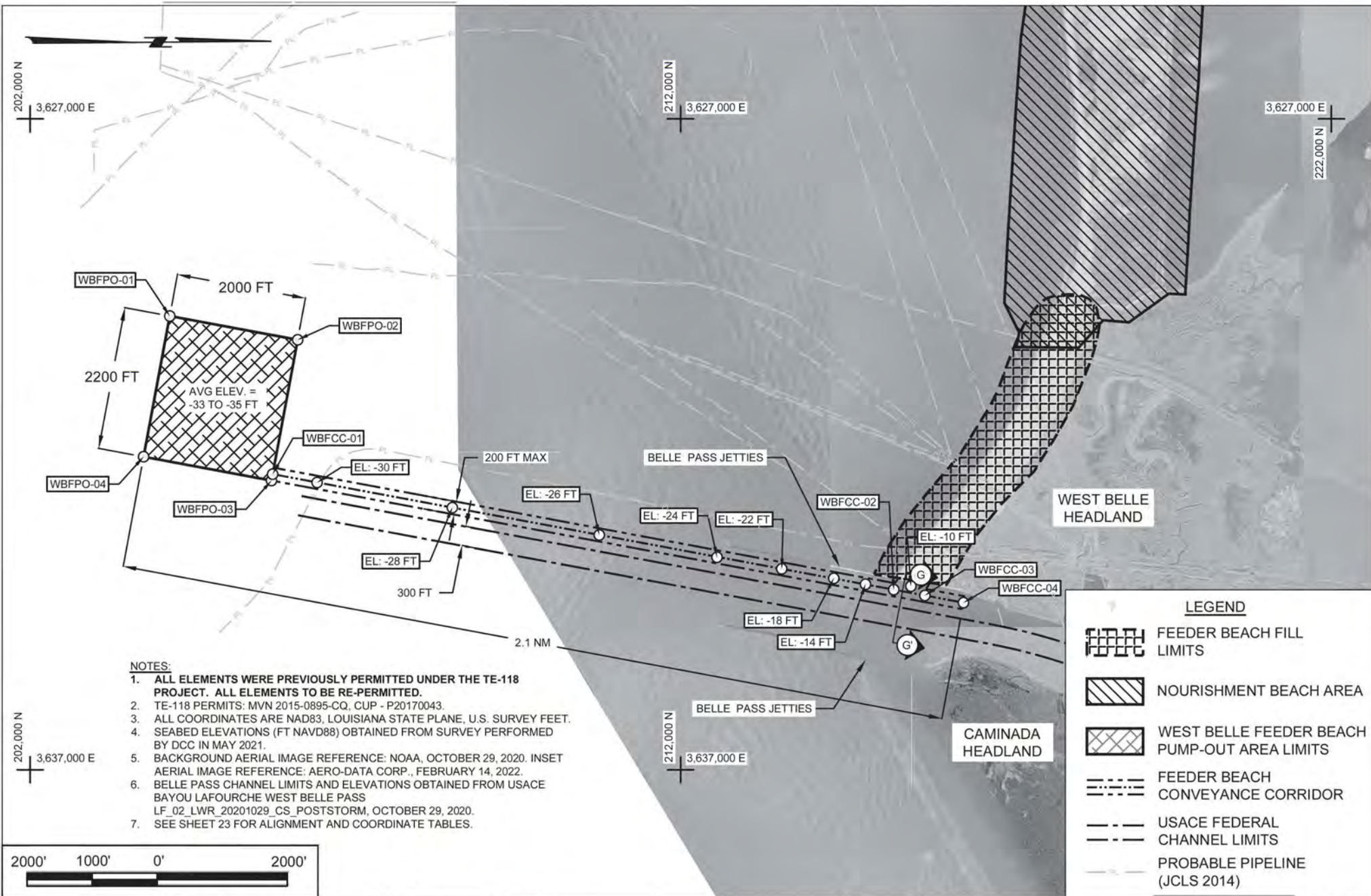
DESIGNED BY: MICHAEL T. POFF, P.E.  
 LICENSE NUMBER: 30048

APPROVED BY: SHANNON HAYNES, P.E.

FEDERAL PROJECT NUMBER: MULTIPLE

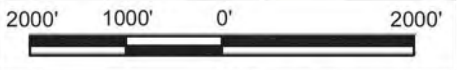
SHEET 15 OF 23






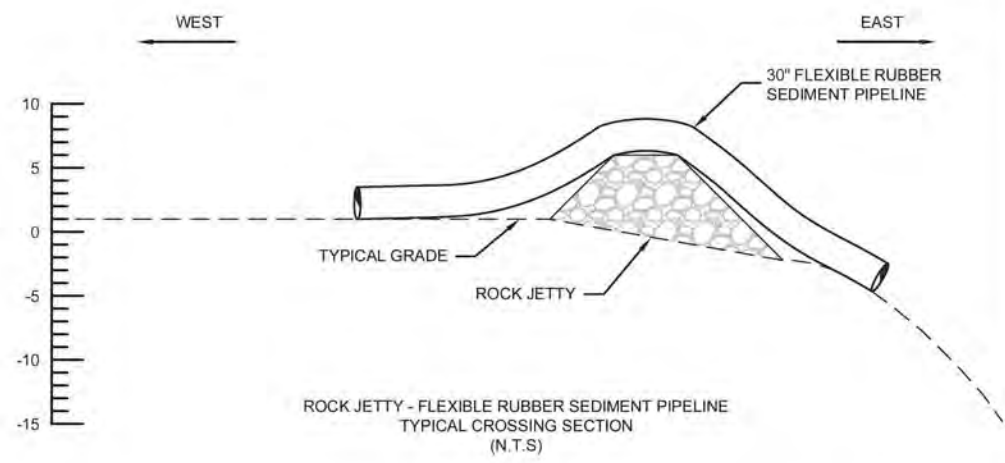
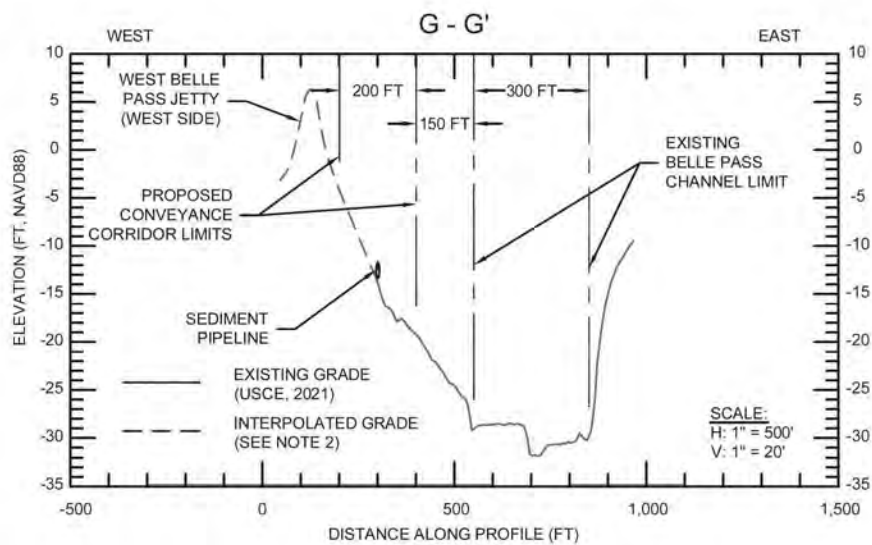
**NOTES:**

1. ALL ELEMENTS WERE PREVIOUSLY PERMITTED UNDER THE TE-118 PROJECT. ALL ELEMENTS TO BE RE-PERMITTED.
2. TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043.
3. ALL COORDINATES ARE NAD83, LOUISIANA STATE PLANE, U.S. SURVEY FEET.
4. SEABED ELEVATIONS (FT NAVD88) OBTAINED FROM SURVEY PERFORMED BY DCC IN MAY 2021.
5. BACKGROUND AERIAL IMAGE REFERENCE: NOAA, OCTOBER 29, 2020. INSET AERIAL IMAGE REFERENCE: AERO-DATA CORP., FEBRUARY 14, 2022.
6. BELLE PASS CHANNEL LIMITS AND ELEVATIONS OBTAINED FROM USACE BAYOU LAFOURCHE WEST BELLE PASS LF\_02\_LWR\_20201029\_CS\_POSTSTORM, OCTOBER 29, 2020.
7. SEE SHEET 23 FOR ALIGNMENT AND COORDINATE TABLES.



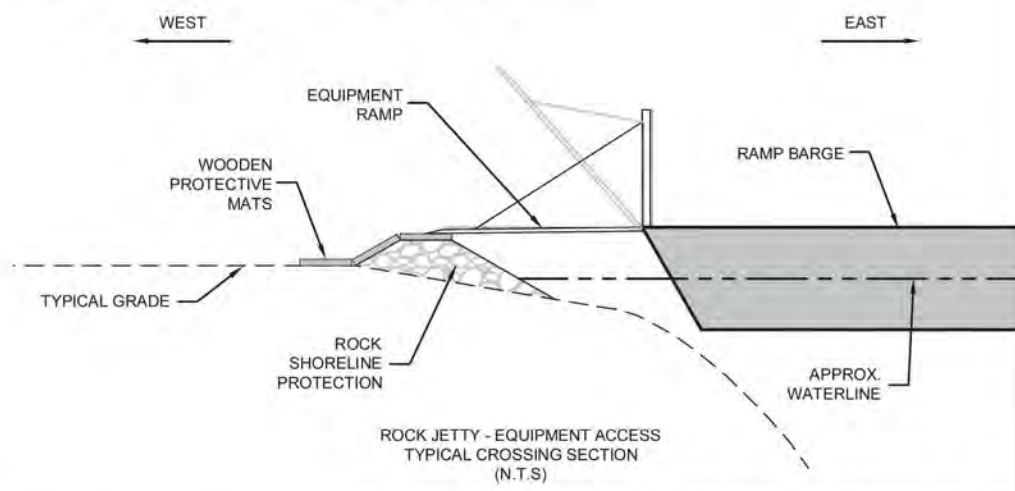
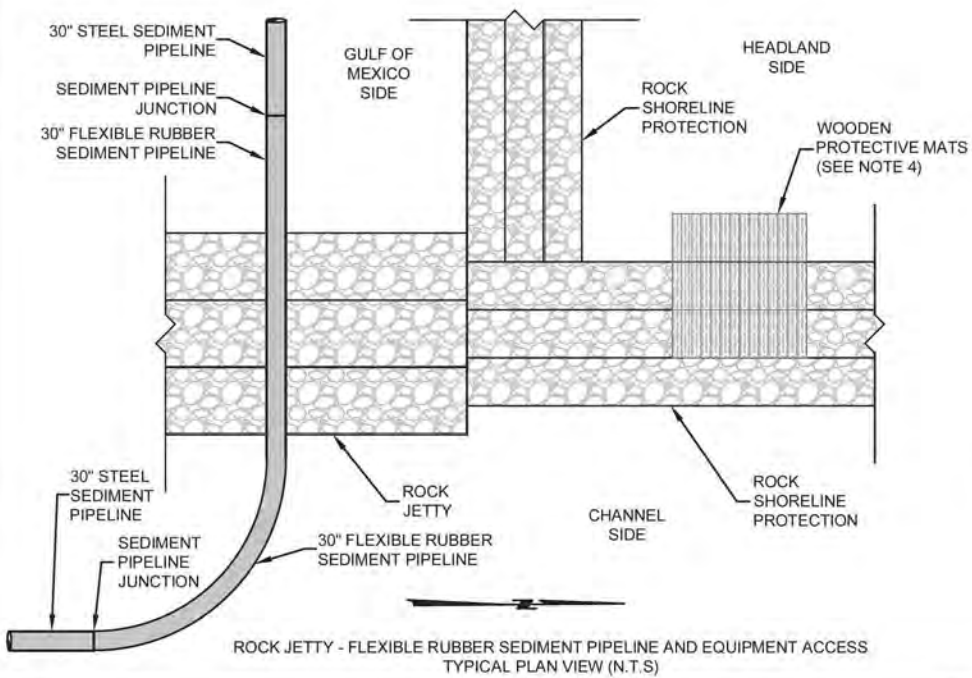
BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR  STATE PROJECT NUMBER: TE-176	WEST BELLE FEEDER BEACH PUMP-OUT AREA & CONVEYANCE CORRIDOR PLAN VIEW  DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ	DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.				






**NOTES:**

1. BELLE PASS CHANNEL SURVEY AND CHANNEL LIMITS OBTAINED FROM USACE PORT FOURCHON NAV. CHANNEL MAINTENANCE CHANNEL DREDGING (W912P820C0070), 2021 POST-DREDGE SURVEY.
2. INTERPOLATED GRADE (JETTY DIMENSIONS) BASED ON USACE EAST JETTY EXTENSION FILE H-16-47797.
3. FLEXIBLE RUBBER SEDIMENT PIPELINE TO CROSS JETTY WITHIN THE CONVEYANCE CORRIDOR LIMITS.
4. JETTY TO BE PROTECTED BY WOODEN PROTECTIVE MATS (OR APPROVED EQUIVALENT) DURING EQUIPMENT ACCESS. WIDTH OF MATS SHALL BE OF SUFFICIENT SIZE TO PROTECT ROCK SHORELINE PROTECTION FROM DAMAGE BY THE EQUIPMENT RAMP.
5. MEAN HIGH WATER = +0.88FT NAVD88, MEAN LOW WATER = -0.33 FT NAVD88.
6. NO EXCAVATIONS OR FILLS ARE REQUIRED FOR THE CONVEYANCE CORRIDOR.
7. SEDIMENT PIPELINE SHALL BE LIGHTED AND MARKED IN ACCORDANCE WITH U.S. COAST GUARD REGULATIONS.
5. TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043.

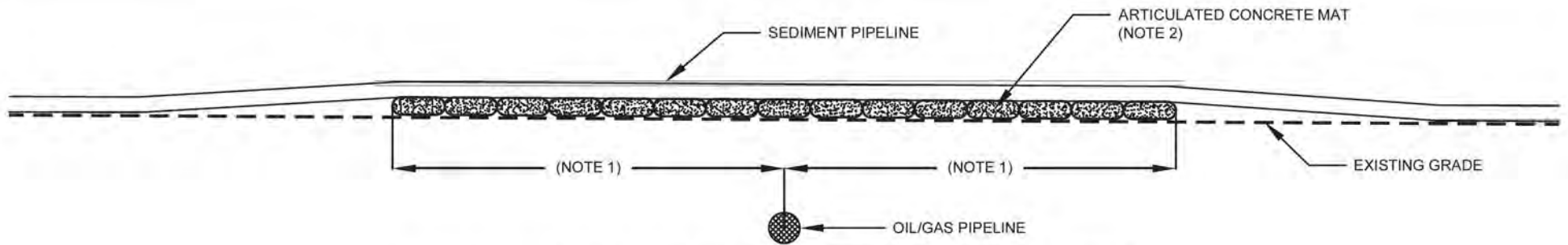


BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR  STATE PROJECT NUMBER: TE-176  FEDERAL PROJECT NUMBER: MULTIPLE	WEST BELLE FEEDER BEACH CONVEYANCE CORRIDOR AND ROCK CROSSING TYPICAL SECTIONS  DATE: MARCH 2023				
							DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.		

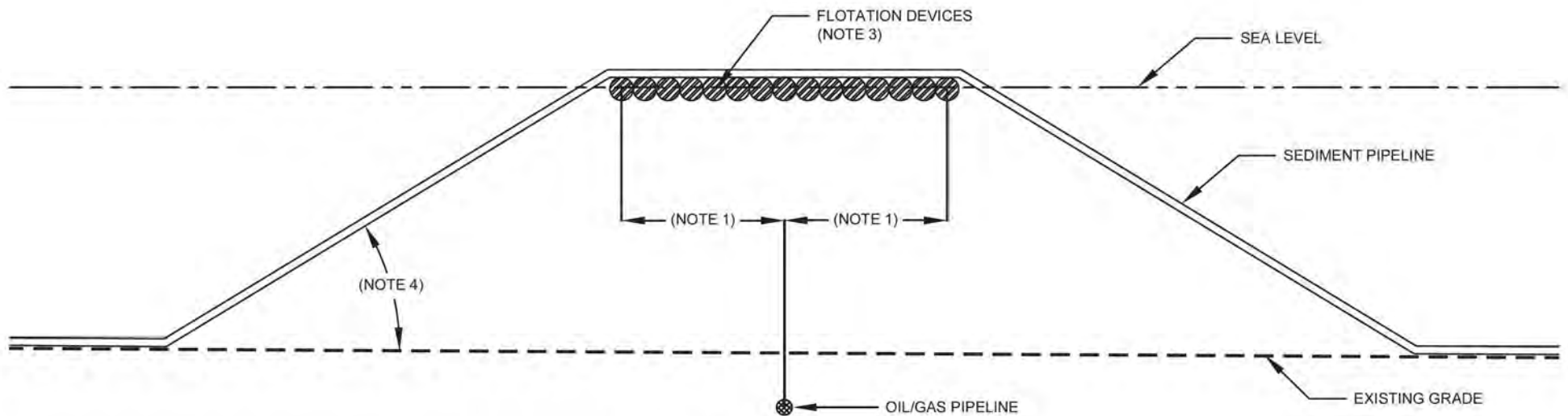
DRAWN BY: STEVE DARTEZ

SHEET 17 OF 23






**OPTIONAL ARTICULATED CONCRETE MAT PROTECTION CROSSING  
(NOT TO SCALE)**

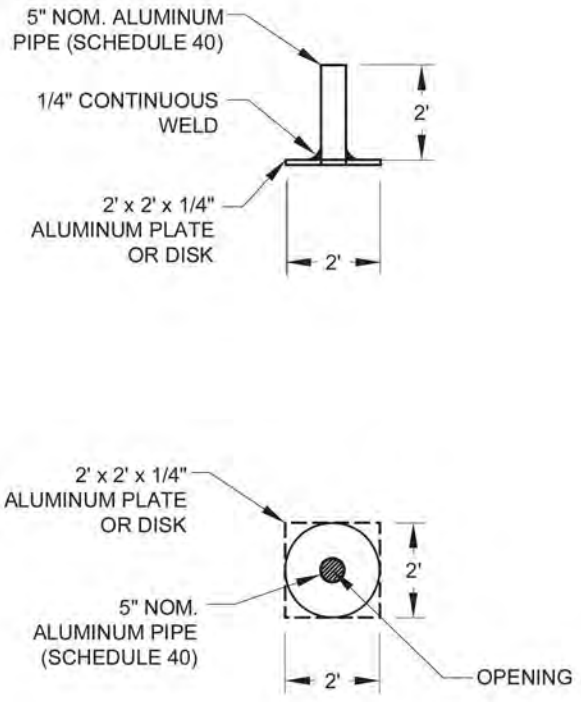


**OPTIONAL FLOTATION CROSSING  
(NOT TO SCALE)**

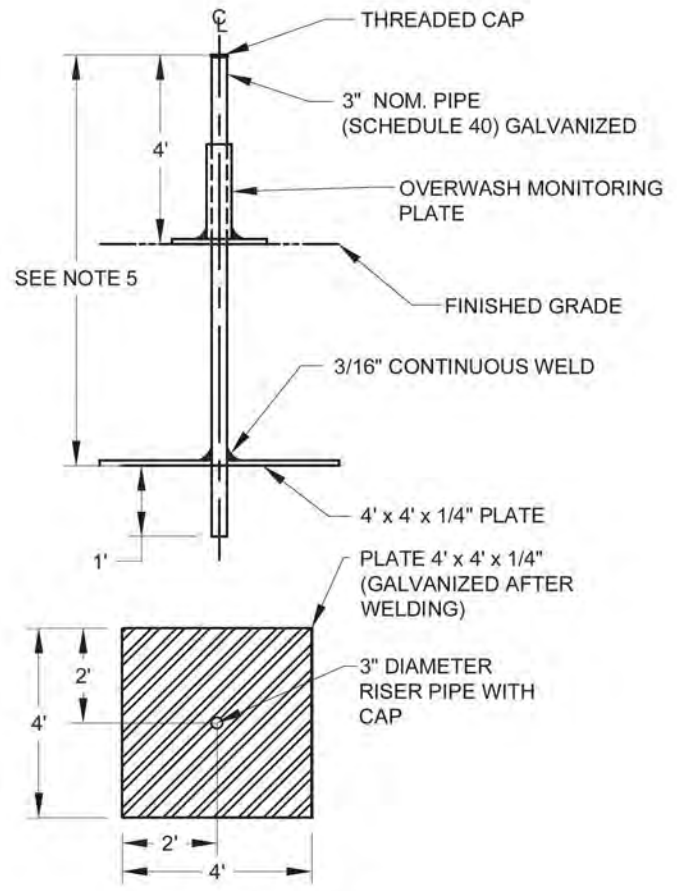
**NOTES:**

1. MEANS AND METHODS OF SEDIMENT PIPELINE CROSSING OF AN OIL/GAS PIPELINE SHALL BE COORDINATED BY THE CONSTRUCTION CONTRACTOR WITH THE OIL/GAS PIPELINE OPERATOR.
2. ARTICULATED CONCRETE MAT CONSTRUCTION AND COVERAGE AREA SHALL BE COORDINATED BY THE CONSTRUCTION CONTRACTOR WITH THE OIL/GAS PIPELINE OPERATOR.
3. FLOTATION DEVICE CONSTRUCTION AND PLACEMENT SHALL BE DETERMINED BY INDUSTRY STANDARDS FOR SEDIMENT PIPELINE SUPPORT AND CONSTRUCTION CONTRACTOR STANDARD EQUIPMENT.
4. ANGLE OF SEDIMENT PIPELINE DEPARTURE FROM EXISTING GRADE SHALL BE DETERMINED BY INDUSTRY STANDARDS FOR SEDIMENT PIPELINE SUPPORT AND CONSTRUCTION CONTRACTOR EQUIPMENT.

BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726		LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR  STATE PROJECT NUMBER: TE-176	OPTIONAL SEDIMENT PIPELINE CROSSING TYPICAL DETAILS  DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048		APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 18 OF 23




**OVERWASH MONITORING PLATE**  
(NOT TO SCALE)



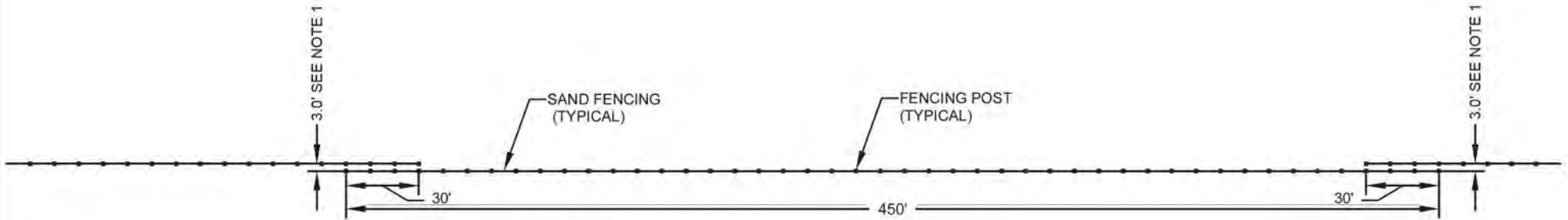
**SETTLEMENT PLATE**  
(NOT TO SCALE)

**SETTLEMENT AND OVERWASH MONITORING SYSTEM NOTES:**

1. SETTLEMENT PLATES SHALL BE CONSTRUCTED USING ASTM A36 STEEL AND HOT-DIPPED GALVANIZED AFTER FABRICATION.
2. ALL SETTLEMENT PLATES SHALL BE SURVEYED WITHIN A DAY OF INSTALLATION AND WEEKLY THROUGHOUT THE DURATION OF THE PROJECT.
3. ALL SETTLEMENT PLATES MUST BE INSTALLED AND MAINTAINED WITHIN 10.5 DEGREES OF VERTICAL.
4. ALL SETTLEMENT PLATES SHALL BE MARKED WITH SURVEY FLAGGING.
5. LENGTH OF THE SETTLEMENT PLATE RISER PIPE SHALL BE SUCH THAT THE ELEVATION OF THE TOP CAP BE NO LESS THAN 4 FEET ABOVE MAXIMUM FINAL DESIGN GRADE FOR ITS LOCATION.
6. OVERWASH MONITORING PLATES SHALL BE FABRICATED USING 6061-TS GRADE ALUMINUM PER SPECIFICATION TS-16.

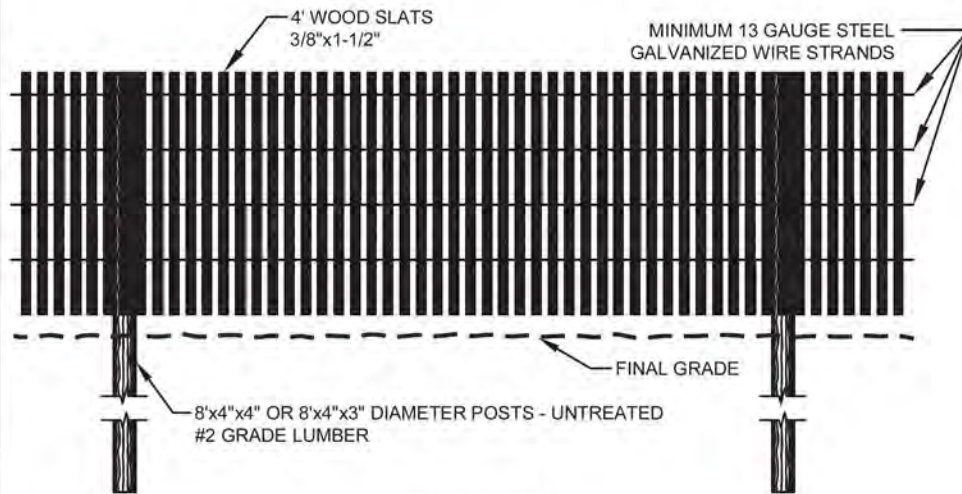
BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	SETTLEMENT AND OVERWASH MONITORING DETAILS
DRAWN BY: STEVE DARTEZ			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 19 OF 23



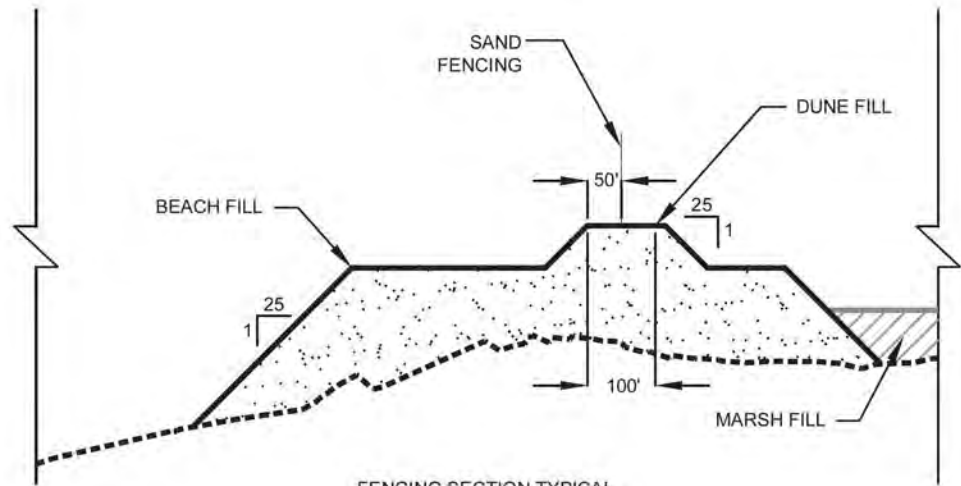


**NOTES:**  
 1. THE DISTANCE BETWEEN FENCES SHALL BE INCREASED FROM 3.0' TO 8.0' AT EVERY FIFTH GAP TO ALLOW ALL-TERRAIN VEHICLE ACCESS.


FENCING GAPPING DIMENSIONS  
 NOT TO SCALE

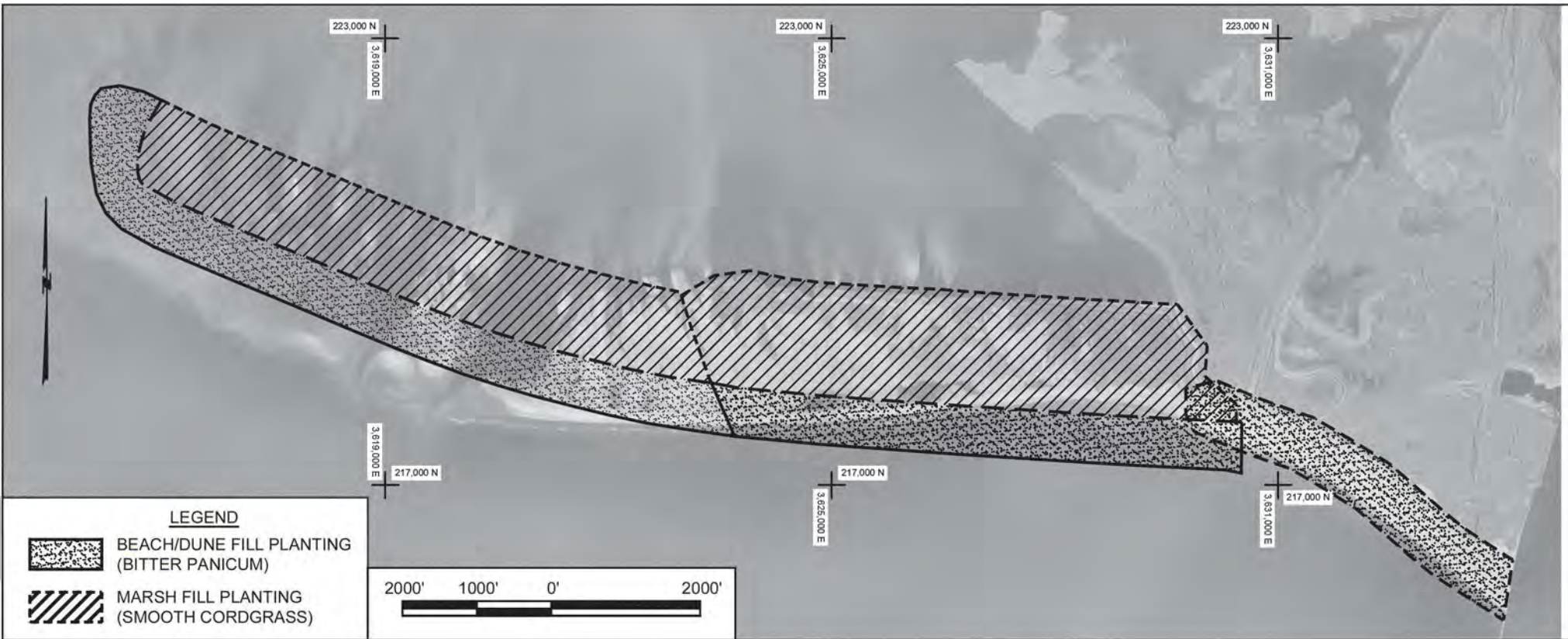


FENCING DETAIL  
 NOT TO SCALE



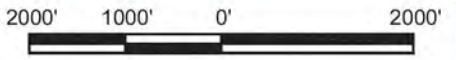
FENCING SECTION TYPICAL  
 NOT TO SCALE

BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	SAND FENCING DETAILS
					STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ	DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.			FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 20 OF 23



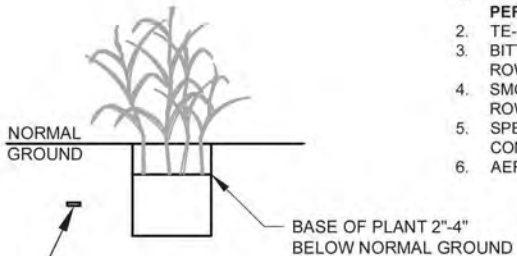
**LEGEND**

- BEACH/DUNE FILL PLANTING (BITTER PANICUM)
- MARSH FILL PLANTING (SMOOTH CORDGRASS)

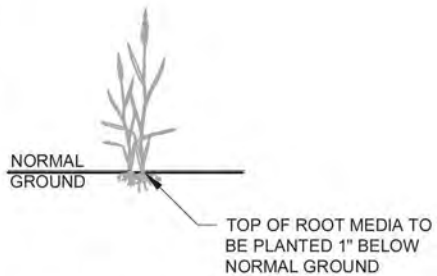


**NOTES:**

1. ALL ELEMENTS EXCEPT THE PROPOSED CORRIDOR EXTENSION WERE PREVIOUSLY PERMITTED UNDER THE TE-118 PROJECT. ALL ELEMENTS TO BE RE-PERMITTED.
2. TE-118 PERMITS: MVN 2015-0895-CQ, CUP - P20170043.
3. BITTER PANICUM PLANTS SHALL BE PLANTED ON SEVEN (7) FOOT CENTERS WITH ROWS TEN (10) FOOT APART.
4. SMOOTH CORDGRASS PLANTS SHALL BE PLANTED ON THREE (3) FOOT CENTERS WITH ROWS THREE (3) FOOT APART.
5. SPECIES OF PLANTS ARE SUBJECT TO CHANGE DUE TO SITE CONDITIONS AND / OR CONSTRUCTION VARIABLES.
6. AERIAL IMAGE REFERENCE: AERO-DATA CORP., FEBRUARY 14, 2022.



**TYPICAL DETAIL A**  
BITTER PANICUM  
4" CONTAINER



**TYPICAL DETAIL B**  
SMOOTH CORDGRASS  
PLUG

BY	DESCRIPTION	DATE	<b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 1211 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70728	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	WEST BELLE HEADLAND VEGETATIVE PLANTING DETAILS
					STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ					DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.



**WEST BELLE HEADLAND RESTORATION AREA EXTENTS**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
WB-01	217,653.90	3,623,694.60	29° 05' 38.64" N	90° 15' 35.59" W
WB-02	222,169.29	3,615,069.37	29° 06' 24.12" N	90° 17' 12.34" W

**WEST BELLE HEADLAND RENOURISHMENT AREA EXTENTS**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
WBN-01	217,159.66	3,630,505.30	29° 05' 33.11" N	90° 14' 18.89" W
WBN-02	217,653.90	3,623,694.60	29° 05' 38.64" N	90° 15' 35.59" W

**WEST BELLE HEADLAND FEEDER BEACH AREA EXTENTS**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
FB-01	214,972.60	3,633,996.87	29° 05' 11.12" N	90° 13' 39.77" W
FB-02	218,213.18	3,629,736.11	29° 05' 43.61" N	90° 14' 27.44" W

**WEST BELLE PUMP-OUT AREA BOUNDARY**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
WBPO-01	201,184.00	3,622,035.00	29° 02' 55.75" N	90° 15' 56.03" W
WBPO-02	202,830.00	3,622,147.00	29° 03' 12.04" N	90° 15' 54.59" W
WBPO-03	203,910.00	3,622,358.00	29° 03' 22.71" N	90° 15' 52.10" W
WBPO-04	203,779.00	3,624,807.00	29° 03' 21.19" N	90° 15' 24.52" W
WBPO-05	202,948.00	3,624,616.00	29° 03' 12.98" N	90° 15' 26.76" W
WBPO-06	202,642.13	3,624,616.00	29° 03' 09.95" N	90° 15' 26.80" W
WBPO-07	202,510.00	3,624,804.00	29° 03' 08.62" N	90° 15' 24.69" W
WBPO-08	202,510.00	3,625,174.00	29° 03' 08.59" N	90° 15' 20.52" W
WBPO-09	201,982.00	3,625,189.00	29° 03' 03.36" N	90° 15' 20.41" W
WBPO-10	201,982.00	3,624,993.00	29° 03' 03.38" N	90° 15' 22.62" W
WBPO-11	201,387.00	3,624,993.00	29° 02' 57.49" N	90° 15' 22.68" W
WBPO-12	201,387.00	3,625,218.00	29° 02' 57.47" N	90° 15' 20.15" W
WBPO-13	200,875.00	3,625,251.00	29° 02' 52.40" N	90° 15' 19.83" W
WBPO-14	200,867.00	3,622,353.00	29° 02' 52.59" N	90° 15' 52.48" W

**WEST BELLE HEADLAND BASELINE ALIGNMENT**


PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
WBBL-01	215,103.43	3,634,909.20	29° 05' 12.33" N	90° 13' 29.48" W
WBBL-02	215,103.43	3,622,909.20	29° 05' 13.46" N	90° 15' 44.71" W
WBBL-03	219,673.64	3,612,904.60	29° 05' 59.61" N	90° 17' 36.99" W

**WEST BELLE HEADLAND ACCESS CHANNEL ALIGNMENT**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
WBAC-01	217,645.16	3,615,892.83	29° 05' 39.27" N	90° 17' 03.52" W
WBAC-02	221,521.00	3,613,887.17	29° 06' 17.81" N	90° 17' 25.73" W
WBAC-03	222,731.99	3,614,010.76	29° 06' 29.79" N	90° 17' 24.21" W
WBAC-04	223,471.55	3,614,638.16	29° 06' 37.05" N	90° 17' 17.06" W
WBAC-05	223,566.68	3,615,287.22	29° 06' 37.94" N	90° 17' 09.74" W
WBAC-06	223,435.44	3,615,809.60	29° 06' 36.59" N	90° 17' 03.86" W
WBAC-07	223,163.53	3,616,023.79	29° 06' 33.88" N	90° 17' 01.48" W
WBAC-08	222,826.76	3,616,028.28	29° 06' 30.55" N	90° 17' 01.46" W
WBAC-09	221,994.96	2,615,593.91	29° 05' 37.66" N	93° 24' 58.23" W
WBAC-10	227,843.89	3,613,062.13	29° 07' 20.48" N	90° 17' 34.38" W
WBAC-11	222,234.16	3,616,613.81	29° 06' 24.63" N	90° 16' 54.92" W

**WEST BELLE CONVEYANCE CORRIDOR ALIGNMENT**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
WBCC-01	203,877.18	3,622,967.24	29° 03' 22.33" N	90° 15' 45.24" W
WBCC-02	215,215.95	3,624,775.01	29° 05' 14.40" N	90° 15' 23.67" W
WBCC-03	217,795.08	3,622,738.98	29° 05' 40.12" N	90° 15' 46.35" W
WBCC-04	217,971.56	3,625,239.74	29° 05' 41.64" N	90° 15' 18.14" W

BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 12111 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR	ALIGNMENT AND COORDINATE TABLES
					STATE PROJECT NUMBER: TE-176	DATE: MARCH 2023
DRAWN BY: STEVE DARTEZ			DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048	APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 22 OF 23

**TE-176-A BORROW AREA BOUNDARY**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
BAA-01	151,207.85	3,492,320.75	28° 54' 50.73" N	90° 40' 20.59" W
BAA-02	149,925.54	3,492,320.74	28° 54' 38.03" N	90° 40' 20.67" W
BAA-03	149,713.06	3,492,884.84	28° 54' 35.90" N	90° 40' 14.34" W
BAA-04	147,396.09	3,492,909.66	28° 54' 12.96" N	90° 40' 14.21" W
BAA-05	147,391.06	3,491,982.13	28° 54' 12.96" N	90° 40' 24.65" W
BAA-06	146,743.44	3,491,980.64	28° 54' 06.55" N	90° 40' 24.71" W
BAA-07	146,743.44	3,491,238.73	28° 54' 06.59" N	90° 40' 33.05" W
BAA-08	151,615.43	3,491,238.73	28° 54' 54.82" N	90° 40' 32.74" W

**TE-176-A BORROW AREA BASELINE ALIGNMENT**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
BAA-BL-01	146,243.44	3,502,079.82	28° 54' 01.01" N	90° 38' 31.13" W
BAA-BL-02	146,243.44	3,491,279.82	28° 54' 01.64" N	90° 40' 32.62" W

**WEST BELLE FEEDER BEACH PUMP-OUT AREA BOUNDARY**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
WBFPO-01	204,146.05	3,630,027.63	29° 03' 24.33"N	90° 14' 25.67"W
WBFPO-02	206,112.34	3,630,393.30	29° 03' 43.76"N	90° 14' 21.34"W
WBFPO-03	205,710.08	3,632,556.22	29° 03' 39.57"N	90° 13' 57.01"W
WBFPO-04	203,743.80	3,632,190.54	29° 03' 20.14"N	90° 14' 01.34"W

**WEST BELLE FEEDER BEACH CONVEYANCE CORRIDOR ALIGNMENT**


PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
WBFCC-01	205,728.37	3,632,457.90	29° 03' 39.76"N	90° 13' 58.12"W
WBFCC-02	216,346.31	3,634,432.53	29° 05' 24.68"N	90° 13' 34.71"W

**TE-176-B BORROW AREA BOUNDARY**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
BAB-01	155,372.32	3,409,859.71	28° 55' 35.74" N	90° 55' 48.18" W
BAB-02	155,372.32	3,416,009.99	28° 55' 35.52" N	90° 54' 38.97" W
BAB-03	153,933.20	3,415,441.30	28° 55' 21.30" N	90° 54' 45.43" W
BAB-04	153,933.20	3,412,296.71	28° 55' 21.41" N	90° 55' 20.81" W
BAB-05	153,379.91	3,412,296.71	28° 55' 15.93" N	90° 55' 20.83" W
BAB-06	153,379.91	3,412,009.17	28° 55' 15.94" N	90° 55' 24.07" W
BAB-07	150,997.32	3,412,009.17	28° 54' 52.36" N	90° 55' 24.16" W
BAB-08	150,997.32	3,413,719.67	28° 54' 52.30" N	90° 55' 04.92" W
BAB-09	151,279.09	3,413,719.67	28° 54' 55.09" N	90° 55' 04.91" W
BAB-10	151,279.09	3,414,264.67	28° 54' 55.07" N	90° 54' 58.77" W
BAB-11	148,803.18	3,414,264.67	28° 54' 30.56" N	90° 54' 58.87" W
BAB-12	148,803.18	3,414,526.66	28° 54' 30.55"N	90° 54' 55.93"W
BAB-13	147,722.32	3,414,526.66	28° 54' 19.85"N	90° 54' 55.97"W
BAB-14	147,722.32	3,409,859.71	28° 54' 20.01"N	90° 55' 48.47"W

**TE-176-B BORROW AREA BASELINE ALIGNMENT**

PI NUMBER	NORTHING	EASTING	LATITUDE	LONGITUDE
BAB-BL-1	146,772.32	3,408,744.72	28° 54' 10.65" N	90° 56' 01.05" W
BAB-BL-2	155,772.32	3,408,744.72	28° 55' 39.74" N	90° 56' 00.70" W

BY	DESCRIPTION	DATE	 <b>COASTAL ENGINEERING CONSULTANTS, INC.</b> PH: (225) 523-7403 12111 N. RANGE AVE, STE. E DENHAM SPRINGS, LA 70726	LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY 150 TERRACE AVENUE BATON ROUGE, LA 70802	WEST BELLE HEADLAND REPAIR  STATE PROJECT NUMBER: TE-176	ALIGNMENT AND COORDINATE TABLES  DATE: MARCH 2023			
DRAWN BY: STEVE DARTEZ		DESIGNED BY: MICHAEL T. POFF, P.E. LICENSE NUMBER: 30048					APPROVED BY: SHANNON HAYNES, P.E.	FEDERAL PROJECT NUMBER: MULTIPLE	SHEET 23 OF 23



MEMORANDUM FOR RECORD: Chief, Regulatory Branch ATTN: Kenneth Blanke  
SUBJECT: MFR IN ACCORDANCE WITH EC 1165-2-220, APPENDIX G – CPRA  
**MVN-2015-00895-CQ, P20230206**

1. The Operations Manager for Bayou Lafourche project (ODS) has reviewed the application to restore East Timbalier Island and West Belle Headland (TE-176) through beach and dune fill placement utilizing offshore sand resources located in federal waters in Lafourche Parish, Louisiana.
2. It has been determined that the subject application is within the Bayou Lafourche navigation servitude but is outside of the navigation fairway limits. Therefore, this request has no impact to the usefulness of the project and will not be injurious to the public interest.

The scope of this analysis for Section 408 evaluation is limited to the federal limits of the Federal Navigation Channel.

3. ODS has no objections to the subject request provided the following navigation conditions are included as part of the Section 10 permit documents as per EC 1165-2-220, APPENDIX K (enclosed):

PROJECT- SPECIFIC CONDITIONS:

- a. The work was performed in accordance with the submitted application and drawings.
- b. Any damage to the channels and/or banks resulting from the Applicant's activities is repair at the Applicant's expense and to the satisfaction of the Corps of Engineers.
- c. The Corps of Engineers contract to repair the east and west jetties at Belle Pass is expected to be awarded in September 2023. The estimated time to construction completion is 9 months. The applicant's proposed conveyance channel lies along the Government's proposed flotation channel. The applicant's sediment pipeline crosses the western jetty. The applicant shall not interfere with the Government Contractor's repair operations. Any damage to the west jetty must be repaired by the permit applicant.
- d. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein.
- e. The applicant will, at his or her expense, install and maintain any safety light, signals, and signs prescribed by the United States Coast Guard, through regulations or otherwise, on authorized facilities or on equipment used in performing work under the authorization.
- f. If the proposed project involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, the applicant is advised to notify the

appropriate Captain of the Port so that a Notice to Mariners, if required, may be provided about one month before you plan to start work. Contact information for the local Captain of the Port's offices may be located at: <https://homeport.uscg.mil> under "port directory". In addition, a copy of your permit approval and drawings should be mailed to the Commander, Eight Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, or emailed to [D08-DG-District-DPW@uscg.mil](mailto:D08-DG-District-DPW@uscg.mil). Telephone inquiries can be directed to the Eighth Coast Guard District, Waterways Management at (504) 671-2330.

- g. The applicant will coordinate their schedule with the Corps of Engineers to limit overlapping with our Bayou Lafourche-Port Fourchon East and West Jetty Repair contract. The POC is Operations Manager Ray Newman, 504 862-2050.
  - h. The Corps of Engineers has the right to require the applicant remove equipment from the west jetty if critical maintenance is required for emergency repair.
4. The above Section 408 special conditions and standard conditions enclosed are enforceable by the USACE Navigation Manager for the Bayou Lafourche as per Appendix G, EC 1165-2-220. The point of contact for enforcing such Section 408 conditions in the Section 10 permit is Jane Brown, 504-862-1297, [Jane.L.Brown@usace.army.mil](mailto:Jane.L.Brown@usace.army.mil) or Ray Newman, 504-862-2050, [Raymond.C.Newman@usace.army.mil](mailto:Raymond.C.Newman@usace.army.mil).
5. If there are any questions regarding these conditions, please contact Jane Brown at 504-862-1297.

Raymond C. Newman  
Operations Manager  
Operations Division

Enclosure (Standard 408 conditions)



**U.S. Army Corps of Engineers**  
**New Orleans District**  
**Section 408**  
**EC-1165-2-220 Appendix K**  
**Standard Terms and Conditions**

LIMITS OF THE AUTHORIZATION

1. This permission only authorizes you, the requester, to undertake the activity described herein under the authority provided in Section 14 of the Rivers and Harbors Act of 1899, as amended (33 USC 408). This permission does not obviate the need to obtain other federal, state, or local authorizations required by law. This permission does not grant any property rights or exclusive privileges, and you must have appropriate real estate instruments in place prior to construction and/or installation.
2. The time limit for completing the work authorized end on 5 years from the date of the Regulatory permit if a Regulatory permit is required. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
3. Without prior written approval of the USACE, you must neither transfer nor assign this permission nor sublet the premises or any part thereof, nor grant any interest, privilege, or license whatsoever in connection with this permission. Failure to comply with this condition will constitute noncompliance for which the permission may be revoked immediately by USACE.
4. The requester understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration of the work herein authorized, or if, in the opinion of the Secretary of the Army or an authorized representative, said work will cause unreasonable conditions and/or obstruction of USACE project authorized design, the requester will be required upon due notice from the USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim can be made against the United States on account of any such removal or alteration.

INDEMNIFICATION AND HOLD HARMLESS

5. The United States will in no case be liable for:
  - a. Any damage or injury to the structures or work authorized by this permission that may be caused or result from future operations undertaken by the United States, and no claim or right to compensation will accrue from any damage; or
  - b. Damage claims associated with any future modification, suspension, or revocation of this permission.
6. The United States will not be responsible for damages or injuries which may arise from or be incident to the construction, maintenance, and use of the project requested by you, nor for damages to the property or injuries to your officers, agents, servants, or employees, or others who may be on your premises or project work areas of the federal project(s) rights-of-way. By accepting this permission, you hereby agree to fully defend, **indemnify**, and **hold harmless** the United States and USACE from any and all such claims, subject to any limitations in law.
7. Any damage to the water resources development project or other portions of any federal project(s) resulting from your activities must be repaired at your expense.

## REEVALUATION OF PERMISSION

8. The determination that the activity authorized by this permission would not impair the usefulness of the federal project and would not be injurious to the public interest was made in reliance on the information you provided.
9. This office, at its sole discretion, may reevaluate its decision to issue this permission at any time circumstances warrant, which may result in a determination that it is appropriate or necessary to modify or revoke this permission. Circumstances that could require a reevaluation include, but are not limited to, the following:
  - a. You fail to comply with the terms and conditions of this permission.
  - b. The information provided in support of your application for permission proves to have been inaccurate or incomplete; or
  - c. Significant new information surfaces which this office did not consider in reaching the original decision that the activity would not impair the usefulness of the water resources development project and would not be injurious to the public interest.

## CONDUCT OF WORK UNDER THIS PERMISSION

10. You are responsible for implementing any requirements for mitigation, reasonable and prudent alternatives, or other conditions or requirements imposed as a result of environmental compliance.
11. Work/usage allowed under this permission must proceed in a manner that avoids interference with inspection, operation, and maintenance of the federal project.
12. In the event of any deficiency in the design or construction of the requested activity, you are solely responsible for taking remedial action to correct the deficiency.
13. The right is reserved to the USACE to enter upon the premises at any time and for any purpose necessary or convenient in connection with government purpose, to make inspections, to operate and/or to make any other use of the lands as may be necessary in connection with government purposes, and you will have no claim for damages on account thereof against the United States or any officer, agent, or employee thereof.
14. You must provide copies of pertinent design, construction, and/or usage submittal/documents. USACE may request that survey and photographic documentation of the alteration work and the impacted project area be provided before, during, and after construction and/or installation.
15. You may be required to perform an inspection of the federal project with the USACE, prior to your use of the structure, to document existing conditions.
16. USACE shall not be responsible for the technical sufficiency of the alteration design nor for the construction and/or installation work.
17. You must submit a copy of "as-built" drawings within 60 days of completion of work showing the new work as it relates to identifiable features of the federal project.



## **STANDARD MANATEE CONDITIONS FOR IN-WATER ACTIVITIES**

During in-water work in areas that potentially support manatees, all personnel associated with the project shall be instructed and aware of the potential presence of manatees, manatee speed zones, and the need to avoid collisions with, and injury to, manatee. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. Additionally, personnel shall be instructed not to attempt to feed or otherwise interact with the animal, although passively taking pictures or video would be acceptable.

All on-site personnel are responsible for observing water-related activities for the presence of manatee(s). We recommend the following to minimize potential impacts to manatees in areas of their potential presence:

- All work, equipment, and vessel operation shall cease if a manatee is spotted within a 50-foot radius (buffer zone) of the active work area. Once the manatee has left the buffer zone on its own accord (manatees must not be herded or harassed into leaving), or after 30 minutes have passed without additional sightings of manatee(s) in the buffer zone, in-water work can resume under careful observation for manatee(s).
- If a manatee(s) is sighted in or near the project area, all vessels associated with the project shall operate at “no wake/idle” speeds within the construction area and at all times while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. Vessels shall follow routes of deep water whenever possible.
- If used, siltation or turbidity barriers shall be properly secured, made of material in which manatees cannot become entangled, and be monitored to avoid manatee entrapment or impeding their movement.
- Temporary signs concerning manatees shall be posted prior to and during all in-water project activities and removed upon completion. Each vessel involved in construction activities shall display at the vessel control station or in a prominent location, visible to all employees operating the vessel, a temporary sign at least 8½ " X 11" reading language similar to the following: “CAUTION BOATERS: MANATEE AREA/ IDLE SPEED IS REQUIRED IN CONSTRUCTION AREA AND WHERE THERE IS LESS THAN FOUR FOOT BOTTOM CLEARANCE WHEN MANATEE IS PRESENT”. A second temporary sign measuring 8½ " X 11" shall be posted at a location prominently visible to all personnel engaged in water-related activities and shall read language similar to the following: “CAUTION: MANATEE AREA/ EQUIPMENT MUST BE SHUTDOWN IMMEDIATELY IF A MANATEE COMES WITHIN 50 FEET OF OPERATION”.
- Collisions with, injury to, or sightings of manatees shall be immediately reported to the U.S. Fish and Wildlife Service’s, Louisiana Ecological Services Office (337/291-3100) and the Louisiana Department of Wildlife and Fisheries, Natural Heritage Program (225/765-2821). Please provide the nature of the call (i.e., report of an incident, manatee sighting, etc.); time of incident/sighting; and the approximate location, including the latitude and longitude coordinates, if possible.



## **VESSEL STRIKE AVOIDANCE MEASURES, NOAA FISHERIES SOUTHWEST REGIONAL OFFICE**

### **Background**

Vessel strikes can injure or kill species protected under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). NOAA Fisheries Southwest Regional Office (SERO) Protected Resources Division (PRD) recommends implementing the following identification and avoidance measures to reduce the risk of vessel strikes and disturbance from vessels to protected species under our jurisdiction.<sup>1</sup>

### **Protected Species Sightings**

All vessel operators and crews should be informed about the potential presence of species protected under the ESA and the MMPA and any critical habitat in a vessel transit area. All vessels should have personnel onboard responsible for observing for the presence of protected species. All personnel should be advised that there are civil and criminal penalties for harming, harassing, or killing listed species and all marine mammals. To determine which protected species and critical habitat may be found in the transit area, please review the relevant [marine mammal](#) and [ESA-listed species](#) at Find A Species (<https://www.fisheries.noaa.gov/find-species>) and any ESA Section 7 consultation documents if applicable.

### **Vessel Strike Avoidance**

The following measures should be taken when they are consistent with safe navigation to avoid causing injury or death of a protected species:

1. Operate at the minimum safe speed when transiting and maintain a vigilant watch for protected species to avoid striking them. Even with a vigilant watch, most marine protected species are extremely difficult to see from a boat or ship, and you cannot rely on detecting them visually and then taking evasive action. The most effective way to avoid vessel strikes is to travel at a slow, safe speed. Whenever possible, assign a designated individual to observe for protected species and limit vessel operation to only daylight hours.
2. Follow deep-water routes (e.g., marked channels) whenever possible.
3. Operate at “Idle/No Wake” speeds in the following circumstances:
  - a. while in any project construction areas
  - b. while in water depths where the draft of the vessel provides less than four feet of clearance from the bottom, or
  - c. in all depths after a protected species has been observed in and has recently departed the area.

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<sup>1</sup> Manatees are managed under the jurisdiction of the U.S. Fish and Wildlife Service.



4. When a protected species is sighted, attempt to maintain a distance of 150 feet or greater between the animal and the vessel. Reduce speed and avoid abrupt changes in direction until the animal(s) has left the area.
5. When dolphins are bow- or wake-riding, maintain course and speed as long as it is safe to do so or until the animal(s) leave the vicinity of the vessel.
6. If a whale is sighted in the vessel's path or within 300 feet from the vessel, reduce speed and shift the engine to neutral. Do not engage the engines until the animals are clear of the area. *Please see below for additional requirements for North Atlantic right whales.*
7. If a whale is sighted farther than 300 feet from the vessel, maintain a distance of 300 feet or greater between the whale and the vessel and reduce speed to 10 knots or less. *Please see below for additional requirements for North Atlantic right whales.*

### **Injured or Dead Protected Species Reporting**

Vessel crews should report sightings of any injured or dead protected species immediately regardless of whether the injury or death is caused by your vessel. Please see [How to Report a Stranded or Injured Marine Animal](https://www.fisheries.noaa.gov/report) (<https://www.fisheries.noaa.gov/report>) for the most up to date information for reporting injured or dead protected species.

If the injury or death is caused by your vessel, also report the interaction to NOAA Fisheries SERO PRD at [takereport.nmfsser@noaa.gov](mailto:takereport.nmfsser@noaa.gov). Please include the species involved, the circumstances of the interaction, the fate and disposition of the animal involved, photos (if available), and contact information for the person who can provide additional details if requested. Please include the project's Environmental Consultation Organizer (ECO) number and project title in the subject line of email reports if a consultation has been completed.

### **Reporting Violations**

To report any suspected ESA or MMPA violation, call the NOAA Fisheries Enforcement Hotline. This hotline is available 24 hours a day, 7 days week for anyone in the United States.

NOAA Fisheries Enforcement Hotline: (800) 853-1964

### **Additional Transit and Reporting Requirements for North Atlantic Right Whales**

1. Federal regulation prohibits approaching or remaining within 500 yards of a North Atlantic right whale (50 CFR 224.103 (c)). All whales sighted within North Atlantic right whale critical habitat should be assumed to be right whales. Please be aware and follow restrictions for all Seasonal Management Areas along the U.S. east coast. These areas have vessel speed restrictions to reduce vessel strikes risks to migrating or feeding whales. More information can be found at [Reducing Vessel Strikes to North Atlantic Right Whales](https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales) (<https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales>).
2. Ships greater than 300 gross tons entering the WHALESOUTH reporting area are required to report to a shore-based station. For more information on reporting procedures consult 33 CFR Part 169, the Coast Pilot, or at [Reducing Vessel Strikes to North Atlantic](https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales)

[Right Whales](https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales) (<https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales>).

3. From November through April, vessels approaching/departing Florida ports of Jacksonville and Fernandina Beach as well as Brunswick Harbor, Georgia are **STRONGLY RECOMMENDED** to use Two-Way Routes displayed on nautical charts. More information on [Compliance with the Right Whale Ship Strike Reduction Rule](#) can be found at ([https://media.fisheries.noaa.gov/2021-06/compliance\\_guide\\_for\\_right\\_whale\\_ship\\_strike\\_reduction.pdf](https://media.fisheries.noaa.gov/2021-06/compliance_guide_for_right_whale_ship_strike_reduction.pdf))
4. Mariners shall check with various communication media for general information regarding avoiding vessel strikes and specific information regarding North Atlantic right whale sighting locations. These include NOAA weather radio, U.S. Coast Guard Broadcast to Mariners, Local Notice to Mariners, and NAVTEX. Commercial mariners calling on United States ports should view the most recent version of the NOAA/USCG produced training CD entitled “A Prudent Mariner’s Guide to Right Whale Protection” (contact the NOAA Fisheries SERO, Protected Resources Division for more information regarding the CD).
5. Injured, dead, or entangled right whales should be immediately reported to the U.S. Coast Guard via VHF Channel 16 and the NOAA Fisheries Southeast Marine Mammal Stranding Hotline at (877) WHALE HELP (877-942-5343).

**For additional information, please contact NOAA Fisheries SERO PRD at:**

NOAA Fisheries Service

Southeast Regional Office

263 13<sup>th</sup> Avenue South

St. Petersburg, Florida 33701

Visit us on the web at [Protected Marine Life in the Southeast](#)

(<https://www.fisheries.noaa.gov/region/southeast#protected-marine-life>)

Revised: May 2021





## **PROTECTED SPECIES CONSTRUCTION CONDITIONS, NOAA FISHERIES SOUTHWEST REGIONAL OFFICE**

The action agency and any permittee shall comply with the following construction conditions for protected species under the jurisdiction of NOAA Fisheries Southwest Regional Office (SERO) Protected Resources Division (PRD):<sup>1</sup>

**Protected Species Sightings**—The action agency and any permittee shall ensure that all personnel associated with the project are instructed about the potential presence of species protected under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). All on-site project personnel are responsible for observing water-related activities for the presence of protected species. All personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing listed species and all marine mammals. To determine which protected species and critical habitat may be found in the transit area, please review the relevant [marine mammal](https://www.fisheries.noaa.gov/find-species) and [ESA-listed species](https://www.fisheries.noaa.gov/find-species) at Find A Species (<https://www.fisheries.noaa.gov/find-species>) and the consultation documents that have been completed for the project.

1. **Equipment**—Turbidity curtains, if used, shall be made of material in which protected species cannot become entangled and be regularly monitored to avoid protected species entrapment. All turbidity curtains and other in-water equipment shall be properly secured with materials that reduce the risk of protected species entanglement and entrapment.
  - a. In-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) shall be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, shall be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line shall be allowed in the water. All anchoring shall be in areas free from hardbottom and seagrass.
  - b. Turbidity curtains and other in-water equipment shall be placed in a manner that does not entrap protected species within the project area and minimizes the extent and duration of their exclusion from the project area.
  - c. Turbidity barriers shall be positioned in a way that minimizes the extent and duration of protected species exclusion from important habitat (e.g. critical habitat, hardbottom, seagrass) in the project area.
2. **Operations**—For construction work that is generally stationary (e.g., barge-mounted equipment dredging a berth or section of river, or shore-based equipment extending into the water):
  - a. Operations of moving equipment shall cease if a protected species is observed within 150 feet of operations.

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<sup>1</sup> Manatees are managed under the jurisdiction of the U.S. Fish and Wildlife Service.

- b. Activities shall not resume until the protected species has departed the project area of its own volition (e.g., species was observed departing or 20 minutes have passed since the animal was last seen in the area).
3. **Vessels**–For projects requiring vessels, the action agency, and any permittee shall ensure conditions in the [Vessel Strike Avoidance Measures](https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance) are implemented as part of the project/permit issuance (<https://www.fisheries.noaa.gov/southeast/consultations/regulations-policies-and-guidance>).
4. **Consultation Reporting Requirements**–Any interaction with a protected species shall be reported immediately to NOAA Fisheries SERO PRD and the local authorized stranding/rescue organization.

To report to NOAA Fisheries SERO PRD, send an email to [takereport.nmfsser@noaa.gov](mailto:takereport.nmfsser@noaa.gov). Please include the species involved, the circumstances of the interaction, the fate and disposition of the species involved, photos (if available), and contact information for the person who can provide additional details if requested. Please include the project's Environmental Consultation Organizer (ECO) number and project title in the subject line of email reports.

To report the interaction to the local stranding/rescue organization, please see the following website for the most up to date information for reporting sick, injured, or dead protected species:

**Reporting Violations**–To report an ESA or MMPA violation, call the NOAA Fisheries Enforcement Hotline. This hotline is available 24 hours a day, 7 days week for anyone in the United States.

NOAA Fisheries Enforcement Hotline      (800) 853-1964

5. **Additional Conditions**–Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the project consultation and must also be complied with.

**For additional information, please contact NOAA Fisheries SERO PRD at:**

NOAA Fisheries Service  
Southeast Regional Office  
263 13<sup>th</sup> Avenue South  
St. Petersburg, Florida 33701  
Tel: (727) 824-5312

Visit us on the web at [Protected Marine Life in the Southeast](https://www.fisheries.noaa.gov/region/southeast#protected-marine-life)  
(<https://www.fisheries.noaa.gov/region/southeast#protected-marine-life>)

Revised: May 2021





DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS DISTRICT  
7400 LEAKE AVENUE  
NEW ORLEANS, LA 70118-365

June 1, 2022

CEMVN  
Regulatory Division

SUBJECT: Programmatic General Permit

A PROGRAMMATIC GENERAL PERMIT  
FOR USE IN THE NEW ORLEANS DISTRICT  
WITHIN THE BOUNDARIES OF THE LOUISIANA COASTAL ZONE

Under authorization granted by applicable sections of Parts 320 through 332 of Title 33, Code of Federal Regulations, and delegated authority from the Commander, US Army Corps of Engineers, the District Commander at New Orleans has determined that it is in the public interest to extend the programmatic general permit (**PGP**) to authorize those activities that result in minimal adverse impacts within the boundaries of the Louisiana Coastal Zone, as specified by the terms and conditions of this PGP.

Specific Legislation requiring Department of the Army permits for work of this nature:

Section 10 of the Rivers and Harbors Act of 3 March 1899 (33 USC 403).

Section 404 of the Clean Water Act (33 USC 1344).

Waters of the United States are defined in Part 328 of Title 33, Code of Federal Regulations.

Special aquatic sites means wetlands, mudflats, vegetated shallows, coral reefs, sanctuaries and refuges, and riffle and pool complexes, as defined at 40 CFR 230.40 through 230.45.

This PGP does not authorize dams in navigable waters of the United States pursuant to Section 9 of the Rivers and Harbors Act of 3 March 1899 (33 USC 401) or transportation of dredged material for ocean disposal pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act (33 USC 1413).

GENERAL EXCLUSIONS

I. The following work will not be eligible under this PGP. Applications for this work will be processed in accordance with 33 CFR Part 325:

(1) Work outside the boundaries of the Louisiana Coastal Zone.

(2) Activities which are not covered under the Louisiana Coastal Resources Program as implemented by the Louisiana Department of Natural Resources, Office of Coastal Management (LDNR, OCM).

(3) No activity is authorized under this PGP which may adversely affect the continued existence, or which will destroy or adversely modify the critical habitat, of a threatened or endangered species, or a species proposed for such a designation, as identified under the Federal Endangered Species Act.

(4) Work or structures within 1,500 feet of any mainline flood control and hurricane damage risk reduction levees, structures, etc. constructed and/or maintained with federal funds without prior coordination with, and the concurrence from, CEMVN. Work that might alter US Army Corps of Engineers Civil Works projects will not qualify for this general permit until Permission pursuant to 33 USC 408 is granted by the District Commander.

(5) Structures or work in or that would impinge upon the value (habitat, hydrology, etc.) of any National Wildlife Refuge, National Forest, areas administered by the National Park Service of the US Department of the Interior, areas administered by the Louisiana Departments of Natural Resources or Wildlife and Fisheries, or other similar publicly held areas administered by federal, state, or local governmental authority unless special permission from these agencies is submitted during the review of, or with, the application for this general permit.

(6) Projects of national or individual concern. This exclusion is invoked on a case-by-case basis and represents, a special class of projects that receive particular attention in Corps decisions on whether to exercise the discretionary authority to require individual applications for work that otherwise meets all of this permit's conditions. While a precise definition is not possible, this category of work normally includes, but is not limited to, the following examples: projects that could cause an unreasonable interference with navigation; significant wetland fills; major power plants, shipping facilities and oil refineries; major commercial, residential or industrial developments; and work that could adversely affect habitats important to migratory birds, endangered or threatened species, estuarine-dependent fishes and shellfishes, or other species of high federal interest; or historic, cultural or archaeological sites listed in the National Register of Historic Places or sites listed in the National Registry of Natural Landmarks; or specific activities for which agencies request, and provide justification for, the requirement of an individual permit review.

(7) The PGP does not authorize dredging or the deposition of dredged and/or fill material for construction of oilfield access roads, drilling locations, pits, ring levees, and associated facilities in jurisdictional waters of the U.S. including wetlands, within the Atchafalaya Basin (as defined by USGS Hydrologic Unit Code: 08080101).

II. The following activities will likely be excluded for consideration under this PGP:

- a. Work within 1 mile of offshore navigation fairways and anchorages
- b. Commercial sand dredging in the Mississippi River

- c. Barge fleeting
- d. Mid-stream transfer facilities in the Mississippi River
- e. Channel ward extensions of existing facilities in federally maintained waterways
- f. Waterway closures (excluding plugs in abandoned canals)
- g. New marsh management
- h. New water control structures (except open culverts sized and set to maintain natural flow)
- i. Contaminated sediment excavation and/or disposal, including but not limited to such activities proposed in Harvey Canal and Calcasieu River
- j. Activities that would adversely impact environmentally sensitive areas (e.g., barrier islands, bird rookeries, coral reefs, seagrass beds, etc.)
- k. Activities adversely affecting Coastal Wetlands Planning, Protection and Restoration Act (PL 646) projects
- l. Projects which would impact the hydrology of adjacent wetlands such that the acreage criteria established in this permit are exceeded

## INCLUSIONS

### Category I Activities

What follows is a listing of activities which fall under Category I. The format of this general permit has been designed so that all similar activities have been grouped together where the purpose and the nature of that impact is similar. These activities are further limited, **unless otherwise noted**, by the acreage being impacted. CEMVN will verify qualification of specific activities for Category I authorization. The procedures for properly applying for and obtaining approval are found in the section of this document entitled 'Reporting/Acknowledgment Procedures'.

For the purposes of this permit, the acreage limitations established include the area flooded, drained, filled, or excavated, unless otherwise indicated. For activities to comply with Category I, they cannot cause the loss of greater than 0.5 of an acre of special aquatic sites.

1. Oil and gas activities including shell pads for drilling activities, exploration and production structures or extensions thereof, new channels or slips less than 0.5 of a mile in length in open water, and other related activities.
2. Survey activities not including 3D seismic activities.
3. Flowlines/pipelines 25,000 linear feet or less in length. Includes minor activities associated with pipeline abandonment.
4. Hazardous condition response activities. For purposes of this general permit, a hazardous condition is a situation which would result in an imminent safety and/or environmental hazard, loss of property, or immediate economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time period needed to



process the application. Applicants will submit sufficient information to document the hazardous condition and scope of work. This authorization is conditional. Within 30 days of the authorization, permittees will be required to submit an application for any work performed, or needed to be performed, to rectify the hazardous situation. The application will be processed in the appropriate manner. Alternatively, if the structures and/or fill installed to remediate the hazard are no longer necessary, the permittee must submit a site restoration plan for review and authorization by CEMVN. Restoration plans must be implemented within 30 days of receipt of CEMVN concurrence, unless otherwise specified (**acreage limits for the initial request do not apply**).

5. Dredging of existing waterbodies. Excavation cannot exceed 40,000 cubic yards of material.
6. Maintenance of existing structures and fill provided the structures or fill are not put to uses differing from those uses specified or contemplated for it. The activity must be the repair, rehabilitation or replacement of a currently serviceable structure or fill. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction. This does not include maintenance dredging or beach restoration.
7. Miscellaneous structures including mooring buoys and aids to navigation which are approved by and installed in accordance with the requirements of the U.S. Coast Guard.
8. Scientific measuring devices. Devices to measure and record scientific data such as staff gauges, tide gauges, water quality testing, etc.
9. Sealed forms or cells for pile supported structures.
10. Single piles, pile clusters.
11. Trenasse (pirogue ditch) maintenance. The maximum width of the trenasse shall not exceed 6 feet with a maximum depth of 3 feet.
12. Minor road crossings. Placement of fill for a road, including the placement of culverts provided bank full flow is maintained. Includes cattle crossings.
13. Bank stabilization. Activity may not exceed 200 feet in length and greater than 1 cubic yard per linear foot of fill placement below the plane of the ordinary highwater mark or mean high water line whichever applies.
14. Erosion Protection and Restoration along public highways which parallels or is adjacent to waterbody, up to one mile in length provided the work is performed by LA DOTD, parish or municipal highway department. No dredging is authorized (except that material which has sloughed from the embankment), bulkheads must be placed at the existing bank line, and work may include revetment and fill to repair and maintain existing bridge

sites.

15. Wharves, piers, and similar structures, structures in manmade canals, small boat slips, boat ramps, and associated fill and appurtenances. Structures may neither exceed 600 square feet in area, nor extend channel ward more than 10 percent of the waterway bank-to-bank distance, nor cause unreasonable interference to navigation. Boat slips/ramps up to 30 feet by 15 feet in area.
16. Artificial reefs constructed for the purpose of enhancing fishing opportunities.
17. Categorical Exclusions: Activities which are undertaken, funded, authorized, regulated, or financed, in whole or in part, by another federal agency or department where that agency or department has determined, pursuant to the Council on Environmental Quality Regulation for Implementing the Procedural Provisions of the National Environmental Policy Act, that the activity work or discharge is categorically excluded from environmental documentation because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment, and the Office of the Chief of Engineers has been furnished notice of the agency's or department's application for the categorical exclusion and concurs with that determination.
18. Work not specifically excluded which clears, grades, fills or excavates no greater than 0.5 of an acre of special aquatic sites, as deemed applicable by CEMVN.

### Category II Activities

What follows is a listing of all of the activities which fall under Category II. The format of this general permit has been designed so that all similar activities have been grouped together where the purpose and the nature of that impact is similar. These activities are further limited, **unless otherwise noted**, by the acreage being impacted. For activities to comply with Category II the impact is limited as follows:

Non-oil and gas related activities may result in the loss of no greater than 2.0 acres of tidal or 3.0 acres of non-tidal, special aquatic sites. Oil and gas related activities may result in the loss of no greater than 3.5 acres tidal or non-tidal special aquatic sites.

1. Oil and gas activities, including board roads, ring levees, exploration and production structures or extensions, new oil and gas canals and slips, parallel/perpendicular slips, etc.
2. Seismic surveys (**acreage limits do apply**).
3. Any flowlines, pipelines and utility lines up to 50,000 linear feet in length, and all aerial transmission lines. Must utilize the least damaging, practicable route and construction method, otherwise an individual permit will be required. Power transmission lines must

comply with regulations found at 33 CFR Part 322.5(i).

4. Cleanup of hazardous and toxic waste. For toxic and hazardous waste, the activity must be sponsored by a government agency with established legal or regulatory authority or be court ordered (**acreage limits do not apply**).
5. Oil spill cleanup. Activities will be subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR Part 300), and work must be done in accordance with the Spill Control and Countermeasure Plan required by 40 CFR part 112.3. Work must also comply with any State Contingency plan and the Regional Response Team must concur with the action (**acreage limits do not apply**).
6. Dredging of existing waterbodies. Excavation cannot exceed 100,000 cubic yards of material (volume limits do not apply to activities being conducted for the purpose of wetland restoration, and; up to 250,000 cubic yards allowed for removal of silt accumulations around existing docks, barge fleets and mooring areas in the Mississippi River with disposal beyond the minus 55-foot contour).
7. Outfall structures. Provided the effluent is in compliance with regulations issued under the National Pollutant Discharge Elimination System (Section 402 of the Clean Water Act).
8. Wharves, piers, and similar structures, structures in manmade canals, small boat slips, boat ramps, and associated fill and appurtenances. Structures may exceed 600 square feet in area, but may neither extend channel ward more than 20 percent of the waterway bank-to-bank distance, nor cause unreasonable interference to navigation. Boat slips/ramps up to 60 feet by 25 feet in area.
9. Erosion Protection and Restoration along public highways which parallels or is adjacent to waterbody, one mile in length and greater provided the work is performed by the LA DOTD, parish or municipal highway department. No dredging is authorized (except that material which has sloughed from the embankment), bulkheads must be placed at the existing bank line, and work may include revetment to repair and maintain existing bridge sites.
10. Bank stabilization. Activities that are greater than 200 linear feet in length, but do not exceed 500 linear feet, or where fill placement exceeds 1 cubic yard per running foot below the plane of the ordinary highwater mark or mean high water line whichever applies. District Engineer may grant a waiver to this limitation for proposed activities up to 1000 feet if determined to have minimal individual and cumulative adverse environmental effect.
11. Categorical Exclusions. Activities which are undertaken, funded, authorized, regulated, or financed, in whole or in part, by another federal agency or department where that agency or department has determined, pursuant to the Council on Environmental Quality



Regulation for Implementing the Procedural Provisions of the National Environmental Policy Act, that the activity work or discharge is categorically excluded from environmental documentation because it is included within a category of actions which neither individually or cumulatively have a significant effect on the human environment, and the Office of the Chief of Engineers has been furnished notice of the agency's or department's application for the categorical exclusion and concurs with that determination.

12. Small weirs, flumes and similar scientific measuring devices provided aquatic organism movement is minimally impeded.
13. Wetland restoration and creation activities. Activities specifically designed which have a beneficial effect on wetlands and/or aquatic resources, as determined applicable by CEMVN. Limits on the volume of dredged material and acreage of fill area do not apply. Mitigation banks/areas excluded.
14. Work not specifically excluded which clears, grades, fills or excavates no greater than 2.0 acres of tidal, or 3.0 acres of non-tidal, special aquatic sites, as determined applicable by CEMVN.

## REPORTING/ACKNOWLEDGMENT PROCEDURES

### A. COMPLETE APPLICATION

Requests for authorization under the PGP require the applicant to submit an application to the DNR, OCM; **an electronic version of the application can be found** at <http://www.dnr.la.gov>. The applicant's submittal must include a fully completed joint application form and project plans showing all work for which a permit is being requested. LDNR, OCM will electronically forward the application to CEMVN.

A "**complete**" application consists of the following:

- (1) A completely filled out joint on-line application form.
- (2) Vicinity Map - You may use an existing road map or U.S. Geological Survey topographic map. This map should include:
  - (i) Location of activity site (draw an arrow showing the exact location of the site on the map).
  - (ii) Latitude, longitude, and section, township and range, if known.
  - (iii) Names, descriptions and location of landmarks.

- (iv) Name of and distance to nearest town, community, or other identifying locations, including parish.
  - (v) Names or numbers of all roads in the vicinity of the site.
  - (vi) North arrow.
  - (vii) Appropriate dimensions (length x width x depth) or drawings to scale.
- (3) Plan view and cross section drawings of the proposed work which include:
- (a) Primary dimensions of the activity.
  - (b) Appropriate dimensions (length x width x depth) or drawings to scale.
  - (c) Volume (cubic yards), source, and type of dredged/fill material(s).
  - (d) Mean low and highwater marks.
- (4) A statement that the proposed project is consistent with the approved state coastal zone management program.

For the following application types to be considered "complete", additional information may be required:

- 1) New oil/gas well or reinjection well applications that would result in adverse impacts to special aquatic sites must have undergone an interagency Geologic Review Meeting. The least damaging practicable alternative identified therein may qualify for PGP authorization provided it complies with the criteria of the PGP.
- 2) Residential subdivisions or an individual single-family home within an existing subdivision must include a subdivision layout.
- 3) Activities on state operated wildlife management areas or federal refuges must include a written approval from the management area/refuge manager.
- 4) Projects where the permitted activity requires site restoration upon abandonment of the activity must include signed statements from the affected landowners that they have no objection to the required restoration and that they agree not to develop the restoration areas without prior approval from CEMVN.
- 5) Projects where a Corps jurisdictional determination is necessary in order to assess the potential impacts of the proposed work.

Proposals not considered "complete" will be placed "on-hold" until such time as **all** required information is obtained.

## B. PROCEDURE

### 1. Category I activities:

Within 10 working days of CEMVN receiving a complete application, it will determine whether the requirements of Category I are met and advise the applicant if the application is complete or if additional information is needed. CEMVN will finalize a permit decision upon completion of all requisite reviews.

### 2. Category II activities:

Within 10 working days of CEMVN receiving a complete application, it will notify the applicant that the project will be evaluated as a Standard Permit or forward a copy of the application and drawings to the National Marine Fisheries Service, US Environmental Protection Agency, and Louisiana Department of Wildlife and Fisheries for review. These agencies will have 5 working days to submit comments or request additional review time not to exceed 20 working days total. Concurrences may be forwarded to CEMVN via telephone or electronic mail, non-concurrences must be made in writing with an information copy sent to the applicant which includes a description of the impact(s) considered to be more than minimal\*. Lack of a response from these resource agencies within the appropriate time frame will be considered as no objection or no position by those agencies.

To the extent practicable and subject to completion of all requisite reviews within 15 days thereafter, CEMVN will either:

- a) issue an authorization letter (with any necessary special conditions), to the permittee, or;
- b) issue an authorization letter with modifications as recommended by the resource agencies or CEMVN, or;
- c) issue a notice to the applicant that the project will be evaluated as a Standard Permit.

To the extent practicable, LDNR, OCM will be notified at the same time the applicant is notified of CEMVN's determination in all of the above situations.



\* CEMVN's non-concurrence with the reviewing resource agencies objections and/or recommendations will be made in writing by the District Commander (or his designee) to the respective agency.

### C. MITIGATION

Appropriate compensatory mitigation will be required for unavoidable adverse impacts which remain after all appropriate and practicable minimization has been attained. The objective of compensatory mitigation is to replace wetland functions, values and services impacted by implementation of the permitted activity. Compensatory mitigation may include, but is not limited to, contracting with a mitigation bank to provide the credits to fully offset the impact; acquisition of credits from the Louisiana Department of Natural Resources' In-lieu Fee Program for the creation, restoration or enhancement of wetlands, or; the permittee's implementation of a wetland mitigation project determined to be acceptable by CEMVN and LDNR, OCM (i.e., permittee responsible mitigation).

CEMVN is obligated to ensure the appropriateness and adequacy of compensatory mitigation in accordance with the 2008 Final Rule on Compensatory Mitigation for Losses of Aquatic Resources, 33 CFR Part 332 and 40 CFR Part 230. CEMVN recognizes that although the State supports a goal of achieving no net loss of coastal wetlands as specified in the April 1997 Louisiana Coastal Wetlands Conservation Plan, differences in regulations and policies promulgated by the state and federal programs may not facilitate alignment of compensatory mitigation requirements in all instances. When CEMVN determines potentially affected resource values to be of sufficient concern so as to ensure the compliance of a prospective PGP with Corps mitigation policy, CEMVN will coordinate such findings with LDNR, OCM with the intent to implement compensatory mitigation requirements that are consistent with state and federal regulations. Should CEMVN and LDNR, OCM achieve concurrence on compensatory mitigation requirements, CEMVN will finalize the decision on the PGP accordingly. In the event concurrence on the compensatory mitigation requirement is not achieved, CEMVN will either stipulate its compensatory mitigation requirements in the PGP authorization or pursue evaluation of the activity in accordance with Standard Permit application procedures, whichever is appropriate. Although it is recognized that the complexity of compensatory mitigation coordination may increase process time, CEMVN will adhere to the procedural timeframe defined above to the extent practicable.

CEMVN also recognizes the interest of the State in locating compensatory mitigation for those actions located outside the Louisiana Coastal Zone, but within the Louisiana Coastal Wetlands Conservation Plan Area (LCPA), within the LCPA. CEMVN is committed to facilitate mitigation site selection within the LCPA to the extent that adherence to Corps national mitigation policy is not compromised.

CEMVN and LDNR, OCM will assess mitigation performance instituted pursuant to PGP implementation as needed, or when requested by either agency.

#### D. GENERAL CONDITIONS

1. Activities authorized under this general permit shall not be used for piecemeal work and shall be applied to single and complete projects. All components of a single and complete project shall be treated together as constituting one single and complete project. All planned phases of multi-phased projects shall be treated together as constituting one single and complete project. This general permit shall not be used for any activity that is part of an overall project for which an individual permit is required.
2. No activity is authorized under this general permit which may adversely affect significant cultural resources listed or eligible for listing in the National Register of Historic Places until the requirements for Section 106 of the National Historic Preservation Act are met. Upon discovery of the presence of previously unknown historic and/or prehistoric cultural resources, all work must cease and the permittee must notify the State Historic Preservation Office and the Corps of Engineers (CEMVN). We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places. The authorization is suspended until it is determined whether or not the activity will have an adverse effect on cultural resources. The authorization may be reactivated or modified through specific conditions if necessary, if it is determined that the activity will have no adverse effect on cultural resources. The Programmatic General Permit (PGP) authorization will be revoked if it is determined that cultural resources would be adversely affected, and an individual permit may be necessary.
3. No activity may substantially disrupt the movement of those species of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the activity's primary purpose is to block or impound water.
4. If the **authorized** activity involves the installation of aerial transmission lines, submerged cable, or submerged pipelines across navigable waters of the United States the following is applicable:

The National Ocean Service (NOS) has been notified of this authorization. You must notify NOS and this office in writing, at least two weeks before you begin work and upon completion of the activity authorized by this permit. Your notification of completion must include a drawing which certifies the location and configuration of the completed activity (a certified permit drawing may be used). Notification to NOS will be sent to the following address: National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Spring, Maryland 20910-3282.

5. For pipelines under an anchorage or a designated fairway in the Gulf of Mexico the following is applicable: The NOS has been notified of this authorization. You must notify NOS and this office in writing, at least two weeks before you begin work and upon completion of the activity authorized by this permit. Within 30 days of completion of the pipeline, 'as built' drawings certified by a professional engineer registered in Louisiana or by a registered surveyor shall be furnished to this office, the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, and to the Director, National Ocean Service, Office of Coast Survey, N/CS261, 1315 East West Highway, Silver Spring, Maryland 20910-3282. The plans must include the location, configuration and actual burial depth of the completed pipeline project.
6. All activities authorized herein shall, if they involve, during their construction or operation, any discharge of pollutants into waters of the United States, be at all times consistent with applicable water quality standards, effluent limitations and standards of performance, prohibitions, pretreatment standards and management practices established pursuant to the Clean Water Act (PL 92-500:86 Stat 816), or pursuant to applicable state and local laws.
7. Substantive changes to the Louisiana Coastal Resources Program may require immediate suspension and revocation of this permit in accordance with 33 CFR 325.7.
8. Irrespective of whether a project meets the other conditions of this permit, the Corps of Engineers retains discretionary authority to require an individual Department of the Army permit when circumstances of the proposal warrant this requirement.
9. Any individual authorization granted under this permit may be modified, suspended, or revoked in whole or in part if the Secretary of the Army or his authorized representative determines that there has been a violation of any of the terms or conditions of this permit or that such action would otherwise be in the public interest.
10. CEMVN may suspend, modify, or revoke this general permit if it is found in the public interest to do so.
11. Activities authorized under the PGP must comply with all other necessary federal, state, and/or local permits, licenses, or approvals. Failure to do so would result in a violation of the terms and conditions of the PGP.
12. The permittee shall allow the District Commander or his authorized representative(s) or designee(s) to make periodic inspections of the project site(s) at any time deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.



13. This general permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and it does not authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations nor does it obviate the requirements to obtain state or local assent required by law for the activity authorized herein.

14. In issuing authorizations under this permit, the federal government will rely upon information and data supplied by the applicant. If, subsequent to the issuance of an authorization, such information and data prove to be false, incomplete, or inaccurate, the authorization may be modified, suspended, or revoked, in whole or in part.

15. For activities resulting in sewage generation at the project site, such sewage shall be processed through a municipal sewage treatment system or, in areas where tie-in to a municipal system is not practical, the on-site sewerage system must be approved by the local parish sanitarian before construction

16. Any modification, suspension, or revocation of the PGP, or any individual authorization granted under this permit, will not be the basis for any claim for damages against the United States.

17. Additional conditions deemed necessary to protect the public interest may be added to the general permit by the District Commander at any time. If additional conditions are added, the public will be advised by public notice. Individual authorizations under the PGP may include special conditions deemed necessary to ensure minimal impacts and compliance with the PGP.

18. The PGP is subject to periodic formal review by CEMVN and the Louisiana Department of Natural Resources, Office of Coastal Management (LDNR, OCM) in coordination with the Environmental Protection Agency, the National Marine Fisheries Service, and the Louisiana Department of Wildlife and Fisheries. Comments from reviewing agencies will be considered in determination as to whether modifications to the general permit are needed. Should the District Commander decide not to incorporate a change proposed by a reviewing agency, after normal negotiations between the respective agencies, the District Commander will explain in writing to the reviewing agency the basis and rationale for his decision.

19. CEMVN retains discretion to review the PGP, its terms, conditions, and processing procedures, and decide whether to modify, reissue, or revoke the permit. If the PGP is not modified or reissued within 5 years of its effective date, it automatically expires and becomes null and void.

20. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

21. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.

22. You must install and maintain, at your expense, any safety lights, signs and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on your authorized facilities. Any inquiries concerning a U.S. Coast Guard Private Aids to Navigation marking determination may be directed to the Eighth Coast Guard District (dpw), Hale Boggs Federal Building, 500 Poydras St., Suite 1230, New Orleans, Louisiana 70130, at (504) 671-2330 or via email to: [D8oanPATON@uscg.mil](mailto:D8oanPATON@uscg.mil). For general information related to Private Aids to Navigation, you may visit the Eighth CG District web site at: <http://www.atlanticarea.uscg.mil/district-8/district-divisions/waterways/PATON>

23. If the authorized project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, you are advised to notify the Eighth Coast Guard District so that a Notice to Mariners, if required, may be prepared. Notification with a copy of this permit approval and drawings can be emailed to: [D8MarineInfo@uscg.mil](mailto:D8MarineInfo@uscg.mil), or mailed to the Commander (dpw), Eighth Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Suite 1230, New Orleans, Louisiana 70130. Telephone inquiries can be directed to the Eighth Coast Guard District, Waterways Management at (504) 671-2118.

24. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party as described in General Condition 25 below. Should you wish to cease to maintain the authorized activity, or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

25. If you sell the property associated with this permit, you must provide this office with a copy of the permit and a letter noting your agreement to transfer the permit to the new owner and the new owner's agreement to accept the permit and abide by all conditions of the permit. This letter must be signed by both parties.

26. Many local governing bodies have instituted laws and/or ordinances in order to regulate dredge and/or fill activities in floodplains to assure maintenance of floodwater storage capacity and avoid disruption of drainage patterns that may affect surrounding properties. If your project involves dredging and/or placement of fill, you must contact the local municipal and/or parish governing body regarding potential impacts to floodplains and compliance of your activities with local floodplain ordinances, regulations or permits. Project designs and any associated drainage plans associated with the undertaking shall comply with all local Parish Government, Drainage Authority, Flood Plain Administrator, and/or other applicable agency requirements. Should it be determined by any of these agencies that the project is creating unnatural inundation conditions on adjacent properties, the permittee will be required to remediate the situation, as directed by these agencies. Should there be any changes required in

the project design, the permittee shall coordinate with this office to obtain a permit amendment and/or review and decision on the plans, prior to commencement of those alterations.

27. In issuing authorizations under this permit, the federal government does not assume any liability for: damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest; damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit, and; design or construction deficiencies associated with the permitted work.

28. All work shall be done in accordance with the approved plans and confined to the permitted work area(s) represented within the attached drawings. If the project requires modifications to the authorized plans, the permittee shall contact this office to obtain a permit amendment and/or review and decision on the plans, prior to commencement of those alterations. The permittee is responsible for ensuring that any contractors and/or workers associated with project construction and implementation, are equally aware of the authorized plans, conditions, and/or restrictions associated with this approval.

29. The permittee shall properly install adequate erosion/siltation control measures around construction areas that require land-based earthwork (i.e., excavation and/or deposition of fill materials, land contouring, machinery rutting, fill maneuvering and redistribution, etc.), to aid in preventing project related sediments, debris and other pollutants from entering adjacent wetlands or waters. Acceptable measures include but are not limited to the proper use and positioning of temporary silt fences, straw bales, fiber/core logs, wooden barriers, seeding or sodding of exposed soils, or other approved EPA construction site storm-water runoff control and best management practices. Control techniques shall be installed prior to the commencement of earthwork activities and maintained until the project is complete and/or the subject areas are stabilized.

## E. AUTHORIZATIONS

No work may be performed under the PGP unless and until:

(1) CEMVN has reviewed the application and has issued a written authorization or, in exceptional cases, a verbal authorization.

(2) All required local, state and other federal permits, licenses, authorizations, and certifications are obtained. This includes, but is not limited to:

(a) A Coastal Use Permit, consistency determination, or finding of No Direct Significant Impact signed by the Secretary of the Louisiana Department of Natural Resources or his designee, and

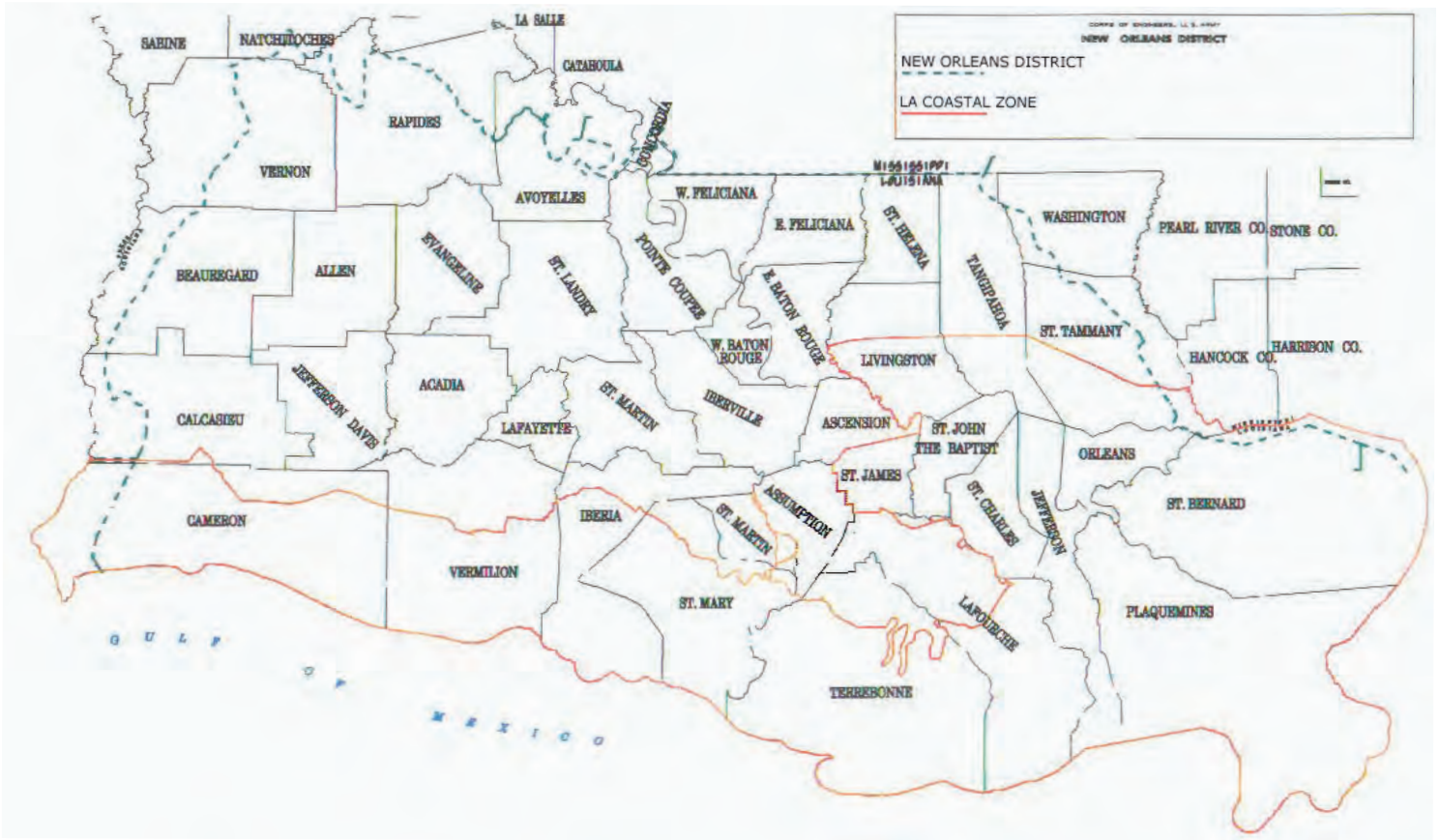


The PGP expires on *June 1, 2027*, unless otherwise modified or reissued.

Individual authorizations granted to applicants under this PGP are valid for 5 years from the date of the authorization letter.

BY THE AUTHORITY OF THE SECRETARY OF THE ARMY:

Martin S. Mayer  
Chief, Regulatory Division



**DEPARTMENT OF THE ARMY PERMIT**

Permittee \_\_\_\_\_

Permittee No. \_\_\_\_\_

Issuing Office \_\_\_\_\_

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description:

Project Location:

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on \_\_\_\_\_. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.



4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.
5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.
6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:
  - (  ) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).
  - (  ) Section 404 of the Clean Water Act (33 U.S.C. 1344).
  - (  ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413)
2. Limits of the authorization.
  - a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.
  - b. This permit does not grant any property rights or exclusive privileges.
  - c. This permit does not authorize any injury to the property or rights of others.
  - d. This permit does not authorize interference with any existing or proposed Federal project.
3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:
  - a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
  - b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or behalf of the United States in the public interest.
  - c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
  - d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

\_\_\_\_\_  
(PERMITTEE)

\_\_\_\_\_  
(DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

\_\_\_\_\_  
(DISTRICT ENGINEER)

\_\_\_\_\_  
(DATE)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(TRANSFEREE)

\_\_\_\_\_  
(DATE)

***MISCELLANEOUS REGULATORY CORRESPONDENCE***



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NOAA Fisheries Service  
Southeast Regional Office  
Protected Resources Division  
Attn: Mr. David Bernhart  
263 13<sup>th</sup> Avenue South  
St. Petersburg, Florida 33701

Subject: West Belle Headland Repair Project (TE-176)

Dear Mr. Bernhart:

The Bureau of Ocean Energy Management (BOEM) is submitting a notification to the NOAA Fisheries Service regarding Endangered Species Act coverage related to the Marine Minerals Program in the Gulf of Mexico. BOEM is anticipating a request to lease Outer Continental Shelf (OCS) sand resources to the State of Louisiana for a headland restoration project along the south-central Louisiana coast. The project is funded under the Federal Emergency Management Act to restore the geomorphic and ecologic form and function of the West Belle Headland, that was previously constructed under the TE-118 project (OCS-G 36705) and eroded by Hurricane Zeta. The restoration will be accomplished through beach, dune, and intertidal marsh habitat creation and reinforcing the shoreline through fill placement using offshore sand sources.

BOEM has authority over the sand extraction portion of the project on the OCS. It is proposed that hopper dredges will excavate approximately four million cubic yards of sand from the Ship Shoal sand body in South Pelto Area Block 12 and Ship Shoal Block Area 88. BOEM has an existing Biological Opinion (BiOp) (Consultation No. F/SER/2003/01247; issued 09/19/05) that covers hopper dredging associated with sand mining at Ship Shoal for restoration projects along the Louisiana coast. This opinion states that “the MMS [now BOEM] anticipates a total of 15 projects which will consist of dredging a total of approximately 54 million cubic yards, the utilization of 24 blocks in the Ship Shoal Area, with an estimated projected dredging time of 60 months.” The proposed project activities are within the scope of proposed activities encompassed in the 09/19/05 BiOp.

The West Belle Headland Repair Project (TE-176) would be the fifth project leased under the 09/19/05 BiOp. This project encompasses portions of activities previously proposed in the East Timbalier Barrier Island Restoration project (TE-118) that was built under the Terrebonne Basin Barrier and Beach Restoration Project (TE-143). In a letter dated May 22, 2014, during the construction of the first project executed under the BiOp (Caminada Headland Shoreline Restoration Project Increment 1), BOEM notified NMFS of the high abundance of sea turtles being relocated (per the 2005 NMFS Biological Opinion Terms and Conditions) from the Ship Shoal dredge area. BOEM concluded and NMFS, in electronic correspondence dated June 5, 2014, concurred that conducting relocation trawling would not violate Sections 7(a) (2) and 7(d) of the Endangered Species Act nor was it likely to jeopardize the continued existence of the listed species

In accordance with prior NMFS guidance, BOEM will continue dredging and sea turtle relocation trawling activities associated with this project while operating under reinitiation. Continued sea turtle relocation trawling activities will not result in jeopardy of the species or destroy or adversely modify designated critical habitat. BOEM would not make any irreversible or irretrievable commitment of resources that has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures.

BOEM has concluded that the sand dredging activities at Ship Shoal to construct the West Belle Headland Repair project (TE-176) are covered under the existing BiOp issued on September 19, 2005 and will not violate Section 7(a)(2) and 7(d) of the Endangered Species Act. The effects of BOEM's proposed authorization of hopper dredging activities are not reasonably expected to jeopardize the continued existence of listed species or critical habitat.

Please let us know if we can provide any additional information you may find necessary. If you have any questions or wish to discuss specific issues, please contact Ms. Jessica Mallindine at (504) 736-7516, [jessica.mallindine@boem.gov](mailto:jessica.mallindine@boem.gov).

Sincerely,

**AGATHA-  
MARIE KALLER**  
Arie Kaller  
Regional Supervisor  
Office of Environment

Digitally signed by AGATHA-MARIE KALLER  
DN: c=US, o=U.S. Government,  
ou=Department of the Interior, ou=Bureau  
of Ocean Energy Management,  
cn=AGATHA-MARIE KALLER,  
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3  
Date: 2023.08.31 07:35:38 -05'00'



## Sealy, Michael

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**From:** Blanke, Kenneth G Jr CIV USARMY CEMVN (USA) <Kenneth.G.Blanke@usace.army.mil>  
**Sent:** Monday, September 25, 2023 5:21 PM  
**To:** Mary.Wunderlich@noaa.gov  
**Subject:** MVN-2015-00895-CQ CPRA- Proposed West Belle Headland Repair Project (TE-176) USACE Determination of No Effect under ESA Coordination  
**Attachments:** MVN-2015-00895-CQ Mod 062023.pdf; Sea Turtle Critical Habitat Framework.pdf; Protected\_Species\_Construction\_Conditions\_SERO.pdf; SERO Vessel Strike Avoidance Measures.pdf; Manta Ray Framework.pdf

Dear Ms. Wunderlich:

The US Army Corps of Engineers New Orleans District Regulatory Division (CEMVN) is submitting a notification to the NOAA Fisheries Service regarding Endangered Species Act coverage related to a proposed headland restoration project along the south-central Louisiana coast for a Regulatory permit request from the Louisiana Coastal Protection and Restoration Authority (CPRA). The project is funded under the Federal Emergency Management Act to restore the geomorphic and ecologic form and function of the West Belle Headland, that was previously permitted and constructed under the TE-118 project (MVN-2015-00895-CQ) and was subsequently eroded by Hurricane Zeta in 2020.

The current repair and restoration project will be accomplished through beach, dune, and intertidal marsh habitat creation and through shoreline reinforcement via fill placement utilizing offshore sand sources. The Bureau of Ocean Energy Management has previously coordinated with your office for the scope of their agency's authority over the sand extraction portion of the project on the OCS. CEMVN's authority is specific to the areas located in state waters for this project (pump out areas which include conveyance sediment pipelines and their corridors, feeder beach areas, nourishment beach areas along the headland, and proposed restoration and repair areas of the previously permitted/constructed headland).

All pump out areas, conveyance corridors, and sediment deposition areas for the headland repairs and restoration will be temporary in nature and would not create an obstruction that the species would not be able to move around these features to access foraging areas. Turbidity would also be temporary in nature and CPRA has provided BMPs and containment berms to be placed in the fill placement areas to keep sediment within the restoration/repair project target areas.

Based on additional information provided by CPRA in the description of activity, and through the adherence and compliance with the Protected Species Construction Conditions (PSCC) and the Vessel Strike Avoidance Measures (VSAM), CEMVN has determined that the project would have no effect on the giant manta ray or sea turtles. The permit will include the PSCC, VSAM, and a special condition referencing these attachments and permittee compliance.

CEMVN is providing this no effect determination and information to NMFS as a courtesy request from FEMA, the designated lead on this project. CEMVN understands that NOAA Fisheries Service is not required to respond to a no effect determination under ESA coordination procedures.

Please feel free to contact me if you require any additional information from CEMVN or the applicant.

Sincerely,

Kenny Blanke

Environmental Resources Specialist  
Central Evaluation Branch  
Regulatory Division  
504-862-1217 phone  
[kenneth.g.blanke@usace.army.mil](mailto:kenneth.g.blanke@usace.army.mil)

## Sealy, Michael

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**From:** Craig Gothreaux - NOAA Federal <craig.gothreaux@noaa.gov>  
**Sent:** Monday, April 24, 2023 10:58 AM  
**To:** Blanke, Kenneth G Jr CIV USARMY CEMVN (USA)  
**Cc:** \_NMFS ser HCDconsultations  
**Subject:** [URL Verdict: Neutral][Non-DoD Source] Re: MVN-2015-00895-CQ CPRA- TE-176 West Belle Headland Repair Project PGP 2 Coordination  
**Attachments:** MVN-2015-00895-CQ PGP2 CPRA TE-176 W Belle Headland Repair Project.pdf  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Kenny,

The NMFS has reviewed the permit application below and does not object to the issuance of permits to complete this project.

Thank you for your coordination,  
Craig

On Mon, Apr 17, 2023 at 12:42 PM Blanke, Kenneth G Jr CIV USARMY CEMVN (USA)  
<[Kenneth.G.Blanke@usace.army.mil](mailto:Kenneth.G.Blanke@usace.army.mil)> wrote:

Good afternoon:

CPRA is proposing to repair portions of previously permitted West Belle Headland Project (TE-118 and TE-52) utilizing borrow from OCS areas associated with previously permitted borrow areas (TE-118, TE-100). Project involves utilization of OCS Borrow Areas which fall under the Bureau of Ocean Energy Management (BOEM) sand resource lease (please see below for additional information and OCS Scope under BOEM authority). Project areas were damaged as a result of Hurricane Zeta post construction. Repairs are proposed under this current application. Our office is tentatively processing this application as a PGP Category 2.

Based on IPaC, the project may affect but not likely to adversely affect the West Indian manatee (through inclusion of manatee conditions), red knot, piping plover, and black rail. Amy- please note that I will be following up with a separate email to USFWS including previous biological assessments and the Service's BO for the previously authorized projects. Please review and advise if a new consultation is required to handle the repair project or if additional critical habitat or species need to be included or evaluated as a result of the current proposal. I can also provide any additional information that CPRA may have already included in their mitigative measures regarding plover, rail, and knot, as well as the habitat.



Craig- previous EFH assessments were provided for the original permit issued for TE-118 and TE-52. I can provide if you would like to review or if you have any questions regarding this proposed repair project.

Compensatory mitigation is not anticipated as the proposed project would create approximately 1,641.1 acres of beach, dune, and marsh, which would provide an overall benefit to the project area and outweigh project related impacts to approximately +/- 490 acres of wetland and supratidal habitats, and +/- 556 acres of waterbottoms associated with borrow and fill placement areas. FEMA is serving as the lead agency, however the Department of the Army permit must be evaluated under the permit request for impacts to Section 10 and Section 404. Please advise if you would like to discuss further.

BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM): A lease for use of Federal sand resources from the Outer Continental Shelf Lease Area Blocks South Pelto 12 and 13 as well as Ship Shoal 88 is required from BOEM. If you have any questions concerning the lease application, you may contact Jennifer Steele at [jennifer.steele@boem.gov](mailto:jennifer.steele@boem.gov). Please furnish BOEM a copy of all public notice comments. Copies can be emailed to [mmpgomr@boem.gov](mailto:mmpgomr@boem.gov).

Note: The Bureau of Ocean Energy Management (BOEM) has sole regulatory authority over the use of Outer Continental Shelf (OCS) sand resources and conveyance on the OCS under the OCS Lands Act. The U.S. Army Corps of Engineers (Corps) requires a permit for all other aspects of the project, including dredging of any state water bottom

areas, as well as conveyance and placement of sand resources. BOEM and the Corps are working collaboratively to ensure effective implementation of the required National Environment Policy Act (NEPA) process, the required Endangered Species Act (ESA) Section 7 consultations, the Magnuson-Stevens Fishery and Conservation Management Act Essential Fish Habitat consultation (Section 305), the National Historic Preservation Act Section 106 process, and the Coastal Zone Management Act Section 307 consistency determination.

Please provide a response by COB on 24 April 2023. Please contact me if you would like to discuss or if you have any questions.

Sincerely,

Kenny Blanke

Environmental Resources Specialist

Central Evaluation Branch

Regulatory Division

504-862-1217 phone

[kenneth.g.blanke@usace.army.mil](mailto:kenneth.g.blanke@usace.army.mil)

--

**Craig Gothreaux**

*Fishery Biologist*

**Southeast Region, Habitat Conservation Division**

**NOAA Fisheries**

5757 Corporate Blvd., Suite 375

Baton Rouge, LA 70808

Office: (225) 380-0078

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[EXTERNAL] MVN-2015-00895-CQ CPRA- Effects determination (BA) of proposed repair of West Belle Pass Headland restoration project on piping plover, red knot, and their critical habitats in Lafourche Parish

Blanke, Kenneth G Jr CIV USARMY CEMVN (USA) <Kenneth.G.Blanke@usace.army.mil>

Fri 7/7/2023 12:24 PM

To:Trahan, Amy <amy\_trahan@fws.gov>

 2 attachments (8 MB)

USFWS Environmental Benefits\_13June2023 (002).docx; MVN-2015-00895-CQ PGP2 Mod Updated 06202023.pdf;

**This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.**

Good afternoon Amy:

The Coastal Protection and Restoration Authority of Louisiana (CPRA) is requesting a Section 10/404 permit from the US Army Corps of Engineers (CEMVN) to restore West Belle Pass Headland by using approximately 2,600,000 cubic yards of offshore dredged material to replenish 17,500 linear feet of barrier headland habitat. This project will repair damage to a restoration project previously permitted on the West Belle Pass Headland (MVN-2015-0895-CQ) that was impacted in August 2020 by Hurricane Zeta during construction activities. The project is seeking funding through the Federal Emergency Management Agency (FEMA). The USACE requests concurrence from the U.S. Fish and Wildlife Service (Service) with a determination that the proposed action is not likely to adversely affect federally listed threatened and endangered species, or their critical habitats, in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 United States Code 1531 et seq.).

Based on IPaC and from previous discussions between CEMVN and US Fish and Wildlife Service, Ecological Services Office (FWS) on past coordination associated with this project site, the proposed activity may affect the piping plover (*Charadrius melodus*) and its critical habitat, as well as the red knot (*Calidris canutus rufus*) and its proposed critical habitat. Also, CEMVN has determined through the inclusion of the Standard Manatee Conditions for In-Water Activities as conditions of the ultimately issued permit, that the project is not likely to adversely affect (NLAA) the West Indian manatee.

The piping plover is a small shorebird that winters in Louisiana from July to March or April. Piping plovers forage on intertidal beaches, mudflats, sand flats, algal flats, and wash over passes with no or sparse vegetation. Their diet consists of polychaete worms, crustaceans, insects, and mollusks that they peck from the top or just beneath the sand. Piping plovers also nest in wrack deposited on beaches or in sparsely vegetated areas that have debris, detritus, or other micro-topographic relief to provide protection from the wind and cold. Major threats to these species are loss and degradation of habitat due to development, human disturbance, and predation.

Critical habitat within the project area would include intertidal beaches and sand flats for foraging, as well as sparsely vegetated sand flats above mean high tide for roosting.



The red knot is a medium-sized shorebird that can be found in Louisiana from August through mid-May during spring and fall migrations as well as wintering months. During this time, the red knots forage along sandy beaches, tidal mudflats, salt marshes, and peat banks. Major threats to this species along the Gulf of Mexico include the loss and degradation of habitat and reduced prey availability due to erosion, shoreline stabilization, and development.

The proposed activity will result in the placement of fill material in the intertidal zone that is used by these species during foraging activities. The placement of fill material along this area would impact benthic fauna communities that include essential prey items that both the piping plover and red knots utilize during their utilization of Louisiana shoreline habitat.

Please see attached letter which integrated CPRA's additional information and specifics about the project and project related impacts and benefits with regard to the subject listed species. Please review and provide any questions or comments.

Additional information provided to CEMVN by CPRA has been reviewed regarding potential mitigating measures to avoid adverse impacts to the piping plover and their critical habitat and the red knot and its proposed critical habitat. This office has determined that the proposed activity is not likely to adversely affect (NLAA) the piping plover, its critical habitat, or the red knot and its proposed critical habitat.

If you need additional information from CPRA, please feel free to contact me and I will get your request to their attention.

Sincerely,

Kenny Blanke

Environmental Resources Specialist  
Central Evaluation Branch  
Regulatory Division  
504-862-1217 phone  
[kenneth.g.blanke@usace.army.mil](mailto:kenneth.g.blanke@usace.army.mil)

The Fish and Wildlife Service (Service) has reviewed the information provided and offers the following comments in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884 as amended, 16 U.S.C. 1531 et seq.). Based on the justification given by the U.S. Army Corps of Engineers (USACE), we concur with the USACE's determination that the proposed action is not likely to adversely affect the federally listed and/or proposed species and their critical habitats as described herein.

We recommend that the USACE contact the Service for additional consultation if: 1) the scope or location of the proposed project is changed significantly; 2) new information reveals that the action may affect listed species or designated critical habitat; 3) the action is modified in a manner that causes effects to listed species or designated critical habitat; or 4) a new species is listed, or critical habitat designated. Additional consultation because of any of the above conditions or for changes not covered in this consultation should occur before changes are made and finalized.

Brigette D. Firmin  
Field Supervisor  
Louisiana Ecological Services Office

DATE

The Coastal Protection and Restoration Authority of Louisiana (CPRA) is requesting a Section 10/404 permit from the US Army Corps of Engineers (USACE) to restore West Belle Pass Headland by using approximately 2,600,000 cubic yards of offshore dredged material to replenish 17,500 linear feet of barrier headland habitat. This project will repair damage to a restoration project previously permitted on the West Belle Pass Headland (MVN-2015-0895-CQ) that was impacted in August 2020 by Hurricane Zeta during construction activities. The project is seeking funding through the Federal Emergency Management Agency (FEMA). The USACE requests concurrence from the U.S. Fish and Wildlife Service (Service) with a determination that the proposed action is not likely to adversely affect federally listed threatened and endangered species, or their critical habitats, in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 United States Code 1531 et seq.).

### **Environmental Benefits**

In Louisiana, barrier island and barrier headland erosion is attributed to increasing tidal prism, insufficient volumes of sediment supplied by littoral currents, land subsidence, and sea-level rise (Boesch 1982). Although increases in the tidal prism may be primarily responsible for enlargement of tidal passes, the insufficient supply of sand available to rebuild eroded areas has also contributed to increased tidal pass widths and shoreline retreat (Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority 1999). Where insufficient supplies of sand prevail, measures to maximize sand retention, such as sand fencing and vegetative planting, are needed to effectively rebuild and maintain these eroded areas. Accordingly, the USACE supports coastal restoration projects that provide the most sustainable and durable options for Service trust fish and wildlife resources and their habitats (e.g., migratory, wintering, and resident shorebirds and waterbirds, coastal beaches, dune, and saline marsh).

As proposed, the project would provide a benefit to Service trust resources and their habitats, because the project's overarching goals are to maintain the West Belle Pass Headland (WBPH) as a component of the Bayou Lafourche barrier system. The WBPH is the westernmost end of the Caminada barrier headland, which is the principal feature of the Bayou Lafourche barrier system; it contains designated critical habitat for the piping plover and red knot. That system includes flanking islands and the retreating headland of Bayou Lafourche along the southwestern portion of the Barataria Basin. The barrier islands and headlands maintain the integrity of the Gulf shoreline and help to protect interior coastal wetlands from further deterioration. The WBPH and larger Caminada Headland also protect Port Fourchon, which services over 90 percent of the Gulf of Mexico's deepwater oil production (<http://portfourchon.com/seaport/economic-development>).

In similar past projects, sediment placed resulted in the creation of sand spits and/or mud flats that provide habitat for piping plovers and red knots. Past projects include those on Trinity-East Island (TE-0020 and TE-0024, both completed in 1999; and TE-0143, completed in 2022), Timbalier Island (TE-0040 completed immediately prior to Hurricanes Katrina and Rita in December 2004; and TE-0143, completed in 2022), Whiskey Island through the NRDA Caillou Lake Headlands Project (TE-0100 completed in 2018),

and Caminada Headland (BA-0045 completed in 2015; BA-0143 completed in 2016; and BA-0171 completed in 2023).

Although West Belle Pass post-hurricane Zeta provides foraging habitat for red knots and piping plovers, those habitats continue to change and erode as they are shaped by natural coastal processes, lack of a continuous sediment supply, and subsidence. CPRA estimates that the remaining habitat provides limited roosting habitat at high tide, and birds are often forced to move to nearby areas at some point during the tidal cycle; therefore CPRA proposes to restore approximately 2.61 million cubic yards of sediment to the West Belle Pass Headland that was lost due to Hurricane Zeta.

Since the work on WBPH will not take place on the entirety of the headland, much of the existing habitat will be available during the period of disturbance for red knots and piping plovers, as well as providing nesting, migratory, and wintering habitat for shorebirds and waterbirds. Further, an abundance of nearby foraging and roosting habitat for knots, plovers, and other shorebirds can be found on Whiskey, Timbalier, and Trinity-East Islands to the west and Caminada Headland to the east.

### **Anticipated Project Effects**

Construction of project features of the proposed project will involve surveying, placing dredged material on the beach, grading the sand fill, installing sand fences, and planting native dune vegetation. Lessons learned from previous restoration projects constructed in the same manner include the following:

- Due to lack of foraging habitat and a freshwater source, manatees have rarely been sighted during the construction of barrier island or headland restoration projects. However, implementation of the Standard Manatee Conditions for In-water Activities will avoid and/or minimize potential impacts to any manatees that may enter the project area during the warmer months.
- Preliminary data indicate that red knots and piping plovers tend to be widely distributed throughout suitable habitats during spring and fall migrations but tend to be concentrated in certain back barrier flats or spit areas during winter months.
- Monitoring of benthic aquatic organisms before, during, and after fill activities on Caminada Headland indicated that impacts to the benthic community are relatively temporary. The draft report (BTNEP, in press) indicates that densities (number of organisms per square meter) decrease to the lowest levels after sediment deposition ends and elevate to pre-project levels over a period of two to three years. Final densities post-fill do appear higher than initial densities, but diversity is lowered.
- The effects of discharge, pumping activity and bird abatement on the distribution of birds appear to be small. Preliminary analyses of data from Caminada Headlands indicate no evidence of Wilson's Plover or Red Knot avoiding pumping areas compared to an unfilled control. However, the distance of the Piping Plover closest to the pumping site was further than the distance to the control. This significant effect did not exist for the average distance of the closest three Piping



Plovers to the discharge and control sites. There was no evidence that bird abatement actions or the status of sediment pumping activities influenced distance from pumping discharge sites and controls, although small sample sizes were an issue with these comparisons.

- Natural wrack is important for encouraging birds to return to newly constructed areas.
- Natural coastal processes may rework the newly placed material on the Gulf beaches prior to the next migration season.
- Restoration projects involving material placement on barrier islands in Louisiana tend to replenish and/or create sand spits and sand/mud flats on the ends of the islands as natural coastal processes shape the placed material.
- Primary retention dikes need to be gapped or opened as soon as dewatering is complete in order for tidal influence to return and to encourage growth of vegetation on the bayside marsh platform.

CPRA anticipates that the proposed project would require an approximately 12-month construction window, which would affect at least one but possibly two wintering seasons and spring and fall migrations, depending on when construction begins and any unforeseen delays (e.g., weather conditions, equipment issues, etc.). Anticipated project effects would include temporary disturbance of birds and temporary smothering of benthic prey species. Construction of the proposed project would occur in a linear fashion across portions of West Belle Pass Headland, so it would not prevent birds from utilizing the existing and newly created available habitats not affected by construction activities.

Based on the lessons learned from past projects, we would expect birds to utilize any available, undisturbed habitats during construction. While the diversity of the benthic community may not recover within 12 months post-construction, we expect that the density of benthic organisms would recover within two to three years post-construction.

### **Effects Analysis**

Due to lack of foraging habitat and a freshwater source, manatees have rarely been sighted during the construction of barrier island or headland restoration projects. However, the permit would be conditioned to include implementation of the Standard Manatee Conditions for In-water Activities to avoid and/or minimize potential impacts to any manatees that may enter the project area during the warmer months. Accordingly, the USACE requests the Service's concurrence with the USACE's determination that issuance of the subject permit action is not likely to adversely affect the West Indian manatee.

Our records indicate that Red Knots and Piping Plovers are regularly found on the spits on the remaining sand spits at WBPH. However, these sand flats are subject to significant movement of sediment and erosion. Because Red Knots and Piping Plovers would not be permanently excluded from the project area and would not be displaced beyond their normal daily movement patterns for foraging and roosting, and due to the abundance of suitable habitat in nearby areas, we anticipate that such

disturbance would be temporary, discountable and insignificant. Accordingly, the USACE requests the Service's concurrence with the USACE's determination that issuance of the subject permit action is not likely to adversely affect the Red Knot or the Piping Plover.

Based on data that CPRA provided for the Caminada headland Beach and Dune Restoration Project, Increments I and II (CPRA Projects BA-45 and BA-143) and the Caillou Lake Headlands Project (TE-100), the USACE recommended that only post-construction surveys of the TE-0118 West Belle Headland project were necessary to confirm that birds are returning to use the newly created habitats. Those surveys were completed in May 2023.

On July 10, 2001, the Service designated critical habitat for wintering piping plover (Federal Register, Volume 66, No. 132). At the time of designation, approximately 24,964 acres of wintering habitat were in Louisiana. Unit LA-5—which includes WBPH—consisted of approximately 5,735 acres of that total. Since that time, CPRA has restored thousands of acres of barrier island and barrier headland habitat (CPRA 2022). Habitat changes are monitored through the Barrier Island Comprehensive Monitoring (BICM) program, which provides a habitat reporting tool online: [https://cims.coastal.la.gov/bicm\\_hrt](https://cims.coastal.la.gov/bicm_hrt)

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and 50 Code of Federal Regulation (CFR) §424.12, critical habitat consists of the physical or biological features (PBFs) essential to the conservation of the species. For wintering piping plovers, PBFs are those habitat components that support foraging, roosting, and sheltering and the physical features necessary to maintain the natural processes that support these habitat components. These areas typically include coastal areas that support intertidal beaches and flats and associated dune systems and flats above annual high tide (Service 2001). The primary constituent elements (PCEs) of critical habitat are those PBFs that provide for a species' life-history processes and are essential to the conservation of the species. PCEs of wintering piping plover critical habitat include sand and mud flats (or both) with no or sparse emergent vegetation. Adjacent unvegetated or sparsely vegetated sand, mud, or algal flats above high tide are also important PCEs, especially for roosting piping plovers (Service 2001). PCEs of the beach/dune ecosystem include surf-cast algae, natural wrack, sparsely vegetated back beach and salterns, spits, and over-wash areas. Over-wash areas are broad, unvegetated zones, with little or no topographic relief, that are formed and maintained by the action of hurricanes, storm surge, or extreme wave action.

Temporary project effects to designated critical habitat would include construction activities (e.g., bulldozers, marsh buggies, discharge pipeline, etc.) and smothering of the benthic prey species within foraging habitat. The duration of those construction activities would be approximately 12 months, pending local weather conditions. Sand spits are expected to reform within six months post-construction which could occur by the next migrating and/or wintering season, depending on when construction ends. In addition, the areas of WBPH not included in the project area and an abundance of nearby critical habitat, including Caminada Headland, would be available for piping plovers during construction and until the benthic community recovers in the restored areas.

Initially, the project would create up to 365 acres of unvegetated or sparsely vegetated sand flats. As the marsh becomes established and the planted dune vegetation increases in density, much of that area

would become too densely vegetated to remain suitable for piping plovers over the life of the project. The addition of sediment to the system is considered a long-term effect (i.e., 10-year lifespan) to the project area. CPRA anticipates that the additional sediment would continually be re-worked and transported throughout the sediment-starved system for the 10-year project life and would, therefore, maintain the headland intact and help to support and sustain the natural ecological processes that sustain piping plover critical habitat. Without the additional sediment, critical habitat within the project area would continue to be lost to erosional forces until only marsh or remnant marsh, which is not suitable for the piping plover, would remain. Although CPRA anticipates that the proposed project would prevent future tidal breaches for the next 10 years, past experience with other similar projects has shown that the dynamic nature of the Louisiana coastal barrier system, including the effects of hurricane events, seasonal, tidal, and storm events, can result in overtopping and the creation of sand flats and spits along barrier headland or island restoration projects regardless of the project's intended life-span. Thus, the addition of sediment to the system creates a net beneficial effect to critical habitat by sustaining the PBFs and PCEs of critical habitat and increasing the quality, acreage, and longevity of roosting and foraging habitat.

Based on our analysis of direct, indirect, and cumulative effects of the proposed action and because: (1) such effects to critical habitat would be temporary, discountable, and insignificant in nature; (2) the proposed project would ultimately benefit critical habitat by increasing, restoring, and prolonging the existence of suitable habitat for piping plover; and (3) critical habitat would retain the current ability for the PCEs to serve the intended conservation roles for this species, the USACE also requests the Service's concurrence with the USACE's determination that issuance of the subject permit for the proposed project is not likely to adversely modify piping plover critical habitat within Unit LA-5.

## **Conclusions**

Due to the length of coastal restoration project development, implementation and construction processes, the USACE (or CPRA acting as the USACE's designed representative) will re-initiate consultation with the Service on an annual basis until construction begins, or at any time if there are changes in the scope or location of the proposed action that would produce project effects not considered in the USACE's determination of this letter.

## **Literature Cited**

- Boesch, D. F., ed. 1982. Proceedings of the conference on coastal erosion and wetland modification in Louisiana: causes, consequences, and options. U.S. Fish and Wildlife Service, Biological Services Program, Washington, D.C. FWS/OBS-82/59. 256 pp.
- BTNEP. In Press. Assessment of Benthic Community Changes along the Restored Caminada Headlands. Barataria\_Terrebonne National Estuary Program for the Coastal Protection and Restoration Authority. Thibodaux, LA. 23pgs.



Coastal Protection and Restoration Authority (CPRA), 2022. Barrier Island Status Report: Draft Fiscal Year 2023 Annual Plan. Coastal Protection and Restoration Authority of Louisiana (CPRA), Baton Rouge, LA, 53p.

LeBlanc, D. 2017. October 26, 2017, electronic mail transmittal from Delaina LeBlanc of the Barataria National Estuary Program to Brigitte Firmin of the Fish and Wildlife Service's Louisiana Ecological Services Office.

Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority. 1999. Coast 2050: toward a sustainable coastal Louisiana, the appendices. Appendix E - region 3 supplemental information. Louisiana Department of Natural Resources. Baton Rouge, LA. 173 pp.

U.S. Fish and Wildlife Service (Service). 2001. Endangered and threatened wildlife and plants final determination of critical habitat for wintering piping plovers. Federal Register, Volume 66, Number 132:36038-36143.

**BUREAU OF OCEAN ENERGY MANAGEMENT (BOEM)**

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NOAA Fisheries Service  
Southeast Regional Office  
Protected Resources Division  
Attn: Mr. David Bernhart  
263 13<sup>th</sup> Avenue South  
St. Petersburg, Florida 33701

Subject: West Belle Headland Repair Project (TE-176)

Dear Mr. Bernhart:

The Bureau of Ocean Energy Management (BOEM) is submitting a notification to the NOAA Fisheries Service regarding Endangered Species Act coverage related to the Marine Minerals Program in the Gulf of Mexico. BOEM is anticipating a request to lease Outer Continental Shelf (OCS) sand resources to the State of Louisiana for a headland restoration project along the south-central Louisiana coast. The project is funded under the Federal Emergency Management Act to restore the geomorphic and ecologic form and function of the West Belle Headland, that was previously constructed under the TE-118 project (OCS-G 36705) and eroded by Hurricane Zeta. The restoration will be accomplished through beach, dune, and intertidal marsh habitat creation and reinforcing the shoreline through fill placement using offshore sand sources.

BOEM has authority over the sand extraction portion of the project on the OCS. It is proposed that hopper dredges will excavate approximately four million cubic yards of sand from the Ship Shoal sand body in South Pelto Area Block 12 and Ship Shoal Block Area 88. BOEM has an existing Biological Opinion (BiOp) (Consultation No. F/SER/2003/01247; issued 09/19/05) that covers hopper dredging associated with sand mining at Ship Shoal for restoration projects along the Louisiana coast. This opinion states that “the MMS [now BOEM] anticipates a total of 15 projects which will consist of dredging a total of approximately 54 million cubic yards, the utilization of 24 blocks in the Ship Shoal Area, with an estimated projected dredging time of 60 months.” The proposed project activities are within the scope of proposed activities encompassed in the 09/19/05 BiOp.

The West Belle Headland Repair Project (TE-176) would be the fifth project leased under the 09/19/05 BiOp. This project encompasses portions of activities previously proposed in the East Timbalier Barrier Island Restoration project (TE-118) that was built under the Terrebonne Basin Barrier and Beach Restoration Project (TE-143). In a letter dated May 22, 2014, during the construction of the first project executed under the BiOp (Caminada Headland Shoreline Restoration Project Increment 1), BOEM notified NMFS of the high abundance of sea turtles being relocated (per the 2005 NMFS Biological Opinion Terms and Conditions) from the Ship Shoal dredge area. BOEM concluded and NMFS, in electronic correspondence dated June 5, 2014, concurred that conducting relocation trawling would not violate Sections 7(a) (2) and 7(d) of the Endangered Species Act nor was it likely to jeopardize the continued existence of the listed species

In accordance with prior NMFS guidance, BOEM will continue dredging and sea turtle relocation trawling activities associated with this project while operating under reinitiation. Continued sea turtle relocation trawling activities will not result in jeopardy of the species or destroy or adversely modify designated critical habitat. BOEM would not make any irreversible or irretrievable commitment of resources that has the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures.

BOEM has concluded that the sand dredging activities at Ship Shoal to construct the West Belle Headland Repair project (TE-176) are covered under the existing BiOp issued on September 19, 2005 and will not violate Section 7(a)(2) and 7(d) of the Endangered Species Act. The effects of BOEM's proposed authorization of hopper dredging activities are not reasonably expected to jeopardize the continued existence of listed species or critical habitat.

Please let us know if we can provide any additional information you may find necessary. If you have any questions or wish to discuss specific issues, please contact Ms. Jessica Mallindine at (504) 736-7516, [jessica.mallindine@boem.gov](mailto:jessica.mallindine@boem.gov).

Sincerely,

Arie Kaller  
Regional Supervisor  
Office of Environment

**APPENDIX C**  
**EO 11988 AND EO 11990 – FLOODPLAINS AND WETLANDS**



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**EXECUTIVE ORDER 11988/11990**  
**FLOODPLAIN MANAGEMENT/WETLANDS – CHECKLIST (44 CFR Part 9)**

<b>APPLICANT:</b>	Office of Risk Management-Coastal Protection Restoration Authority
<b>COUNTY/STATE:</b>	LaFourche Parish, Louisiana
<b>COORDINATES:</b>	Headland Extents: WB-01 (29.094067, -90.259886) to WB-02 (29.106700, -90.286761)

**PROPOSED ACTION:**

The West Belle Headland Repair Project Area is located in Lafourche and Terrebonne Parishes, Louisiana, and is part of the Terrebonne Basin. The Terrebonne Basin consists of four (4) contiguous water bodies, from west to east, named Caillou Bay, Lake Pelto, Terrebonne Bay, and Timbalier Bay, separated from the open Gulf of Mexico by a series of barrier islands. West Belle Headland is located on the far eastern side of the Terrebonne Basin.

The purpose of the Repair Project includes reestablishment of the geomorphic and ecological form and function (GEFF) of West Belle Headland, that were constructed under the TE-118 project and eroded by Hurricane Zeta, through beach, dune, and intertidal marsh habitat creation and reinforcing the shoreline through fill placement utilizing offshore sand sources. Restoration of the GEFF will provide the buffer to reduce the forces and effects of wave action, saltwater intrusion, storm surge and tidal currents on the West Belle Headland as well as the adjacent wetlands and estuary and provide a marsh platform to capture over wash sediments during episodic events and serve as a roll-over platform. The Repair Project will also provide protection and sustain significant and unique foraging and nesting areas for threatened, endangered and protected species.

Under the Preferred Action Alternative, the TE-0176 restoration project area will be approximately 17,500 linear feet in length, and it will have essentially the same footprint as the destroyed TE-118 constructed project would have had. There are two borrow areas located on the Outer Continental

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Shelf (OCS) that will be utilized to fill the repair project template and the marsh feature.

The in-water work for the West Belle Restoration Project will be conducted using barge or vessel-based heavy equipment with no bottom disturbance allowed other than anchoring in the permitted allowable areas.

The land-based work will be conducted by bulldozers, excavators, front-end loaders, marsh- buggies, and off-road vehicles. Land-based equipment will access the West Belle Restoration Project Area via the excavation of an access channel from approximately the -9.0 ft NAVD88 contour to the fill area or along the West Belle Feeder Beach from Belle Pass. The alignment of the access channel will be the same as the one that was permitted and utilized for the TE-118 project.

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**APPLICABILITY: Actions which have the potential to affect floodplains/wetlands or their occupants, or which are subject to potential harm by location in floodplains/wetlands.**

YES  NO

The proposed action could potentially adversely affect the floodplain/wetlands.

Remarks: Mitigation/Restoration to return to pre-disaster conditions.

YES  NO

The proposed action could potentially be adversely affected by the floodplain/wetlands.

Remarks: Actions to limit erosion and provide flood protection are in the V-Coastal Floodplain.

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**ACTION:**

Review against 500 Year floodplain (for Critical Action)

Review against 100 Year floodplain

Not Applicable (for actions located in wetland only)

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**STEP NO. 1**

**Determine whether the proposed action is located in the 100-year floodplain (500-year floodplain for critical actions) and/or wetland; (44 CFR §9.7).**



The project is located within a V-Coastal Floodplain, area of 100-yr flooding, per Flood Insurance Rate Map (FIRM) panel number 22057C0975E, dated 06/16/2021.

A review of the National Wetland Inventory (NWI) online mapper, accessed on October 11, 2023, for the site indicates that the area is located within a designated estuarine and marine wetland (E2USN/E2USP).

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**STEP NO. 2      Notify the public at the earliest possible time of the intent to carry out an action in a floodplain/wetland, and involve the affected and interested public in the decision-making process; (44 CFR §9.8)**

Notice was provided as part of a disaster cumulative notice:

Newspaper: <https://www.fema.gov/disaster-federal-register-notice/dr-4577-la-initial-notice>

Date: 01/12/2021

Project Specific Notice (e.g. EA, newspaper, public meeting, etc):

Public Notice: \_\_\_\_\_

Date: \_\_\_\_\_

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**STEP NO. 3      Identify and evaluate practicable alternatives to locating the proposed action in a floodplain/wetland (including alternatives sites, actions and the "no action" option). (44 CFR §9.9)**

**Alternative Options**

YES  NO

Is there a practicable alternative site location outside of the floodplain/wetland?

If yes, provide the site location:

YES  NO

Is there a practicable alternative action outside of the floodplain/wetland that will not affect the floodplain/wetland?

If yes, describe the alternative action:

YES  NO

Is the NO Action alternative the most practicable alternative?

**If a practicable alternative exists outside the floodplain/wetland, FEMA must locate the action at the alternative site.**

**REMARKS**

The headland has been significantly damaged and is not performing the original function of providing erosion resistance, habitat, or wetland protection. A No Action alternative is not a practical option as continued degradation of the headland will exacerbate the erosion, loss of habitat and protection of the wetland. No alternative protections exist outside the floodplain/wetland that protect the current environment or meet the community's needs [44 CFR §9.9(b) (1)].

---

**STEP NO. 4      Identify the potential direct and indirect impacts associated with the occupancy or modification of floodplains/wetlands and the potential**

**direct and indirect support of floodplain/wetlands development that could result from the proposed action; (44 CFR §9.10)**

- YES**  **NO** Is the proposed action in compliance with the NFIP (see 44 CFR Part 59 seq.)?  
 **N/A** Remarks:
- YES**  **NO** Does the proposed action increase the risk of flood loss?
- YES**  **NO** Will the proposed action result in an increased base discharge or increase the flood hazard potential to other properties or structures?
- YES**  **NO** Does the proposed action minimize the impact of floods on human health, safety and welfare?
- YES**  **NO** Will the proposed action induce future growth and development, which will potentially adversely affect the floodplain/wetland?
- YES**  **NO** Does the proposed action involve dredging and/or filling of a floodplain/wetland?
- YES**  **NO** Will the proposed action result in the discharge of pollutants into the floodplain/wetlands?
- YES**  **NO** Does the proposed action avoid long-, and short-term adverse impacts associated with the occupancy and modification of floodplains/wetlands?  
 **N/A** Remarks:
- YES**  **NO** Will the proposed action result in any indirect impacts that will affect the natural values and functions of floodplains/wetlands?
- YES**  **NO** Will the proposed action forego an opportunity to restore the natural and beneficial values served by floodplains/wetlands?  
 **N/A** Remarks:
- YES**  **NO** Does the proposed action restore and/or preserve the natural and beneficial values served by floodplains/wetlands?  
 **N/A** Remarks:
- YES**  **NO** Will the proposed action result in an increase to the useful life of a structure or facility?

**REMARKS:**

The proposed project action is needed as an essential link to the larger coastal ecosystem. The proposed action is not likely to result in any potential direct impacts that will adversely affect the existing floodplains/wetlands. While there will be a change to the structural footprint due to build up of the dune and marshland with engineered/placed structures, the new footprint would be beneficial in restoring the previous and future floodplain/wetland values.

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**STEP NO. 5      Minimize the potential adverse impacts and support to or within floodplains/wetlands to be identified under Step 4, restore and preserve the natural and beneficial values served by floodplains/wetlands; (44 CFR §9.11)**

**YES**  **NO**      Were flood hazard reduction techniques applied to the proposed action to minimize the flood impacts if site location is in the 100- or 500-Year floodplain/wetlands?

**N/A** Remarks:

**YES**  **NO**      Were avoidance and minimization measures applied to the proposed action to minimize the short-, and long-term impacts on the 100-Year floodplain/wetlands?

If no, identify measures required as a condition of the grant:

**N/A** Remarks:

**YES**  **NO**      Were measures implemented to restore and preserve the natural and beneficial values of the floodplain/wetlands.

If no, identify measures required as a condition of the grant:

**N/A** Remarks:

**YES**  **NO**      Is new construction or substantial improvement in a floodway, and new construction in a coastal high hazard area proposed?

**If YES:** Is the activity considered as functionally dependent use or a structure or facility which facilitates an open space use?

**YES**  **NO**

**REMARKS:**

Reestablishment of the headland for wave and wind erosion, and marsh protection is critical to limiting the future erosion of the remaining emergent and estuarine habitat in the area. This action promotes and preserves the values of the wetland by reestablishing and increasing the wetland habitat and footprint.

---

**STEP NO. 6      Reevaluate the proposed action to determine first, if it is still practicable in light of its exposure to flood hazards, the extent to which it will aggravate the hazards to others, and its potential to disrupt floodplain/wetlands values and second, if alternatives preliminarily rejected at Step 3 are practicable in light of the information gained in Steps 4 and 5. (44 CFR §9.9)**

**YES**  **NO**      The action is still practicable at a floodplain/wetland site in light of the exposure to flood risk and ensuing disruption of natural values.



- YES**  **NO**      The floodplain/wetlands site is the only practicable alternative.
- YES**  **NO**      There is no potential for limiting the action to increase the practicability of previously rejected non-floodplain/wetlands sites and alternative actions.
- YES**  **NO**      Minimization of harm to or within the floodplain/wetlands can be achieved using all practicable means.
- YES**  **NO**      The action in a floodplain/wetland clearly outweighs the requirement of E.O. 11988/11990.

**FEMA shall not act in a floodplain/wetland unless it is the only practicable location.**

---

**STEP NO. 7**

**Prepare and provide the public with a finding and public explanation of any final decision that the floodplain/wetland is the only practicable alternative; and (44 CFR §9.12)**

- Check if the Initial Public Notice serves as the Final Public Notice or a Cumulative Final Public Notice was published. No condition required.
- Check if the condition was added to the REC indicating that "For actions located in the floodplain and/or wetlands, the applicant must issue a final public notice per 44 CFR Part 9.12(e) at least 15 days prior to the start of work. The final notice shall include the following: (1) A statement of why the proposed action must be located in an area affecting or affected by a floodplain or a wetland; (2) A description of all significant facts considered in making this determination; (3) A list of the alternatives considered; (4) A statement indicating whether the action conforms to applicable state and local floodplain protection standards; (5) A statement indicating how the action affects or is affected by the floodplain and/or wetland, and how mitigation is to be achieved; (6) Identification of the responsible official or organization for implementation and monitoring of the proposed action, and from whom further information can be obtained; and (7) A map of the area or a statement that such map is available for public inspection, including the location at which such map may be inspected and a telephone number to call for information."

**STEP NO. 8**

**Review the implementation and post - implementation phases of the proposed action to ensure that the requirements stated in Section 9.11 are fully implemented. Oversight responsibility shall be integrated into existing processes. (44 CFR §9.11)**

- YES**  **NO**      Was Grant conditioned on review of implementation and post-implementation phases to ensure compliance of EO 11988?

**Failure to comply with conditions enumerated in the Record of Environmental Consideration may jeopardize federal funding.**

**APPENDIX D**  
**SECTION 106 DOCUMENTATION**

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No known historic properties will be affected by this undertaking. Therefore, our office has no objection to the implementation of this project. This effect determination could change should new information come to our attention.



Kristin P. Sanders  
State Historic Preservation Officer  
Date

U.S. Department of Homeland Security  
Federal Emergency Management Agency  
FEMA-State Joint Field Office  
FEMA-4577-DR-LA  
1500 Main Street  
Baton Rouge, LA 70802



**FEMA**

July 20, 2023

Kristen Sanders  
State Historic Preservation Officer  
Department of Culture, Recreation & Tourism  
1051 North Third Street  
Baton Rouge, LA 70802

**RE: Section 106 Review Consultation, Hurricane Zeta, FEMA-4577-DR-LA**

Office of Risk Management, Coastal Protection and Restoration Authority – CPRA Beach Repairs associated with the West Belle Restoration project (TE-176), Terrebonne and Lafourche Parishes, Louisiana  
Grants Manager Project Number 185175, PW 00984

**Determination: No Historic Properties Affected**

Dear Ms. Sanders:

The Federal Emergency Management Agency (FEMA) will be providing funds authorized under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, P.L. 93-288, as amended, in response to Disaster Declaration FEMA-4577-DR-LA for Hurricane Zeta, dated October 26, 2020 to October 29, 2020. FEMA is initiating Section 106 review under the National Historic Preservation Act (NHPA) for the above referenced project in accordance with the Programmatic Agreement among FEMA, the Louisiana State Historic Preservation Officer (SHPO), the Governor’s Office of Homeland Security and Emergency Preparedness (GOHSEP), and Participating Tribes, executed on December 21, 2016, as amended (2016 Statewide PA).

It is proposed that federal funding through FEMA’s Public Assistance Program be provided to the Office of Risk Management (ORM) – Coastal Protection and Restoration Authority (CPRA) (Subrecipient) to restore the West Belle Headland to its pre-disaster form and function (Undertaking). The scope of work (SOW) includes all activities associated with the restoration of the beach and dune, creation of the intertidal marsh habitat and reinforcement of the shoreline through fill replacement (Figure 1). The purpose of this consultation is to address one (1) component of the West Belle Headland Restoration (TE-176) project that will be expanded beyond the previously reviewed footprint. There are multiple project components that have been assessed as part of other CPRA project work. The summation of the components relevant to TE-176 will be discussed later in this document.

**Project History**

The State of Louisiana was awarded \$1.2 billion in funds due to the damages caused by the Deepwater Horizon oil spill which occurred on April 20, 2010. The State allocated this funding towards multiple coastal and barrier island restoration projects. The current West Belle Headland Restoration project, funded by the State’s restoration efforts, is a sub-set of a larger-scale environmental compliance effort that was documented as a part of this effort. An Environmental Impact Statement (EIS) was prepared for these projects and in support of the

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**APPENDIX E**  
**OTHER INFORMATION (PUBLIC NOTICE, FONSI,**  
**JOINT AGENCY COOPERATING AGREEMENT)**



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**PUBLIC NOTICE**

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**FEMA PUBLIC NOTICE OF AVAILABILITY FOR THE DRAFT SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT AND DRAFT FINDING OF NO SIGNIFICANT IMPACT FOR THE STATE OF LOUISIANA OFFICE OF RISK MANAGEMENT AND COASTAL PROTECTION AND RESTORATION AUTHORITY BEACH REPAIRS – WEST BELLE HEADLAND REPAIR PROJECT, TE-0176 (FEMA-4577-DR-LA-00337)**

Interested parties are hereby notified that the Federal Emergency Management Agency (FEMA) has prepared a draft Supplemental Environmental Assessment (SEA) and draft Finding of No Significant Impact (FONSI) for the proposed West Belle Headland Repair Alternative to reestablish the geomorphic and ecological form and function of West Belle Headland which was constructed by the Louisiana Coastal Protection and Restoration Authority (CPRA) under the TE-0143/0118 project and subsequently damaged from erosion caused by Hurricane Zeta, through beach, dune, and intertidal marsh habitat creation and shoreline reinforcement by means of fill placement utilizing Gulf of Mexico offshore (Outer Continental Shelf [OCS]) sand sources.

The project area covers approximately 17,500 linear feet of formerly restored coastal barrier headland located immediately west of West Belle Pass, approximately 8,500 linear feet of new intertidal marsh creation inland of the restored headland, 2 sediment borrow areas located in the Gulf of Mexico on the OCS within South Pelto 12 and Ship Shoal 88 Lease Blocks, an existing dredged access channel west of the headland, and 2 sediment pump-out areas and conveyance corridor alignments located in State waters of the Gulf of Mexico within Lafourche Parish, Louisiana.

The proposed project is to repair extensive damage from Hurricane Zeta to a nearly (approximately 80 percent) completed barrier headland restoration project (TE-0143/0118) that was being constructed to provide dune, beach and salt-marsh habitat and a buffer to reduce the forces and effects of wave action, saltwater intrusion, storm surge and tidal currents on the West Belle Headland estuary and interior coastal wetlands. The loss of TE-0143/0118 project components from Hurricane Zeta effects exposes oil and gas infrastructure and sensitive marsh habitat inland of the West Belle Headland to the forces and effects of increased wave action, saltwater intrusion, storm surge and tidal currents.

The sub-recipient, the Louisiana Office of Risk Management, seeks federal grant funds for this action eligible under a Presidential Disaster Declaration, signed on January 12, 2021 (FEMA-4577-DR-LA). The primary purpose of this project is to repair the extensive damages sustained from Hurricane Zeta to the nearly completed TE-0143/0118, which was being constructed to reestablish the geomorphic and ecological form and function of the West Belle Headland.

Prior to Hurricane Zeta, the project area was projected to endure land loss and shoreline erosion of approximately 207 acres of supratidal habitat, 173 acres of Essential Fish Habitat (EFH), designated critical habitat for the piping plover (*Charadrius melodus*), storm protection for the Timbalier Bay Estuarine System, and protection of oil and gas infrastructure. The alternatives considered include:

1. No Action Alternative; and
2. West Belle Headland Repair Alternative (Proposed Action).

A draft Supplemental Environmental Assessment (SEA) has been prepared in accordance with FEMA Instruction 108-1-1 and DHS Instruction 023-01-001-01, pursuant to Section 102 of the National Environmental Policy Act of 1969 (NEPA), as implemented by Title 40 of the Code of Federal Regulations [CFR], Parts 1500-1508 (40 CFR 1500-1508), promulgated by the President's Council on Environmental Quality (CEQ).

The purpose of the draft SEA is to evaluate the potential impacts of the proposed action on the physical and human environment. This draft SEA summarizes the purpose and need, affected environment, and potential environmental consequences associated with the proposed action.

The draft FONSI is FEMA's finding that the Proposed Action would not have a significant effect on the human and natural environment. The draft SEA and FONSI are available for review at the following locations:

- Coastal Protection and Restoration Authority, 150 Terrace Ave., Baton Rouge, LA
  - o Monday through Friday from 8:00 am to 4:30 pm; and
- Lafourche Parish Government, 4876 Hwy 1, Raceland, LA
  - o Monday through Friday from 7:30 am to 5:00 pm.

This public notice will run in The Baton Rouge Advocate and The Daily Comet for five (5) days on Wednesday, March 20, 2024; Saturday, March 23, 2024; Tuesday, March 26, 2024; Friday, March 29, 2024; and Monday, April 1, 2024.

The document can also be downloaded from FEMA's website at <https://www.fema.gov/emergency-managers/practitioners/environmental-historic/nepa/supplemental-environmental-23> and from CPRA's website at <https://coastal.la.gov/>.

There will be a 30-day comment period beginning on Wednesday, March 20, 2024, and concluding on Thursday April 18, 2024, at 4:00 pm.

Written comments may be mailed to: DEPARTMENT OF HOMELAND SECURITY-FEMA EHP – WEST BELLE HEADLAND REPAIR, 1500 MAIN STREET, BATON ROUGE, LOUISIANA, 70802. Comments may be emailed to [fema-liro-ehp-pa@fema.dhs.gov](mailto:fema-liro-ehp-pa@fema.dhs.gov). Based on FEMA's findings to date, no significant adverse environmental effects are anticipated. However, if FEMA receives new information that results in a change from no adverse effects, then FEMA would revise the findings and issue a second public notice allowing time for additional comments. However, if no substantive comments are received, the draft EA and associated draft FONSI will become final and this Notice of Availability will also serve as the final Public Notice. Substantive comments will be addressed as appropriate in the final documents.

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**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

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**FINDING OF NO SIGNIFICANT IMPACT**  
**OFFICE OF RISK MANAGEMENT**  
**COASTAL PROTECTION RESTORATION AUTHORITY**  
**BEACH REPAIRS – WEST BELLE HEADLAND REPAIR PROJECT, TE-0176**  
**FEMA-4577-DR-LA-00337**

**BACKGROUND**

Hurricane Zeta made landfall in Louisiana (LA), approximately 25 miles west of the West Belle Headland (WBH) as a Category 3 hurricane on October 28, 2020. The President issued a major disaster declaration under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law (PL) 93-288, as amended, on January 12, 2021, with an Incident Period from October 26 to October 29, 2020. That declaration authorized the Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) to provide federal assistance in designated areas of LA (FEMA DR-4577-LA). Section 406 of the Stafford Act authorizes FEMA's Public Assistance (PA) Program to assist with funding the repair, restoration, reconstruction, or replacement of public facilities damaged as a result of the declared disaster.

FEMA has received an application, through the Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), from the LA Office of Risk Management (LORM, Grantee) for the proposed Coastal Protection and Restoration Authority (CPRA, Grantee) - West Belle Headland Repair Project (TE-0176) described in a draft Supplemental Environmental Assessment (SEA). Because FEMA is providing federal financial assistance, it is serving as the lead agency for the overall project. FEMA has determined that LORM, CPRA, and TE-0176 are eligible for federal disaster Public Assistance.

Hurricane Zeta caused extensive damage to a nearly (approximately 80 percent) completed barrier headland restoration project (TE-0143/0118) that was being constructed to provide dune, beach and salt-marsh habitat and a buffer to reduce the forces and effects of wave action, saltwater intrusion, storm surge and tidal currents on the West Belle Headland estuary and interior coastal wetlands. The proposed project (TE-0176) is to reestablish the geomorphic and ecological form and function of West Belle Headland being constructed by CPRA under the TE-0143/0118 project when damaged from erosion caused by Hurricane Zeta, through beach, dune, and intertidal marsh habitat creation and shoreline reinforcement by means of fill placement utilizing Gulf of Mexico offshore (Outer Continental Shelf [OCS]) sand sources. The project location center is at the following coordinates: latitude 29.09727°, longitude -90.24871°.

As defined by the President's Council on Environmental Quality's (CEQ) Regulations for Implementing the National Environmental Policy Act (NEPA) § 1508.5, cooperating agencies may participate in the preparation of environmental documentation, including assisting with developing the purpose and need. Involvement as a cooperating agency is related to each agency's jurisdiction and special expertise including: (1) identifying issues to be addressed in an SEA; (2) arranging for the collection and/or assembly of necessary resource, environmental, social, economic, and institutional data; (3) analyzing data; (4) developing alternatives; (5) evaluating alternatives and estimating the effects of implementing each alternative; and (6) carrying out other tasks necessary for the development of an SEA. Because TE-0176 involves development of a Non-competitive Negotiated Agreement (NNA) between the Bureau of Ocean Energy Management (BOEM) and the State of Louisiana that addresses potential use of OCS sand and gravel resources in federal waters, BOEM is serving as a joint consulting (Cooperating) agency. Because of their permitting authority and wetlands expertise, the US Army Corps of Engineers (USACE) is also serving as a joint consulting (Cooperating) agency.

Prior to Hurricane Zeta, CPRA, conducted a NEPA analysis and prepared for BOEM an Environmental Assessment (EA) for the East Timbalier Island Restoration Project (TE-0143/0118) – Final EA for Issuance of a NNA for the Use of OCS Sand – Lafourche Parish, LA, dated February 2019 (2019 EA). A portion of that EA included coastal restoration efforts on West Belle Headland. On June 3, 2019, CPRA, in coordination with BOEM, issued a Finding of No Significant Impact (FONSI), Final EA, and Statement of Findings for that 2019 EA, and work on TE-0143/0118 commenced in March 2020.

Any federal agency may adopt another federal agency's EA when such adoption would save time and money (40 Code of Federal Regulations ([CFR]) Sections 1500.4[n], 1500.5[h], and 1506.3), provided the original document satisfies the adopting agency's NEPA requirements. FEMA has adopted the 2019 EA prepared for CPRA/BOEM and is providing supplemental information through this SEA.

A draft SEA was prepared in accordance with FEMA Instruction 108-1-1 and DHS Instruction 023-01-001-01, Rev. 1, pursuant to CEQ regulations implementing Section 102 of NEPA (Title 40 of the Code of Federal Regulations [C.F.R.] §§ 1500-1508), and FEMA's regulations implementing NEPA (44 C.F.R. §§ 9-10) (Environmental Considerations 1980; Floodplain Management and Protection of Wetlands 1980). The purpose of the draft SEA is to evaluate the potential impacts of the Proposed Project on the physical and human environment that will be modified or were not considered or previously analyzed in the 2019 EA. That SEA provides additional information and analysis as needed to address changes to baseline conditions or project details that were not analyzed in the 2019 EA. Changed circumstances since the 2019 EA that are relevant to environmental concerns and the proposed scope of work include removal of the East Timbalier Island restoration component from the 2019 EA Preferred Alternative, additionally protected natural resources, and the environmental effects of implementing TE-0176 following damages that were caused to the nearly completed TE-0143/0118 project by Hurricane Zeta. Two alternatives have been proposed and reviewed including 1) the "No Action" alternative, and 2) the West Belle Headland Repair Alternative (Proposed Action).

#### FINDING OF NO SIGNIFICANT IMPACT

FEMA has evaluated the proposed project for significant adverse impacts to oceanographic and coastal processes, geology, air quality, noise, water quality and resources (surface water, groundwater, and wetlands), floodplains, climate, coastal barrier resources, biological resources (vegetation, benthic, plankton, fisheries, wildlife, essential fish habitat, federally-listed threatened or endangered species and critical habitats), historic and cultural resources, socioeconomics (including minority and low income populations), and hazardous, toxic, and radioactive materials. The results of these evaluations as well as consultations and input from other federal and state agencies are presented in the SEA. During the construction period, short-term impacts to water quality, air quality, and noise are anticipated. All short-term impacts require conditions to minimize and mitigate impacts to the proposed project site and surrounding areas.

The above described action would not result in any significant adverse impacts to/from oceanographic and coastal processes, geology, air quality, noise, water quality and resources (surface water, groundwater, and wetlands), floodplains, climate, coastal barrier resources, biological resources (vegetation, benthic, plankton, fisheries, wildlife, essential fish habitat, federally-listed threatened or endangered species and critical habitats), historic and cultural resources, socioeconomics (including minority and low income populations), or hazardous, toxic and radioactive materials. Based on the information analyzed, FEMA, BOEM, and USACE have determined that implementation of the proposed action would not result in significant adverse impacts to the quality of the natural and human environment. The proposed alternative is not anticipated to have the potential for significant cumulative



effects when combined with past, present, and reasonably foreseeable future actions in accordance with 44 CFR Part 10.8 (d)(3)(x). As a result of this FONSI, an EIS will not be prepared (44 CFR Part 10) and the proposed action as described in the SEA may proceed.

### CONDITIONS AND MITIGATION MEASURES

The following conditions must be met as part of implementation of the project. Failure to comply with these conditions may jeopardize federal funds.

Based upon the studies, reviews, and consultations undertaken in the SEA, several conditions must be met and mitigation measures must be taken by LORM and CPRA prior to and during project implementation:

- Access to the OCS borrow areas for the purpose of sand mining is dependent upon issuance of a NNA by BOEM which will include stipulations required to be implemented as part of the terms of that agreement.
- Grantees are required to obtain and comply with all applicable local, state, and federal permits, laws, regulations, approvals, and requirements prior to initiating work on this project.
- Grantees shall ensure that all contractors and workers on this project are made fully aware of the limits of the authorized work, adhere to and comply with all state and regional conditions. Grantees shall also ensure that all contractors and workers comply with all general conditions listed in the PGP Special Conditions, as well as the permit's special conditions. Non-compliance with permit terms and conditions may result in permit suspension or revocation.
- Grantees shall limit clearing, excavation and the placement of fill material to areas essential to the project. The jurisdictional remainder of the property shall be left in its natural state. If the authorized project requires any additional work not expressly permitted herein, the Grantees must obtain an amendment to this authorization prior to commencement of work.
- Grantees shall assure that all material used during construction shall be pollutant free in accordance with the EPA Guidelines for Discharge of Dredged or Fill Material, found in 40 CFR 230. The material may be obtained offsite or from site preparation. Offsite material shall not be obtained from wetlands or from areas that may adversely affect adjacent wetlands. Any excess material shall be placed in an upland area and property contained or stabilized to prevent entry into adjacent wetlands of other waters.
- Grantees that discover any previously unknown historic, cultural, or archeological remains and artifacts while accomplishing the permitted activity must immediately notify USACE, New Orleans District Regulatory Division (CEMVN-RG) and their PA contacts at FEMA, who will in turn contact FEMA Environmental and Historic Preservation (EHP) staff, halt all construction activity at the location of discovery, and avoid construction activities within a fifty 50-foot buffer zone of the location of discovery until the required coordination has been completed. FEMA and CEMVN-RG will initiate the Federal, Tribal, and state (SHPO) coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places. The Grantees will not proceed with work until the SHPO completes review and all consultation as appropriate (Inadvertent Discovery Clause).
- If abandoned cemeteries, unmarked graves, or human remains are discovered during the permitted activity, the Grantees will stop work immediately and comply with the Louisiana Unmarked Human Burial Sites Preservation Act (La. R.S. 8:671 et seq.). The Grantees will notify local law enforcement, CEMVN-RG, their PA contacts at FEMA, who will in turn contact FEMA EHP, and the Louisiana Division of Archaeology (LDOA), within the Louisiana Department of Culture, Recreation and Tourism, Office of Cultural Development, by telephone at 225-342-8170 to assess the nature and age

of the human skeletal remains within twenty-four (24) hours of the discovery of unmarked human remains and will accompany local law enforcement personnel during all field investigations. If the appropriate local law enforcement official determines that the remains are not a crime scene, and the remains are more than 50 years old, LDOA has jurisdiction over the remains. In no instance will human remains be removed from the discovery site until jurisdiction is established. In cases where the LDOA assumes jurisdiction and the remains are determined to be American Indian, LDOA will consult with Tribes, FEMA, CEMVN-RG, and the Grantees to determine the appropriate course of action.

- The work will be performed in accordance with the submitted application and drawings. Any changes in the project configuration as a result of local approvals must be documented and appropriate drawings provided to FEMA and CEMVN-RG for incorporation into the permit file.
- Grantees are aware that future site visits and inspections of the project site may be conducted by personnel of CEMVN-RG and/or other resource agencies in order to assess project compliance with the requirements of this authorization.
- Grantees shall adhere to the special conditions contained in the enclosed US Fish and Wildlife (USFWS) document, titled “*Standard Manatee Conditions for In-Water Activities*” to help avoid and/or minimize project related adverse effects to the West Indian manatee. As part of the USACE and USFWS compliance, all personnel conducting any work in or near water in areas that potentially contain manatees will observe the “*Standard Manatee Conditions for In-Water Activities*” as described in USACE Permit MVN 2015-00895-CQ, November 8, 2023. Specifics of these activities are included in Appendix B of the SEA.
- This project is in waters known to be utilized by Sea Turtles and Giant Manta Ray, which are protected species under the jurisdiction of NOAA Fisheries Southeast Regional Office (SERO). The Grantees shall adhere to the “*Protected Species Construction Conditions*” and “*Vessel Strike Avoidance Measures*” as required by the SERO Protected Resources Division for these species. “*Vessel Strike Avoidance Measures*” will be observed for all species and critical habitat protected under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA). Those measures are published by the SERO and specifics can be found in USACE Permit MVN 2015-00895-CQ, November 8, 2023, located in Appendix B of the SEA.
- Any damage to the channels and/or banks resulting from the Grantees’ activities will be repaired at the Grantees’ expense and to the satisfaction of the USACE.
- The USACE contract to repair the east and west jetties at Belle Pass is expected to be awarded in September 2023. The estimated time to construction completion is 9 months. The Grantees’ proposed conveyance channel lies along the Government’s proposed flotation channel. The Grantees’ sediment pipeline crosses the western jetty. The Grantees shall not interfere with the Government Contractor’s repair operations. Any damage to the west jetty must be repaired by the Grantees.
- There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein.
- The Grantees will, at its expense, install and maintain any safety light, signals, and signs prescribed by the United States Coast Guard (USCG), through regulations or otherwise, on authorized facilities or on equipment used in performing work under the authorization.
- If the proposed project involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, the Grantees are advised to notify the appropriate Captain of the Port so that a Notice to Mariners, if required, may be provided about one month before you plan to start work. Contact information for the local Captain of the Port’s offices may be located at: <https://homeport.uscg.mil> under “port directory”. In addition, a copy of your permit approval and drawings should be mailed to

the Commander, Eight Coast Guard District, Hale Boggs Federal Building, 500 Poydras Street, Room 1230, New Orleans, Louisiana 70130, or emailed to D08-DG-District-DPW@uscg.mil. Telephone inquiries can be directed to the Eighth Coast Guard District, Waterways Management at (504) 671-2330.

- Grantees will coordinate their schedule with the USACE to limit overlapping with our Bayou Lafourche-Port Fourchon East and West Jetty Repair contract. The POC is Operations Manager Ray Newman, (504) 862-2050.
- USACE has the right to require the Grantees remove equipment from the west jetty if critical maintenance is required for emergency repair.
- The above Section 408 special conditions and standard conditions enclosed are enforceable by the USACE Navigation Manager for the Bayou Lafourche as per Appendix G, EC 1165-2-220.
- Grantees shall conduct construction monitoring which will begin with a pre-construction meeting and continue with bi-weekly meetings through the duration of construction.
- Construction activities shall be monitored to ensure that the activities stay within the Project footprint and activities are completed in accordance with all permit conditions and stipulations. Emphasis will be placed on the several cultural resource avoidance buffers along the corridors, including pipeline crossings, and in the borrow areas.
- Pre-construction hazard surveys shall be conducted to verify and mark the location of hazards prior to construction.
- Pre- and post-construction and dredging bathymetric and topographic progress surveys shall be conducted to monitor the borrow areas, conveyance corridors, and fill areas.
- A Bird Monitoring and Abatement Plan will be developed cooperatively by CPRA and USFWS and shall be implemented to avoid or minimize impacts to the avifauna that use the West Belle Headland. This effort will be in place prior to start of any construction activity on the Headland and it will be in effect throughout construction.
- Entry into or disturbance of active waterbird breeding/nesting colonies is prohibited by the Louisiana Department of Wildlife and Fisheries (LDWF). A field visit to the TE-0176 Project Area to look for evidence of nesting colonies of waterbirds should be conducted no more than two weeks before project work begins if work will occur during the nesting season. If no nesting colonies are found within 1000 ft (2000 ft for brown pelicans [*Pelecanus occidentalis*]) of the proposed project, no further consultation with LDWF will be necessary. If active nesting colonies are found in this area, further consultation with LDWF will be required. If present, colonies should be surveyed by a qualified biologist to document species present and the extent of the colonies. A survey report prepared consistent with the guidelines included in Appendix B of the SEA should be prepared and submitted to the LDWF Wildlife Diversity Program (WDP) at the address provided in Appendix B.

To minimize disturbance to colonial nesting birds, the following restrictions on activity should be observed:

- For colonies containing nesting wading birds (e.g., herons [*Ardeidae* spp.], egrets [*Ardeidae* spp.], night herons [*Nyctanassa* spp.], ibis [*Threskiornithidae* spp.], roseate spoonbills [*Platalea ajaja*]) or anhingas (*Anhinga anhinga*) or cormorants (*Nannopterum* spp.), all project activity occurring within 1000 ft of an active nesting colony should be restricted to the non-nesting period (i.e., September 1 through February 15).
- For colonies containing nesting gulls (*Laridae* spp.), terns (*Laridae* spp.), or black skimmers (*Rynchops niger*), all project activity occurring within 650 ft (2000 ft for brown pelicans) of an active nesting colony should be restricted to the non-nesting period (i.e., September 16 through April 1).

- The Agreement Components and Special Conditions included in the Louisiana Department of Natural Resources (LDNR) Office of Coastal Management (OCM), Coastal Use Permit (CUP)/Consistency Determination (CUP No. P20230206) must be met in order for the TE-0176 Project to meet the requirements of the Louisiana Coastal Resources Program CUP Permit. The CUP Permit including the Agreement Components and Special Conditions is included in Appendix B of the SEA.
- Project construction would involve the use of potentially hazardous materials (e.g., petroleum products, potentially including but not limited to gasoline, diesel, brake and hydraulic fluid, cement, caustics, acids, solvents, paint, electronic components, pesticides, herbicides, fertilizers, and/or treated timber) and may result in the generation of small volumes of hazardous wastes. Appropriate measures to prevent, minimize, and control spills of hazardous materials must be taken and generated hazardous or non-hazardous wastes are required to be disposed in accordance with applicable federal, state, and local regulations. The Grantees' Construction Contractor shall implement a spill contingency plan for hazardous, toxic, or petroleum materials for the construction, transport and borrow areas. Equipment necessary to quickly contain any spills will be present on or in close proximity to project equipment. Construction Contractors will be responsible for the management of hazardous materials and wastes, which will be handled in accordance with federal and state regulations. All wastes and refuse generated by project construction will be removed and properly disposed of and compliance with USEPA Vessel General Permits (VGP) associated with the Vessel Incidental Discharge Act (VIDA) will be ensured, as applicable.
- The Grantees' Construction Contractor shall comply with the maritime Rules of the Road and the USCG regulations regarding vessel operation and obstruction to navigation.
- Grantees shall establish and adhere to a maintenance program involving periodic renourishment of the West Belle Headland with imported sand to preserve the original design or a specific engineered design that is justified and clearly stated in the maintenance program.
- To reduce potential short-term effects to air quality from construction-related activities, the Grantees' Construction Contractor shall be responsible for implementing BMPs to reduce fugitive dust generation and diesel emissions. To reduce these emissions, running times for fuel-burning equipment should be kept to a minimum and engines should be properly maintained.
- Grantees are required to coordinate with the local floodplain administrator, obtain required permits prior to initiating work, and comply with any conditions of the permit to ensure harm to and from the floodplain is minimized. All coordination pertaining to these activities and Grantees' compliance with any conditions must be documented and copies forwarded to the GOHSEP and FEMA for inclusion in the permanent project files.
- Per 44 CFR 9.11(d), mitigation or minimization standards to offset impacts to floodplains or wetlands must be applied, where possible.
- Should the site plans (including drainage design) change, the Grantees shall submit changes to their PA contacts at FEMA, who will in turn contact FEMA Environmental and Historic Preservation (EHP) for review and approval prior to the start of construction.
- All applicable BMPs should be implemented as identified to control and reduce nonpoint source pollution associated with construction activities. The Louisiana Department of Environmental Quality (LDEQ) has stormwater general permits for construction areas greater than or equal to one acre. The Grantees must contact the LDEQ Water Permits Division to determine if the proposed project requires a permit.
- Unusable equipment, debris and material will be disposed of in an approved manner and at a permitted disposal site. If petroleum products, hazardous materials, toxic waste, or soils and/or groundwater contaminated with hazardous constituents (or evidence thereof) are discovered during



implementation of the project, notification to LDEQ's Single-Point-of-Contact (SPOC) at (225) 219-3640 is required. Any handling, managing, and disposal of those items shall occur in accordance with LDEQ requirements and OSHA worker exposure regulations covered within 29 CFR 1910 and 1926. All coordination with LDEQ pertaining to these activities should be documented and copies forwarded to GOHSEP and FEMA as part of the permanent project files.

- Upon completion of construction, the Grantees shall document construction activities in a construction completion report.
- All coordination pertaining to project activities and Grantees' compliance with the conditions, conservation measures, and BMPs should be documented, and copies forwarded to FEMA for inclusion in the permanent project files.
- Due to the length of coastal restoration project development, implementation, and construction processes, the USACE (or CPRA acting as the USACE's designed representative) will re-initiate consultation with the USFWS and SERO on an annual basis until construction begins, or at any time if there are changes in the scope or location of the proposed action that would produce project effects not considered in the USACE's determination.

### CONCLUSION

Based on the consideration of potential effects in the SEA, as well as consultations and input from other federal and state agencies and the public, and adherence to the project conditions set forth in this FONSI, FEMA has determined that the implementation of the proposed action would not result in significant adverse impacts to the quality of the natural and human environment. In addition, the proposed project does not appear to have potential for significant cumulative effects when combined with past, present, and reasonably foreseeable future actions. As a result of this FONSI, an Environmental Impact Statement will not be prepared (per FEMA Instruction 108-1-144 [C.F.R. § 10.9]) and the proposed project as described in the SEA may proceed.

### APPROVALS

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<b>Latoya Leger,</b> <b>Regional Environmental Officer</b> <b>Region VI</b>	<b>Date</b>
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**Louisiana Integration and Recovery Office**

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# **JOINT AGENCY COOPERATING AGREEMENT**

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U.S. Department of Homeland Security  
Federal Emergency Management Agency  
Louisiana Integration and Recovery Office  
1500 Main Street  
Baton Rouge, LA 70802



**FEMA**

February 8, 2024

Matt Wilson  
Regional Supervisor, Office of Resource Evaluation  
Gulf of Mexico Region  
Bureau of Ocean Energy Management

Martin S. Mayer, USACE  
Chief, Regulatory Branch  
New Orleans District  
7400 Leake Avenue  
New Orleans, Louisiana 70118

RE: Cooperating Agency Agreement between the Federal Emergency Management Agency (FEMA), the Bureau of Ocean Energy Management (BOEM), and the US Army Corps of Engineers (USACE) for the West Belle Headland Repair Project, Lafourche and Terrebonne Parishes, LA (Proposed Action, Coastal Protection and Restoration Authority (CPRA) Project TE-0176)

Dear Mr. Wilson:

In accordance with 42 U.S.C. §5121, et seq, and disaster declaration FEMA-4577-DR-LA for Hurricane Zeta, the Louisiana Office of Risk Management (ORM) has requested federal Public Assistance (PA) funds from the Federal Emergency Management Agency (FEMA) for the Proposed Action (Coastal Protection and Restoration Authority (CPRA) Project TE-0176).

The proposed Scope of Work (SOW) includes the repair project template that is approximately 17,500 linear feet and is essentially the same footprint constructed previously for the East Timbalier Island Restoration Project (TE-0118). The West Belle Headland repair template for TE-0176 will begin at the terminus of the existing TE-0052 Project and will include construction of beach, dune, marsh, and feeder beach. The target elevation of the dune will be +7.5 feet (ft) North American Vertical Datum (NAVD) 88, with fore- and back-slopes of 1V:25H and a typical width of 100 ft at the crest. The target elevation of the beach will be +5.0 ft NAVD 88, with a slope of 1V:25H from the beach berm crest extending seaward to the intersection with the existing grade, and a typical width of 290 ft. The marsh feature is approximately 8,500 linear ft in length and will involve placement of sand to create intertidal marsh habitat. The marsh platform target elevation is +3.0 ft NAVD88 with an average width of 1,145 ft. There are two (2) borrow areas located on the Outer Continental Shelf (OCS) that will be utilized to fill the repair project template and the marsh feature.



In accordance with Unified Federal Review authority at 42 U.S.C. § 5189g, this Cooperative Agreement defines and sets forth roles and responsibilities of lead agency and cooperating agency status between FEMA, the Bureau of Ocean Energy Management (BOEM), and the United States Army Corps of Engineers (USACE) under the National Environmental Policy Act (NEPA), Endangered Species Act (ESA), Magnuson-Stevens Fishery Conservation and Management Act (MSA), and §106 of the National Historic Preservation Act (NHPA). FEMA is inviting BOEM and USACE to serve as cooperating agencies in the completion of the Supplemental Environmental Assessment (SEA) for the West Belle Headland Repair Project (TE-0176). Cooperating agency status may be granted when the agency has jurisdiction by law and special expertise on environmental issues.

As defined by the Council on Environmental Quality's Regulations for Implementing NEPA, § 1508.5, cooperating agencies participate in the preparation of the environmental documentation, including assisting with developing the purpose and need. Involvement as a cooperating agency is related to your jurisdiction and special expertise including: (1) identifying issues to be addressed in the SEA; (2) arranging for the collection and/or assembly of necessary resource, environmental, social, economic, and institutional data; (3) analyzing data; (4) developing alternatives; (5) evaluating alternatives and estimating the effects of implementing each alternative; and (6) carrying out other tasks necessary for the development of the SEA.

Since the Proposed Action is repair to pre-disaster conditions with minor changes to the SOW of the previously permitted West Belle Pass Barrier Headland Restoration (TE-0118), FEMA, BOEM, and USACE will update and / or amend, to the fullest extent practicable, all previous permits, consultations, and environmental compliance documentation when feasible.

FEMA will serve as a Lead Agency and will coordinate project reviews for projects funded under FEMA programs related to the disaster designated and for NEPA projects funded under other authorities as appropriate and provide technical assistance in the preparation of NHPA § 106 consultations and the Cultural Resources Section (5.5) in the SEA, in conjunction with USACE.

BOEM will serve as a Cooperating Agency as such activity or portions thereof require the dredging of sand resources from the OCS. Because BOEM is responsible for implementation of the OCS Lands Act (OCSLA), that agency has jurisdiction over sand and gravel, oil and gas, alternative energy, and other mineral development on the OCS. Under Public Law (PL) 103-426 [OCSLA § 8(k)], if OCS sand resources are to be used for shore protection, beach restoration, or coastal wetlands restoration projects by federal, state, or local government agencies, or in construction projects authorized by or funded in whole or in part by the Federal Government, BOEM may enter into a Non-competitive Negotiated Agreement (NNA) that addresses potential use of OCS sand and gravel. BOEM will also provide technical assistance, engage in permitting, evaluation of impact avoidance, minimization, and mitigation, and other responsibilities as required by the ESA, the Marine Mammal Protection Act (MMPA), the MSA, and the Coastal Zone Management Act (CZMA).

USACE will serve as a Cooperating Agency as such activity or portions thereof also require authorization from the Corps under Sections 9 or 10 of the Rivers and Harbors Act (RHA), Section 404 of the Clean Water Act (CWA), and/or Section 103 of the Marine Protection, Research and Sanctuaries Act (MPRSA). USACE will ensure other cooperating agencies are aware of any information the USACE needs to complete its review such as compliance with CWA Section 404(b)(1). USACE's review will occur concurrently with other cooperating agencies to the extent appropriate and practicable. USACE



will also prepare and submit to the US Fish and Wildlife Service (USFWS) notifications regarding compliance with the ESA and Coastal Barrier Resources Act (CBRA).

Each party shall designate at least one (1) representative to serve as their Environmental and Historic Preservation (EHP) manager for the project. Each party shall notify the other parties of changes to such appointments. EHP managers shall timely and effectively communicate with one another and routinely coordinate on lines of effort assuring issues and disputes are resolved in a timely manner at the lowest level. FEMA, BOEM, and USACE will engage and coordinate as early and often in the project review process to identify EHP issues and information needs, as well as to facilitate timely project decisions and ensure that the responsibilities of each agency are met. This coordination will include identifying and implementing opportunities to perform agency EHP review efforts more efficiently and effectively, including related efforts that may involve other agencies. See below for specific roles and responsibilities for each agency.

### **Roles and Responsibilities**

#### *A. As the lead agency for NEPA, FEMA shall:*

1. Be the point of contact for potential stakeholders on NEPA reviews and §106 NHPA consultations.
2. Prepare, consolidate, and publish all EHP analyses required for federal decisions. The federal laws, regulations, and policies that may require analysis include, but are not necessarily limited to: NEPA, NHPA, CWA, Clean Air Act (CAA), CZMA, ESA, Bald and Golden Eagle Protection Act (BGEPA), Executive Order (EO) 11988 (Floodplain Management), EO 11990 (Wetlands Protection), and EO 12898 (Environmental Justice).
3. FEMA will lead the §106 NHPA Review, with input from BOEM and USACE, as outlined in 36 CFR 800.2 (a)(2) of the NHPA, including consultation with Federally recognized Tribes with Areas of Interest within project areas and the Louisiana State Historic Preservation Office (SHPO).
4. Routinely coordinate all EHP actions with BOEM and USACE, and seek technical review and assistance as needed, particularly on issues within BOEM and USACE's jurisdiction and areas of special expertise.
5. Provide BOEM and USACE the draft SEA and applicable findings for review and comment prior to it being published for public review.
6. Provide BOEM and USACE the draft and final §106 NHPA consultation, Solicitation of Views (SOVs).

#### *B. As a cooperating agency, BOEM shall:*

1. Devote appropriate staff, subject matter experts (SMEs), and other resources needed to fulfill its obligations hereunder, and raise issues and concerns early during coordination and review process.
2. Make available appropriate staff and SMEs to attend meetings and hearings.

3. Make available appropriate staff and SMEs to timely review and comment on EHP actions and deliverables, to include draft responses to stakeholder comments.
4. Proactively identify gaps in FEMA analysis and/or data related to permitting or NNA requirements and/or required state or local approvals required to implement the project.
5. Timely respond to and resolve any questions, comments, and data requests posed by FEMA.
6. As appropriate, consult with U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) to satisfy requirements of the ESA, the MMPA, and the MSA, and provide the communication, consultation, and analysis for inclusion in the SEA.
7. Provide the leasing agreement (NNA) requirements and any conditions that are needed to fulfill the leasing terms.

C. As a cooperating agency, USACE shall:

1. Devote appropriate staff, SMEs, and other resources needed to fulfill its obligations hereunder, and raise issues and concerns early during coordination and review process.
2. Make available appropriate staff and SMEs to attend meetings and hearings.
3. Make available appropriate staff and SMEs to timely review and comment on EHP actions and deliverables, to include draft responses to stakeholder comments.
4. Proactively identify gaps in FEMA analysis and/or data related to permitting requirements and/or required state or local approvals required to implement the project.
5. Respond in a timely manner and resolve any questions, comments, and data requests posed by FEMA.
6. As needed, consult with the USFWS and NMFS under the MMPA and Section 7 of the ESA and provide FEMA and BOEM the communication, consultation, and analysis for inclusion in the SEA.
7. Provide the permit modifications and/or authorization under Sections 9 or 10 of the RHA, Section 404 of the CWA, and/or Section 103 of the MPRSA, including permit requirements and conditions.
8. Provide all NEPA documents that aided in the decision making for permit issuance.
9. Prepare and submit to the USFWS notifications regarding compliance with the CBRA.

As cooperating agencies, you would commit personnel adequate to the process, focusing your efforts on review and input on topics for which you have expertise and appropriate data or information. If you decide to accept the invitation, we hope you will commit personnel to help prepare environmental analyses based on your expertise and area of jurisdiction. We would appreciate receiving a written response to this request within 30 days from the date of this letter. Should you decide to decline the



invitation, please let us know as soon as possible. If you have any questions, please contact Tiffany Spann-Winfield, Environmental Liaison Officer (ELO), at [tiffany.spann@fema.dhs.gov](mailto:tiffany.spann@fema.dhs.gov) or (504) 218-6800.

Sincerely,

**TIFFANY R  
SPANN WINFIELD**

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Tiffany Spann-Winfield  
Environmental Liaison Officer  
Louisiana Recovery & Integration Office (LIRO)  
FEMA Region 6



# United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT

Gulf of Mexico Regional Office

1201 Elmwood Park Blvd

New Orleans, Louisiana 70123-2394

Tiffany Spann-Winfield  
Environmental Liaison Officer  
Louisiana Recovery & Integration Office (LIRO)  
FEMA Region 6  
1500 Main Street  
Baton Rouge, LA 70802

March 6, 2024

Dear Ms. Spann-Winfield,

Thank you for your letter on February 8, 2024, requesting that the Bureau of Ocean Energy Management (BOEM) become a cooperating agency on the Supplemental Environmental Assessment for the West Belle Headland Repair Project (TE-0176). There is an identified need for use of Federal sand resources located within the Outer Continental Shelf (OCS). Section 8(k) of the Outer Continental Shelf Lands Act (OCSLA) grants BOEM the authority to convey, on a noncompetitive bases, the rights to OCS sand, gravel, or shell resources for shore protection, beach, or wetlands restoration, or use in construction projects funded in whole or part or authorized by the Federal Government.

BOEM welcomes the opportunity to serve as a cooperating agency as BOEM has sole jurisdiction over the use of OCS sand resources and conveyance on the OCS under OCSLA. As a cooperating agency, BOEM will continue to participate and provide input in the National Environmental Policy Act (NEPA) process at the earliest possible time, make staff available for support and enhance interdisciplinary capability of the Federal project team. BOEM will be involved as appropriate according to our jurisdiction as defined in Section 8(k) of OCSLA and lend staff special expertise.

BOEM agrees to participate as a cooperating agency in the required Endangered Species Act (ESA) Section 7 consultation; the Magnuson-Stevens Fishery and Conservation Management Act Essential Fish Habitat (EFH) consultation (Section 305); the National Historic Preservation Act (NHPA) Section 106 process; the Coastal Zone Management Act (CZMA) Section 307 consistency process; and any Tribal consultations, as needed depending on existing coverage. BOEM will continue working collaboratively with FEMA and USACE to ensure effective implementation of the required NEPA process and associated consultations BOEM understands that FEMA will continue to be the lead Federal agency for ensuring compliance to both Section 106 of the NHPA, including coordination with the State Historic Preservation Officer, and Section 307 of the CZMA. BOEM welcomes the opportunity to review and provide comments on any draft correspondence regarding these consultations.

Dr. Jennifer Steele will remain as the main BOEM POC for this project. Dr. Steele will identify/notify other BOEM personnel as necessary through the process. I will provide FEMA with the executed Noncompetitive Negotiated Agreement (lease). BOEM personnel will continue to timely and effectively communicate with the project team and coordinate on the multiple lines of effort to assure issues and disputes are resolved in a timely manner at the lowest level. BOEM welcomes the continued engagement and coordination this important project.

Sincerely,

**MATTHEW  
WILSON**

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Matthew G. Wilson  
Regional Supervisor  
Gulf of Mexico Region  
Office of Resource Evaluation

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