U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE
and
STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES, COASTAL ENGINEERING DIVISION

Plans of Proposed
POINT AU FER ISLAND – BREACH REPAIRS
PROJECT TE-22
TERREBONNE PARISH, LOUISIANA
January 2005

AS BUILT

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<td>8.</td>
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LOCATION MAP
SCALE: 1" = 6,000'

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS
LAND SURVEYORS
P.O. BOX 687
CUT OFF, LOUISIANA 70345
(985) 632-5786

NAVAL ARCHITECTS
MARINE ENGINEERS

DRAWING PLOTTED AT HALF-SCALE

STATE OF LOUISIANA AGRICULTURE COMMISSION
CIVIL ENGINEERING

RECOMMENDED FOR APPROVAL
DNR/CEQ PROJECT ENGINEER
DATE
DNR/CEQ ENGINEER MANAGER
DATE
DNR/CEQ DIRECTOR
DATE

PREPARED BY:
PICCIOLA & ASSOCIATES, INC.

SHEET 1 OF 8 SET NO. ___.

J.N. 0204-0401
SUMMARY OF ESTIMATED QUANTITIES

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QUANTITY</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>MOBILIZATION AND DEMOBILIZATION</td>
<td>LINE LIN</td>
<td>LUMP SUM</td>
</tr>
<tr>
<td>2</td>
<td>STONE RIPRAP (250 lb. CLASS)</td>
<td>TONS</td>
<td>3,450</td>
</tr>
<tr>
<td>3</td>
<td>STONE RIPRAP (35 lb. CLASS)</td>
<td>TONS</td>
<td>NONE</td>
</tr>
<tr>
<td>4</td>
<td>GEOTEXTILE FABRIC</td>
<td>SQ. YD.</td>
<td>2,890</td>
</tr>
<tr>
<td>5</td>
<td>TIMBER PILING (2.5 CCA TREATED) 40' LONG</td>
<td>LIN. FT.</td>
<td>440</td>
</tr>
<tr>
<td>6</td>
<td>PLUNGS CAPS (GALVANIZED)</td>
<td>EACH</td>
<td>7</td>
</tr>
<tr>
<td>7</td>
<td>VINYL SHEET PLUNGS PENHEAD</td>
<td>LIN. FT.</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>(NORTHSTAR 3120 OR APPROVED EQUAL)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>2 1/8&quot; TIMBER WHALER (0.8 CCA TREATED)</td>
<td>LIN. FT.</td>
<td>122</td>
</tr>
<tr>
<td>9</td>
<td>2 1/8&quot; TIMBER WHALER (2.5 CCA TREATED)</td>
<td>LIN. FT.</td>
<td>122</td>
</tr>
<tr>
<td>10</td>
<td>2&quot;x12&quot; TIMBER CAP (0.8 CCA TREATED)</td>
<td>LIN. FT.</td>
<td>61</td>
</tr>
<tr>
<td>11</td>
<td>GALVANIZED HARDWARE FOR VINYL, PENHEAD</td>
<td>LUMP SUM</td>
<td>LUMP SUM</td>
</tr>
<tr>
<td>12</td>
<td>ARTICULATED MAT (SUBMAR 20'x4'x1.5&quot; THICK) OR EQUAL</td>
<td>EACH</td>
<td>7</td>
</tr>
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3,336 TONS (AS BUILT)

GENERAL NOTES:

1. ALL BOUNDARIES AND VERTICAL CONTROL POINTS HAVE BEEN ESTABLISHED OR DESIGNATED BY THE ENGINEER AND ARE SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN AND PROTECT FROM DAMAGE OR DESTRUCTION THESE POINTS AND SHALL PROVIDE ADDITIONAL SURVEY, LAYOUT, AND MEASUREMENT WORK USING THESE POINTS.

2. CONTRACTOR SHALL VERIFY EXISTING GRADES, ELEVATIONS, AND LOCATIONS IN THE FIELD PRIOR TO CONSTRUCTION.


4. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND PARISH LAWS CONCERNING POLLUTION OF WATERWAYS, PROTECTION OF SHELLFISH AND FISH, WATERFRONT, WILDLIFE AND DOMESTIC ANIMALS.

5. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO CAUSE THE LEAST POSSIBLE INTERFERENCE WITH BOTH THROUGH AND LOCAL MARINE TRAFFIC.

6. CONTRACTOR SHALL EMPLOY EFFECTIVE MEASURES TO CONTROL EROSION OF NATURAL AND CONSTRUCTED SURFACES.

7. THE SAFETY HAZARDS PRELIMINARILY DETERMINED BY THE PRECAUTIONS PREPARED IN THE GRAPHIC SHEETS AND AA SOFTWARE AND ALL OTHER APPROPRIATE MEASURES TO PREVENT INJURIES AND DEATHS CAUSED BY FALLING OR SLIDING MATERIALS AND PREVENT DAMAGE TO EQUIPMENT.

8. TEMPORARY UTILITY AND SANITARY FACILITIES FOR OPERATION OF THE CONTRACTOR'S PLANT OR EQUIPMENT SHALL BE PROVIDED AND MAINTAINED AT THE EXPENSE OF THE CONTRACTOR.

9. COASTAL USE PERMITS WILL BE PROVIDED BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OTHER PERMITS.

10. CONSTRUCTION SERVITIES FOR ALL WORK AND RIGHT-OF-ENTRY ONTO THE SITE WILL BE PROVIDED BY OWNER.

11. ALIGNMENTS AND/or ELEVATIONS MAY BE ADJUSTED IN THE FIELD BY THE PROJECT ENGINEER TO MEET CHANGING FIELD CONDITIONS OR TO BETTER ACCOMPLISH THE PROJECT OBJECTIVES. ANY ADDITIONAL QUANTITIES WILL BE PAID FOR AT THE UNIT PRICE BID FOR THE SPECIFIC ITEM.

12. CONTRACTOR SHALL NOT BE ALLOWED TO ADOPT CHANGE DURING THEMOSTILITY OR WHEN A RAINSTORM IS INIMIC.

13. DUE TO CHANGING FIELD CONDITIONS, SHORELINES SHALL NOT BE USED AS CONSTRUCTION REFERENCE POINTS.

14. X AND Y COORDINATES ARE BASED ON NAD 83. LATITUDES AND LONGITUDES ARE BASED ON NAD 83. ELEVATIONS AND ARE BASED ON NAD 88. SOUNDINGS REFERENCE WATER LEVEL SHOW.

TECHNICAL NOTES:

1. THE CONTRACTOR IS NOTIFIED THAT THE WORK SITE IS ACCESSIBLE THROUGH THE APPROPRIATE DEPARTMENT OF WILDLIFE AND FISHERIES. ALL PERSONNEL SHALL ABIDE BY THE MANAGEMENT AREA RULES AND REGULATIONS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NAVIGATING WITHIN THE LIMITS OF THE PROJECT AREA.

3. THE CONTRACTOR IS NOTIFIED THAT THE PROJECT SITE IS TOTALY ON OR ALONG PREVIOUS PRIVATE OR STATE PROPERTY. EXTREME CAUTION SHALL BE EXERCISED IN PROTECTION OF PROPERTY, HABITAT, AND WILDLIFE FROM DAMAGE OR HARM.

4. THE CONTRACTOR IS NOTIFIED THAT HE WILL BE CONDUCTING HIS OPERATIONS IN THE VICINITY OF UTILITIES, PIPELINES, FLOWERS, OIL AND GAS STRUCTURES, AND OTHER MINERAL OPERATIONS. THE CONTRACTOR WILL PROVIDE ALL APPROPRIATE INFORMATION PRIOR TO CONSTRUCTION. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

5. A LISTING OF ALL COMPANIES KNOWN TO CONDUCT MINERAL OPERATIONS AND HAVE ACTIVE WELLS AND/OR PIPELINES IN THE VICINITY WILL BE PROVIDED FOR REFERENCE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING WHETHER THERE ARE OTHERS. CONTRACTOR SHALL CONTACT LOUISIANA ONE CALL 72 HOURS PRIOR TO CONSTRUCTION AT 1-800-272-3020.

6. DREDGING/TREATMENT CHANNELS ARE PROHIBITED ON THIS JOB.

LAND MANAGER:

ALAN ENNSINGER (337) 462-0782

AS BUILT
POINT AU FER ISLAND - BREACH RE1
PROJECT TE-22
TERREBONNE PARISH, LOUISIANA

NOTE:
The proposed bulkhead shall not
be attached to the existing
bulkhead. It shall be fit flush
with the existing bulkhead.

CONTRACTOR SHALL SAW CUT THIS
8'x20' PANEL AS NECESSARY IN ORDER
to fit sitting around bulkhead

PROPOSED ARTICULATED MATS
GEOTEXTILE FABRIC (3 REDS)
(SLUMINAR MATS, 8'x20'x4.5" THICK)
OR APPROVED EQUAL

REDS, 3.5"x4.5"x2'-3" LONG GALE BOLTS W/ REDS
WASHERS (TYP. EACH PLUNGIN)

REDS, 3.5"x4.5"x8'-8" LONG GALE BOLTS W/ REDS
WASHERS (TYP.)

10'-0"

10'-0"

10'-0"

10'-0"

10'-0"

8'-0"

6'-0"

8'x12 TIMBER CAP

PROPOSED NORTHSTAR 3100 VINYL
SHEET PILE BULKHEAD OR APPROVED
EQUAL, SHALL BE APPROVED
BY PROJECT ENGINEER

2"x8'x18' long CREOSOTE TIMBER
WHALER (TYP.)

EXISTING BULKHEAD

EX. GRADE

EX. 4" GALV. PILE CAP

PROPOSED TIMBER PLUNGING (TYP.)

PROPOSED VINYL SHEET PILE BULKHEAD CLOSURE

DETAIL OF SHEET METAL PILE COVER
(TYPICAL ALL PILES)
NO SCALE

SECTION "A"-"A"
SCALE 1/4" = 1'-0"
SEE SHEET 8

AS BUILT
POINT AU FER ISLAND - BREACH REPAIRS
PROJECT TE-22
TERREBONNE PARISH, LOUISIANA

AS BUILT NOTE:
AS BUILT TOTAL FOR RIPRAMP FOR THIS SITE IS 325 TONS

ARTICULATED MAT ON GEOTEXTILE FABRIC (A REED)

PROPOSED 250 T. CLASS
STONE RIPRAMP

EXISTING RIPRAMP TO BE REMOVED
(DIST 250 CLASS)

ARTICULATED MAT ON GEOTEXTILE FABRIC (A REED)

EXISTING RIPRAMP TO BE REMOVED
(DIST 250 CLASS)

NOTE:
ALL TOPOGRAPHY IS APPROXIMATE

SCALE: 1" = 10'

NOTE:
1. HORIZONTAL CONTROL IS BASED ON NAV 83 - LOUISIANA
SOUTH ZONE (1702) FEET
VERTICAL CONTROL IS BASED ON NAV 88 IN FEET

GENERAL NOTES:
1. PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL BE RESPONSIBLE
FOR THE LOCATION OF ANY SUB-SURFACE PIPELINE OR STRUCTURES THAT
MAY BE AT OR NEAR EACH SITE. CONTRACTOR SHALL WORK CLOSER
WITH MUDDY OR SANDY SUBSTRATE. CONTRACTOR SHALL REMOVE
ALL EGRET NESTING MATERIAL FROM ELCIS AREA. CONTRACTOR SHALL
CONTACT LOUISIANA ONE CALL 72 HOURS PRIOR
TO CONSTRUCTION AT 1-888-777-4000.
2. SEE SHEET 2 FOR ADDITIONAL GENERAL AND TECHNICAL NOTES.

AS BUILT

DRAWING PLOTTED
AT HALF-SCALE

SCALE: SHOWN

SHEET NO. 8 of 8