STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY

SHORELINE PROTECTION NAVIGATIONAL AIDS

PROJECT NOS. PO-0022, PO-0072 & PO-0030

ORLEANS PARISH & ST. BERNARD PARISH

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STATE OF LOUISIANA INSET MAP

LICENSURE CLASSIFICATION REQUIREMENTS
MAJOR CLASSIFICATION: HEAVY CONSTRUCTION or
SUBCLASSIFICATION: FOUNDATIONS AND PILE DRIVING or
SUBCLASSIFICATION: COASTAL RESTORATION AND HABITAT ENHANCEMENT

STATE OF LOUISIANA
BARRY J. RICHARD, JR.
License No. 35547
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
4-26-23

REV	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY
2045 LAKESHORE DR. CERM SUITE 309 NEW ORLEANS, LA 70122

TITLE SHEET

SHORELINE PROTECTION NAVIGATIONAL AIDS

STATE PROJECT Nos. PO-0022, PO-0072, & PO-0030

DESIGNED BY: CH

DRAWN BY: CH

APPROVED BY: BR

DATE: FEB 2023

SHEET 1

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR ENSURING THAT ALL WORK COMPLIES WITH THE PLANS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY CONCERNING ANY CONFLICTS THAT ARISE DURING THE COURSE OF CONSTRUCTION ACTIVITIES.
3. THE CONTRACTOR SHALL CONFORM TO THE APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.
4. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) U.S. SURVEY FEET (FEET).
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND MARKING ALL UNDERGROUND UTILITIES AND PIPELINES WITHIN 150 FT OF THE PROJECT AREA PRIOR TO BEGINNING CONSTRUCTION. PIPELINES AND UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL CONTACT LOUISIANA ONE CALL AT 1-800-272-3020 AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. ALL UTILITIES AND OBSTRUCTIONS SHALL REMAIN MARKED THROUGHOUT THE DURATION OF CONSTRUCTION.
6. THE ESTIMATED QUANTITIES SHOWN ON THE PLANS ARE FOR BIDDING PURPOSES ONLY. UNIT QUANTITIES ARE BASED ON SITE CONDITIONS AND INFORMATION OBTAINED DURING THE DESIGN PROCESS AND ARE SUBJECT TO CHANGE. THE OWNER RESERVES THE RIGHT TO ADJUST QUANTITIES DURING CONSTRUCTION, HIGHER OR LOWER BY TWENTY-FIVE (25) PERCENT WITHOUT ADJUSTMENT OF THE UNIT PRICE BID FOR THE ITEM.
7. THE CONTRACTOR SHALL SUBMIT A WORK PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO ISSUANCE OF NOTICE TO PROCEED. THE WORK PLAN SHALL INCLUDE A PROJECT SCHEDULE, SEQUENCE OF CONSTRUCTION, AND QUALITY CONTROL PLAN FOR ALL MAJOR ITEMS OF WORK.
8. THE CONTRACTOR SHALL SUBMIT A WORK PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO ISSUANCE OF NOTICE TO PROCEED. THE WORK PLAN SHALL INCLUDE A PROJECT SCHEDULE, SEQUENCE OF CONSTRUCTION, AND QUALITY CONTROL PLAN FOR ALL MAJOR ITEMS OF WORK.
9. THE CONTRACTOR SHALL VERIFY ALL ELEVATIONS AND DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES FOUND IN THE PLANS AND SPECIFICATIONS.
10. ALL DEBRIS UNEARTHED FROM THE COMPLETION OF THIS CONTRACT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND BE REMOVED FROM THE SITE. NO ADDITIONAL COMPENSATION SHALL BE GIVEN TO CONTRACTOR FOR MATERIALS THAT ARE DISCOVERED DURING CONSTRUCTION THAT ARE NOT SHOWN IN THE PLANS.
11. ALL DEBRIS AND MATERIALS REMOVED DURING CONSTRUCTION AND NOT SPECIFICALLY NOTED OR REQUESTED FOR SALVAGE BY THE OWNER SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT AN APPROPRIATE OFF-SITE LOCATION.
12. THE CONTRACTOR SHALL NOT, AT ANY TIME, TREAD ON EXISTING MARSH OR VEGETATED WETLANDS UNLESS OTHERWISE DIRECTED BY THE ENGINEER. FOR PROTECTION OF EXISTING VEGETATION, ACCESS TO OR MOVEMENT OUTSIDE OF THE DEFINED PROJECT SITES SHALL BE PROHIBITED WITHIN VEGETATED AREAS FOR ALL PERSONNEL OR EQUIPMENT ACCESS OR MATERIAL STORAGE.
13. 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.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NAVIGATING FROM A NAVIGABLE WATER BODY TO THE SITES.
15. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR NAVIGATING WITHIN THE LIMITS OF THE PROJECT SITES. NO ACCESS DREDGING IS PERMITTED. ALL EQUIPMENT SHALL BE FLOATING AT ALL TIMES DURING TRANSIT TO AND FROM THE PROJECT SITES.
16. PLANS AND SPECIFICATIONS ARE COMPLEMENTARY; WHAT IS REQUIRED BY ONE IS BINDING AS IF REQUIRED BY ALL. CLARIFICATIONS AND INTERPRETATIONS OF, OR NOTIFICATIONS OF MINOR VARIATIONS AND DEVIATIONS IN THE CONTRACT DOCUMENTS, WILL BE ISSUED BY THE ENGINEER.

STATE OF LOUISIANA
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4-26-23

SUMMARY OF ESTIMATED QUANTITIES

BASE BID - BAYOU CHEVEE (PO-0022)	UNIT	QUANTITY
MOBILIZATION / DEMOBILIZATION	LS	1
TIMBER PILES	LF	750
DAYBOARDS	EA	15
MARINE LANTERNS	EA	15
LADDER APPURTENANCES	EA	15
ALTERNATE NO. 1 - BILOXI MARSH SHORELINE PROTECTION (PO-0072)		
MOBILIZATION / DEMOBILIZATION	LS	1
TIMBER PILE	LF	50
DAYBOARD	EA	1
MARINE LANTERN	EA	1
ALTERNATE NO. 2 - LAKE BORGNE SHORELINE PROTECTION (PO-0030)		
MOBILIZATION / DEMOBILIZATION	LS	1
TIMBER PILE	LF	50
DAYBOARDS	EA	3

STRUCTURAL NOTES

1. ALL BOLTS AND NUTS SHALL INCLUDE HDG OGEE WASHERS UNLESS NOTED OTHERWISE.
2. ALL SAW CUTS AND DRILLED HOLES SHALL BE TREATED W/ COPPER NAPHTHENATE PRIOR TO INSTALLING HARDWARE.
3. ALL ALUMINUM MATTERIALS SHALL BE FITTED WITH NEOPRENE WASHERS TO PREVENT DIRECT CONTACT WITH TREATED TIMBER.

CIVIL NOTES

1. CONTRACTOR TO REMOVE ROCK AS NECESSARY TO INSTALL PILINGS AND REPLACE IN KIND.
2. THE CONTRACTOR SHALL INVESTIGATE THE SUBSURFACE CONDITIONS OF THE ENTIRE SITE PRIOR TO BEGINNING PILE DRIVING. IF THE CONTRACTOR IDENTIFIES A PERMANENT OBSTRUCTION, THE ENGINEER MAY ADJUST THE LAYOUT TO AVOID THE OBSTRUCTION. ANY ADJUSTMENT THAT DOES NOT RESULT IN A CHANGE IN QUANTITY SHALL BE INSTALLED AT NO ADDITIONAL COST.

REV	DATE	DESCRIPTION	BY

COASTAL PROTECTION AND RESTORATION AUTHORITY
2045 LAKESHORE DR. CERM SUITE 309 NEW ORLEANS, LA 70122

GENERAL NOTES & QUANTITIES

DESIGNED BY: CH

APPROVED BY: BR

SHORELINE PROTECTION NAVIGATIONAL AIDS

STATE PROJECT Nos. PO-0022, PO-0072, & PO-0030

DRAWN BY: CH

DATE: FEB 2023

SHEET 2

PILING LOCATION TABLE

POINT #	LATITUDE	LONGITUDE
P1	N30° 06' 33.31"	W89° 50' 46.43"
P2	N30° 06' 26.17"	W89° 50' 41.98"
P3	N30° 06' 19.33"	W89° 50' 34.80"
P4	N30° 06' 14.92"	W89° 50' 25.81"
P5	N30° 06' 10.57"	W89° 50' 21.77"
P6	N30° 06' 05.51"	W89° 50' 22.61"
P7	N30° 06' 05.08"	W89° 50' 21.87"
P8	N30° 06' 06.04"	W89° 50' 18.78"
P9	N30° 06' 00.51"	W89° 50' 16.50"
P10	N30° 05' 57.54"	W89° 50' 14.18"
P11	N30° 05' 53.63"	W89° 50' 07.09"
P12	N30° 05' 49.04"	W89° 50' 00.52"
P13	N30° 05' 47.09"	W89° 49' 53.91"
P14	N30° 05' 47.21"	W89° 49' 44.37"
P15	N30° 05' 49.02"	W89° 49' 35.18"

STATE OF LOUISIANA
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NAVIGATIONAL AID LOCATIONS – BASE BID – BAYOU CHEVEE (PO-0022)

REV	DATE	DESCRIPTION	BY

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2045 LAKESHORE DR. CERM SUITE 309 NEW ORLEANS, LA 70122

BASE BID PLAN VIEW

DESIGNED BY: CH

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SHORELINE PROTECTION NAVIGATIONAL AIDS

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SHEET 3

DAY BOARD ELEVATION (NTS)

DAYBOARD DETAIL

STATE OF LOUISIANA
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NOTES:

1. PERMANENT WARNING SIGNS SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE PROJECT ENGINEER. APPROXIMATE LOCATIONS OF THE TIMBER PILES SUPPORTING THE WARNING SIGNS ARE SHOWN ON SHEET 3.
2. THE 2" BORDER ON THE WARNING SIGN WILL BE A RETROREFLECTIVE MATERIAL OF ORANGE COLOR. THE LETTERING FIELD WILL BE A RETROREFLECTIVE MATERIAL OF WHITE COLOR. THE LETTERING FOR THE WARNING SIGNS WILL BE BLACK. ALL SIGNS MUST MEET U.S. COAST GUARD STANDARDS IN ACCORDANCE WITH 33 CFR 330.4 (a) (1).4
3. NEOPRENE WASHERS SHALL BE PLACED BETWEEN THE SIGN AND THE PILING AT ALL POINTS OF CONTACT.
4. HARDWARE FOR TIMBER CONNECTIONS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SECTION 811.15 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS PUBLISHED BY THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, 2016 EDITION.
5. TIMBER PILES SHALL CONFORM TO SECTIONS 804 AND 1014 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, AS PUBLISHED BY THE LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT, 2016 EDITION. PILES SHALL BE TREATED WITH A WATER BORNE ACA OR CCA PRESERVATIVE WITH 2.5 PCF RETENTION.
6. TIMBER PILING SHALL BE 50-FEET IN LENGTH WITH A MIN. 12-INCH DIAMETER BUTT AND MIN. 7-INCH DIAMETER AT THE TIP.
7. EXPOSED BOLT THREADS SHALL BE EITHER TACK WELDED TO NUTS, STRIPPED, OR DAMAGED BY OTHER APPROVED METHOD TO PREVENT EASY REMOVAL.
8. ALL FILM LETTERS AND BORDERS SHALL BE USCG COMPLIANT.

REV	DATE	DESCRIPTION	BY

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BASE BID DETAILS

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SHEET 4

LOCATION TABLE		
POINT #	LATITUDE	LONGITUDE
P16	29°55'37.01"N	89°35'1.74"W

ALTERNATE NO. 1 NAVIGATIONAL AID LOCATION – PO-0072 BILOXI MARSH

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ALTERNATE NO. 1 PLAN VIEW

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SHEET 5

LOCATION TABLE

POINT #	LATITUDE	LONGITUDE
P17	29°56'49.7"N	89°50'27.2"W
P18	29°56'46.2"N	89°50'23.6"W
P19	29°56'34.5"N	89°50'14.8"W

ALTERNATE NO. 2 NAVIGATIONAL AID LOCATIONS – PO-0030 LAKE BORGNE SHORELINE PROTECTION

REV	DATE	DESCRIPTION	BY
S			

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ALTERNATE NO. 2 PLAN VIEW

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STATE PROJECT Nos. PO-0022, PO-0072, & PO-0030

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SHEET 6

ALTERNATE NO. 1 DETAILS

ALTERNATE NO. 2 DETAILS

NOTES:

1: THE SIGNS INSTALLED AS PART OF ALTERNATE NO. 2 SHOULD BE MOUNTED AT THE SAME ELEVATION AS THE EXISTING SIGN LOCATED AT STRUCTURE P18.

2: ALL FILM LETTERS AND BORDERS SHALL BE USCG COMPLIANT.

3: ALL LETTERS AND BORDERS SHALL BE RETROREFLECTIVE.

4: NEOPRENE WASHERS SHALL BE PLACED BETWEEN THE SIGN AND THE PILING AT ALL POINTS OF CONTACT.

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ALTERNATE DETAILS

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SHEET 7

TYPICAL DETAIL
LADDER SUPPORTS

NOTES:

1: CONTRACTOR IS ONLY RESPONSIBLE FOR INSTALLING THE SHOWN LADDER BRACKETS AND BRACES. THE ALUMINUM LADDER SHOWN IN THE DRAWINGS IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TO BE MANUFACTURED AS PART OF THIS CONTRACT.

2: ONLY THE NAVIGATIONAL AIDS INSTALLED AT POINT P1 THRU P15 WILL REQUIRE THE INSTALLATION OF THE SHOWN LADDER SUPPORTS, BRACKETS AND BRACES.

3: STRUCTURAL SHAPES:

- A. STEEL PLATES AND ANGLES – ASTM A36 OR BETTER
- B. PIPE- ASTM A53 GRADE B
- C. ALUMINUM – 6061-T6

4: FASTENERS

- A. 3/4" DIAMTER ROD – ASTM A193 B7 WITH HEAVY HEX GRAD
- B. STEEL TO STEEL – ASTM A307 GRADE B OR BETTER WITH A56 OTHERWISE NOTED.
- C. STEEL TO ALUMINUM – TYPE 316 STAINLESS STEEL (SS)
- D. LAG SCREWS AND TIMBER THRU BOLT – ANSI/ASME B.18.2.1 GRADE 2 OR ASTM 307 GRADE 2

5. ALL NON STAINLESS STEEL AND FASTENER COMPONENTS SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM153 WITH 2 OUNCES OF ZINC COATING PER SQUARE FOOT MINIMUM.

6. CONNECT STAINLESS STEEL BOLTS TO ALUMINUM AND MILD STEEL USING STAINLESS STEEL EDPM BONDED SEALING WASHERS.

7. APPLY LOCTITE THREADLOCKER RED 271 TO THREADS OF ALL PERMANENT BOLTED STEEL CONNECTIONS PRIOR TO FINAL NUT TIGHTENING.

8. WELDING SHALL CONFORM WITH CURRENT AWS STANDARDS FOR STEEL AND ALUMINUM.

- A. STEEL WELD MATERIAL – E70XX
- B. ALUMINUM WELD FILLER 5356

9. COAT THE TIMBER PILE SURFACE IN CONTACT WITH THE STEEL PIPE SUPPORT BRACKET WITH A BITUMINOUS SEALANT.

10. SEAL THE GAP BETWEEN THE STEEL PIPE SUPPORT BRACKET AND THE PILE WITH A 1/2" WIDE LAYER OF EPOXY ALONG THE PERMITER OF THE PILE AT THE TOP AND BOTTOM OF THE PIPE. EPOXY USED SHALL BE A HIGH STRENGTH, TWO PART EPOXY ADHESIVE ACCEPTABLE FOR USE IN OVERSIZED OR CORED HOLES. EPOXY DISPENSING SYSTEM SHALL USE A SELF-MIXING MECHANISM TO ENSURE PROPER MIXING OF RESIN AND HARDENER. FOLLOW ALL MANUFACTURER'S INSTRUCTIONS FOR PRODUCT INSTALLATION AND CURE TIME.

1 DETAIL
LADDER BRACKET

0 .75 1.5
SCALE IN FEET

2 DETAIL
PL 1

0 6 12
SCALE IN INCHES

5 DETAIL
LADDER BRACE

0 .75 1.5
SCALE IN FEET

LADDER BRACKET
TOP VIEW

C SECTION
LADDER BRACE

0 .75 1.5
SCALE IN FEET

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SHEET 8