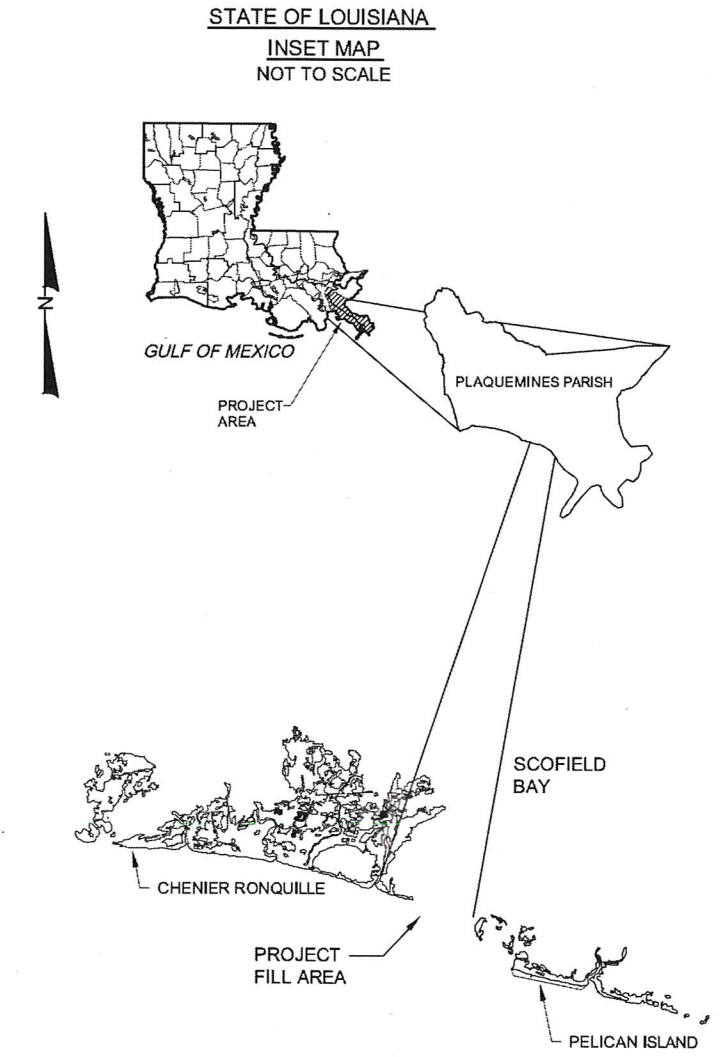
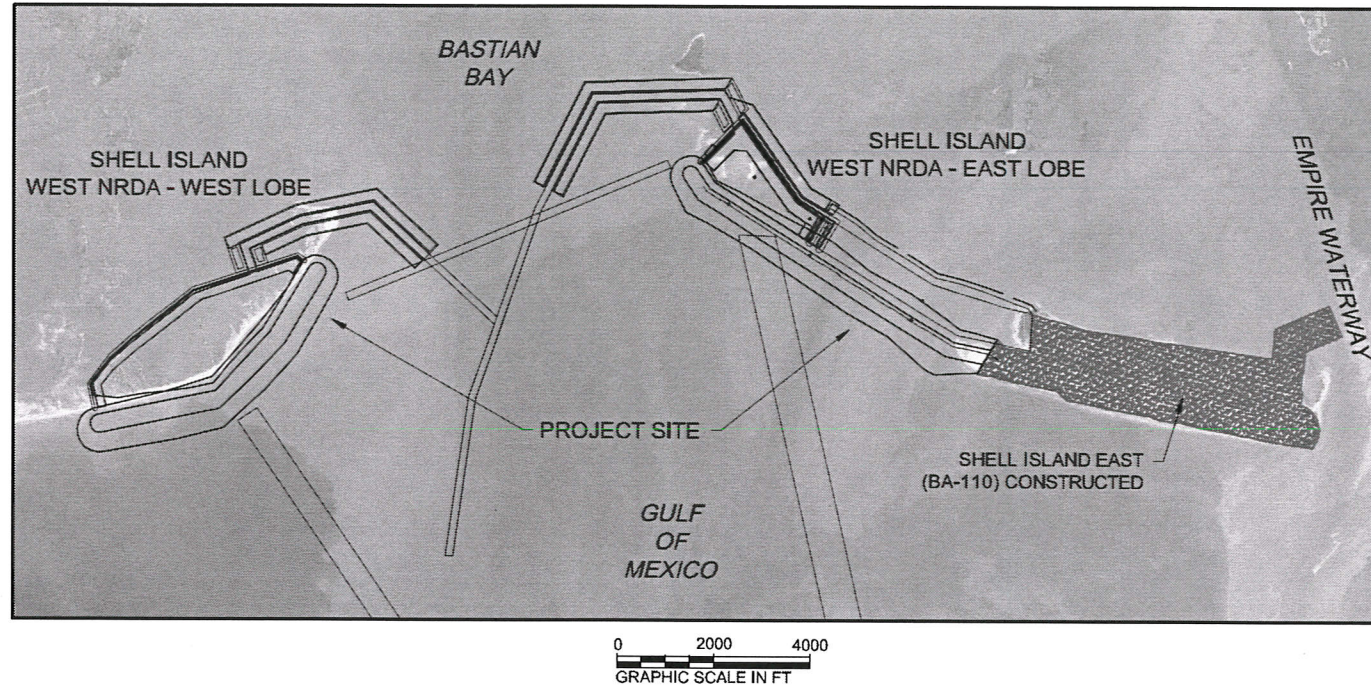


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**STATE OF LOUISIANA  
COASTAL PROTECTION AND RESTORATION  
AUTHORITY**

**SHELL ISLAND WEST NRDA  
RESTORATION PROJECT  
(BA-111) PLAQUEMINES PARISH, LOUISIANA**

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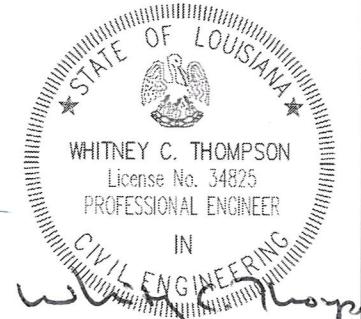


*[Signature]*  
CHIEF - ENGINEERING DIVISION

*[Signature]*  
ENGINEER MANAGER

*[Signature]*  
PROJECT ENGINEER

*[Signature]*  
ENGINEER OF RECORD



LICENSURE CLASSIFICATION  
MAJOR CLASSIFICATION:  
HEAVY CONSTRUCTION

1	10/10/13	CPRA Comments	DS	<b>CB&amp;I COASTAL PLANNING &amp; ENGINEERING, INC.</b> 2481 N.W. BOCA RATON BOULEVARD BOCA RATON, FLORIDA 33431 PH. (561) 391-8102 FAX (561) 391-9116 C.O.A. FL #4028 C.O.A. LA #2531 www.CBICOM	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 DRAWN BY: GK DESIGNED BY: WT	SHELL ISLAND WEST NRDA RESTORATION PROJECT STATE PROJECT NUMBER: BA-111	TITLE SHEET
REV.	DATE	DESCRIPTION	BY			FEDERAL PROJECT NUMBER: APPROVED BY: GT	DATE: 02/20/15 SHEET 1 OF 70

**GENERAL NOTES:**

- ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) U.S. SURVEY FEET (FEET), GEOID 2009. ALL HORIZONTAL COORDINATES ARE GIVEN IN THE NORTH AMERICAN DATUM OF 1983 (NAD83, LOUISIANA STATE PLANE SOUTH ZONE) U.S. SURVEY FEET (FEET). SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEY MONUMENT DATA SHEETS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NAVIGATING FROM A NAVIGABLE WATER BODY TO THE PROJECT AREA. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR NAVIGATING WITHIN THE LIMITS OF THE PROJECT PLAN AREA AND EXCAVATION ONLY WITHIN THE LIMITS OF THE ACCESS AND BORROW CHANNELS. THE CPRA PROJECT ENGINEER OR REPRESENTATIVE SHALL HAVE THE RIGHT TO MONITOR THE EQUIPMENT LOCATION DURING CONSTRUCTION.
- ALL EQUIPMENT SHALL BE FLOATING AT ALL TIMES DURING TRANSIT TO AND FROM THE PROJECT SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING LANDOWNERS AND PIPELINE AND UTILITY OPERATORS 10 WORKING DAYS PRIOR TO MOBILIZATION. WITHIN THE BEACH/DUNE AND MARSH FILL AREA, ALL PIPELINES AND UNDERGROUND UTILITIES SHALL BE MARKED WITH BUOYS OR FLAGGED STAKES DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CLEARANCES FROM THE PIPELINES SET FORTH IN THE PLAN DRAWINGS OR IN THE BID DOCUMENTS. SEE SP-7 "LANDOWNER AND LEASEHOLDER REQUIREMENTS" AND TS-22.5 "SUBMERGED LINE APPROVALS." NO EXCAVATION IS ALLOWED WITHIN 50 FEET OF A PIPELINE UNLESS OTHERWISE STIPULATED IN THE AGREEMENT. THE CONTRACTOR SHALL NOT ANCHOR OR EXCAVATE WITHIN 500 FEET OF ANY PIPELINE OR TRANSMISSION LINE WITHIN THE MISSISSIPPI RIVER. THE FOLLOWING IS A LIST OF UTILITIES AND PIPELINE OPERATORS KNOWN TO HAVE PIPELINES IN THE VICINITY. PIPELINE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATIONS. THE OWNER IS NOT LIABLE FOR EXACT LOCATIONS. THE CONTRACTOR MUST CALL LOUISIANA ONE CALL AT 1-800-272-3020 AT LEAST FIVE (5) WORKING DAYS PRIOR TO MOBILIZATION.

COLUMBIA GULF TRANSMISSION (NISOURCE)  
CONTACT: DARREN DUHON  
PHONE: (337)266-4673

EXXON PIPELINE COMPANY  
CONTACT: MIKE BELL  
PHONE: (281)654-1073

CONTACT: RYAN McWHORTER  
PHONE: (281)925-3780

GULF SOUTH PIPELINE COMPANY, LP  
CONTACT: DOUG ARNOLD  
PHONE: (985)872-5043 EXT. 203

MIDEAST GAS SYSTEM, INC. (C/O KJ COMPANY)  
CONTACT: JO BETH TAYLOR  
PHONE: (281)872-3100

OGS PIPELINE  
CONTACT: TIM VAN ACKEREN  
PHONE: (512)610-5100

TENNESSEE GAS PIPELINE COMPANY  
CONTACT: RICK SELLERS  
PHONE: (337)738-6144

WESTFIELD OIL AND GAS, INC.  
CONTACT: ERNIE F. GOUGE

- PLANS AND BID DOCUMENTS ARE COMPLEMENTARY; WHAT IS REQUIRED IN ONE IS AS 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.
- FILL AREA SURVEY ELEVATIONS SHOWN ON THE PLANS ARE BASED ON SURVEYS PERFORMED IN OCTOBER 2014 BY CB&I. AN UPDATED PRE-CONSTRUCTION SURVEY WILL BE PERFORMED AS PART OF THIS CONTRACT. SEE TS-2, TS-31, TS-32, TS-33, TS-34 AND TS-35.
- THE ALIGNMENTS AND CONSTRUCTION VOLUMES MAY BE REVISED BY THE ENGINEER AT THE TIME OF CONSTRUCTION TO REFLECT CHANGES IN FIELD CONDITIONS.
- ANY DAMAGE CAUSED BY THE CONTRACTOR 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.
- MEAN HIGH WATER (MHW) AND MEAN LOW WATER (MLW) ELEVATIONS ARE BASED ON THE TIDE STATION AT GRAND ISLE, LOUISIANA.

- THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY IN ALL AREAS OF EXCAVATION AND OTHER WORK THAT MAY POTENTIALLY DAMAGE OR INTERFERE WITH EXISTING INFRASTRUCTURE, PRIOR TO ANY WORK. LOCATION OF INFRASTRUCTURE (PIPELINES, WELL HEADS, ETC.) ARE PROVIDED IN THE CONTRACT DOCUMENTS FOR INFORMATIONAL PURPOSES ONLY. SEE TS-33 PRE-CONSTRUCTION MAGNETOMETER SURVEY.
- THE CONTRACTOR SHALL NOTE THAT BAYS, WATER BOTTOMS, CREEKS, AND PONDS IN THE VICINITY OF THE PROJECT MAY INCLUDE PUBLICLY-ISSUED AND PRIVATELY-ISSUED LEASES FOR THE CULTIVATION AND HARVEST OF COMMERCIAL FISHERY RESOURCES. THE CONTRACTOR SHALL CONDUCT ALL ASPECTS OF ITS OPERATION TO AVOID ANY AND ALL IMPACTS TO SUCH LEASES. THE CONTRACTOR MAY NOT CONSTRUCT WITHIN 150 FEET OF A PUBLICLY-ISSUED OR PRIVATELY-ISSUED LEASE.
- UPON COMPLETION OF THE PROJECT, THE ENGINEER MAY ALLOW THE CONTRACTOR TO LEAVE THE PRIMARY DIKE IN PLACE. THE CONTRACTOR SHALL EXERCISE CARE TO MAINTAIN THE PRIMARY DIKES AT THE DESIGN ELEVATION DURING THE PROJECT AND SHALL PREVENT ANY BREACHES OF THE DIKES FOR THE DURATION OF THE PROJECT. THE CPRA MAY REQUEST SOME LOCALIZED DIKE DEGRADATION AT THE END OF THE PROJECT.
- UPON COMPLETION OF THE PROJECT, THE CONTRACTOR WILL BE REQUIRED TO GRADE MATERIAL PLACED IN THE REHANDLING AND DISPOSAL AREAS TO AN ELEVATION NOT TO EXCEED +3.0 FEET, NAVD88.
- UPON COMPLETION OF THE PROJECT, THE CONTRACTOR WILL BE REQUIRED TO GRADE MATERIAL PLACED IN THE ACCESS CHANNEL SPOIL AREAS TO WITHIN 0.5 FEET OF THE EXISTING ELEVATION PRIOR TO CONSTRUCTION.
- AVOIDING IMPACTS TO EXISTING VEGETATION: FOR PROTECTION OF EXISTING VEGETATION, ACCESS TO OR MOVEMENT ACROSS THE ISLAND OUTSIDE OF THE DEFINED PROJECT AREA SHALL BE PROHIBITED WITHIN VEGETATED AREAS FOR ALL PERSONNEL AND EQUIPMENT, UNLESS REQUESTED IN WRITING AND APPROVED BY THE ENGINEER. VEGETATED AREAS SHALL NOT BE USED FOR EQUIPMENT, PERSONNEL OR MATERIAL ACCESS OR STORAGE. THE DREDGED FILL SHALL BE DISCHARGED WITHIN THE CONTAINED AREAS IN A MANNER THAT WILL MINIMIZE OVERFLOW OF THE DREDGED MATERIAL FROM THE BOUNDS OF ITS PLACEMENT AREA.
- THE CONTRACTOR SHALL MOBILIZE A VEHICLE CAPABLE OF TRANSVERSING THE PROJECT AREA ON A TWICE DAILY BASIS TO PATROL FOR NESTING BIRDS. THIS TASK IS REQUIRED STARTING APRIL 15 REGARDLESS OF CONSTRUCTION AND MUST CONTINUE THROUGH THE NESTING SEASON OR UNTIL FINAL ACCEPTANCE OF THE PROJECT.
- BEACH/DUNE FILL SHALL NOT EXCEED A SILT CONTENT OF 20% WITH A MINIMUM MEAN GRAIN SIZE OF 0.09 mm AS MEASURED ON THE BEACH FOLLOWING PLACEMENT.
- BEACH/ DUNE FILL BORROW AREAS ALLOCATED FOR THE PROJECT ARE LOCATED IN THE MISSISSIPPI RIVER. HYDRAULIC DREDGING OPERATIONS SHALL REQUIRE THE CONTRACTOR MARK DREDGING EQUIPMENT AND WORK AREAS WITH AIDS AND COORDINATE WITH THE UNITED STATES COAST GUARD (USCG) AND MARITIME NAVIGATION SAFETY ASSOCIATION (MNSA) SO AS TO AVOID IMPEDING OR OBSTRUCTING NAVIGATION. DURING MOBILIZATION, CONSTRUCTION, AND DEMOBILIZATION, AN OFFICER SHALL BE REQUIRED TO BE PRESENT ONBOARD THE DREDGE TO MONITOR ACTIVITIES, IMPLEMENT OPERATIONAL SAFETY OF ALL VESSELS, AND MAINTAIN VESSEL-TO-VESSEL COMMUNICATIONS. SEE SP-23 COMMUNICATION PLAN.
- THE CONTRACTOR SHALL FOLLOW THE CONVEYANCE CORRIDOR AND SHALL NOT, AT ANY TIME, TRAVEL ON EXISTING MARSH OR VEGETATED WETLANDS UNLESS SPECIFIED IN THESE PLANS OR WRITTEN DIRECTION FROM THE ENGINEER. REFER TO THE SPECIFICATIONS FOR EQUIPMENT AND CONSTRUCTION ACCESS.
- CONVEYANCE CORRIDOR ELEVATIONS SHOWN ON THE PLANS ARE BASED ON SURVEYS PERFORMED BY:  
  
STATION 0+00 TO 04+50 - U.S. ARMY CORPS OF ENGINEERS, 2010. (CHECKED X-SECTION.DGN FILE)  
STATION 04+50 TO 08+20 - HYDROTERRA TECHNOLOGIES, LLC., 2012  
STATION 08+20 TO 19+00 - SJB GROUP, LLC., 2008  
STATION 18+00 TO 22+00 - HYDROTERRA TECHNOLOGIES, LLC., 2012  
STATION 22+00 TO 35+20 - SJB GROUP, LLC., 2008  
STATION 35+20 TO 41+30 - HYDROTERRA TECHNOLOGIES, LLC., 2012  
STATION 41+30 TO 60+00 - SJB GROUP, LLC., 2008  
STATION 60+00 TO 44+25 - HYDROTERRA TECHNOLOGIES, LLC., 2012
- SEE APPENDICES OF THE SPECIFICATIONS FOR CONVEYANCE CORRIDOR SURVEYS BY HYDROTERRA TECHNOLOGIES, LLC. AND SJB GROUP, LLC.

**BENCHMARK CONTROL POINT**

MONUMENT	NORTHING	EASTING	ELEVATION
BA-SCOFIELD-2	278,985.57	3,832,299.78	4.27'
BA40-SM-01	315,642.60	3,854,052.36	1.86'
BA40-SM-02	302,064.70	3,842,736.23	2.02'
BA40-SM-03	276,699.08	3,845,115.03	3.63'

NOTE: SURVEY MONUMENTS ARE LOCATED EAST OF EMPIRE WATERWAY AND NOT WITHIN THE PROJECT AREA SHOWN IN THE PLANS. COORDINATES ARE IN STATE PLANE, NAD 1983, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET. ELEVATIONS ARE REFERENCED TO NAVD 1988, U.S. SURVEY FEET, GEOID 2009.

**EAST LOBE BASELINE**

BEND POINT	EASTING	NORTHING
P.O.B.	3821143.9	293006.3
PI #1	3821222.5	291952.3
PI #2	3822092.3	290692.9
PI #3	3825460.1	286386.9
P.O.E.	3825977.0	286151.2

NOTE: COORDINATES ARE IN STATE PLANE, NAD 1983, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.

**WEST LOBE BASELINE**

BEND POINT	EASTING	NORTHING
P.O.B.	3806722.8	292829.3
PI #1	3810167.7	292210.5
P.O.E.	3814526.6	294660.0

NOTE: COORDINATES ARE IN STATE PLANE, NAD 1983, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.

**WEST LOBE BASELINE**

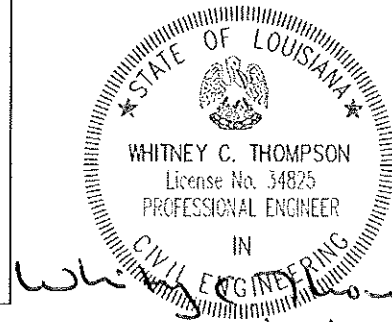
TIDAL DATUM	ELEVATION
MEAN HIGHER HIGH WATER (MHHW)	1.71
MEAN HIGH WATER (MHW)	1.70
MEAN SEA LEVEL (MSL)	1.18
MEAN TIDE LEVEL (MTL)	1.18
MEAN LOW WATER (MLW)	0.66
MEAN LOWER LOW WATER (MLLW)	0.65

SOURCE: NOAA (2012), <http://www.co-ops.nos.noaa.gov/benchmarks/8761724.html>.  
NOTE: ELEVATIONS ARE REFERENCED TO NAVD 1988, U.S. SURVEY FEET, GEOID 2009.

**SUMMARY OF ESTIMATED QUANTITIES**

ITEM	DESCRIPTION	UNIT	ESTIMATED QUANTITY
<b>BASE BID</b>			
1	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	1
2	PRE-CONSTRUCTION SURVEYS	LUMP SUM	1
3	AS-BUILT SURVEYS	LUMP SUM	1
4	SAND FILL	CUBIC YARD	3,390,300
5	MARSH FILL	CUBIC YARD	1,107,200
6	PRIMARY CONTAINMENT DIKES	LINEAR FEET	5,920
7	SAND FENCING	LINEAR FEET	9,900
8	SETTLEMENT PLATES	EACH	12
9	TURBITITY CONTROL STRUCTURE - SAND FLAT	LUMP SUM	1
10	PIPELINE CONVEYANCE CORRIDOR CROSSINGS - MISSISSIPPI RIVER FILL AREA	LUMP SUM	1
11	NAVIGATIONAL CROSSINGS	EACH	5
12	BOOSTER PUMP LOCATIONS	LUMP SUM	1
13	SIGNAGE	LUMP SUM	1
14	SIGNAGE REMOVAL	LUMP SUM	1
<b>ADDITIVE ALTERNATE 1</b>			
15	SAND FILL	CUBIC YARD	704,900
16	SAND FENCING	LINEAR FEET	1,350
17	SETTLEMENT PLATES	EACH	2
18	TURBITITY CONTROL STRUCTURE - SAND FLAT	LUMP SUM	1
<b>ADDITIVE ALTERNATE 2</b>			
19	SAND FILL	CUBIC YARD	778,600
20	SAND FENCING	LINEAR FEET	3,150
21	SETTLEMENT PLATES	EACH	1
<b>ADDITIVE ALTERNATE 3</b>			
22	SAND FILL	CUBIC YARD	-24,000
23	MARSH FILL	CUBIC YARD	571,600
24	PRIMARY CONTAINMENT DIKES	LINEAR FEET	4,580
25	SETTLEMENT PLATES	EACH	3

NOTE: WHERE THE QUANTITY OF WORK WITH RESPECT TO ANY ITEM IS COVERED BY A UNIT PRICE, SUCH QUANTITIES ARE ESTIMATED QUANTITIES TO BE USED WHEN COMPARING BIDS AND THE RIGHT IS RESERVED BY THE OWNER TO INCREASE/DECREASE SUCH QUANTITIES BY UP TO 25% TO COMPLETE THE WORK AND/OR REMAIN WITHIN THE FUNDING LIMITS WITHOUT A CHANGE IN UNIT COST. THE OWNER AND CONTRACTOR MAY NEGOTIATE AN ALTERNATE UNIT PRICE IF THE INCREASE/DECREASE IN QUANTITY EXCEEDS 25% OF THE BID QUANTITY ESTIMATE.



1	10/10/13	CPRA Comments	DS	<p><b>CB&amp;I COASTAL PLANNING &amp; ENGINEERING, INC.</b> 2481 N.W. BOCA RATON BOULEVARD BOCA RATON, FLORIDA 33431 PH. (561) 391-8102 FAX (561) 391-9116  C.O.A. FL #4028 C.O.A. LA #2531 www.CBICOM</p>	<p><b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801</p>	<p>SHELL ISLAND WEST NRDA RESTORATION PROJECT</p>	<p>GENERAL NOTES</p>
REV.	DATE	DESCRIPTION	BY	<p>DRAWN BY: GK</p>	<p>DESIGNED BY: WT</p>	<p>STATE PROJECT NUMBER: BA-111</p> <p>FEDERAL PROJECT NUMBER:</p> <p>APPROVED BY: GT</p>	<p>DATE: 02/20/15</p> <p>SHEET 2 OF 70</p>

WEST LOBE

EAST LOBE

MARSH PROFILES

BASILINE STATION	EASTING	NORTHING	AZIMUTH	PERPENDICULAR DISTANCE TO NEXT STATION (FT)
10+00	3807707.1	292652.5	190.2	250.0
12+50	3807953.1	292608.3	190.2	250.0
15+00	3808199.2	292564.1	190.2	250.0
17+50	3808445.2	292519.9	190.2	250.0
20+00	3808691.3	292475.7	190.2	250.0
22+50	3808937.4	292431.5	190.2	250.0
25+00	3809183.4	292387.3	190.2	250.0
27+50	3809429.5	292343.1	190.2	250.0
30+00	3809675.5	292298.9	190.2	250.0
32+50	3809921.6	292254.7	190.2	250.0
35+00	3810167.7	292210.5	190.2	515.9
47+50	3811257.4	292822.9	150.7	250.0
50+00	3811475.3	292945.3	150.7	250.0
52+50	3811693.3	293067.8	150.7	250.0
55+00	3811911.2	293190.3	150.7	250.0
57+50	3812129.2	293312.8	150.7	250.0
60+00	3812347.1	293435.2	150.7	250.0
62+50	3812565.1	293557.7	150.7	344.7
65+95	3812885.5	293726.6	150.7	

NOTE: COORDINATES ARE IN STATE PLANE, NAD 1983, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.

MARSH AND SAND FLAT PROFILES

BASILINE STATION	EASTING	NORTHING	AZIMUTH	PERPENDICULAR DISTANCE TO NEXT STATION (FT)
5+28	3821183.2	292479.3	246.9	250.0
7+92	3821202.9	292215.8	246.9	250.0
10+57	3821222.5	291952.3	246.9	250.0
13+12	3821367.5	291742.4	246.9	250.0
15+67	3821512.4	291532.5	246.9	250.0
18+22	3821657.4	291322.6	246.9	250.0
20+77	3821802.4	291112.7	246.9	250.0
23+32	3821947.4	290902.8	246.9	250.0
25+88	3822092.3	290692.9	246.9	250.0
28+21	3822235.8	290509.4	246.9	105.9
30+53	3822379.3	290325.9	232.9	250.0
33+03	3822533.4	290129.0	232.9	250.0
35+54	3822687.4	289932.0	232.9	250.0
38+04	3822841.5	289735.1	232.9	250.0
40+54	3822995.5	289538.1	232.9	250.0
43+04	3823149.6	289341.2	232.9	250.0
45+54	3823303.6	289144.2	232.9	250.0
48+04	3823457.6	288947.3	232.9	250.0
50+54	3823611.6	288750.3	232.9	250.0
53+04	3823765.7	288553.4	232.9	250.0
55+54	3823919.7	288356.4	232.9	250.0
58+04	3824073.8	288159.5	232.9	250.0
60+54	3824227.8	287962.5	232.9	250.0
63+04	3824381.8	287765.6	232.9	250.0
65+54	3824535.8	287568.6	232.9	250.0
68+04	3824689.9	287371.7	232.9	250.0
70+54	3824843.9	287174.7	232.9	250.0
73+04	3824998.0	286977.8	232.9	250.0
75+54	3825152.0	286780.8	232.9	250.0
78+04	3825306.1	286583.9	232.9	250.0
80+54	3825460.1	286386.9	232.9	250.0
83+38	3825718.6	286269.1	232.9	250.0
86+22	3825977.0	286151.2	232.9	250.0

NOTE: COORDINATES ARE IN STATE PLANE, NAD 1983, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.

BEACH PROFILES

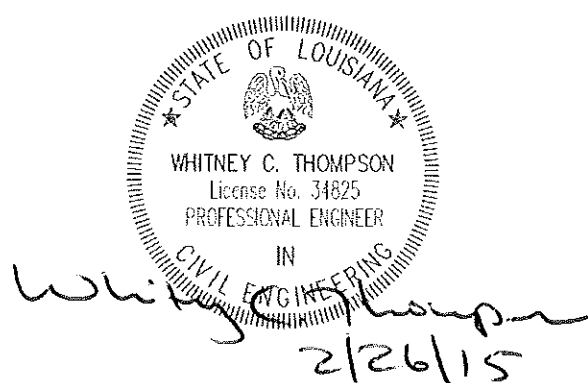
BASILINE STATION	EASTING	NORTHING	AZIMUTH	PERPENDICULAR DISTANCE TO NEXT STATION (FT)
1+29	3821153.5	292877.6	246.9	378.0
5+28	3821183.2	292479.3	246.9	125.0
6+60	3821193.0	292347.6	246.9	125.0
7+92	3821202.9	292215.8	246.9	125.0
9+24	3821212.7	292084.1	246.9	125.0
10+57	3821222.5	291952.3	246.9	125.0
11+85	3821295.0	291847.4	246.9	125.0
13+12	3821367.5	291742.4	246.9	125.0
14+40	3821439.9	291637.4	246.9	125.0
15+67	3821512.4	291532.5	246.9	125.0
16+95	3821584.9	291427.6	246.9	125.0
18+22	3821657.4	291322.6	246.9	125.0
19+50	3821729.9	291217.6	246.9	125.0
20+77	3821802.4	291112.7	246.9	125.0
22+05	3821874.9	291007.8	246.9	125.0
23+32	3821947.4	290902.8	246.9	125.0
24+60	3822019.8	290797.8	246.9	125.0
25+88	3822092.3	290692.9	246.9	112.5
27+05	3822164.1	290601.1	246.9	112.5
28+21	3822235.8	290509.4	246.9	112.5
29+37	3822307.5	290417.7	246.9	116.5
30+53	3822379.3	290325.9	232.9	125.0
31+78	3822456.3	290227.4	232.9	125.0
33+03	3822533.4	290129.0	232.9	125.0
34+28	3822610.4	290030.5	232.9	125.0
35+54	3822687.4	289932.0	232.9	125.0
36+79	3822764.4	289833.5	232.9	125.0
38+04	3822841.5	289735.1	232.9	125.0
39+29	3822918.5	289636.6	232.9	125.0
40+54	3822995.5	289538.1	232.9	125.0
41+79	3823072.5	289439.6	232.9	125.0
43+04	3823149.6	289341.2	232.9	125.0
44+29	3823226.6	289242.7	232.9	125.0
45+54	3823303.6	289144.2	232.9	125.0
46+79	3823380.6	289045.7	232.9	125.0
48+04	3823457.6	288947.3	232.9	125.0
49+29	3823534.6	288848.8	232.9	125.0
50+54	3823611.6	288750.3	232.9	125.0
51+79	3823688.6	288651.8	232.9	125.0
53+04	3823765.7	288553.4	232.9	125.0
54+29	3823842.7	288454.9	232.9	125.0
55+54	3823919.7	288356.4	232.9	125.0
56+79	3823996.7	288257.9	232.9	125.0
58+04	3824073.8	288159.5	232.9	125.0
59+29	3824150.8	288061.0	232.9	125.0
60+54	3824227.8	287962.5	232.9	125.0
61+79	3824304.8	287864.0	232.9	125.0
63+04	3824381.8	287765.6	232.9	125.0
64+29	3824458.8	287667.1	232.9	125.0
65+54	3824535.8	287568.6	232.9	125.0
66+79	3824612.8	287470.1	232.9	125.0
68+04	3824689.9	287371.7	232.9	125.0
69+29	3824766.9	287273.2	232.9	125.0
70+54	3824843.9	287174.7	232.9	125.0
71+79	3824920.9	287076.2	232.9	125.0
73+04	3824998.0	286977.8	232.9	125.0
74+29	3825075.0	286879.3	232.9	125.0
75+54	3825152.0	286780.8	232.9	125.0
76+79	3825229.0	286682.3	232.9	125.0
78+04	3825306.1	286583.9	232.9	125.0

NOTE: COORDINATES ARE IN STATE PLANE, NAD 1983, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.

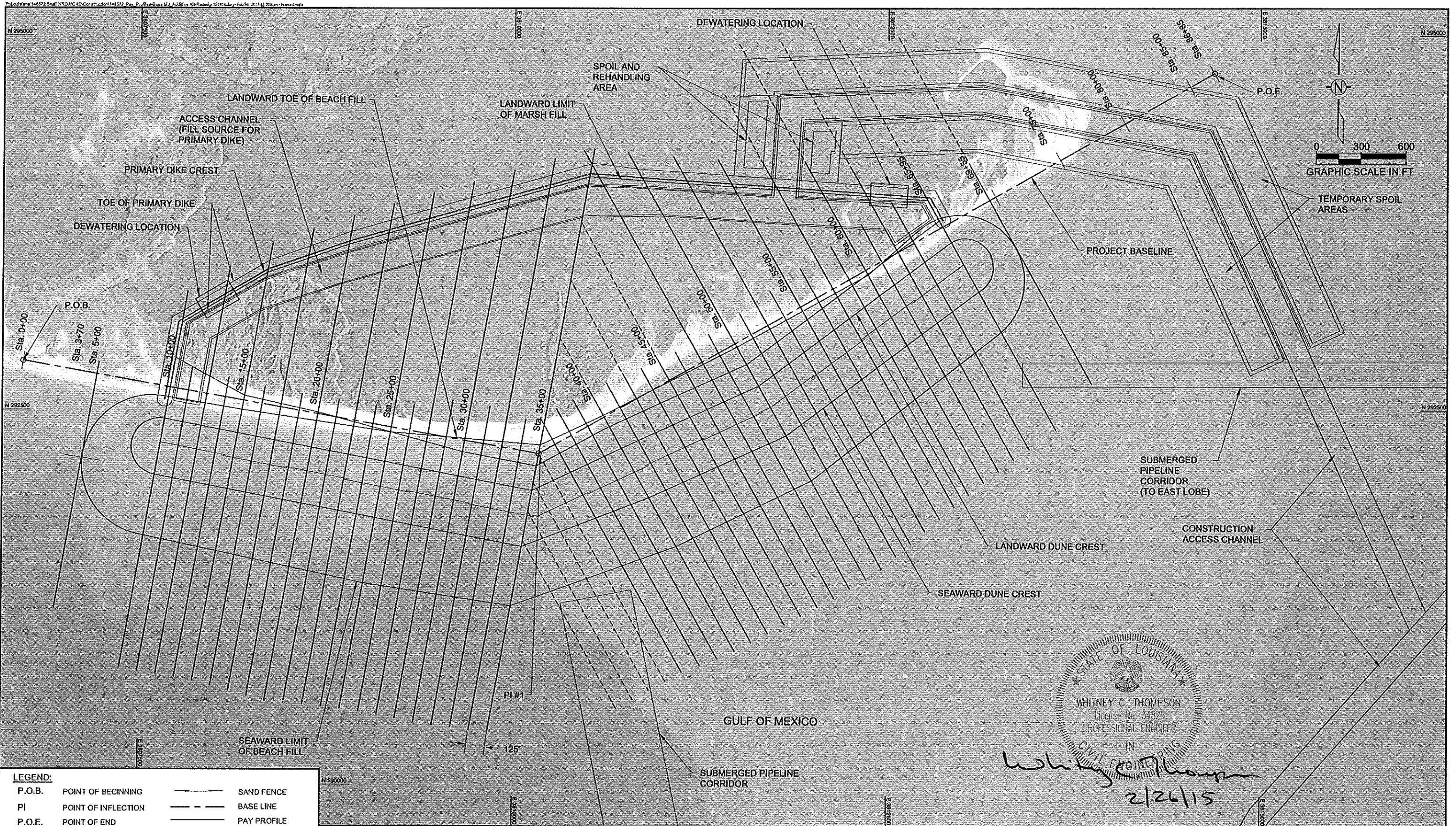
BEACH PROFILES

BASILINE STATION	EASTING	NORTHING	AZIMUTH	PERPENDICULAR DISTANCE TO NEXT STATION (FT)
5+00	3807214.9	292740.9	190.2	500.0
10+00	3807707.1	292652.5	190.2	125.0
11+25	3807830.1	292630.4	190.2	125.0
12+50	3807953.1	292608.3	190.2	125.0
13+75	3808076.1	292586.2	190.2	125.0
15+00	3808199.2	292564.1	190.2	125.0
16+25	3808322.2	292542.0	190.2	125.0
17+50	3808445.2	292519.9	190.2	125.0
18+75	3808568.3	292497.8	190.2	125.0
20+00	3808691.3	292475.7	190.2	125.0
21+25	3808814.3	292453.6	190.2	125.0
22+50	3808937.4	292431.5	190.2	125.0
23+75	3809060.4	292409.4	190.2	125.0
25+00	3809183.4	292387.3	190.2	125.0
26+25	3809306.5	292365.2	190.2	125.0
27+50	3809429.5	292343.1	190.2	125.0
28+75	3809552.5	292321.0	190.2	125.0
30+00	3809675.5	292298.9	190.2	125.0
31+25	3809798.6	292276.8	190.2	125.0
32+50	3809921.6	292254.7	190.2	125.0
33+75	3810044.6	292232.6	190.2	125.0
35+00	3810167.7	292210.5	190.2	491.5
36+25	3810276.6	292211.7	150.7	125.0
37+50	3810385.6	292333.0	150.7	125.0
38+75	3810494.6	292394.2	150.7	125.0
40+00	3810603.6	292455.4	150.7	125.0
41+25	3810712.5	292516.7	150.7	125.0
42+50	3810821.5	292577.9	150.7	125.0
43+75	3810930.5	292639.2	150.7	125.0
45+00	3811039.5	292700.4	150.7	125.0
46+25	3811148.4	292761.6	150.7	125.0
47+50	3811257.4	292822.9	150.7	125.0
48+75	3811366.4	292884.1	150.7	125.0
50+00	3811475.3	292945.3	150.7	125.0
51+25	3811584.3	293006.6	150.7	125.0
52+50	3811693.3	293067.8	150.7	125.0
53+75	3811802.3	293129.1	150.7	125.0
55+00	3811911.2	293190.3	150.7	125.0
56+25	3812020.2	293251.5	150.7	125.0
57+50	3812129.2	293312.8	150.7	125.0
58+75	3812238.1	293374.0	150.7	125.0
60+00	3812347.1	293435.2	150.7	125.0
61+25	3812456.1	293496.5	150.7	125.0
62+50	3812565.1	293557.7	150.7	125.0
63+75	3812674.0	293618.9	150.7	219.7
65+95	3812885.5	293726.6	150.7	360.0
69+55	3813179.2	293902.8	150.7	

NOTE: COORDINATES ARE IN STATE PLANE, NAD 1983, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.



1	10/10/13	CPR Comments	DS	<b>CB&amp;I COASTAL PLANNING &amp; ENGINEERING, INC.</b> 2481 N.W. BOCA RATON BOULEVARD BOCA RATON, FLORIDA 33431 PH: (561) 391-8102 FAX: (561) 391-8116 C.O.A. FL #4028 C.O.A. LA #2531 www.CBICOM	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	<b>SHELL ISLAND WEST NRDA RESTORATION PROJECT</b>		<b>WEST AND EAST LOBE SURVEY PROFILE LOCATIONS</b>	
						STATE PROJECT NUMBER: BA-111			
						FEDERAL PROJECT NUMBER:		DATE: 02/20/15	
REV.	DATE	DESCRIPTION	BY			DRAWN BY: GK		DESIGNED BY: WT	
						APPROVED BY: GT		SHEET 3 OF 70	



**LEGEND:**

P.O.B.	POINT OF BEGINNING	———	SAND FENCE
PI	POINT OF INFLECTION	- - - - -	BASE LINE
P.O.E.	POINT OF END	—————	PAY PROFILE
		-----	REQUIRED CHECK PROFILE (NON PAY)

- NOTES:**
- COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
  - DATE OF SURROUNDING AREA IMAGERY: OCTOBER 16, 2005.
  - DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.
  - SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

1	10/10/13	CPRA Comments	DS
REV.	DATE	DESCRIPTION	BY

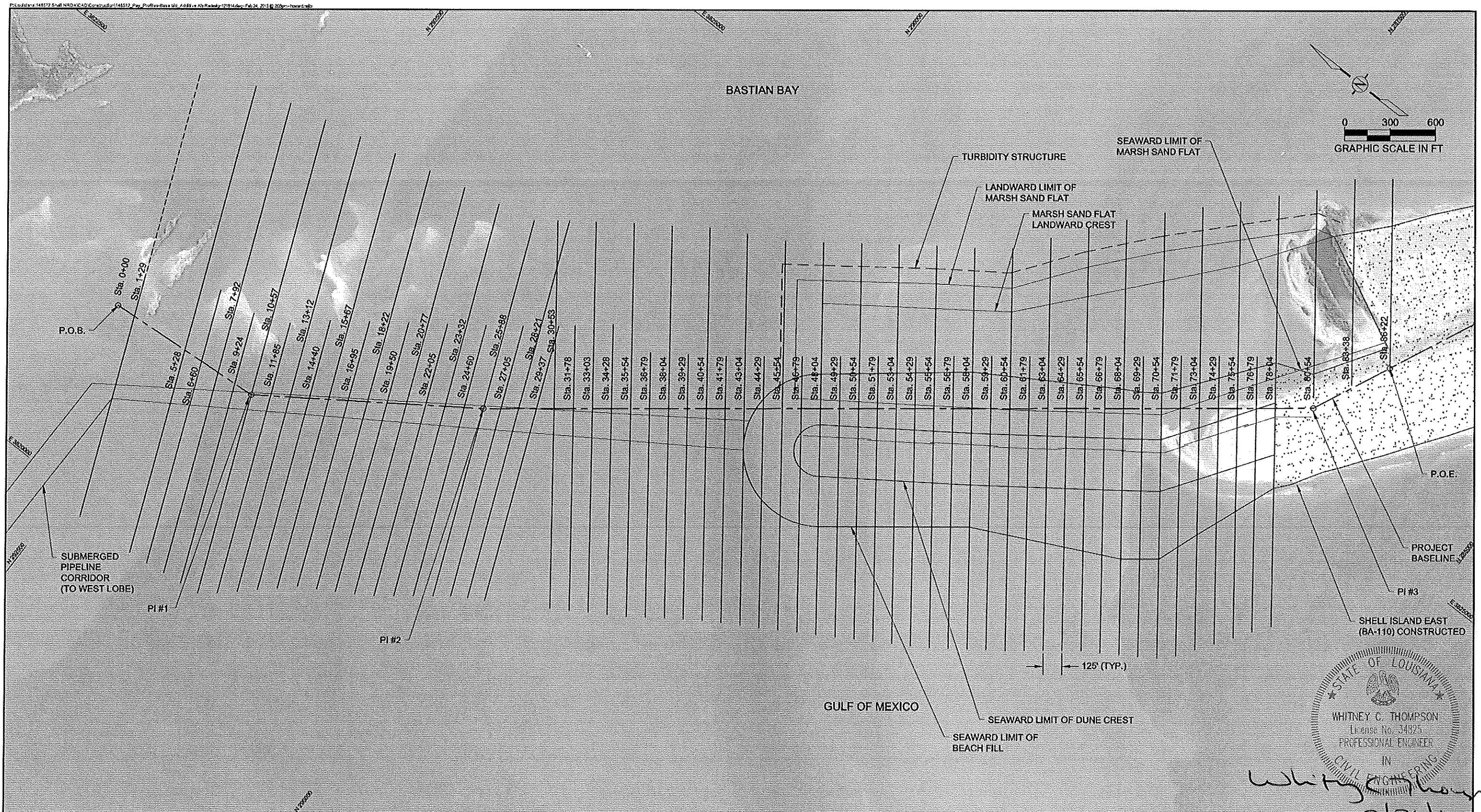
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH (561) 391-8102  
 FAX (561) 391-9116  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
 www.CBLCOM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**WEST LOBE BASE BID PROFILES PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 4 OF 70

STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 IN  
 CIVIL ENGINEERING  
*Whitney C. Thompson*  
 2/26/15



**LEGEND:**  
 P.O.B. POINT OF BEGINNING  
 PI POINT OF INFLECTION  
 P.O.E. POINT OF ENDING  
 BA-110  
 --- BASELINE  
 - - - SAND FENCE  
 - - - PAY PROFILE  
 - - - REQUIRED CHECK PROFILE

**NOTES:**  
 1. COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).  
 2. DATE OF SURROUNDING AREA IMAGERY: OCTOBER 15, 2005.  
 3. DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.  
 4. SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

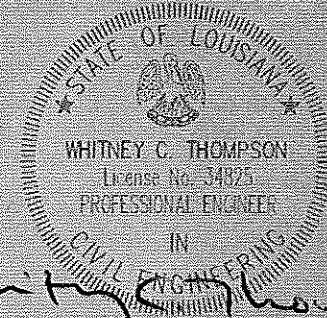
REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH (561) 391-8102  
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 C.O.A. FL #4028  
 C.O.A. LA #2531  
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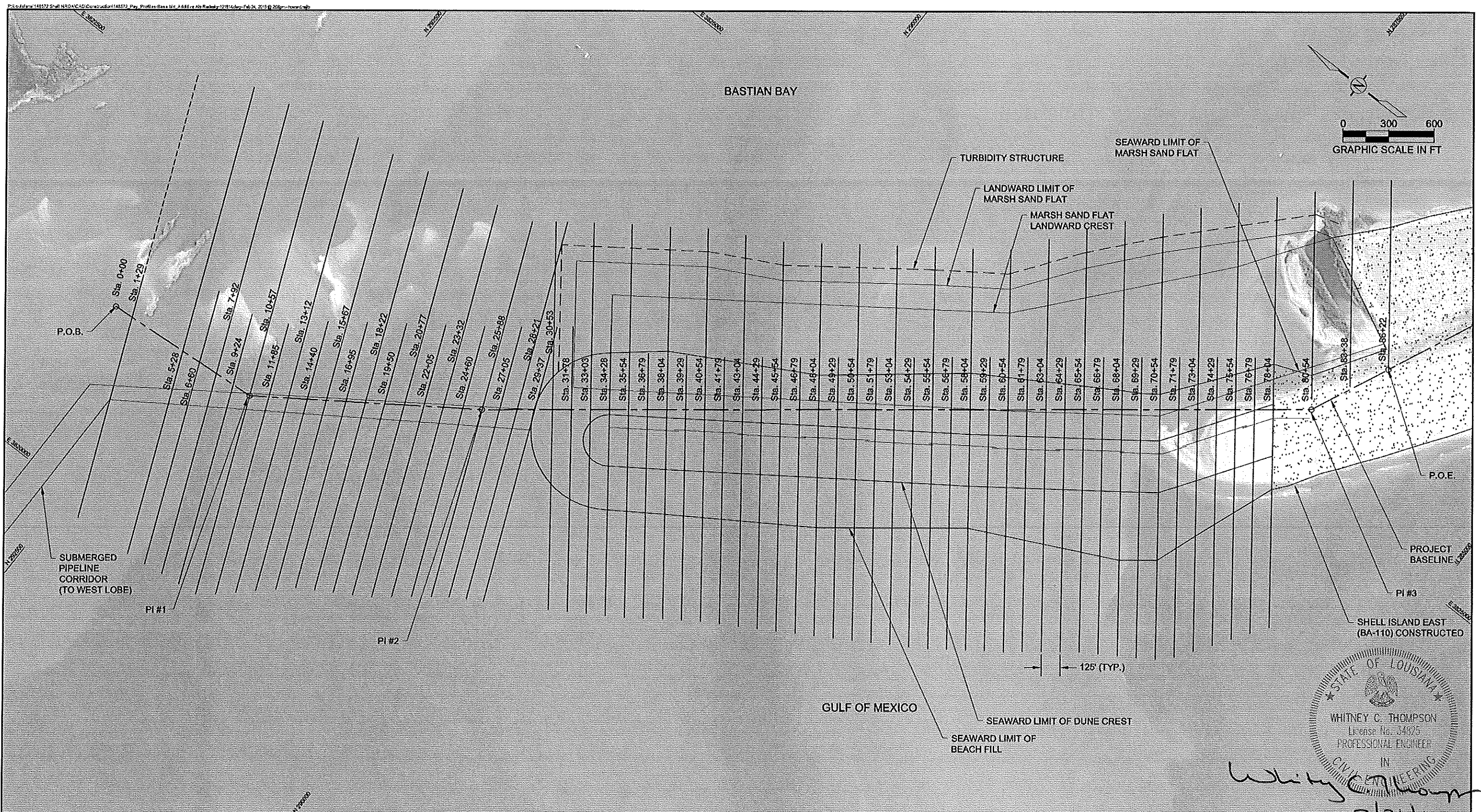
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EAST LOBE BASE BID SURVEY PROFILES PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 5 OF 70



*Whitney C. Thompson*  
 2/26/15



**LEGEND:**

P.O.B.	POINT OF BEGINNING	---	BASELINE
PI	POINT OF INFLECTION	---	SAND FENCE
P.O.E.	POINT OF ENDING	---	PAY PROFILE
	BA-110	---	REQUIRED CHECK PROFILE

**NOTES:**

- COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
- DATE OF SURROUNDING AREA IMAGERY: OCTOBER 15, 2005.
- DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.
- SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

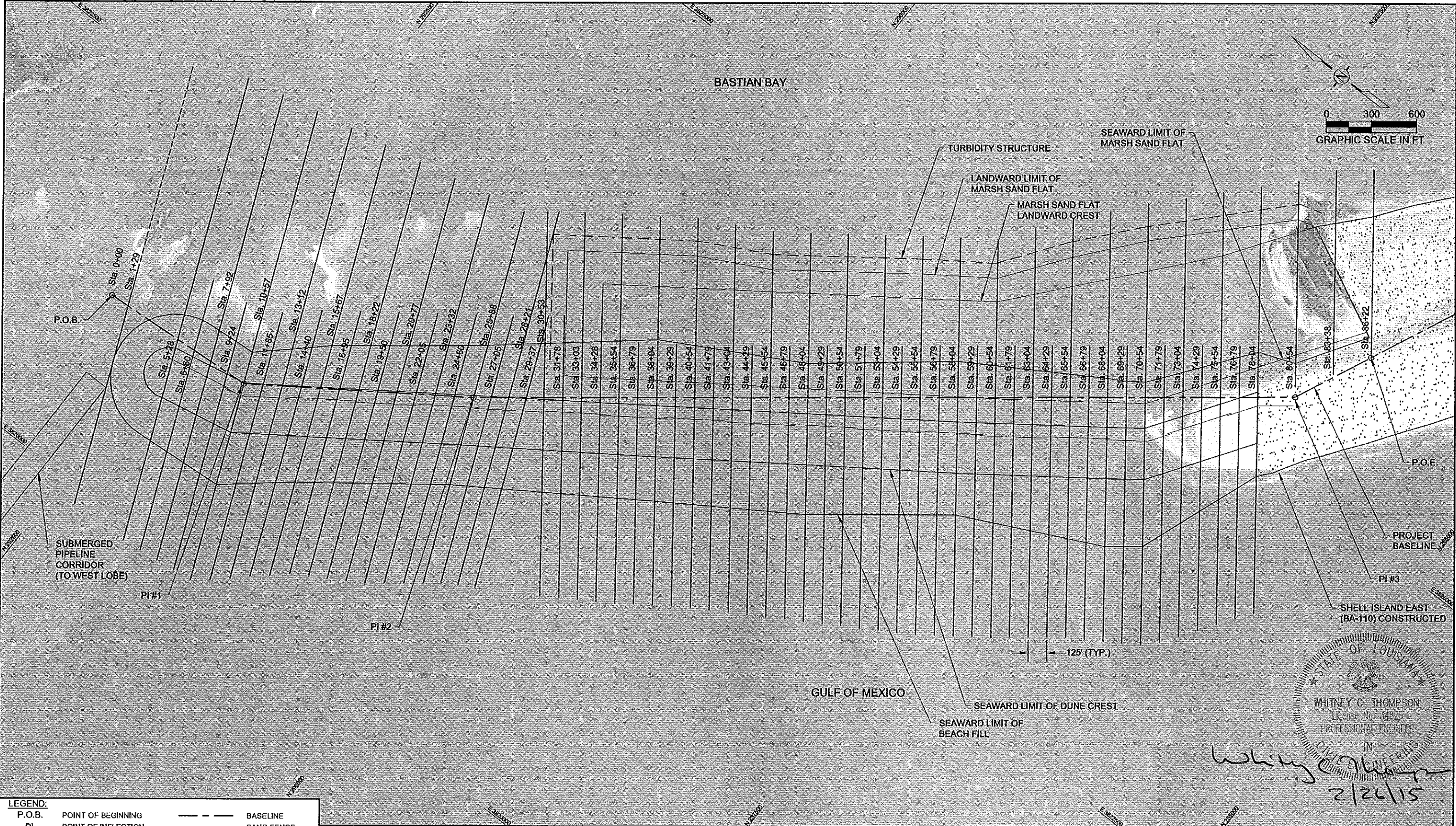
REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCCA RATON BOULEVARD  
 BOCCA RATON, FLORIDA 33431  
 PH. (561) 391-6102  
 FAX (561) 391-9116  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
 www.CB&I.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EAST LOBE BASE BID AND ADDITIVE ALTERNATE 1 PROFILES PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 6 OF 70



**LEGEND:**

P.O.B.	POINT OF BEGINNING	---	BASELINE
PI	POINT OF INFLECTION	---	SAND FENCE
P.O.E.	POINT OF ENDING	---	PAY PROFILE
BA-110	BA-110	---	REQUIRED CHECK PROFILE

**NOTES:**

- COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
- DATE OF SURROUNDING AREA IMAGERY: OCTOBER 15, 2005.
- DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.
- SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

REV.	DATE	DESCRIPTION	BY
	10/10/13	CPRA Comments	DS

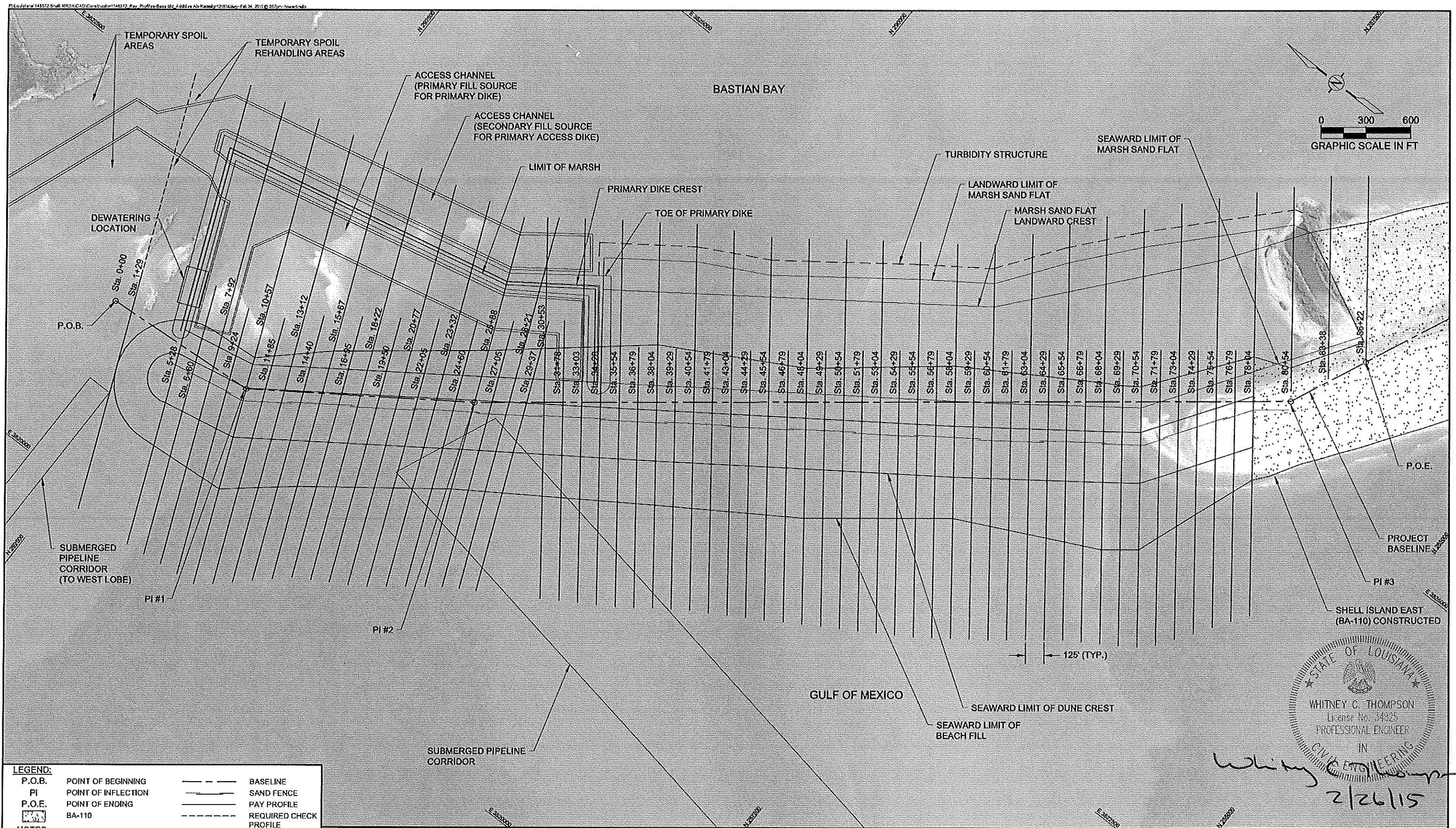
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH (561) 391-8102  
 FAX (561) 391-8116  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EAST LOBE BASE BID AND ADDITIVE ALTERNATES 1 AND 2 PROFILES PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 7 OF 70

STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 34925  
 PROFESSIONAL ENGINEER  
 IN CIVIL ENGINEERING  
*Whitney Thompson*  
 2/26/15



**LEGEND:**

P.O.B.	POINT OF BEGINNING	---	BASELINE
PI	POINT OF INFLECTION	---	SAND FENCE
P.O.E.	POINT OF ENDING	---	PAY PROFILE
BA-110		---	REQUIRED CHECK PROFILE

- NOTES:**
- COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
  - DATE OF SURROUNDING AREA IMAGERY: OCTOBER 15, 2005.
  - DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.
  - SEE SHEET 29 FOR PROJECT AREA OVERVIEW.
  - TEMPORARY SPOIL REHANDLING AREA INTERSECTS THE SECONDARY FILL SOURCE FOR THE PRIMARY DIKE. CONTRACTOR SHOULD EVALUATE PLACEMENT OF MATERIAL IN THIS AREA WITH RESPECT TO UTILIZING THE SECONDARY FILL SOURCE.

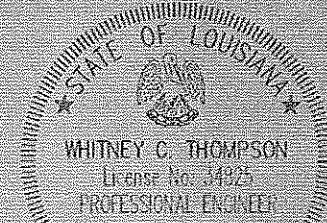
REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH. (561) 391-8102  
 FAX (561) 391-9116  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
 www.CBICOM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

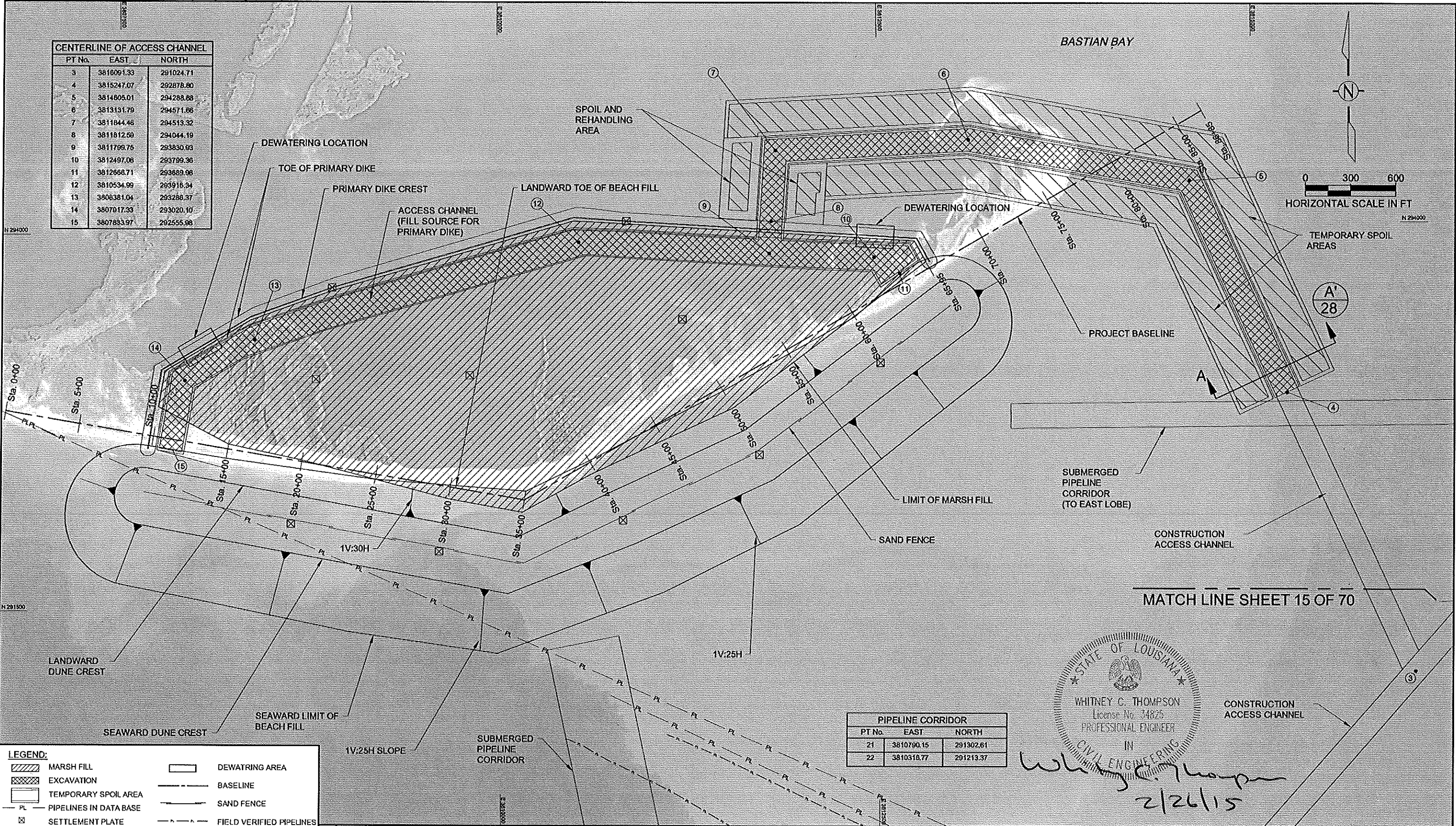
**EAST LOBE BASE BID AND ADDITIVE ALTERNATES 1, 2, AND 3 PROFILES PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 8 OF 70



*Whitney C. Thompson*  
 2/26/15



CENTERLINE OF ACCESS CHANNEL		
PT No.	EAST	NORTH
3	3816091.33	291024.71
4	3815247.07	292878.80
5	3814605.01	294288.88
6	3813131.79	294571.66
7	3811844.48	294513.32
8	3811812.60	294044.19
9	3811798.75	293830.93
10	3812497.06	293799.36
11	3812668.71	293689.98
12	3810534.99	293916.34
13	3806381.04	293286.37
14	3807017.33	293020.10
15	3807833.97	292555.98



MATCH LINE SHEET 15 OF 70

LEGEND:	
	MARSH FILL
	EXCAVATION
	TEMPORARY SPOIL AREA
	PIPELINES IN DATA BASE
	SETTLEMENT PLATE
	CENTERLINE ACCESS CHANNEL LOCATION
	DEWATERING AREA
	BASELINE
	SAND FENCE
	FIELD VERIFIED PIPELINES

- NOTES:**
- COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
  - DATE OF SURROUNDING AREA IMAGERY: OCTOBER 15, 2005.
  - DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.
  - SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH: (561) 391-8102  
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 C.O.A. FL #4028  
 C.O.A. LA #2531  
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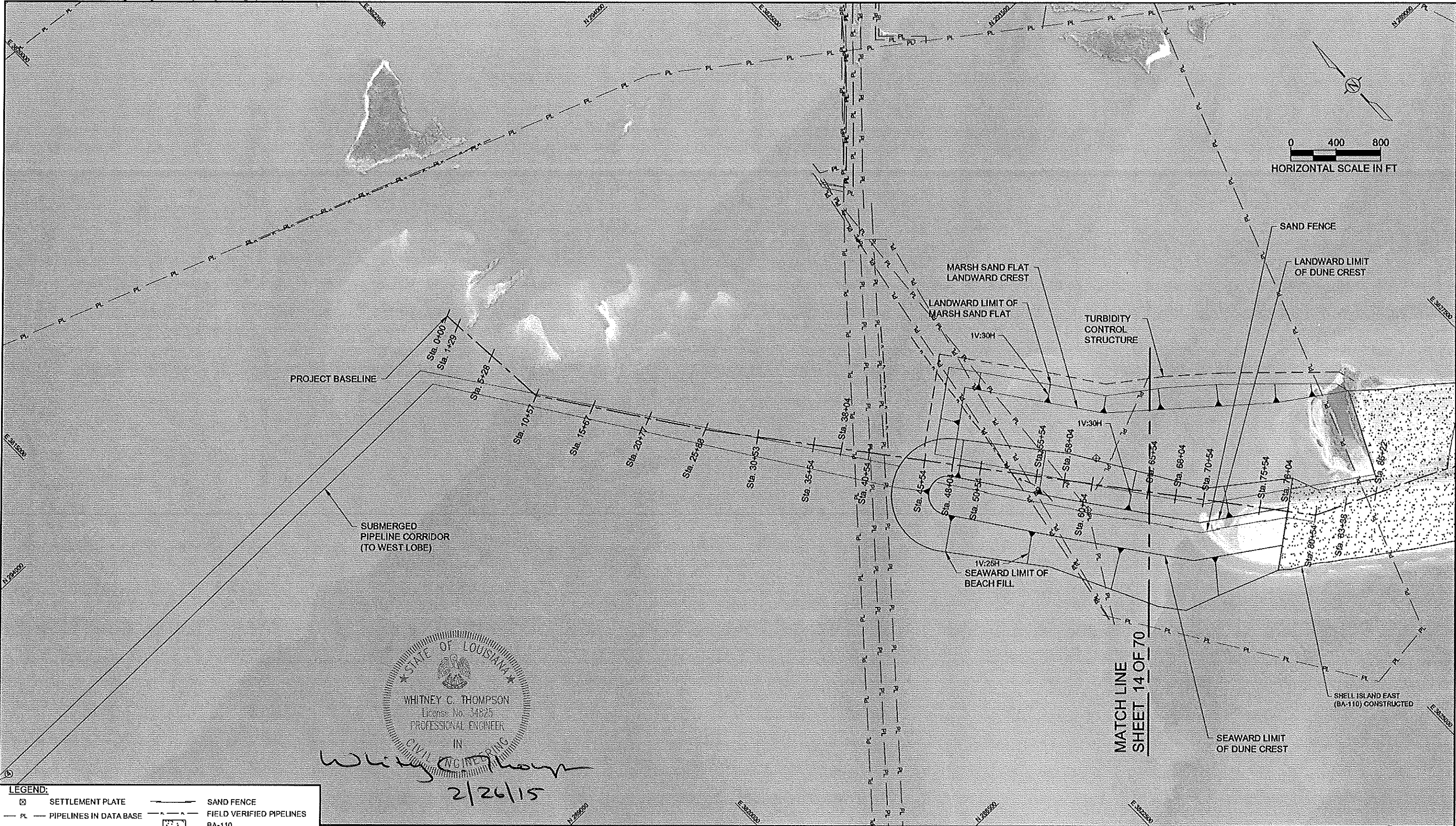
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**WEST LOBE BASE BID PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 9 OF 70

STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 IN  
 CIVIL ENGINEERING  
*Whitney C. Thompson*  
 2/26/15

PIPELINE CORRIDOR		
PT No.	EAST	NORTH
21	3810790.15	291302.61
22	3810318.77	291213.37



**LEGEND:**  
 [Symbol] SETTLEMENT PLATE      [Symbol] SAND FENCE  
 [Symbol] PIPELINES IN DATA BASE      [Symbol] FIELD VERIFIED PIPELINES  
 [Symbol] BASELINE      [Symbol] BA-110

**NOTES:**  
 1. COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).  
 2. DATE OF SURROUNDING AREA IMAGERY: OCTOBER 16, 2005.  
 3. DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.  
 4. PLACEMENT OF TEMPORARY DREDGE PIPELINE ALONG THE LENGTH OF BA-110 BEACH/DUNE SHALL BE DESCRIBED IN THE WORK PLAN FOR APPROVAL BY THE ENGINEER.  
 5. SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

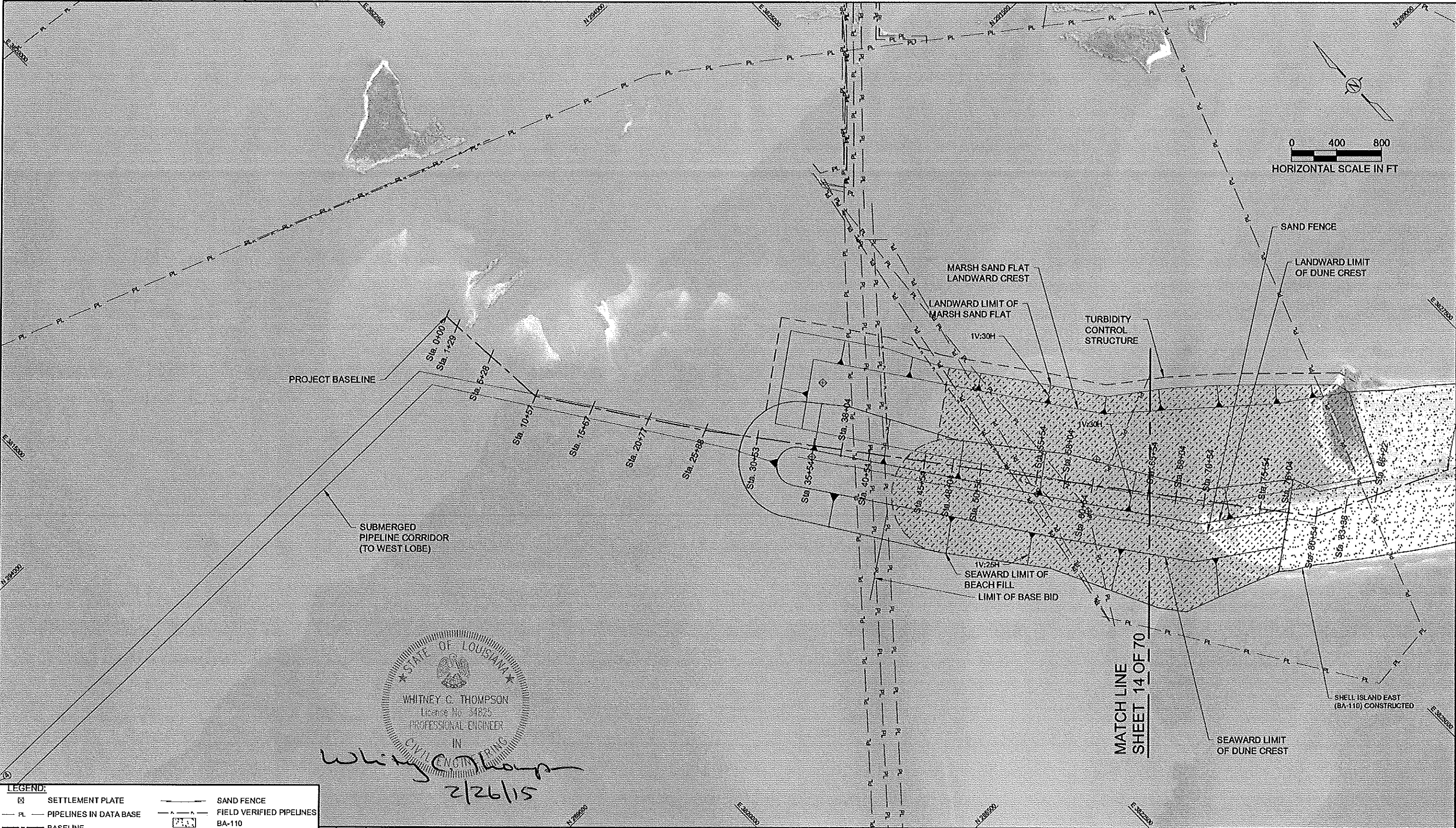
REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

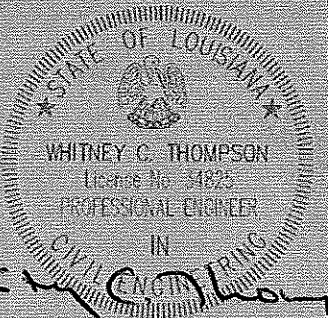
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH (561) 391-8102  
 FAX (561) 391-8115  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
 www.CBI.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK      DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EAST LOBE BASE BID PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 10 OF 70



  
 WHITNEY C. THOMPSON  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 IN  
 CIVIL ENGINEERING  
*Whitney C. Thompson*  
 2/26/15

**LEGEND:**

SETTLEMENT PLATE	SAND FENCE
PIPELINES IN DATA BASE	FIELD VERIFIED PIPELINES
BASELINE	BA-110
	BASE BID

- NOTES:**
- COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
  - DATE OF SURROUNDING AREA IMAGERY: OCTOBER 15, 2005.
  - DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.
  - PLACEMENT OF TEMPORARY DREDGE PIPELINE ALONG THE LENGTH OF BA-110 BEACH/DUNE SHALL BE DESCRIBED IN THE WORK PLAN FOR APPROVAL BY THE ENGINEER.
  - SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

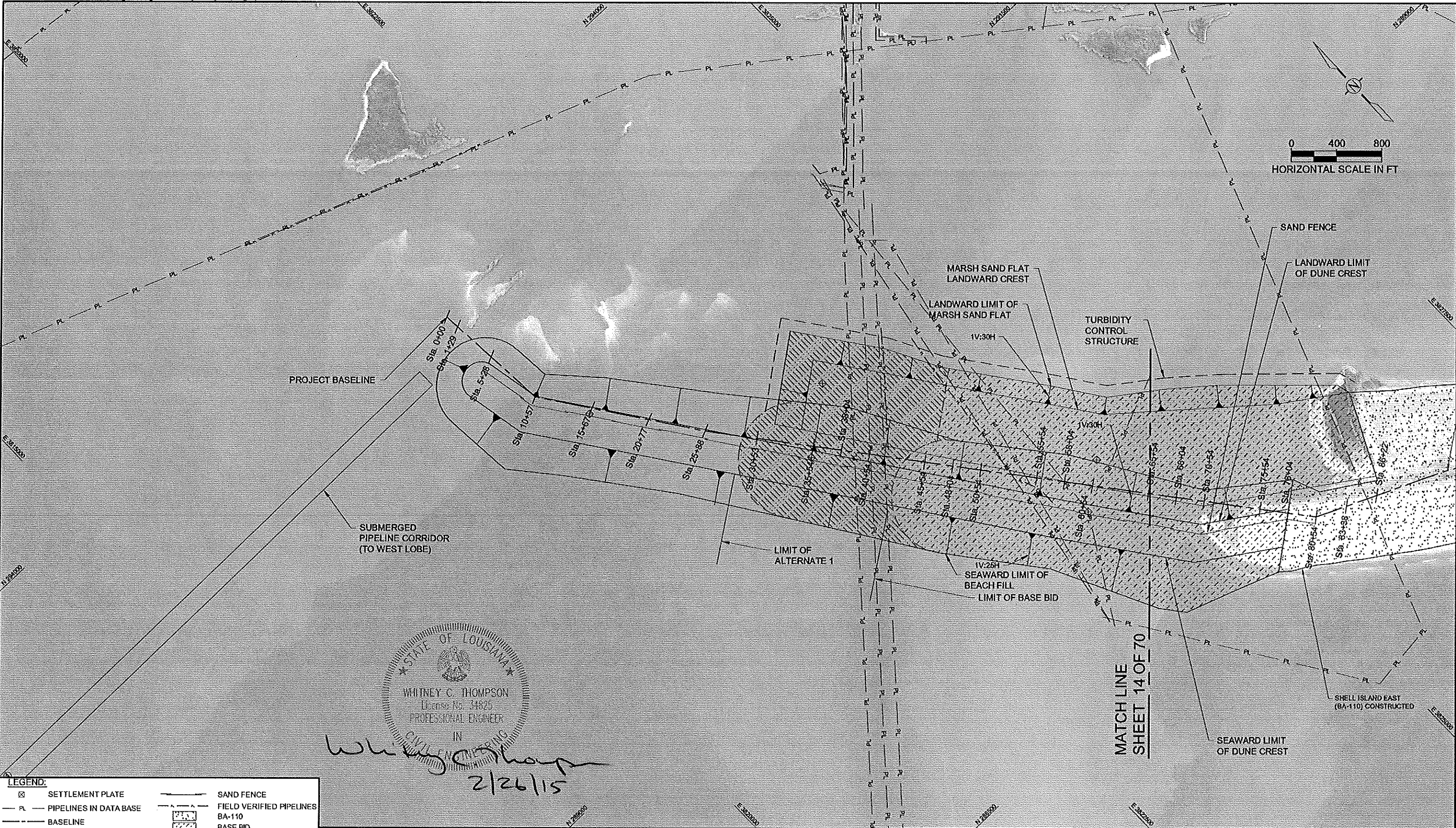
REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH (561) 391-8102  
 FAX (561) 391-9116  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
 www.CB&I.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EAST LOBE BASE BID AND ADDITIVE ALTERNATE 1 PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 11 OF 70



**LEGEND:**

	SETTLEMENT PLATE		SAND FENCE
	PIPELINES IN DATA BASE		FIELD VERIFIED PIPELINES
	BASELINE		BA-110
			BASE BID
			ALTERNATE 1

**NOTES:**

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- SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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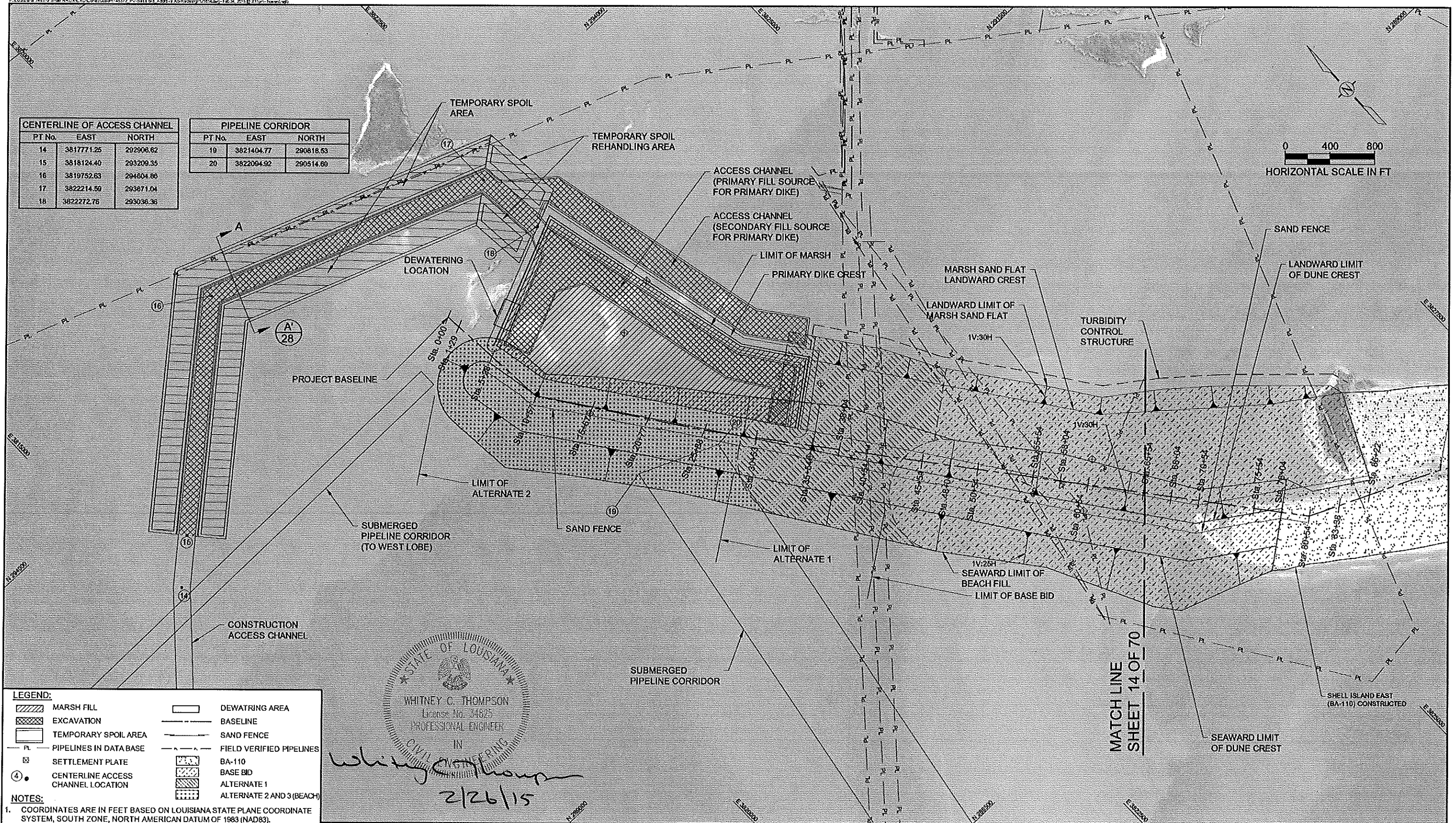
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EAST LOBE BASE BID AND ADDITIVE ALTERNATES 1 AND 2 PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 12 OF 70

CENTERLINE OF ACCESS CHANNEL		
PT.No.	EAST	NORTH
14	3817771.25	292906.62
15	3818124.40	293209.35
16	3819752.63	294604.86
17	3822214.59	293871.04
18	3822272.76	293036.36

PIPELINE CORRIDOR		
PT.No.	EAST	NORTH
19	3821404.77	290818.53
20	3822094.92	290514.60



**LEGEND:**

	MARSH FILL		DEWATERING AREA
	EXCAVATION		BASILINE
	TEMPORARY SPOIL AREA		SAND FENCE
	PIPELINES IN DATA BASE		FIELD VERIFIED PIPELINES
	SETTLEMENT PLATE		BA-110
	CENTERLINE ACCESS CHANNEL LOCATION		BASE BID
			ALTERNATE 1
			ALTERNATE 2 AND 3 (BEACH)

**NOTES:**

- COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
- DATE OF SURROUNDING AREA IMAGERY: OCTOBER 15, 2005.
- DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.
- TEMPORARY SPOIL REHANDLING AREA INTERSECTS THE SECONDARY FILL SOURCE FOR THE PRIMARY DIKE. CONTRACTOR SHOULD EVALUATE PLACEMENT OF MATERIAL IN THIS AREA WITH RESPECT TO UTILIZING THE SECONDARY FILL SOURCE.
- PLACEMENT OF TEMPORARY DREDGE PIPELINE ALONG THE LENGTH OF BA-110 BEACH/DUNE SHALL BE DESCRIBED IN THE WORK PLAN FOR APPROVAL BY THE ENGINEER.
- SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 IN  
 CIVIL ENGINEERING  
*Whitney Thompson*  
 2/26/15

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH (561) 391-8102  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
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**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

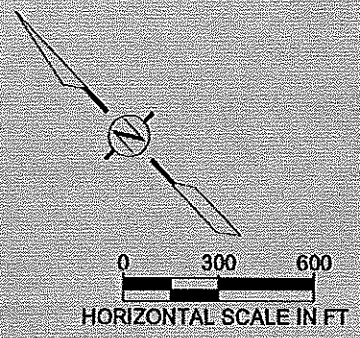
**EAST LOBE BASE BID AND ADDITIVE ALTERNATES 1,2,AND 3 PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 13 OF 70

**LEGEND:**

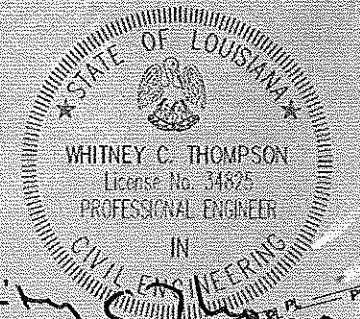
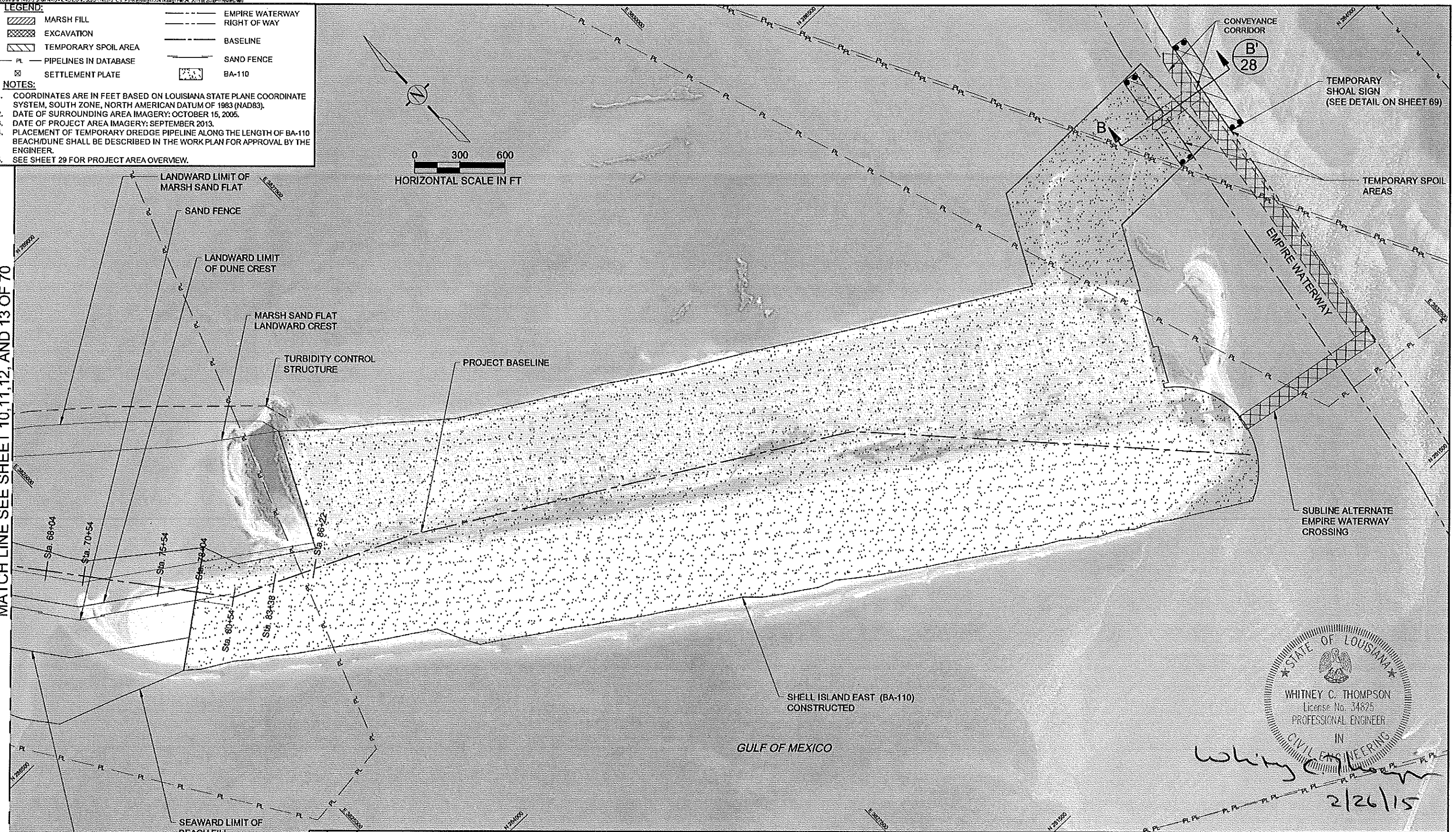
- MARSH FILL
- EXCAVATION
- TEMPORARY SPOIL AREA
- PIPELINES IN DATABASE
- SETTLEMENT PLATE
- EMPIRE WATERWAY RIGHT OF WAY
- BASELINE
- SAND FENCE
- BA-110

**NOTES:**

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- SEE SHEET 29 FOR PROJECT AREA OVERVIEW.



MATCH LINE SEE SHEET 10, 11, 12, AND 13 OF 70



*Whitney C. Thompson*  
2/26/15

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: GK      DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**

STATE PROJECT NUMBER: BA-111

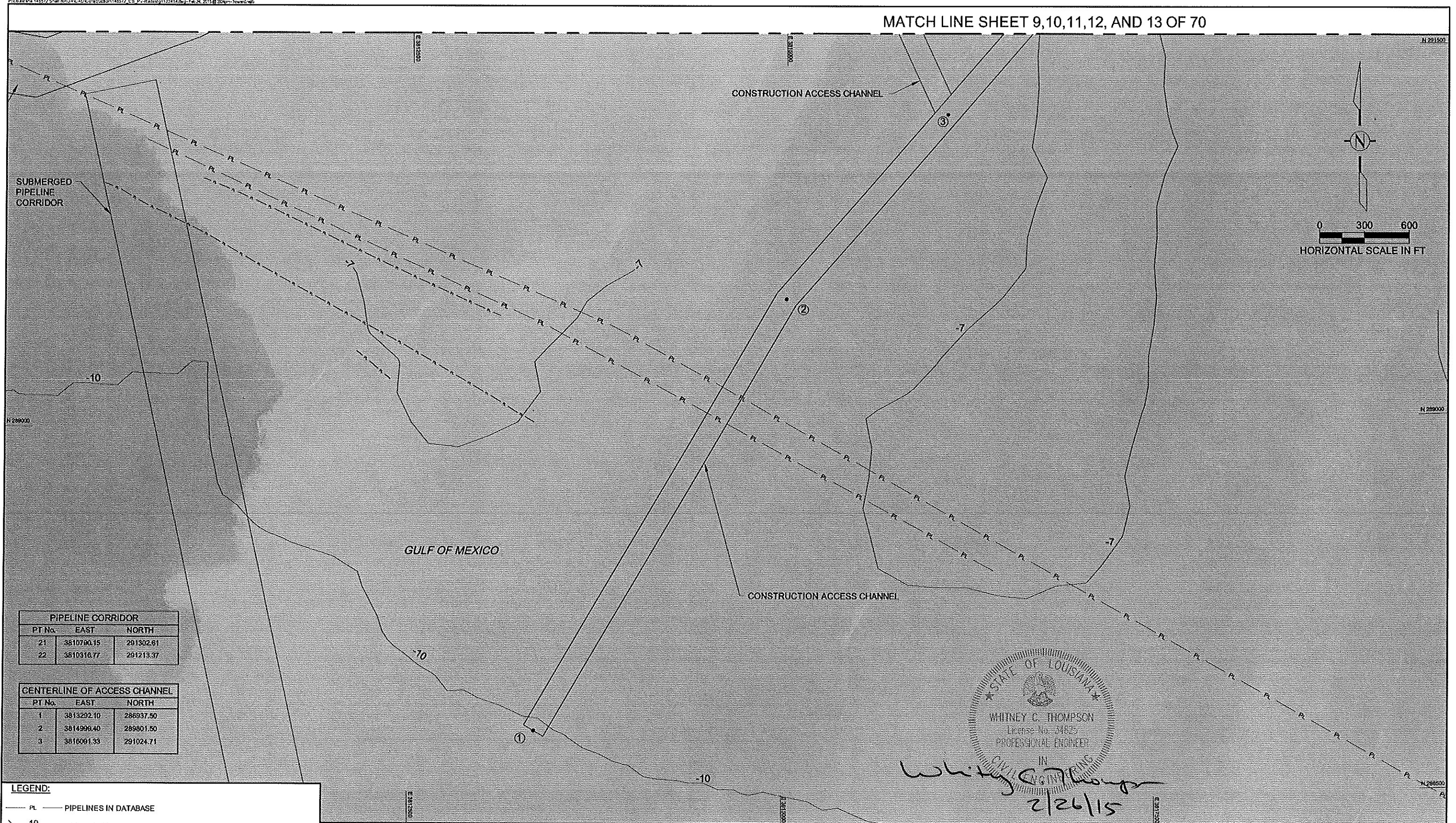
FEDERAL PROJECT NUMBER:

APPROVED BY: GT

**SHELL EAST PLAN VIEW WITH EMPIRE WATERWAY CROSSING**

DATE: 02/20/15

SHEET 14 OF 70



PIPELINE CORRIDOR		
PT No.	EAST	NORTH
21	3810790.15	291302.91
22	3810316.77	291213.37

CENTERLINE OF ACCESS CHANNEL		
PT No.	EAST	NORTH
1	3813292.10	286937.50
2	3814996.40	289801.50
3	3816091.33	291024.71

**LEGEND:**  
 PL — PIPELINES IN DATABASE  
 -10 — DEPTH CONTOURS  
 ④ — CENTERLINE ACCESS CHANNEL LOCATION

**NOTES:**  
 1. COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).  
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 3. DATE OF PROJECT AREA IMAGERY: SEPTEMBER 2013.  
 4. SEE SHEET 29 FOR PROJECT AREA OVERVIEW.

REV.	DATE	DESCRIPTION	BY
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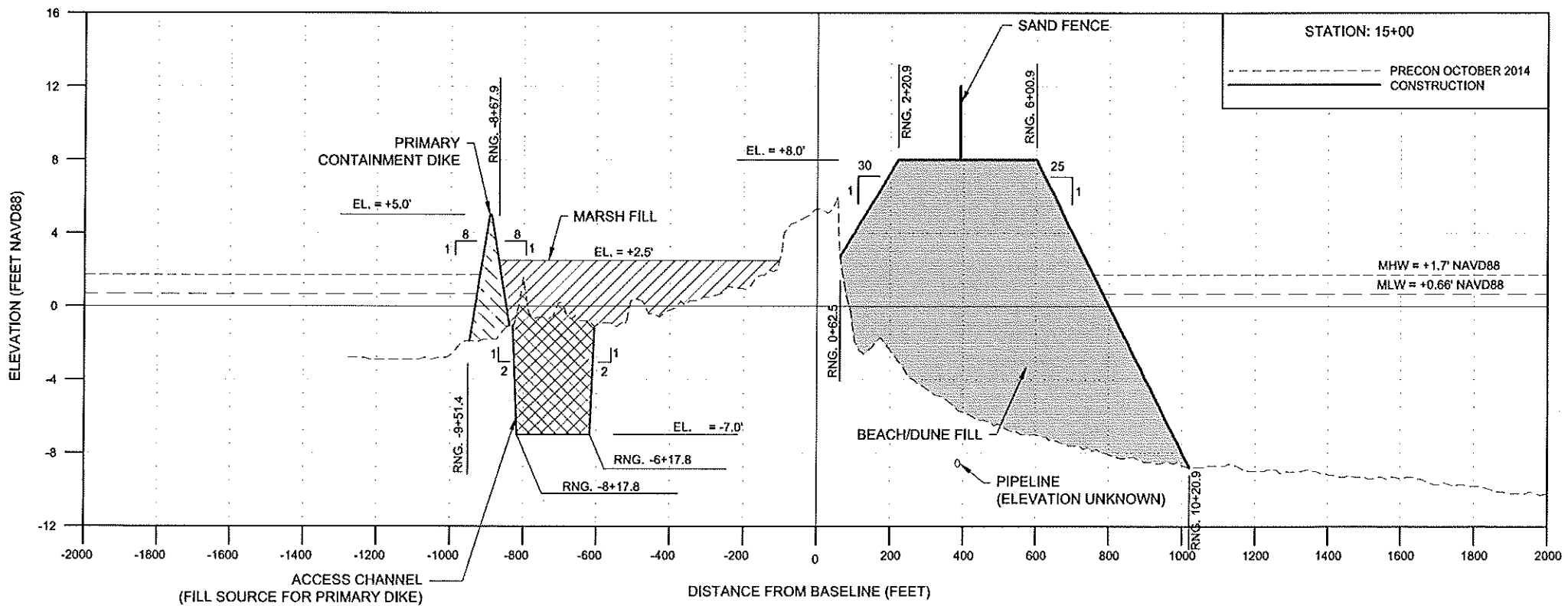
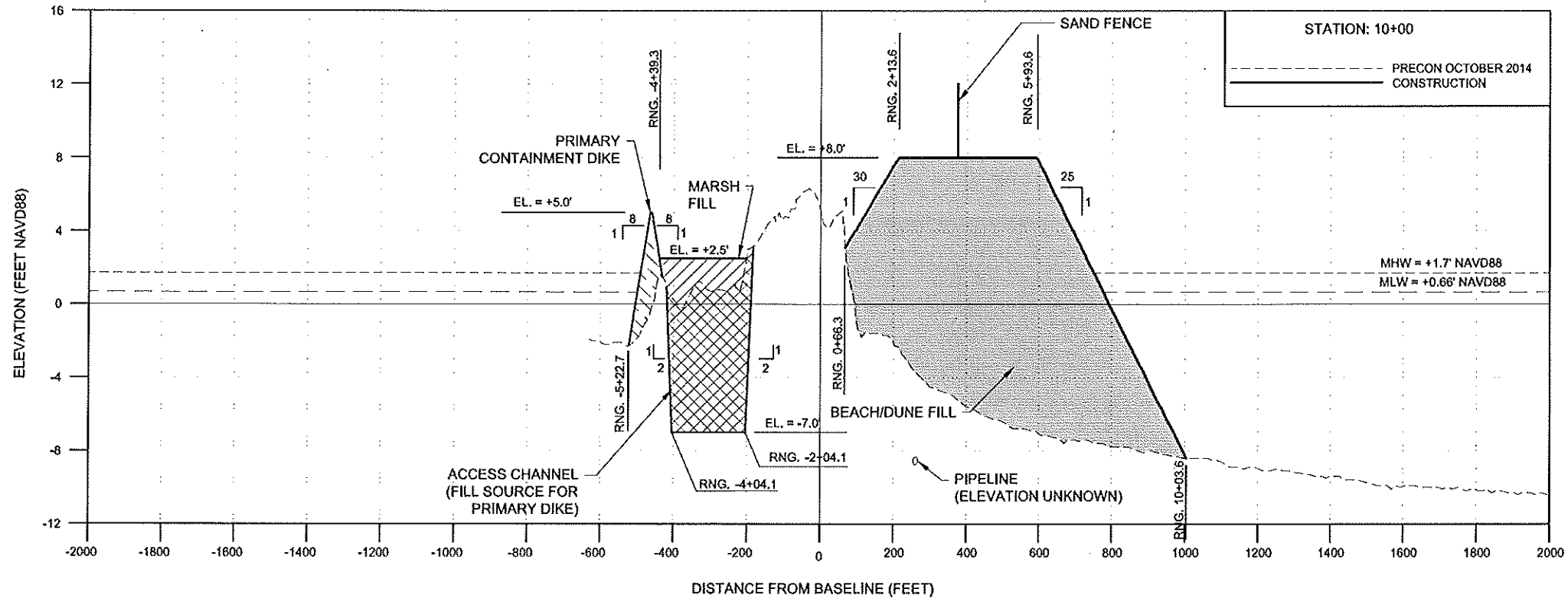
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
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**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**CONSTRUCTION ACCESS CHANNEL PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 15 OF 70

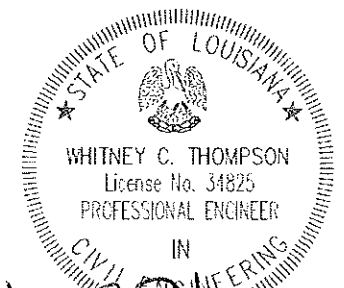
STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 CIVIL ENGINEERING  
*Whitney C. Thompson*  
 2/26/15



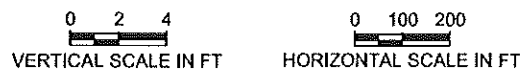
- NOTES:**
1. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.
  2. LAYOUT ALL FILL AREAS BY CROSS SECTIONS.
  3. POSITIVE RANGES ARE SOUTH OF BASELINE. NEGATIVE RANGES ARE NORTH OF BASELINE.

**LEGEND:**

	PRIMARY CONTAINMENT DIKE FILL
	MARSH FILL
	EXCAVATED MATERIAL
	BEACH/DUNE FILL



*Whitney C. Thompson*  
2/26/15



1	10/10/13	CPRA Comments	DS
REV.	DATE	DESCRIPTION	BY

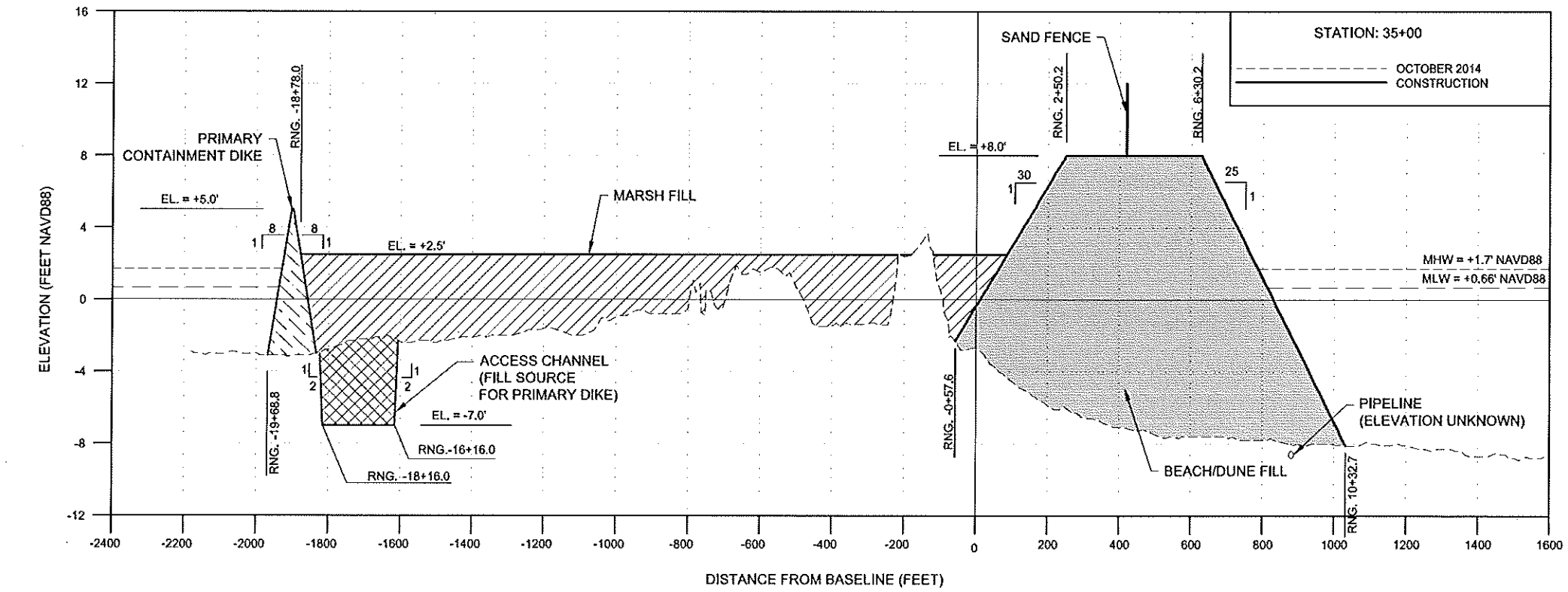
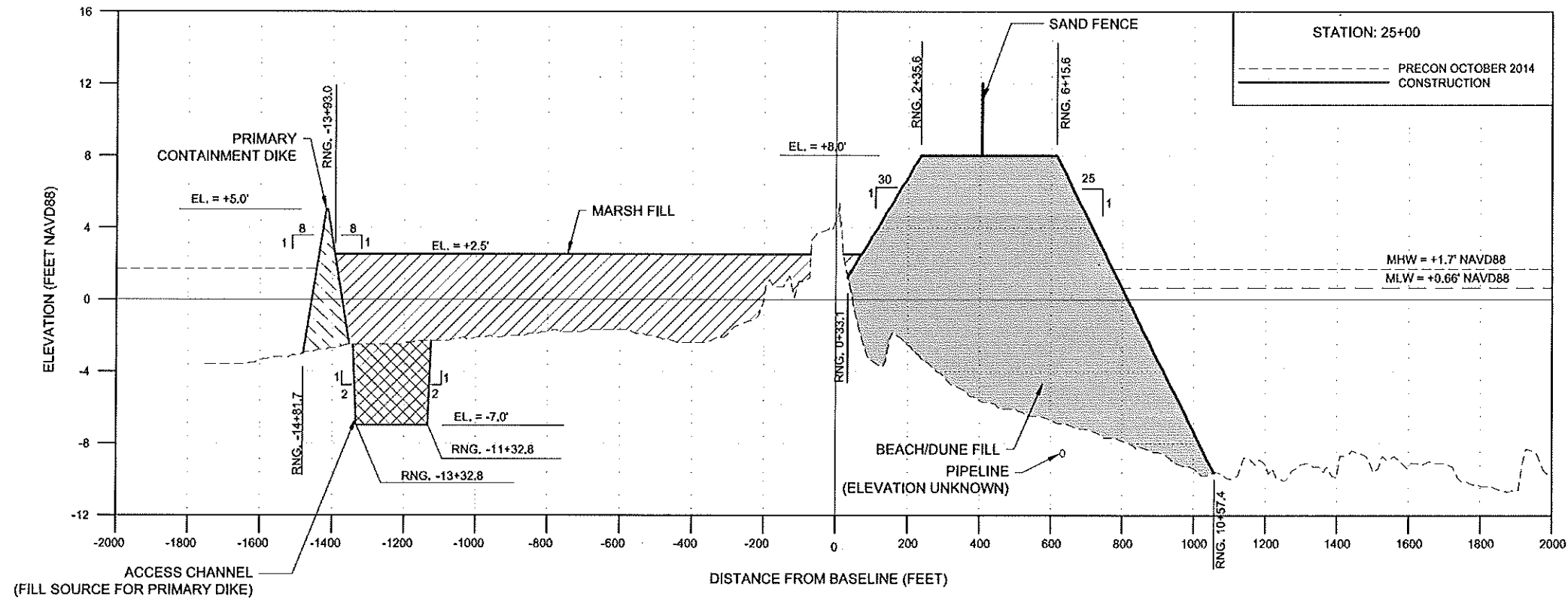
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
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PH (561) 391-6102  
FAX (561) 391-9116  
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450 LAUREL STREET  
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DRAWN BY: GK  
DESIGNED BY: WT

SHELL ISLAND WEST NRDA RESTORATION PROJECT  
STATE PROJECT NUMBER: BA-111  
FEDERAL PROJECT NUMBER:  
APPROVED BY: GT

WEST LOBE CONSTRUCTION PROFILES  
DATE: 02/20/15  
SHEET 16 OF 70

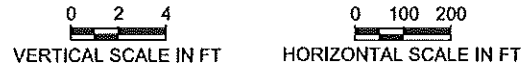
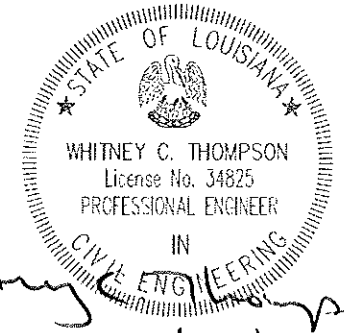




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**LEGEND:**

- PRIMARY CONTAINMENT DIKE FILL
- MARSH FILL
- EXCAVATED MATERIAL
- BEACH/DUNE FILL



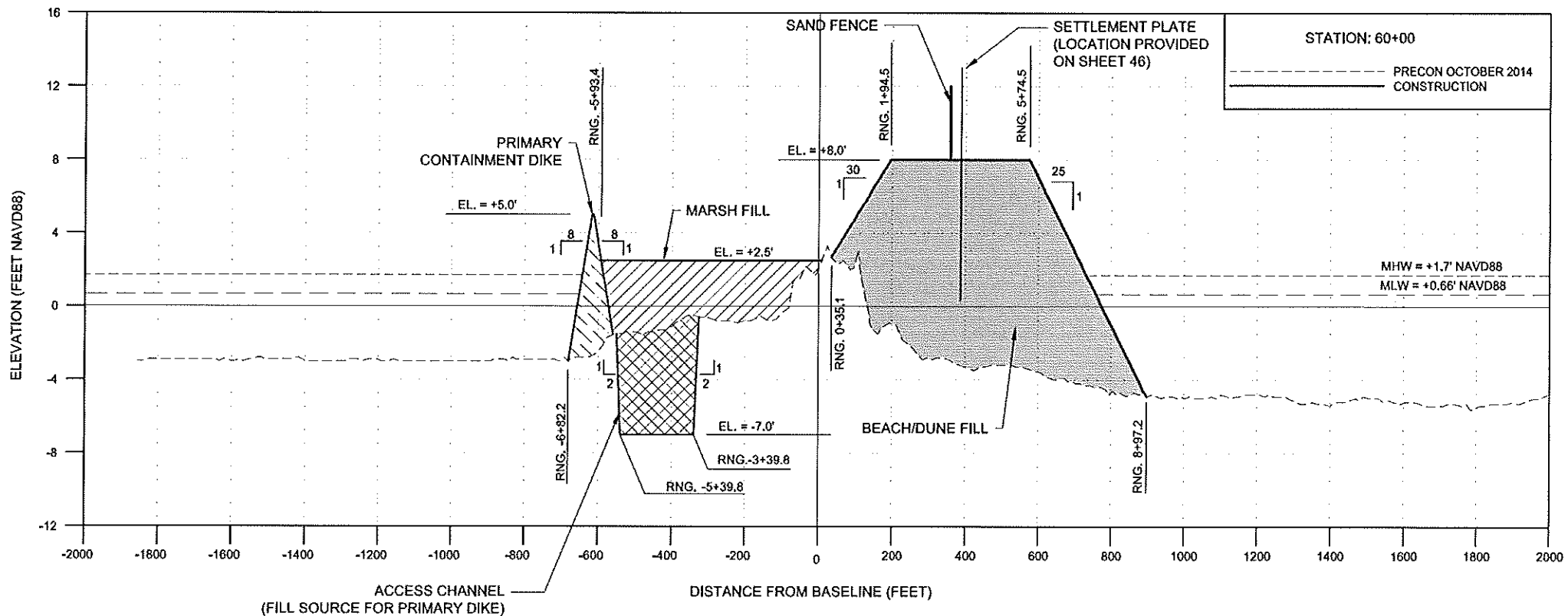
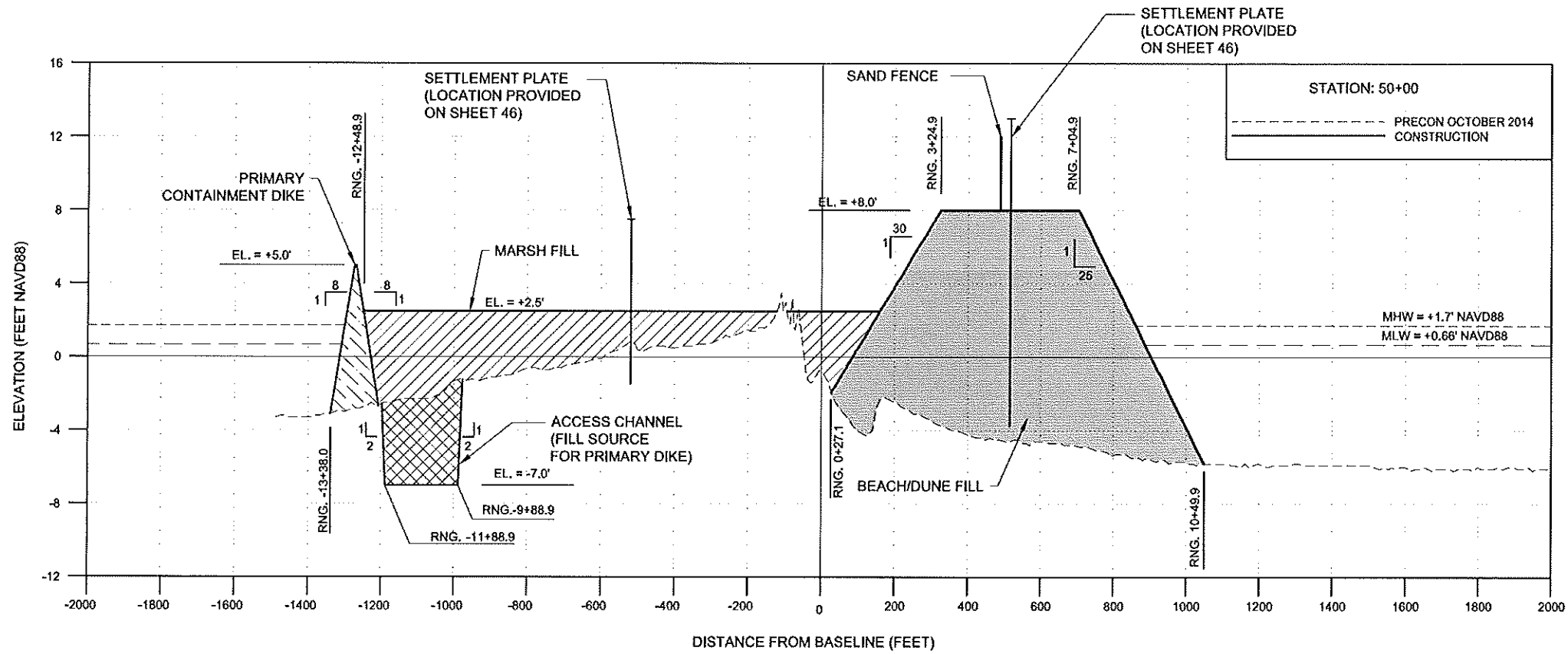
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
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**WEST LOBE CONSTRUCTION PROFILES**  
 DATE: 02/20/15  
 SHEET 17 OF 70

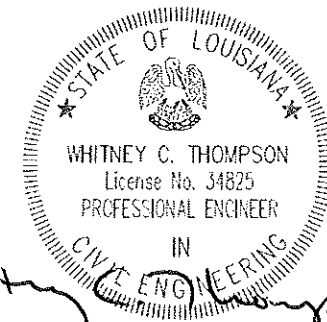


**NOTES:**

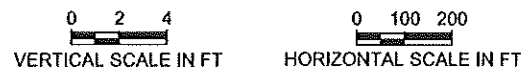
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**LEGEND:**

- PRIMARY CONTAINMENT DIKE FILL
- MARSH FILL
- EXCAVATED MATERIAL
- BEACH/DUNE FILL
- BEACH/DUNE FILL REDUCTION



*Whitney C. Thompson*  
2/26/15



REV.	DATE	DESCRIPTION	BY
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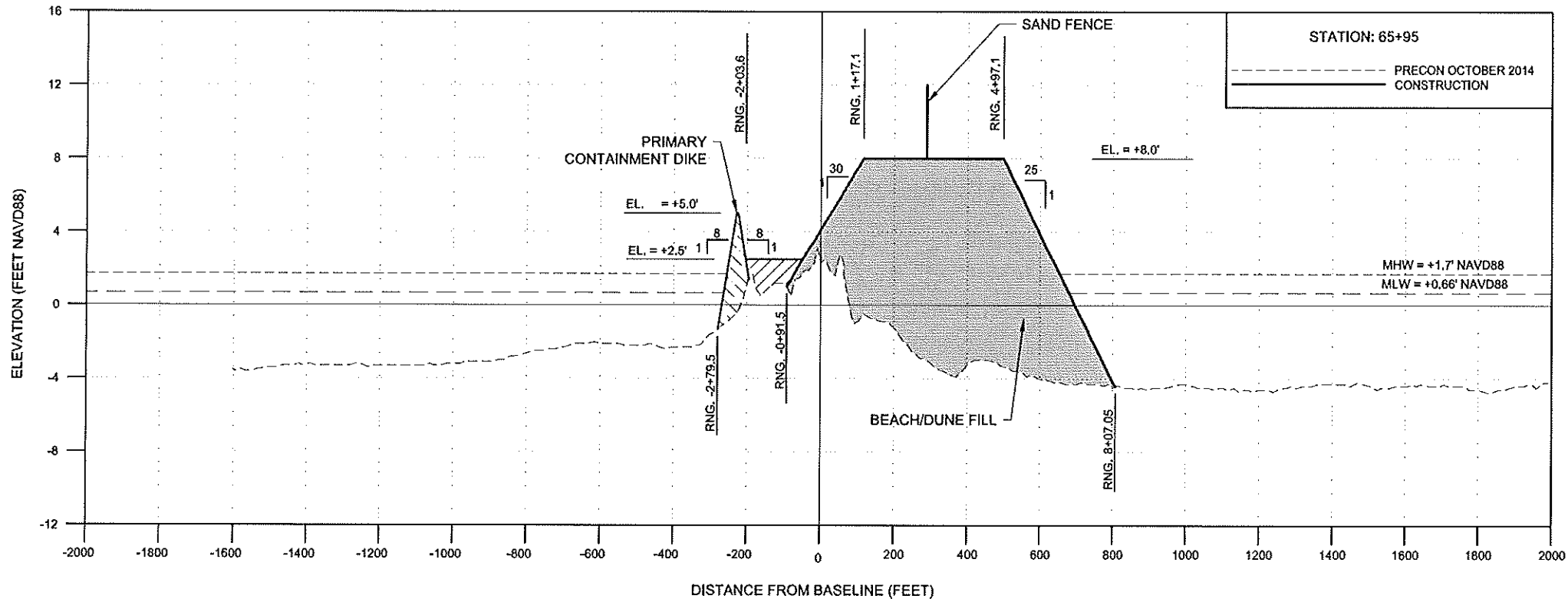
DRAWN BY: GK      DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**

STATE PROJECT NUMBER: BA-111  
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APPROVED BY: GT

**WEST LOBE CONSTRUCTION PROFILES**

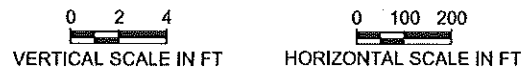
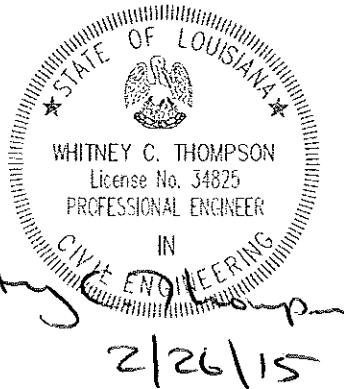
DATE: 02/20/15  
SHEET 18 OF 70



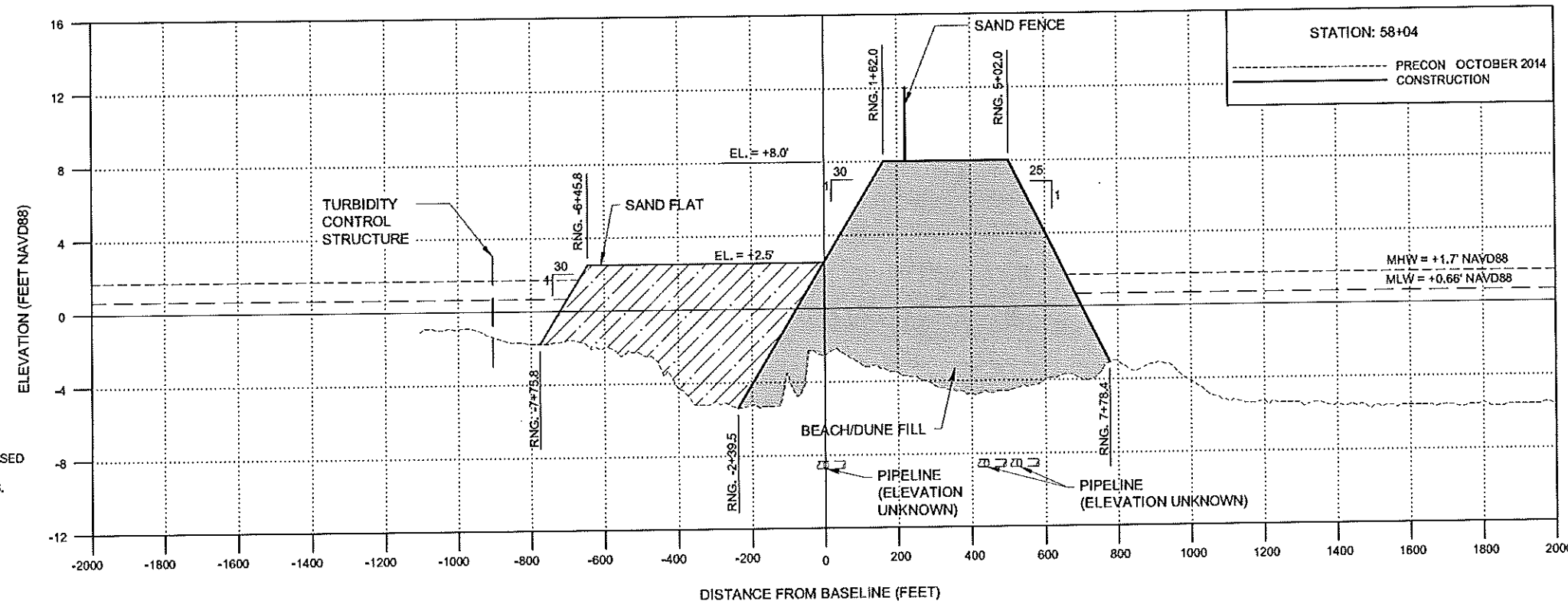
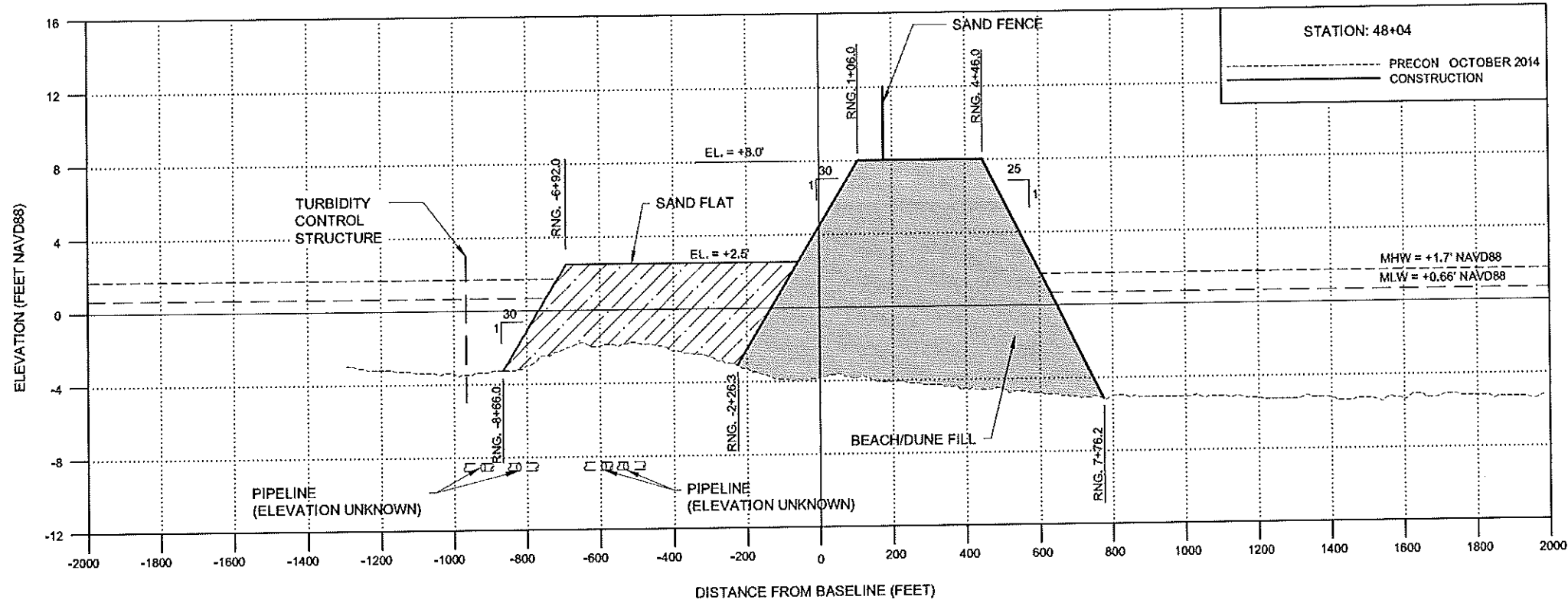
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**LEGEND:**

	PRIMARY CONTAINMENT DIKE FILL
	MARSH FILL
	EXCAVATED MATERIAL
	BEACH/DUNE FILL

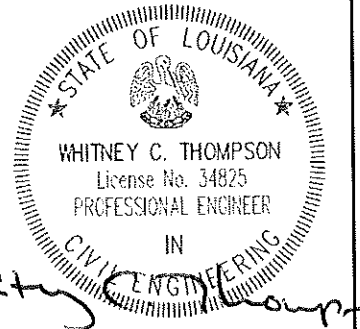
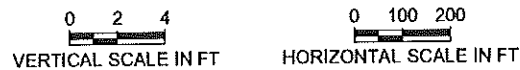


1	10/10/13	CPRA Comments	DS	<b>CB&amp;I COASTAL PLANNING &amp; ENGINEERING, INC.</b> 2481 N.W. BOCA RATON BOULEVARD BOCA RATON, FLORIDA 33431 P/L (561) 391-8102 FAX (561) 391-8116 C.O.A. FL. #4028 C.O.A. LA. #2531 www.CBI.COM	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	SHELL ISLAND WEST NRDA RESTORATION PROJECT		WEST LOBE CONSTRUCTION PROFILES
REV.	DATE	DESCRIPTION	BY			STATE PROJECT NUMBER: BA-111	FEDERAL PROJECT NUMBER:	
				DRAWN BY: GK	DESIGNED BY: WT	APPROVED BY: GT	SHEET 19 OF 70	



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- LEGEND:**
- SAND FLAT
  - BEACH/DUNE FILL



*Whitney C. Thompson*  
2/26/15

REV.	DATE	DESCRIPTION	BY
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**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
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PH (561) 391-8192  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
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DRAWN BY: GK      DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**

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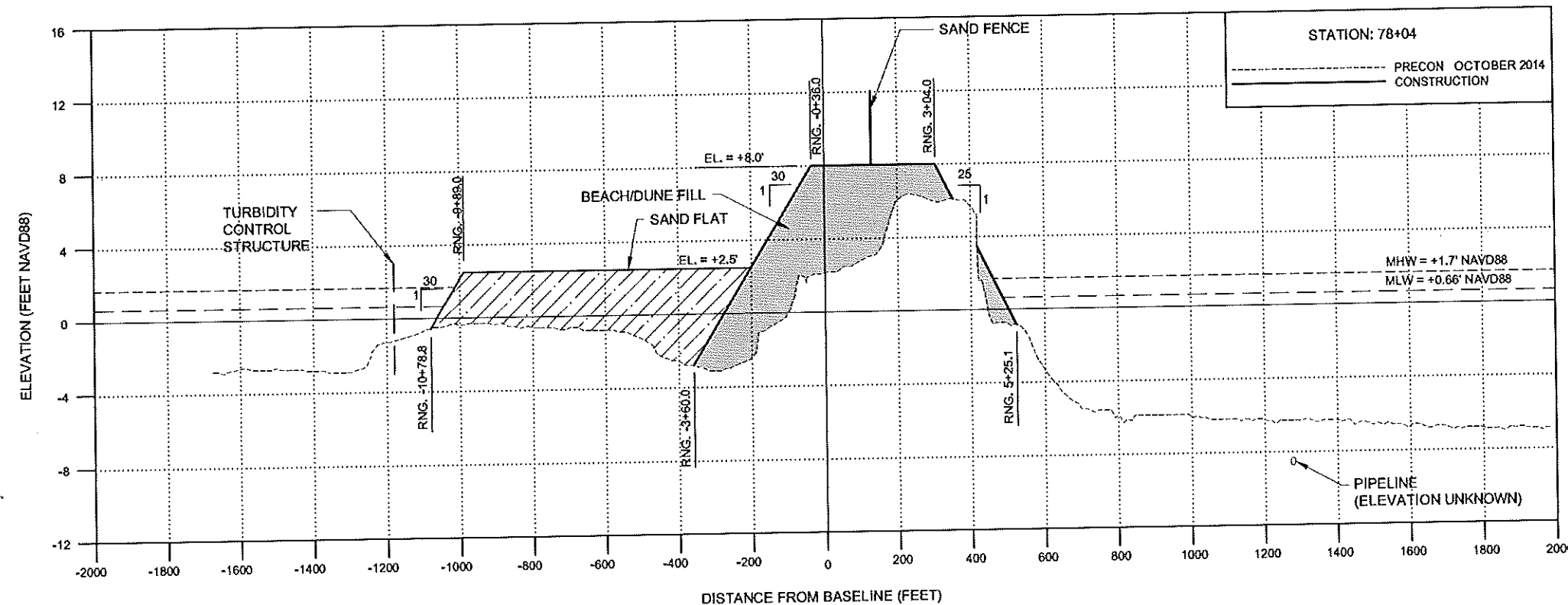
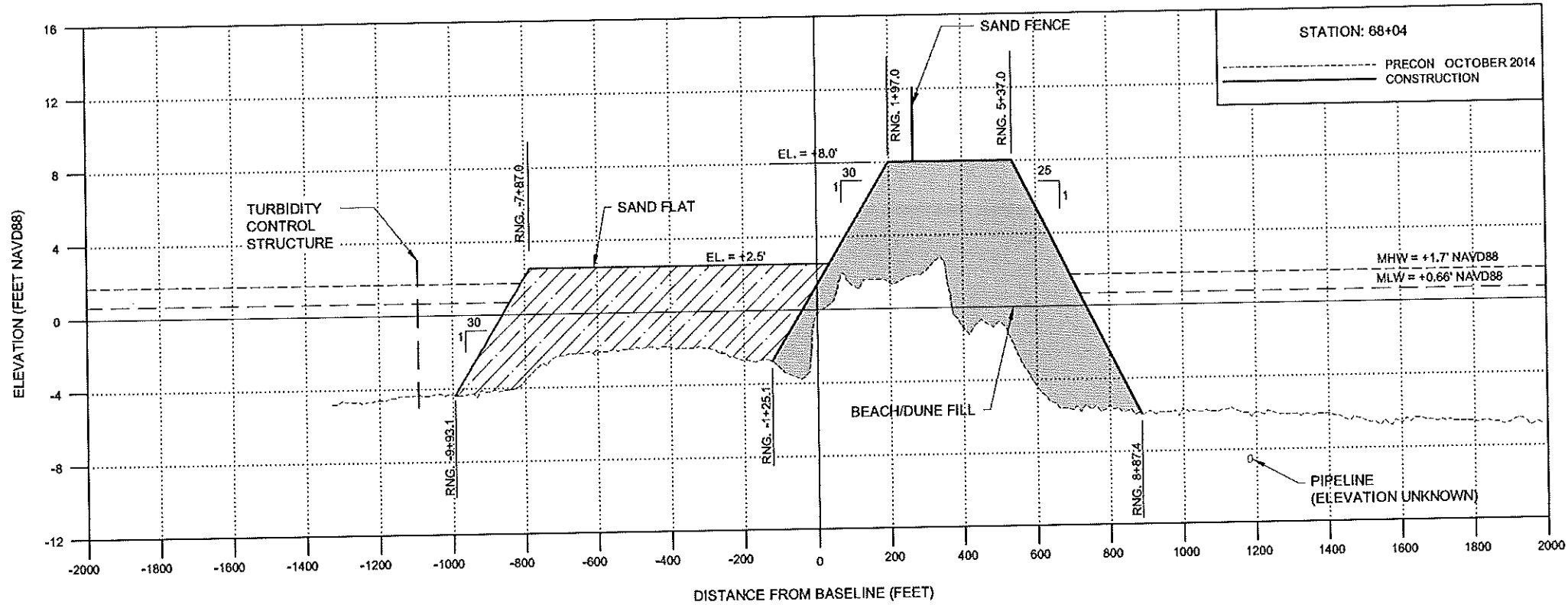
FEDERAL PROJECT NUMBER:

APPROVED BY: GT

**EAST LOBE BASE BID CONSTRUCTION PROFILES**

DATE: 02/20/15

SHEET 20 OF 70



**NOTES:**

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**LEGEND:**

- SAND FLAT
- BEACH/DUNE FILL

0 2 4  
VERTICAL SCALE IN FT

0 100 200  
HORIZONTAL SCALE IN FT

REV.	DATE	DESCRIPTION	BY
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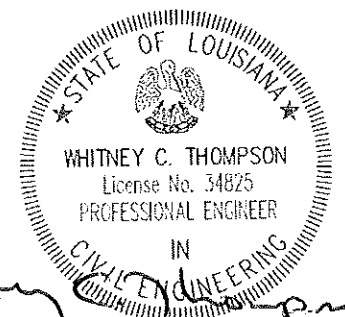
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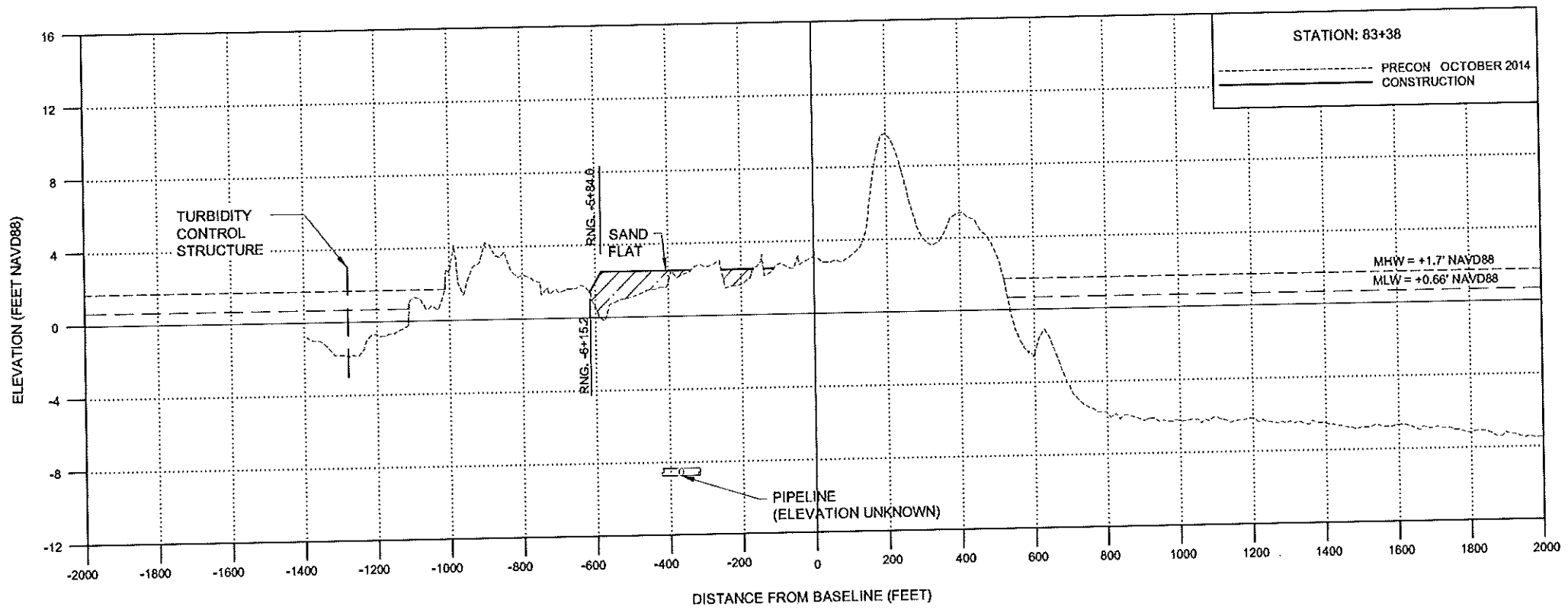
EAST LOBE BASE BID CONSTRUCTION PROFILES

DATE: 02/20/15

SHEET 21 OF 70



*Whitney C. Thompson*  
 2/26/15

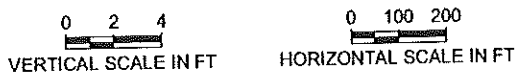


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1. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.
2. LAYOUT ALL FILL AREAS BY CROSSSECTIONS.
3. POSITIVE RANGES ARE SOUTH OF BASELINE. NEGATIVE RANGES ARE NORTH OF BASELINE.

**LEGEND:**

- SAND FLAT
- BEACH/DUNE FILL



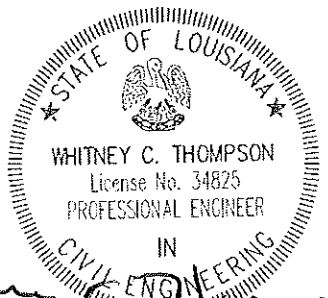
REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH. (561) 391-8192  
 FAX (561) 391-0116  
 C.O.A. FL. #4028  
 C.O.A. LA. #2531  
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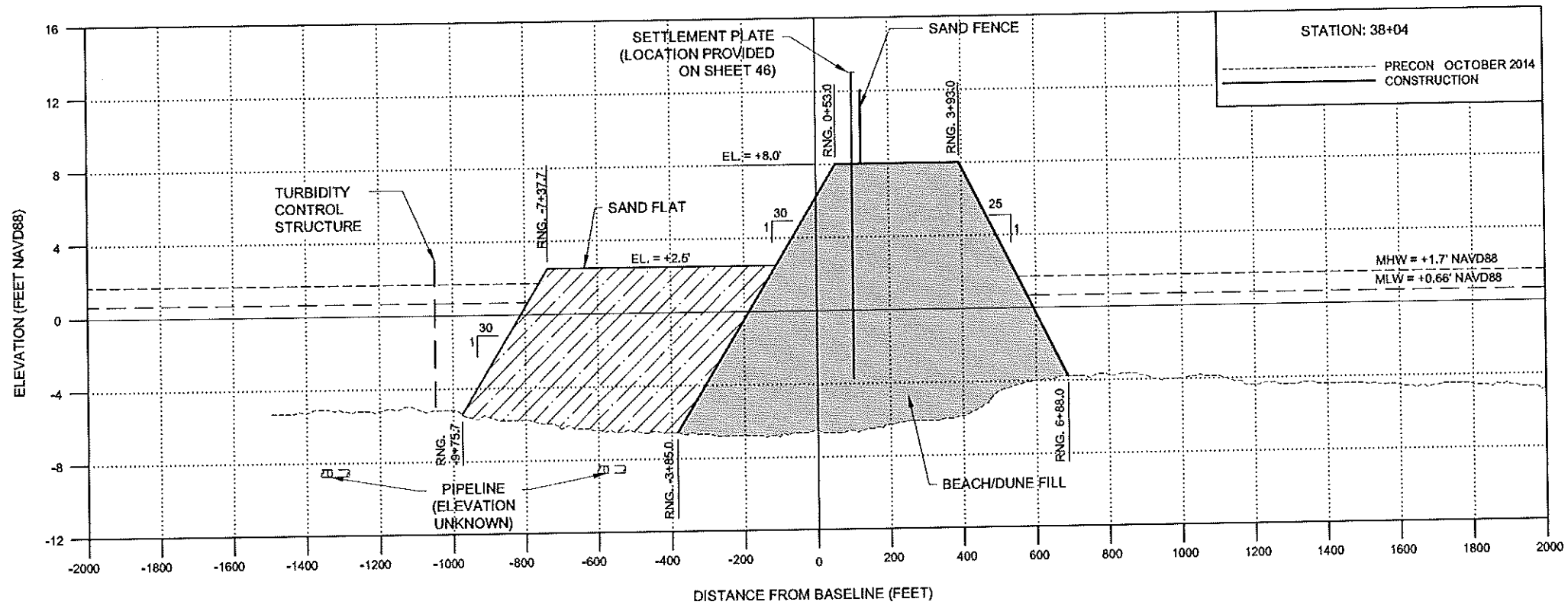
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK      DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EAST LOBE BASE BID CONSTRUCTION PROFILES**  
 DATE: 02/20/15  
 SHEET 22 OF 70



*Whitney C. Thompson*  
 2/26/15

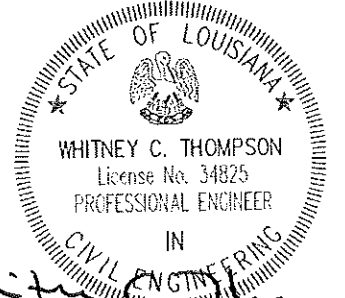
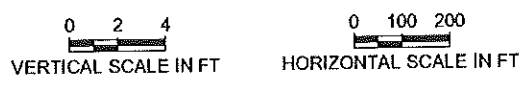


**NOTES:**

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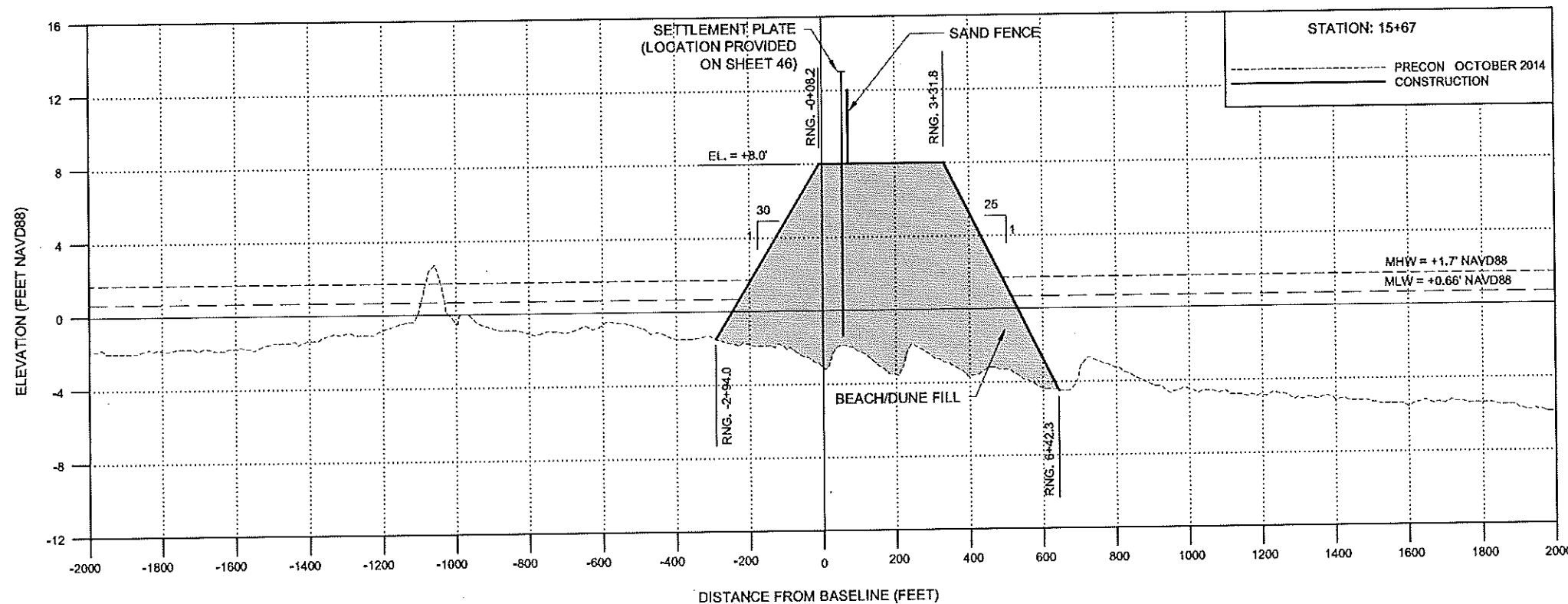
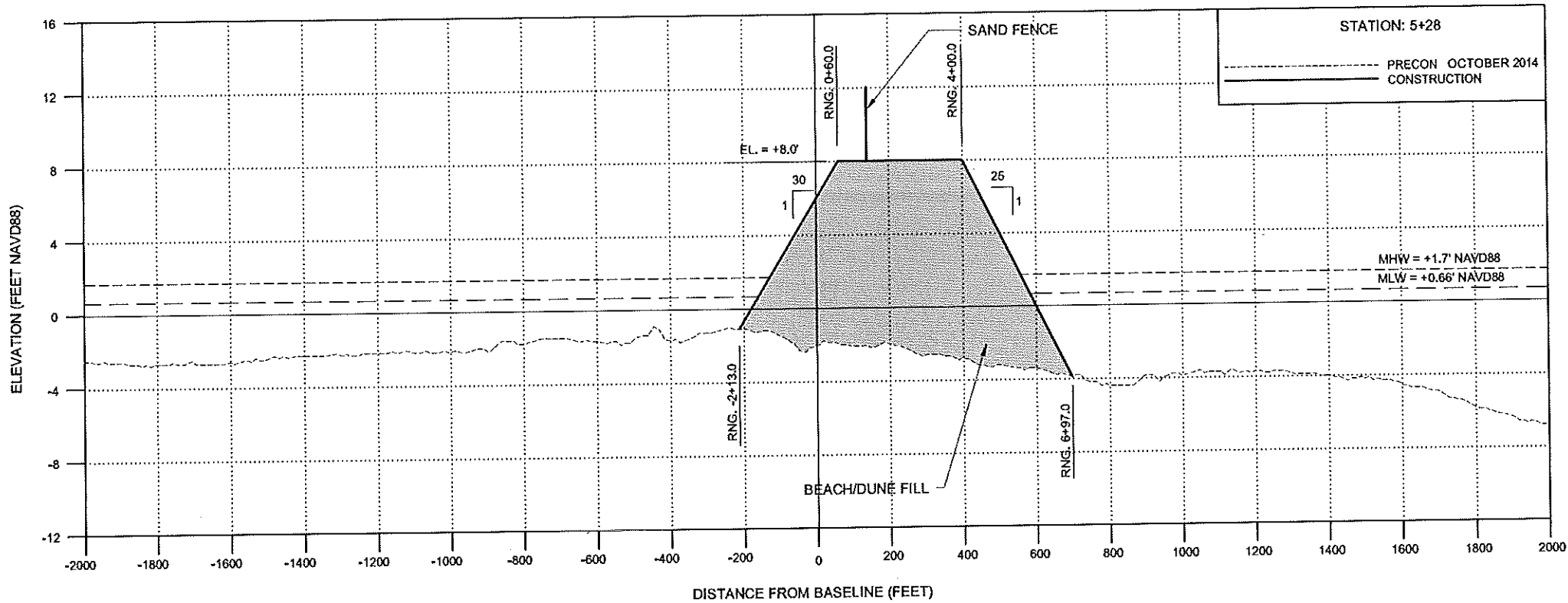
**LEGEND:**

- PRIMARY CONTAINMENT DIKE FILL
- MARSH FILL
- EXCAVATED MATERIAL
- BEACH/DUNE FILL



*Whitney C. Thompson*  
2/26/15

1		10/10/13	CPRA Comments	DS	<b>CB&amp;I COASTAL PLANNING &amp; ENGINEERING, INC.</b> 2481 N.W. BOCA RATON BOULEVARD BOCA RATON, FLORIDA 33431 PH (561) 391-8102 FAX (561) 391-9116 C.O.A. FL #4028 C.O.A. LA #2531 www.CBICOM	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	SHELL ISLAND WEST NRDA RESTORATION PROJECT		EAST LOBE ADDITIVE ALTERNATE 1 CONSTRUCTION PROFILES DATE: 02/20/15 SHEET 23 OF 70	
							STATE PROJECT NUMBER: BA-111	APPROVED BY: GT		
							FEDERAL PROJECT NUMBER:			
REV.	DATE	DESCRIPTION		BY			DRAWN BY: GK	DESIGNED BY: WT		

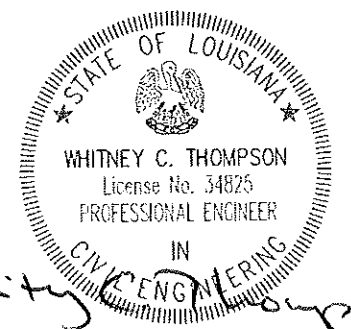


**NOTES:**

1. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.
2. LAYOUT ALL FILL AREAS BY CROSS SECTIONS.
3. POSITIVE RANGES ARE SOUTH OF BASELINE. NEGATIVE RANGES ARE NORTH OF BASELINE.

**LEGEND:**

BEACH/DUNE FILL



0 2 4  
VERTICAL SCALE IN FT

0 100 200  
HORIZONTAL SCALE IN FT

1	10/10/13	CPRA Comments	DS
REV.	DATE	DESCRIPTION	BY

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PH (561) 391-8102  
FAX (561) 391-9116

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C.O.A. LA #2531  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: GK

DESIGNED BY: WT

SHELL ISLAND WEST NRDA RESTORATION PROJECT

STATE PROJECT NUMBER: BA-111

FEDERAL PROJECT NUMBER:

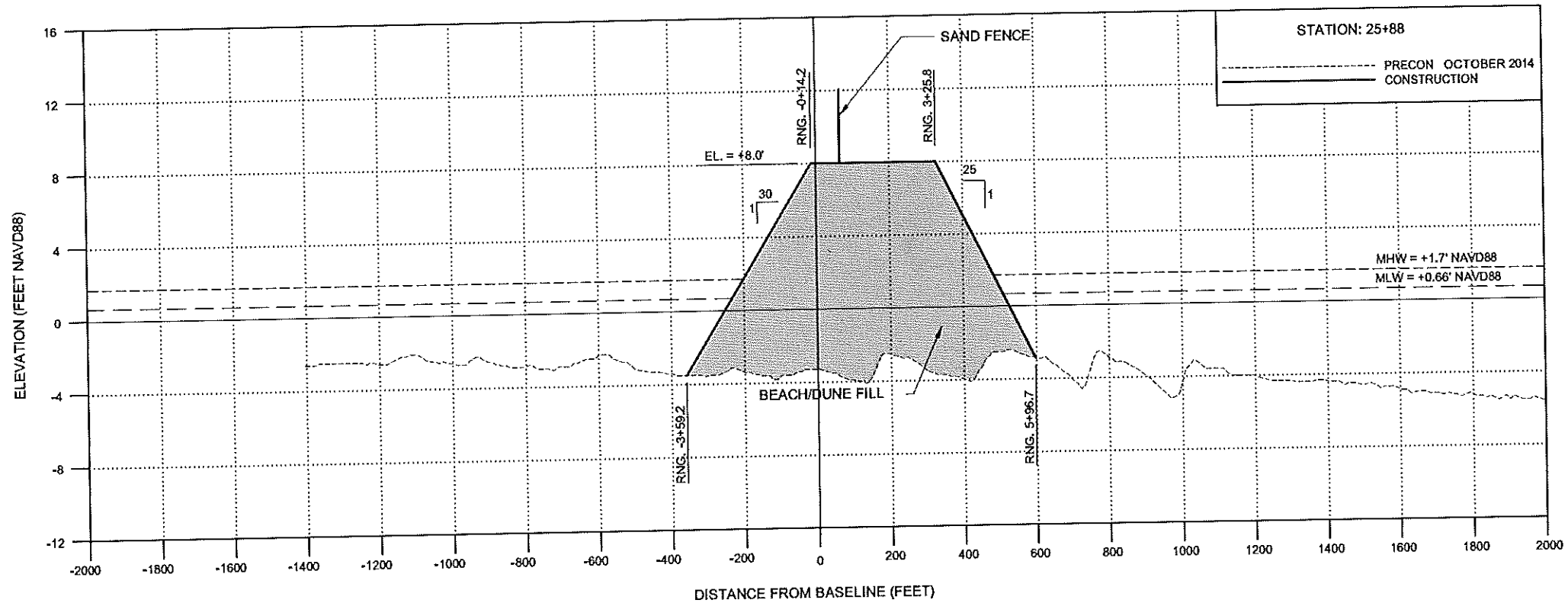
APPROVED BY: GT

EAST LOBE ADDITIVE ALTERNATE 2 CONSTRUCTION PROFILES

DATE: 02/20/15

SHEET 24 OF 70



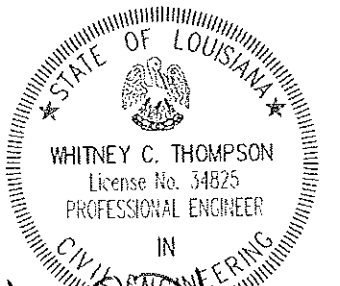


**NOTES:**

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2. LAYOUT ALL FILL AREAS BY CROSS SECTIONS.
3. POSITIVE RANGES ARE SOUTH OF BASELINE. NEGATIVE RANGES ARE NORTH OF BASELINE.

**LEGEND:**

BEACH/DUNE FILL



*Whitney C. Thompson*  
2/26/15

0 2 4  
VERTICAL SCALE IN FT

0 100 200  
HORIZONTAL SCALE IN FT

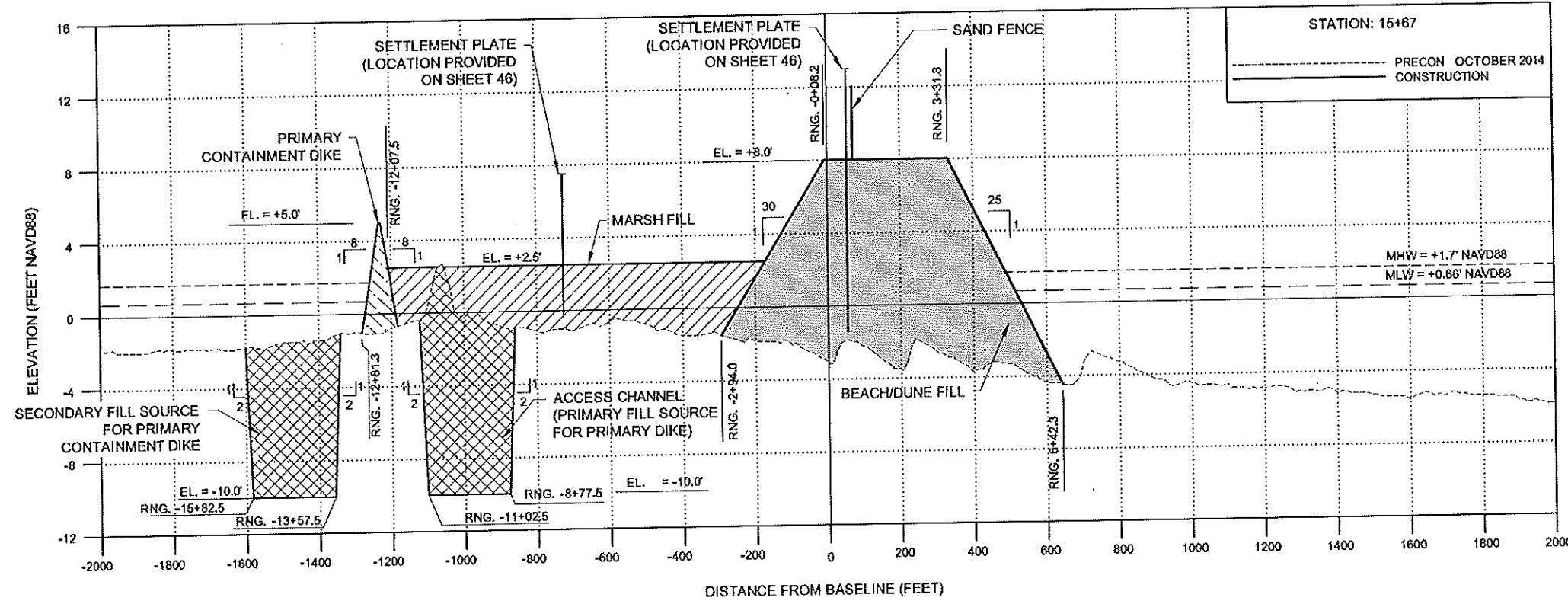
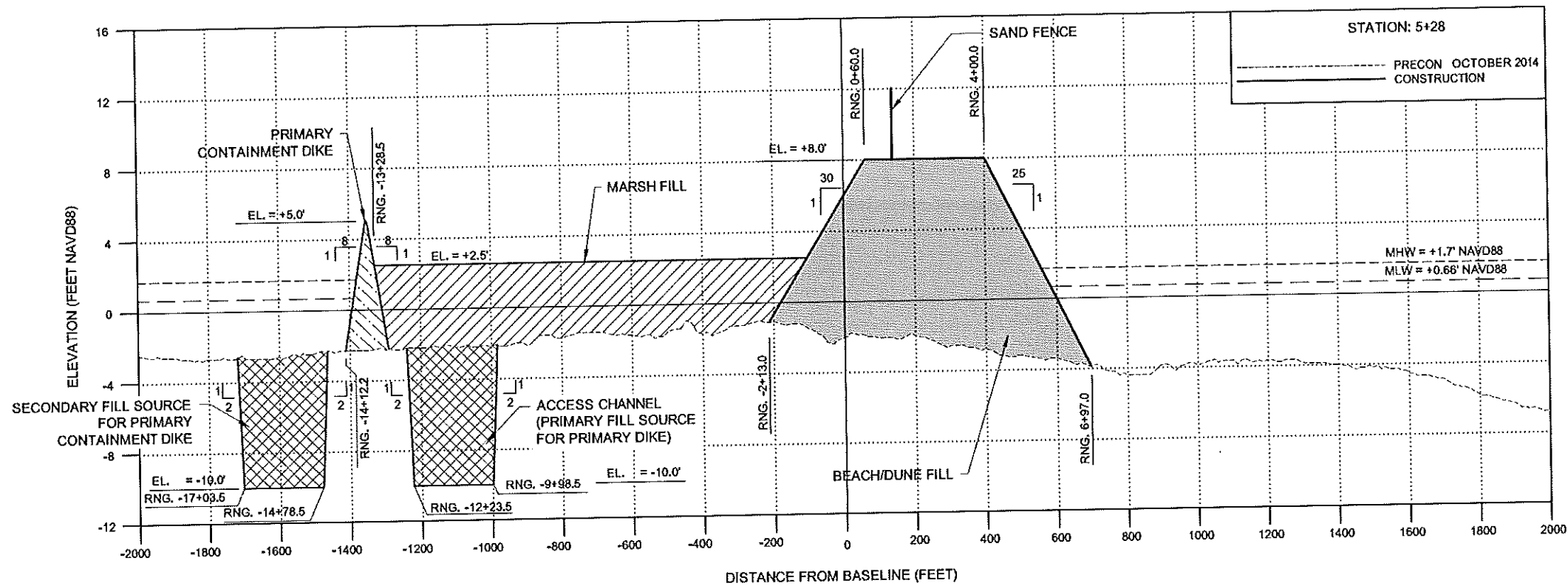
REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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SHELL ISLAND WEST NRDA RESTORATION PROJECT  
STATE PROJECT NUMBER: BA-111  
FEDERAL PROJECT NUMBER:  
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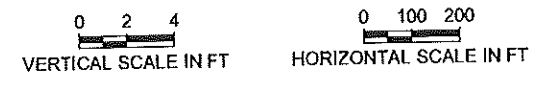
EAST LOBE ADDITIVE ALTERNATE 2 CONSTRUCTION PROFILES  
DATE: 02/20/15  
SHEET 25 OF 70



- NOTES:**
- ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.
  - LAYOUT ALL FILL AREAS BY CROSS SECTIONS.
  - POSITIVE RANGES ARE SOUTH OF BASELINE. NEGATIVE RANGES ARE NORTH OF BASELINE.

**LEGEND:**

- PRIMARY CONTAINMENT DIKE FILL
- MARSH FILL
- EXCAVATED MATERIAL
- BEACH/DUNE FILL



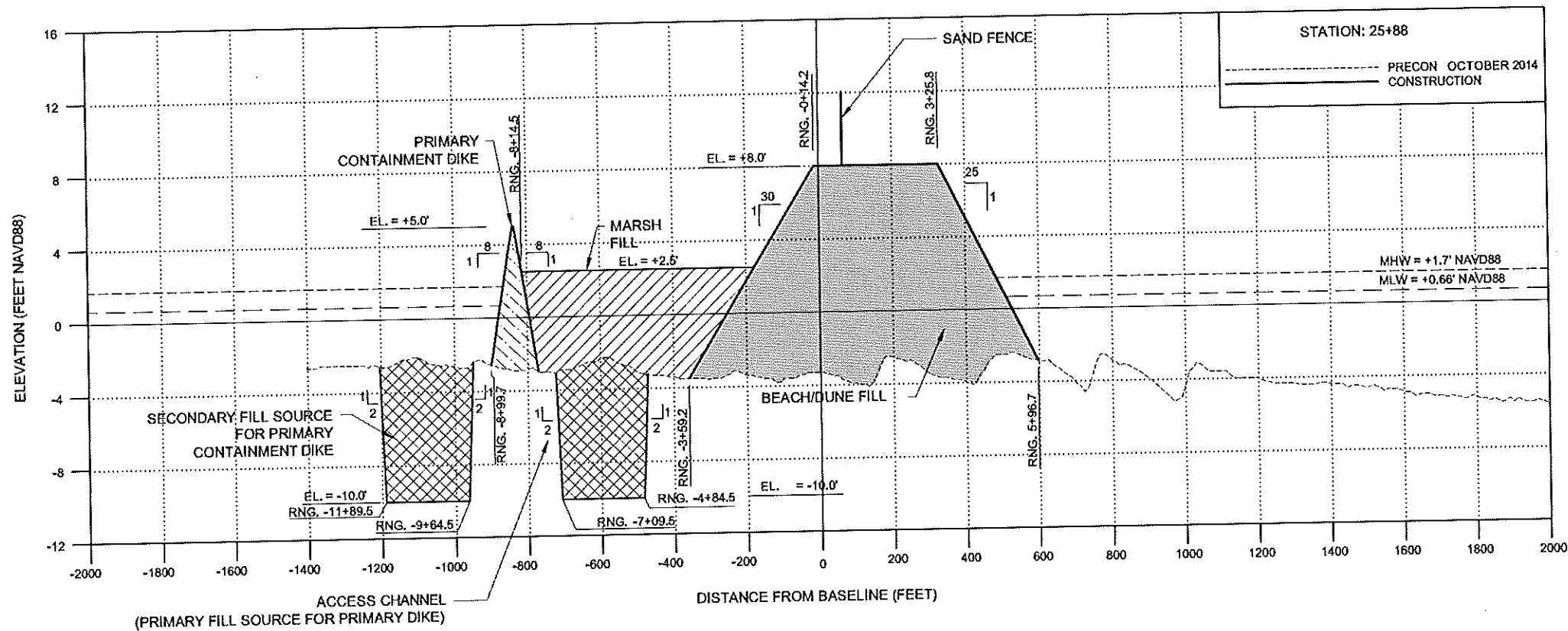
REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EAST LOBE ADDITIVE ALTERNATE 3 CONSTRUCTION PROFILES**  
 DATE: 02/20/15  
 SHEET 26 OF 70



**NOTES:**

1. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.
2. LAYOUT ALL FILL AREAS BY CROSS SECTIONS.
3. POSITIVE RANGES ARE SOUTH OF BASELINE. NEGATIVE RANGES ARE NORTH OF BASELINE.

**LEGEND:**

- PRIMARY CONTAINMENT DIKE FILL
- MARSH FILL
- EXCAVATED MATERIAL
- BEACH/DUNE FILL

0 2 4  
VERTICAL SCALE IN FT

0 100 200  
HORIZONTAL SCALE IN FT

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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 BOCA RATON, FLORIDA 33431  
 PH (561) 391-8102  
 FAX (561) 391-8116  
 C.O.A. FL. #4928  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801

DRAWN BY: GK

DESIGNED BY: WT

SHELL ISLAND WEST NRDA RESTORATION PROJECT

STATE PROJECT NUMBER: BA-111

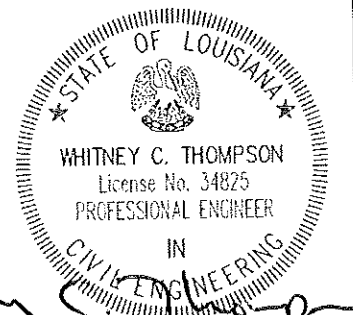
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APPROVED BY: GT

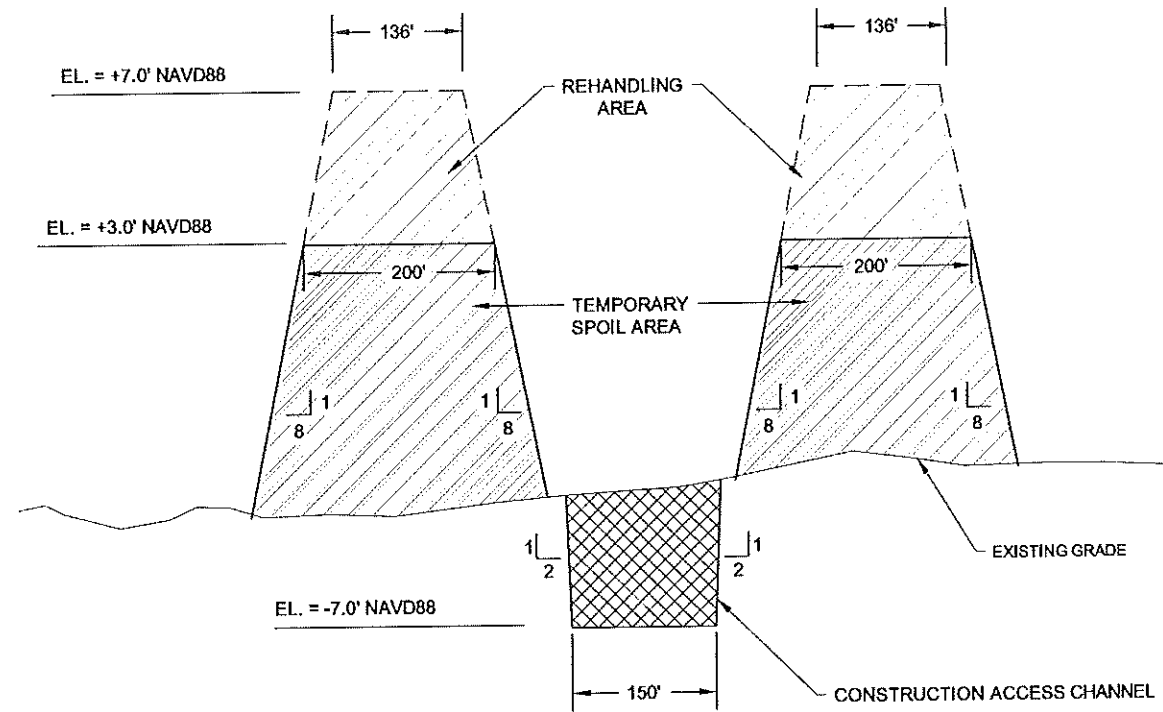
EAST LOBE ADDITIVE ALTERNATE 3 CONSTRUCTION PROFILES

DATE: 02/20/15

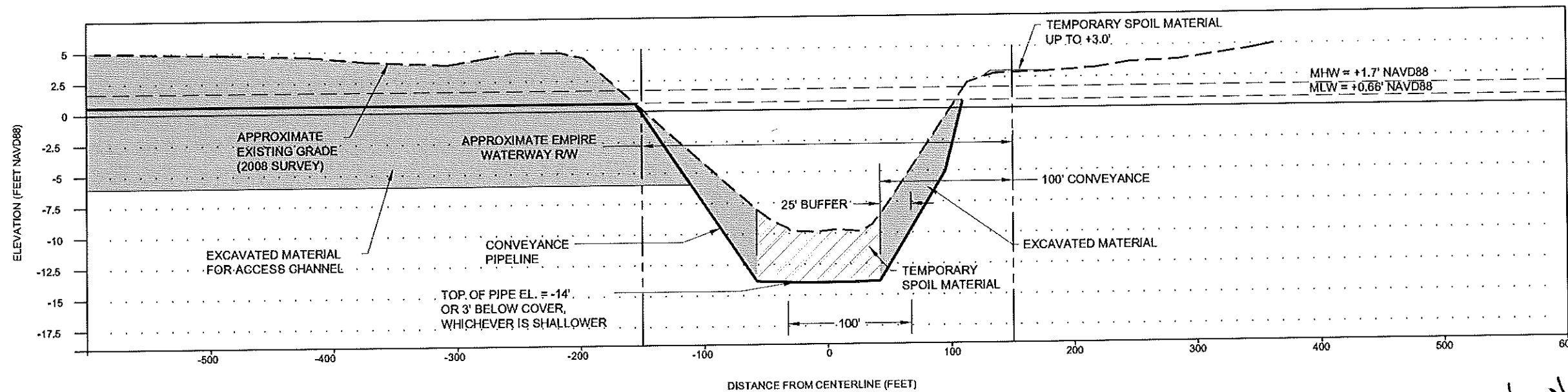
SHEET 27 OF 70



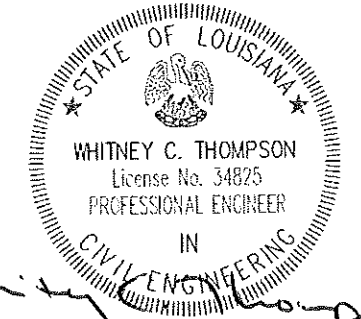
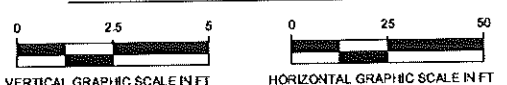
*Whitney C. Thompson*  
 2/26/15



CONSTRUCTION ACCESS CHANNEL AND TEMPORARY SPOIL AND REHANDLING AREA  
SECTION A-A'  
(PLAN VIEW SHOWN ON SHEET 13)  
N.T.S.



EMPIRE WATERWAY CROSSING B-B'  
(PLAN VIEW SHOWN ON SHEET 14)



*Whitney C. Thompson*  
2/26/15

**LEGEND:**

- CONSTRUCTION ACCESS CHANNEL
- EXCAVATED MATERIAL
- TEMPORARY SPOIL MATERIAL
- REHANDLING MATERIAL

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
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**SHELL ISLAND WEST NRDA RESTORATION PROJECT**

STATE PROJECT NUMBER: BA-111

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
**CROSS SECTIONS A-A' AND B-B'**


DATE: 02/20/15

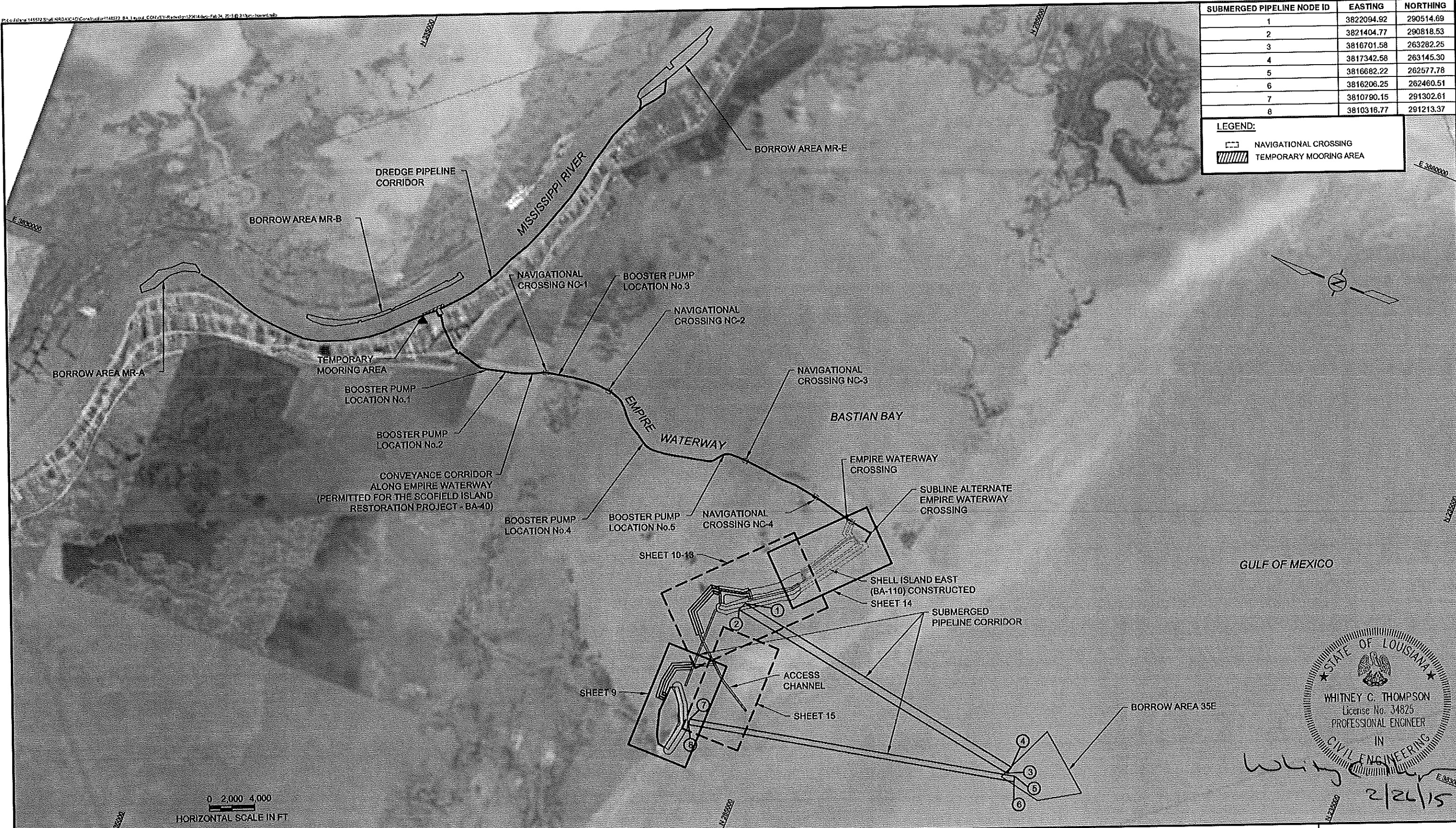
SHEET 28 OF 70

SUBMERGED PIPELINE NODE ID	EASTING	NORTHING
1	3822094.92	290514.69
2	3821404.77	290818.53
3	3816701.58	263282.25
4	3817342.58	263145.30
5	3816682.22	262577.78
6	3816206.25	262460.51
7	3810790.15	291302.61
8	3810316.77	291213.37

**LEGEND:**

 NAVIGATIONAL CROSSING

 TEMPORARY MOORING AREA



STATE OF LOUISIANA

WHITNEY C. THOMPSON  
License No. 34825  
PROFESSIONAL ENGINEER

IN  
CIVIL ENGINEERING

*Whitney C. Thompson*  
2/26/15

**NOTES:**

- COORDINATES ARE IN FEET BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD83).
- DATE OF SURROUNDING AREA PHOTOGRAPH: OCTOBER 15, 2005.
- DATE OF PROJECT AREA PHOTOGRAPH: JULY 16, 2008.
- SEE SHEET 66 AND 67 FOR BOOSTER PUMP AND NAVIGATIONAL CROSSING LOCATIONS.
- SEE TS-22.4 OF THE SPECIFICATIONS FOR INFORMATION REGARDING THE SUBMERGED PIPELINE CORRIDOR.

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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DRAWN BY: GK      DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**

STATE PROJECT NUMBER: BA-111

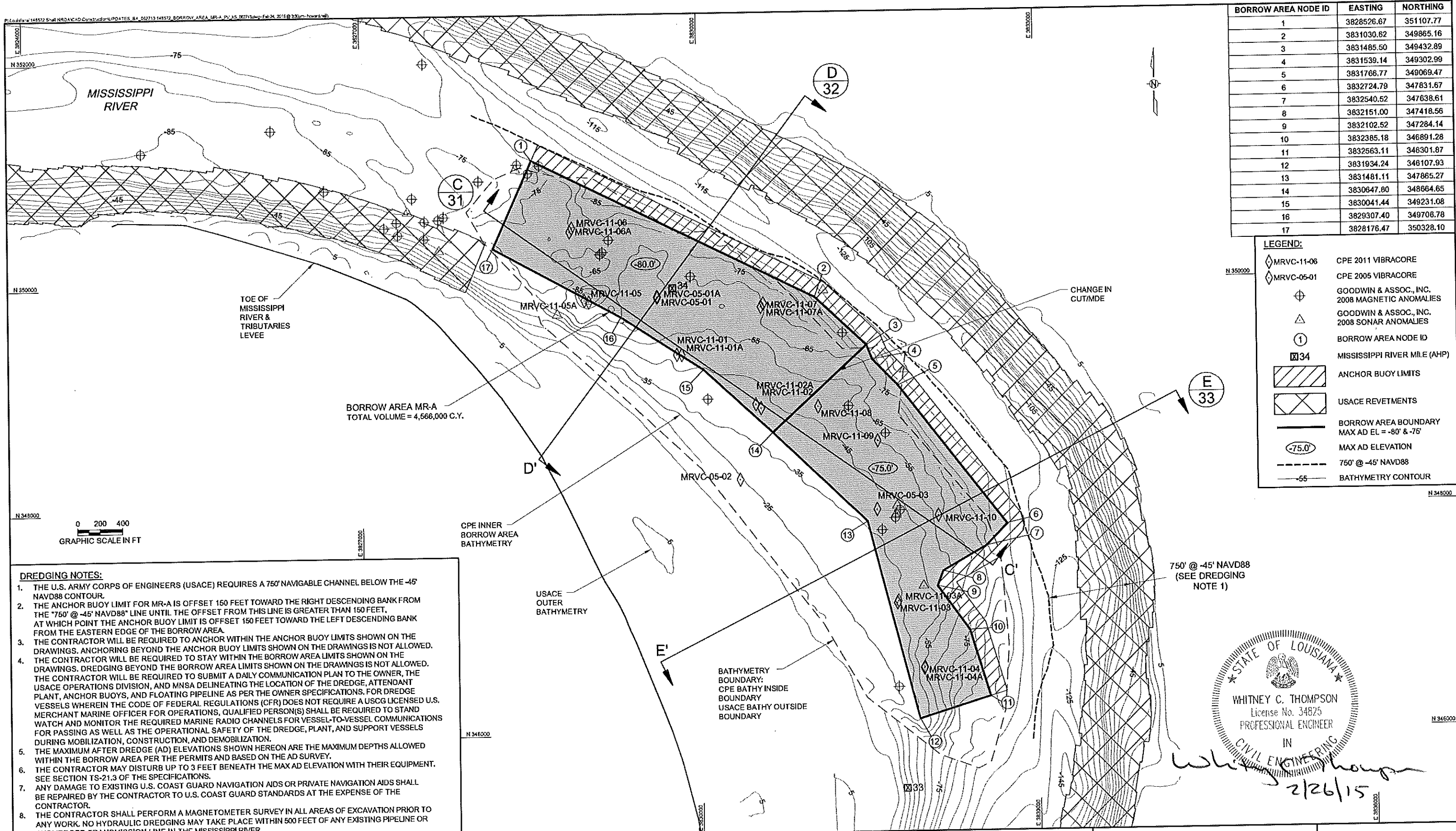
FEDERAL PROJECT NUMBER:

APPROVED BY: GT

**BORROW AREA LOCATION AND CONVEYANCE CORRIDOR PLAN VIEW**

DATE: 02/20/15

SHEET 29 OF 70



BORROW AREA NODE ID	EASTING	NORTHING
1	3828526.67	351107.77
2	3831030.62	349865.16
3	3831485.50	349432.89
4	3831539.14	349302.99
5	3831766.77	349069.47
6	3832724.79	347831.67
7	3832540.52	347638.61
8	3832151.00	347418.56
9	3832102.52	347284.14
10	3832385.18	346891.28
11	3832563.11	346301.87
12	3831934.24	346107.93
13	3831481.11	347865.27
14	3830647.80	348664.65
15	3830041.44	349231.08
16	3829307.40	349708.78
17	3828176.47	350328.10

**LEGEND:**

- ◇ MRVC-11-06 CPE 2011 VIBRACORE
- ◇ MRVC-05-01 CPE 2005 VIBRACORE
- ⊕ GOODWIN & ASSOC., INC. 2008 MAGNETIC ANOMALIES
- △ GOODWIN & ASSOC., INC. 2008 SONAR ANOMALIES
- ① BORROW AREA NODE ID
- 34 MISSISSIPPI RIVER MILE (AHP)
- ▨ ANCHOR BUOY LIMITS
- ▩ USACE REVETMENTS
- BORROW AREA BOUNDARY
- MAX AD EL = -80' & -75'
- -75.0' MAX AD ELEVATION
- - - 750' @ -45' NAVD88
- - - BATHYMETRY CONTOUR

**DREDGING NOTES:**

- THE U.S. ARMY CORPS OF ENGINEERS (USACE) REQUIRES A 750' NAVIGABLE CHANNEL BELOW THE -45' NAVD88 CONTOUR.
- THE ANCHOR BUOY LIMIT FOR MR-A IS OFFSET 150 FEET TOWARD THE RIGHT DESCENDING BANK FROM THE 750' @ -45' NAVD88 LINE UNTIL THE OFFSET FROM THIS LINE IS GREATER THAN 150 FEET. AT WHICH POINT THE ANCHOR BUOY LIMIT IS OFFSET 150 FEET TOWARD THE LEFT DESCENDING BANK FROM THE EASTERN EDGE OF THE BORROW AREA.
- THE CONTRACTOR WILL BE REQUIRED TO ANCHOR WITHIN THE ANCHOR BUOY LIMITS SHOWN ON THE DRAWINGS. ANCHORING BEYOND THE ANCHOR BUOY LIMITS SHOWN ON THE DRAWINGS IS NOT ALLOWED.
- THE CONTRACTOR WILL BE REQUIRED TO STAY WITHIN THE BORROW AREA LIMITS SHOWN ON THE DRAWINGS. DREDGING BEYOND THE BORROW AREA LIMITS SHOWN ON THE DRAWINGS IS NOT ALLOWED. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A DAILY COMMUNICATION PLAN TO THE OWNER, THE USACE OPERATIONS DIVISION, AND MNSA DELINEATING THE LOCATION OF THE DREDGE, ATTENDANT PLANT, ANCHOR BUOYS, AND FLOATING PIPELINE AS PER THE OWNER SPECIFICATIONS. FOR DREDGE VESSELS WHEREIN THE CODE OF FEDERAL REGULATIONS (CFR) DOES NOT REQUIRE A USCG LICENSED U.S. MERCHANT MARINE OFFICER FOR OPERATIONS, QUALIFIED PERSON(S) SHALL BE REQUIRED TO STAND WATCH AND MONITOR THE REQUIRED MARINE RADIO CHANNELS FOR VESSEL-TO-VESSEL COMMUNICATIONS FOR PASSING AS WELL AS THE OPERATIONAL SAFETY OF THE DREDGE, PLANT, AND SUPPORT VESSELS DURING MOBILIZATION, CONSTRUCTION, AND DEMOBILIZATION.
- THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
- THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
- 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.
- THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY IN ALL AREAS OF EXCAVATION PRIOR TO ANY WORK. NO HYDRAULIC DREDGING MAY TAKE PLACE WITHIN 500 FEET OF ANY EXISTING PIPELINE OR SUBMERGED TRANSMISSION LINE IN THE MISSISSIPPI RIVER.

**NOTES:**

- COORDINATES SHOWN HEREON ARE BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83.
- ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
- DATE OF COASTAL PLANNING & ENGINEERING, INC. BATHYMETRIC SURVEY IS OCTOBER, 2011. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
- DATE OF USACE BATHYMETRIC SURVEY IS 2004.
- EASTINGS AND NORTHINGS SHOWN ALONG DRAWING BOUNDARY FOR GRID REFERENCE.

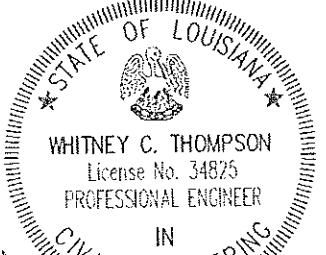
REV.	DATE	DESCRIPTION	BY
1	10/24/12	Created BA Plans	KD
2	5/21/13	Updated BA Plans	KM
3	6/27/13	Updated notes/legend	KM
4	10/10/13	CPRA Comments	KM

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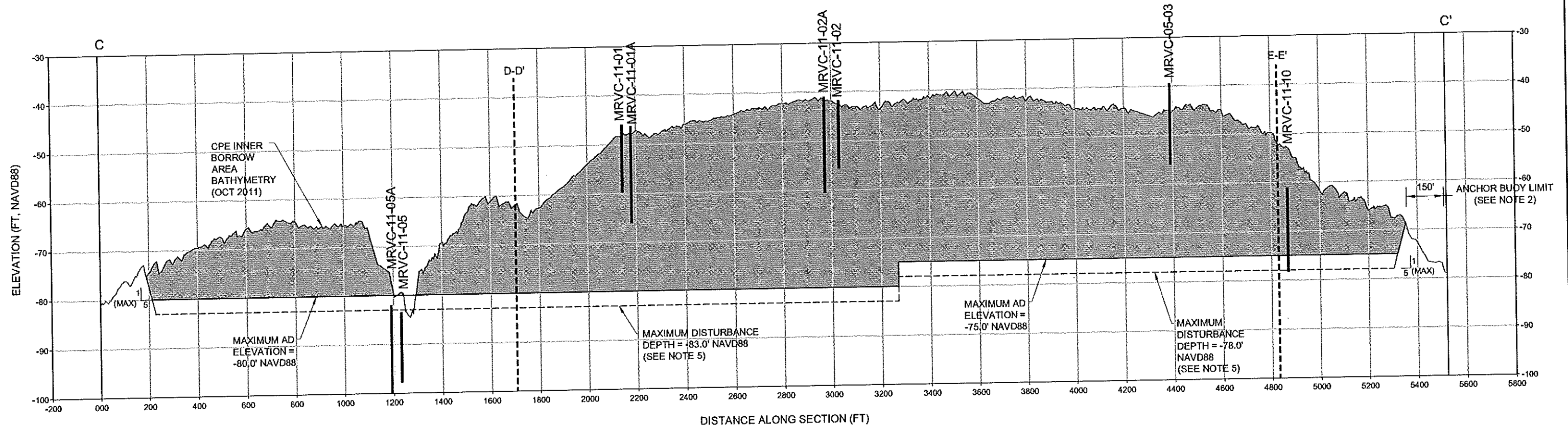
**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**BORROW AREA MR-A PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 30 OF 70



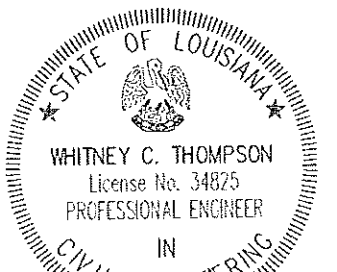
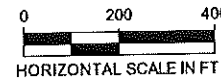
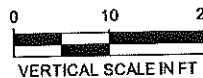
*Whitney C. Thompson*  
 2/26/15

BORROW AREA MR-A CROSS SECTION C-C'



NOTES:

- SEE SHEET 30 FOR LOCATION OF CROSS SECTION LINE.
- THE ANCHOR BUOY LIMIT FOR MR-A IS OFFSET 150 FEET TOWARD THE RIGHT DESCENDING BANK FROM THE "750' @ -45' NAVD88" LINE UNTIL THE OFFSET FROM THIS LINE IS GREATER THAN 150 FEET, AT WHICH POINT THE ANCHOR BUOY LIMIT IS OFFSET 150 FEET TOWARD THE LEFT DESCENDING BANK FROM THE EASTERN EDGE OF THE BORROW AREA.
- ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
- THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
- THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
- CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO CONTAIN SIMILAR MATERIAL.
- WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.
- BORROW AREA SURVEY CONDUCTED IN OCTOBER 2011. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
- DATE OF COASTAL PLANNING & ENGINEERING, INC. BATHYMETRIC SURVEY IS OCTOBER, 2011.



*Whitney C. Thompson*  
2/26/15

REV.	DATE	DESCRIPTION	BY
1	10/24/12	Created BA Plans	KD
2	5/21/13	Updated BA Plans	KM
3	6/27/13	Updated notes	KM
4	10/10/13	CPRA Comments	KM

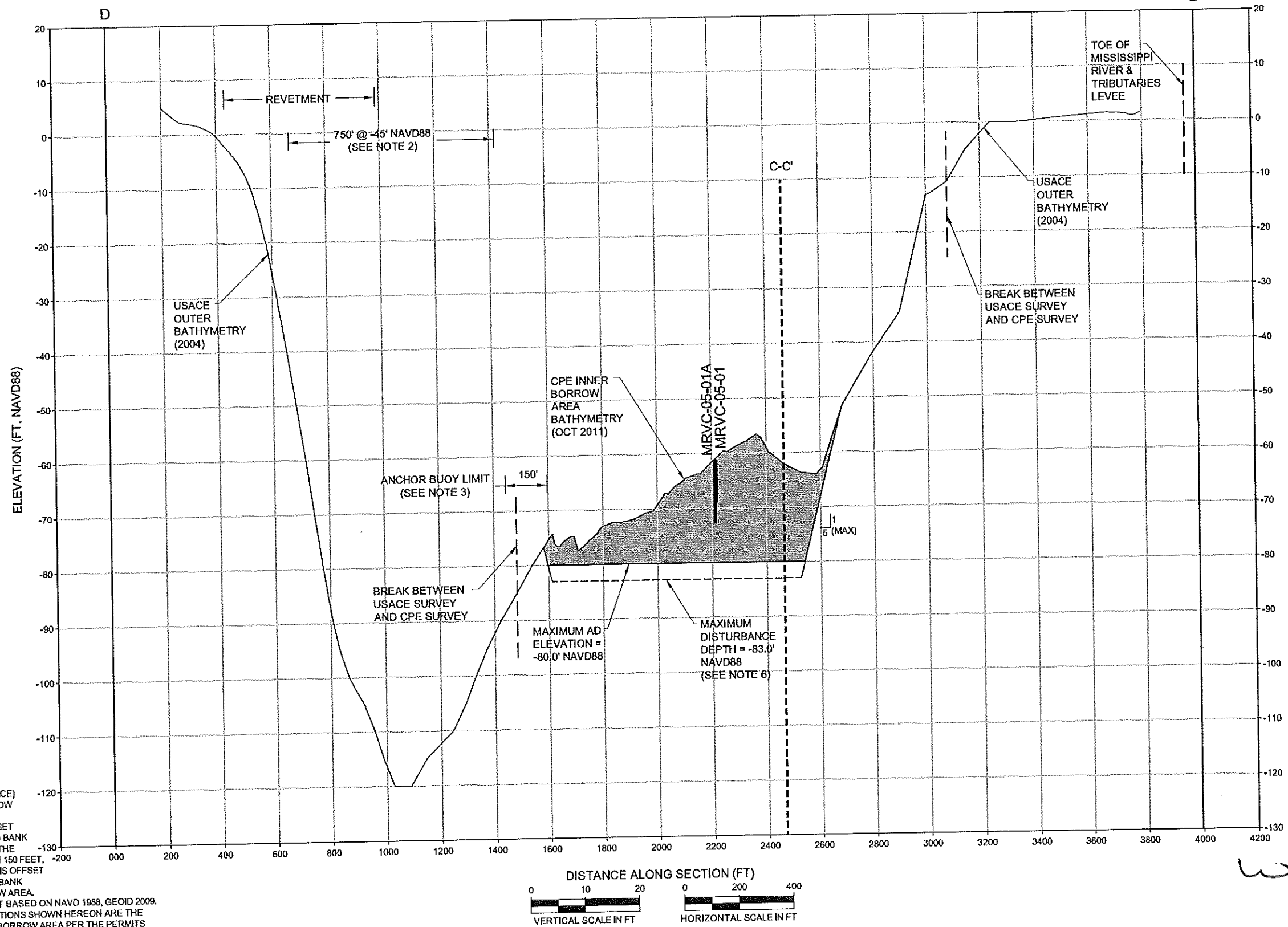
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH: (561) 391-8192  
 FAX: (561) 391-9116  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
 www.CB&I.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**BORROW AREA MR-A CROSS SECTION C-C'**  
 DATE: 02/20/15  
 SHEET 31 OF 70

BORROW AREA MR-A CROSS SECTION D-D'



- NOTES:**
- SEE SHEET 30 FOR LOCATION OF CROSS SECTION LINE.
  - THE U.S. ARMY CORPS OF ENGINEERS (USACE) REQUIRES A 750' NAVIGABLE CHANNEL BELOW THE -45' NAVD88 CONTOUR.
  - THE ANCHOR BUOY LIMIT FOR MR-A IS OFFSET 150 FEET TOWARD THE RIGHT DESCENDING BANK FROM THE 750' @ -45' NAVD88 LINE UNTIL THE OFFSET FROM THIS LINE IS GREATER THAN 150 FEET. AT WHICH POINT THE ANCHOR BUOY LIMIT IS OFFSET 150 FEET TOWARD THE LEFT DESCENDING BANK FROM THE EASTERN EDGE OF THE BORROW AREA.
  - ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
  - THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
  - THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
  - CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO CONTAIN SIMILAR MATERIAL.
  - WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.
  - BORROW AREA SURVEY CONDUCTED IN OCTOBER 2011. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
  - DATE OF COASTAL PLANNING & ENGINEERING, INC. BATHYMETRIC SURVEY IS OCTOBER, 2011.
  - DATE OF USACE BATHYMETRIC SURVEY IS 2004.

REV.	DATE	DESCRIPTION	BY
1	10/24/12	Created BA Plans	KD
2	5/21/13	Updated BA Plans	KM
3	6/27/13	Updated notes	KM
4	10/10/13	CPRA Comments	KM

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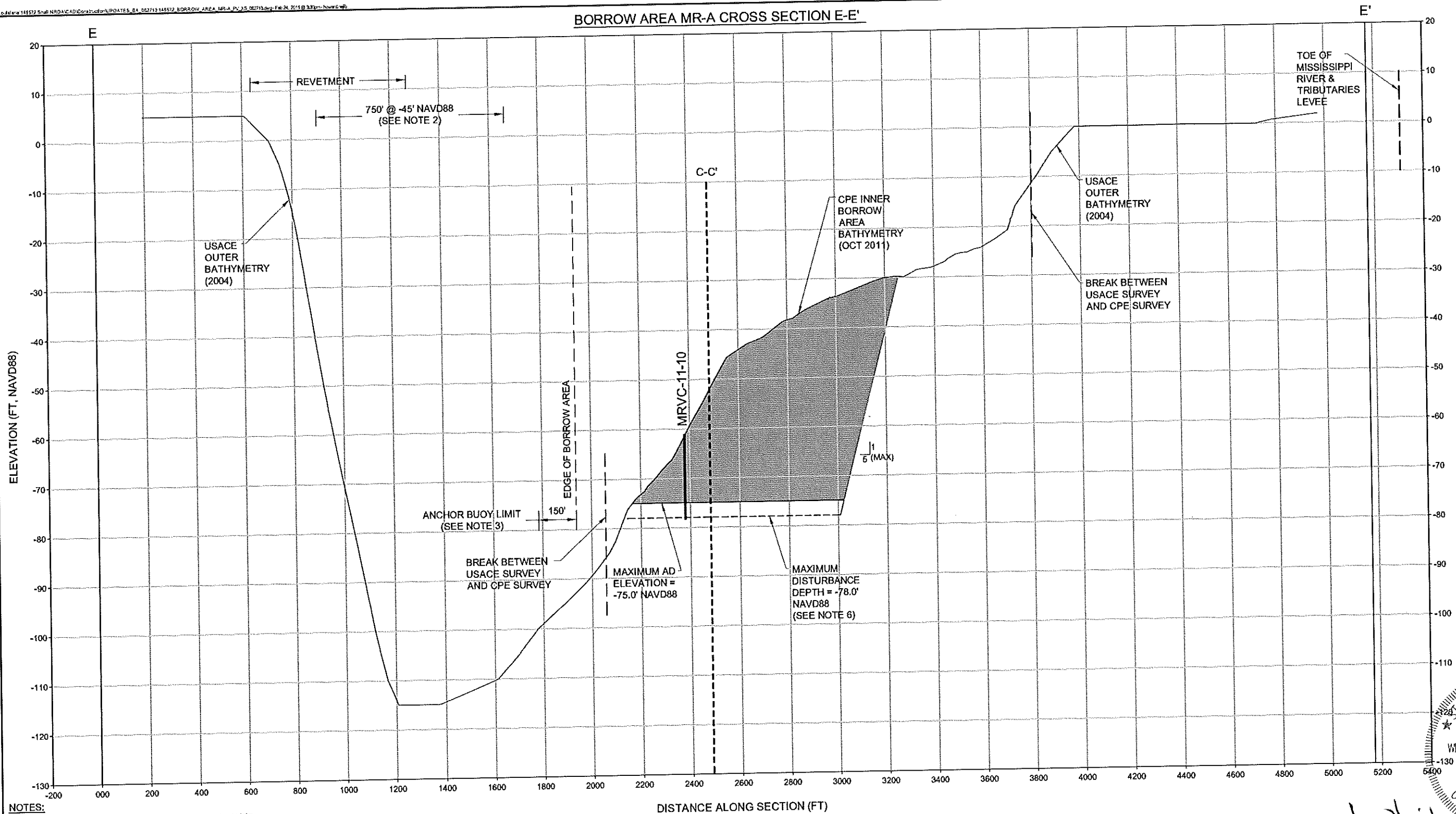
**BORROW AREA MR-A CROSS SECTION D-D'**  
 DATE: 02/20/15  
 SHEET 32 OF 70



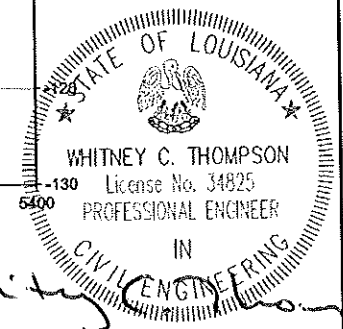
*Whitney C. Thompson*  
 2/26/15



BORROW AREA MR-A CROSS SECTION E-E'



- NOTES:**
- SEE SHEET 30 FOR LOCATION OF CROSS SECTION LINE.
  - THE U.S. ARMY CORPS OF ENGINEERS (USACE) REQUIRES A 750' NAVIGABLE CHANNEL BELOW THE -45' NAVD88 CONTOUR.
  - THE ANCHOR BUOY LIMIT FOR MR-A IS OFFSET 160 FEET TOWARD THE RIGHT DESCENDING BANK FROM THE 750' @ -45' NAVD88' LINE UNTIL THE OFFSET FROM THIS LINE IS GREATER THAN 150 FEET, AT WHICH POINT THE ANCHOR BUOY LIMIT IS OFFSET 150 FEET TOWARD THE LEFT DESCENDING BANK FROM THE EASTERN EDGE OF THE BORROW AREA.
  - ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
  - THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
  - THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
  - CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO CONTAIN SIMILAR MATERIAL.
  - WIDTH OF LAYERS IS REPRESENTATIVE ONLY, ACTUAL MATERIAL MAY VARY.
  - BORROW AREA SURVEY CONDUCTED IN OCTOBER 2011. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
  - DATE OF COASTAL PLANNING & ENGINEERING, INC. BATHYMETRIC SURVEY IS OCTOBER, 2011.
  - DATE OF USACE BATHYMETRIC SURVEY IS 2004.



*Whitney C. Thompson*  
2/26/15

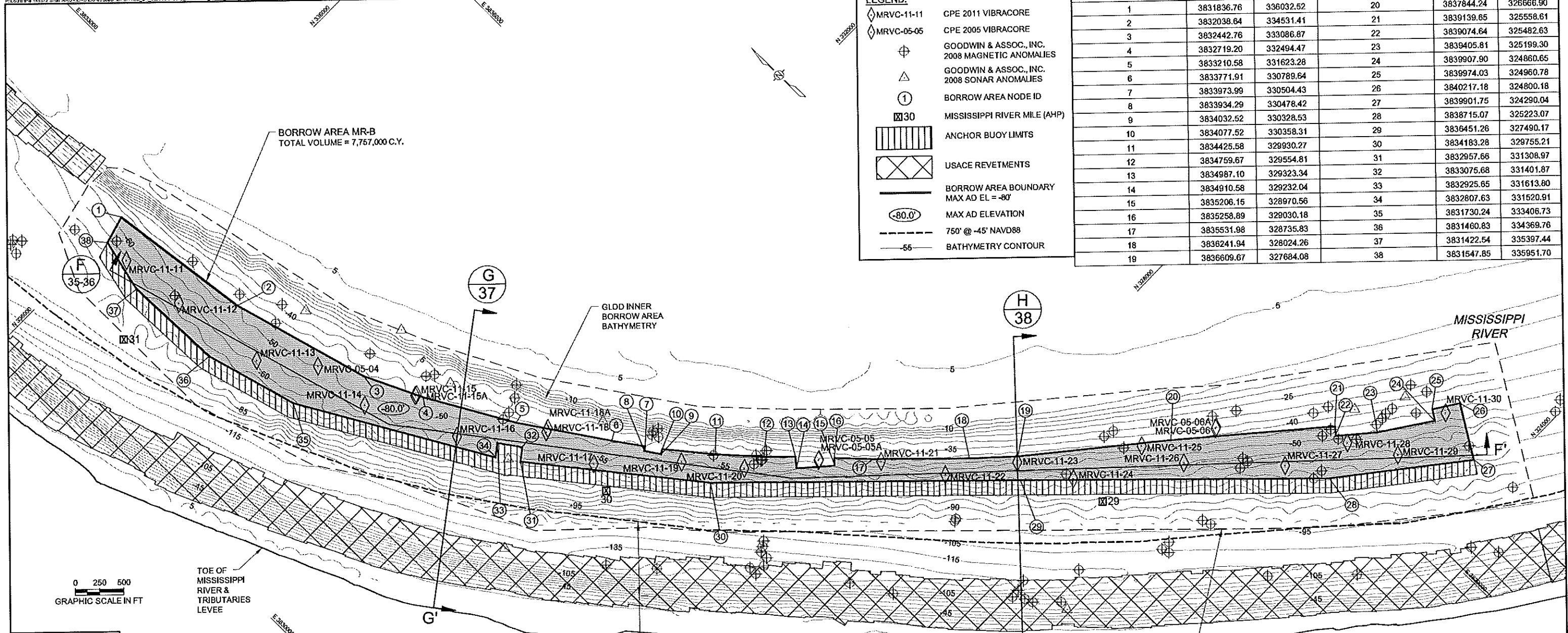
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**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
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**BORROW AREA MR-A CROSS SECTION E-E'**  
 DATE: 02/20/15  
 SHEET 33 OF 70



**LEGEND:**

- ◇ MRVC-11-11 CPE 2011 VIBRACORE
- ◇ MRVC-05-05 CPE 2005 VIBRACORE
- ⊕ GOODWIN & ASSOC., INC. 2008 MAGNETIC ANOMALIES
- △ GOODWIN & ASSOC., INC. 2008 SONAR ANOMALIES
- ① BORROW AREA NODE ID
- ⊠ 30 MISSISSIPPI RIVER MILE (AHP)
- ▨ ANCHOR BUOY LIMITS
- ▩ USACE REVETMENTS
- BORROW AREA BOUNDARY MAX AD EL = -80'
- -60.0' MAX AD ELEVATION
- - - 750' @ -45' NAVD88
- 55- BATHYMETRY CONTOUR

BORROW AREA NODE ID	EASTING	NORTHING	BORROW AREA NODE ID	EASTING	NORTHING
1	3831836.76	336032.52	20	3837844.24	326666.90
2	3832038.64	334531.41	21	3839139.65	325558.61
3	3832442.76	333086.87	22	3839074.64	325482.63
4	3832719.20	332494.47	23	3839405.81	325199.30
5	3833210.58	331623.28	24	3839907.90	324860.65
6	3833771.91	330789.64	25	3839974.03	324960.78
7	3833973.99	330504.43	26	3840217.18	324800.18
8	3833934.29	330478.42	27	3839901.75	324290.04
9	3834032.52	330328.53	28	3838715.07	325223.07
10	3834077.52	330358.31	29	3836451.26	327490.17
11	3834425.58	329930.27	30	3834183.28	329755.21
12	3834759.67	329554.81	31	3832957.66	331308.97
13	3834987.10	329323.34	32	3833075.68	331401.87
14	3834910.58	329232.04	33	3832925.65	331613.80
15	3835206.15	328970.56	34	3832807.63	331520.91
16	3835258.89	329030.18	35	3831730.24	333406.73
17	3835531.98	328735.83	36	3831460.83	334369.76
18	3836241.94	328024.26	37	3831422.54	335397.44
19	3836609.67	327684.08	38	3831547.85	335951.70

**DREDGING NOTES:**

1. THE U.S. ARMY CORPS OF ENGINEERS (USACE) REQUIRES A 750' NAVIGABLE CHANNEL BELOW THE -45' NAVD88 CONTOUR.
2. THE ANCHOR BUOY LIMIT FOR MR-B IS OFFSET 160 FEET TOWARD THE RIGHT DESCENDING BANK FROM THE SOUTHWESTERN EDGE OF THE BORROW AREA.
3. THE CONTRACTOR WILL BE REQUIRED TO ANCHOR WITHIN THE ANCHOR BUOY LIMITS SHOWN ON THE DRAWINGS. ANCHORING BEYOND THE ANCHOR BUOY LIMITS SHOWN ON THE DRAWINGS IS NOT ALLOWED.
4. THE CONTRACTOR WILL BE REQUIRED TO STAY WITHIN THE BORROW AREA LIMITS SHOWN ON THE DRAWINGS. DREDGING BEYOND THE BORROW AREA LIMITS SHOWN ON THE DRAWINGS IS NOT ALLOWED. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A DAILY COMMUNICATION PLAN TO THE OWNER, THE USACE OPERATIONS DIVISION, AND MNSA DELINEATING THE LOCATION OF THE DREDGE, ATTENDANT PLANT, ANCHOR BUOYS, AND FLOATING PIPELINE AS PER THE OWNER SPECIFICATIONS. FOR DREDGE VESSELS WHEREIN THE CODE OF FEDERAL REGULATIONS (CFR) DOES NOT REQUIRE A USCG LICENSED U.S. MERCHANT MARINE OFFICER FOR OPERATIONS, QUALIFIED PERSON(S) SHALL BE REQUIRED TO STAND WATCH AND MONITOR THE REQUIRED MARINE RADIO CHANNELS FOR VESSEL-TO-VESSEL COMMUNICATIONS FOR PASSING AS WELL AS THE OPERATIONAL SAFETY OF THE DREDGE, PLANT, AND SUPPORT VESSELS DURING MOBILIZATION, CONSTRUCTION, AND DEMOBILIZATION.
5. THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
6. THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
7. 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.
8. THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY IN ALL AREAS OF EXCAVATION PRIOR TO ANY WORK. NO HYDRAULIC DREDGING MAY TAKE PLACE WITHIN 500 FEET OF ANY EXISTING PIPELINE OR SUBMERGED TRANSMISSION LINE IN THE MISSISSIPPI RIVER.

**NOTES:**

1. COORDINATES SHOWN HEREON ARE BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83.
2. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
3. DATE OF THE GREAT LAKES DREDGE & DOCK COMPANY, LLC. (GLDD) BATHYMETRIC SURVEY IS APRIL, 2013. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
4. DATE OF THE USACE BATHYMETRIC SURVEY IS 2004.
5. EASTINGS AND NORTHINGS SHOWN ALONG DRAWING BOUNDARY FOR GRID REFERENCE.

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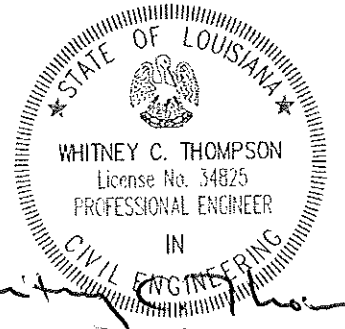
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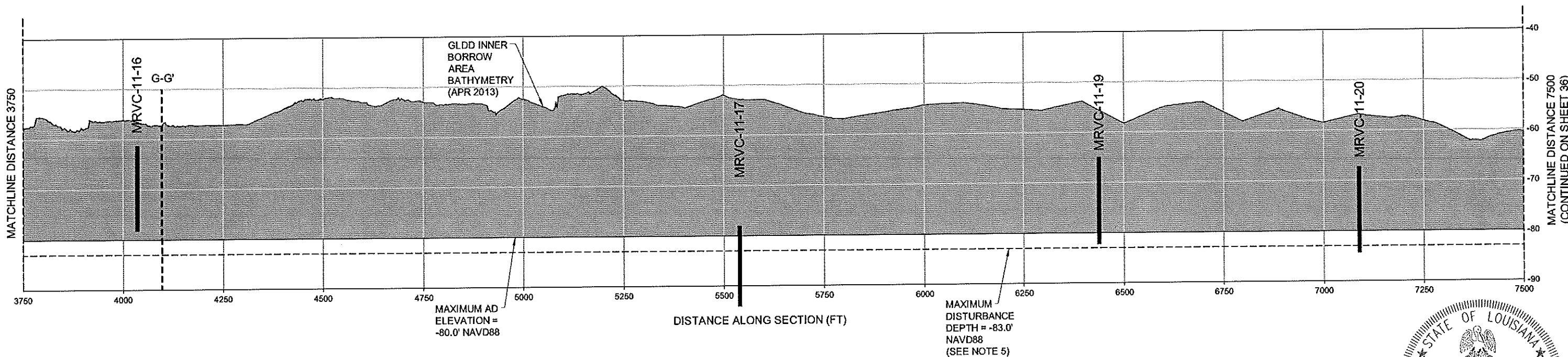
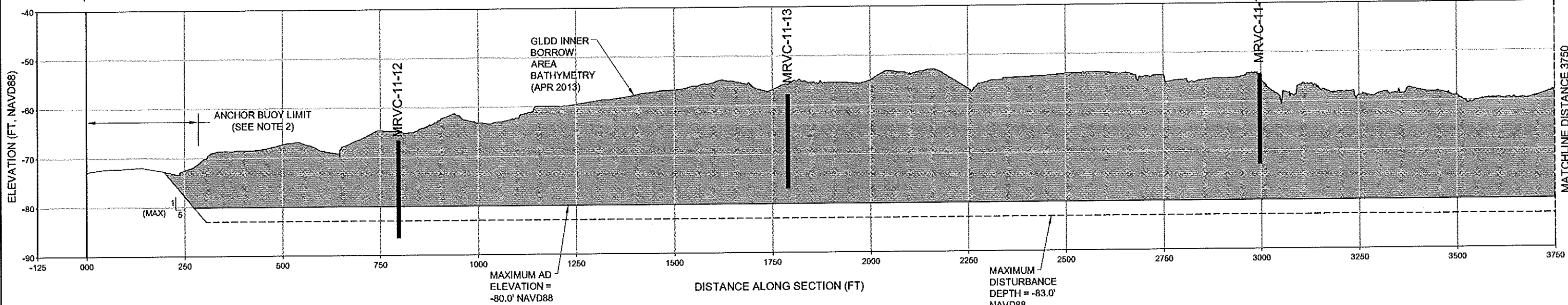
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
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**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
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**BORROW AREA MR-B PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 34 OF 70

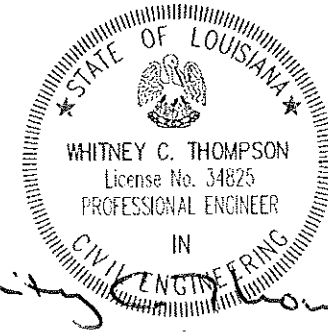
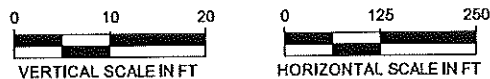


BORROW AREA MR-B CROSS SECTION F-F' (1 OF 2)



NOTES:

- SEE SHEET 34 FOR LOCATION OF CROSS SECTION LINE.
- THE ANCHOR BUOY LIMIT FOR MR-B IS OFFSET 150 FEET TOWARD THE RIGHT DESCENDING BANK FROM THE "750' @ -45' NAVD88" LINE UNTIL THE OFFSET FROM THIS LINE IS GREATER THAN 150 FEET, AT WHICH POINT THE ANCHOR BUOY LIMIT IS OFFSET 150 FEET TOWARD THE LEFT DESCENDING BANK FROM THE EASTERN EDGE OF THE BORROW AREA.
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*Whitney C. Thompson*  
2/26/15

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SHELL ISLAND WEST NRDA RESTORATION PROJECT

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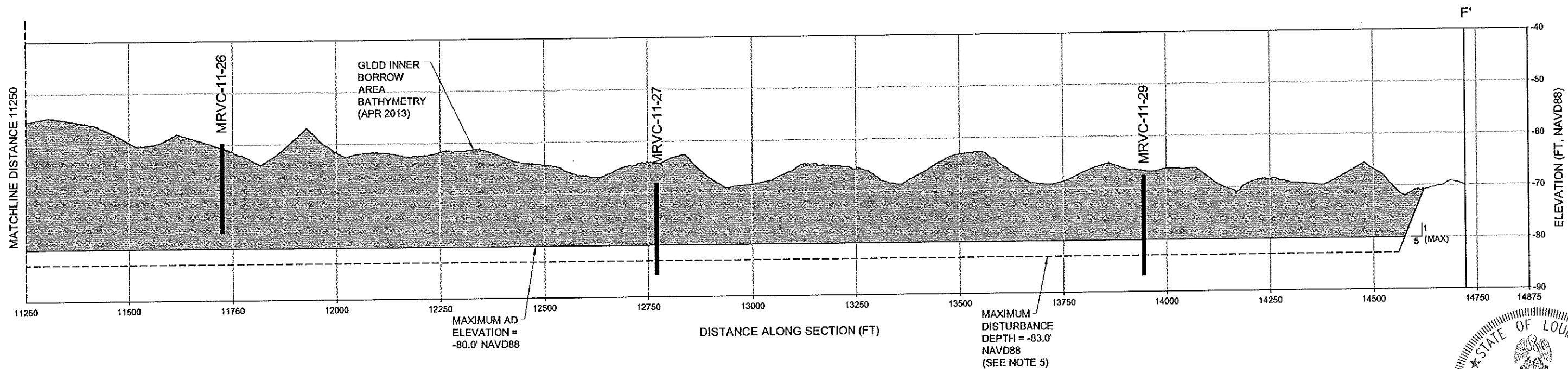
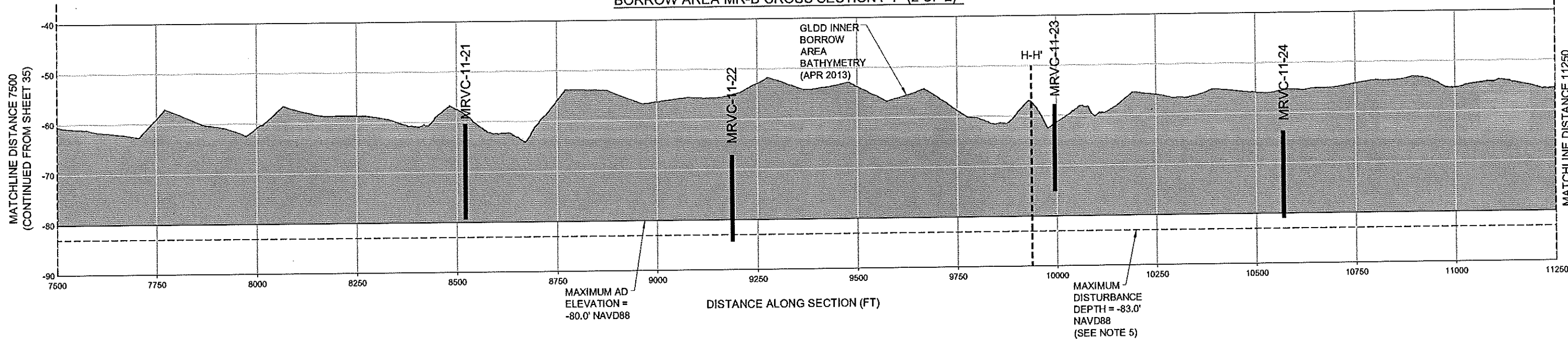
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BORROW AREA MR-B CROSS SECTION F-F' (1 OF 2)

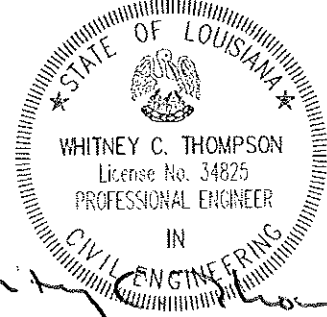
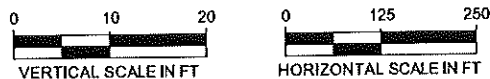
DATE: 02/20/15

SHEET 35 OF 70

BORROW AREA MR-B CROSS SECTION F-F' (2 OF 2)



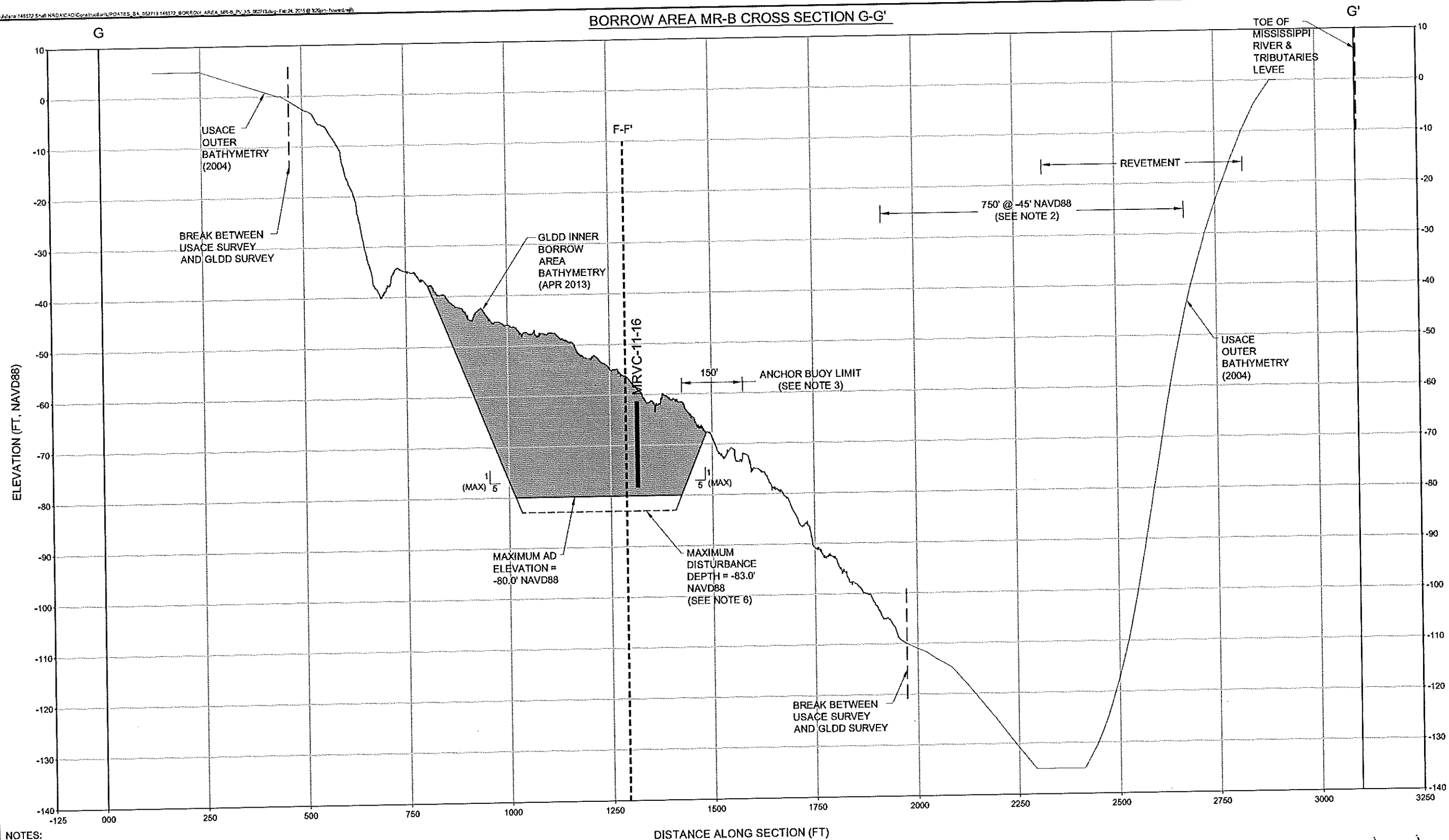
- NOTES:**
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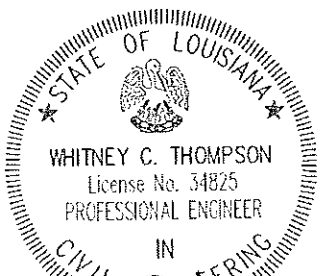
*Whitney C. Thompson*  
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BORROW AREA MR-B CROSS SECTION G-G'



- NOTES:**
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  - THE U.S. ARMY CORPS OF ENGINEERS (USACE) REQUIRES A 750' NAVIGABLE CHANNEL BELOW THE -45' NAVD88 CONTOUR.
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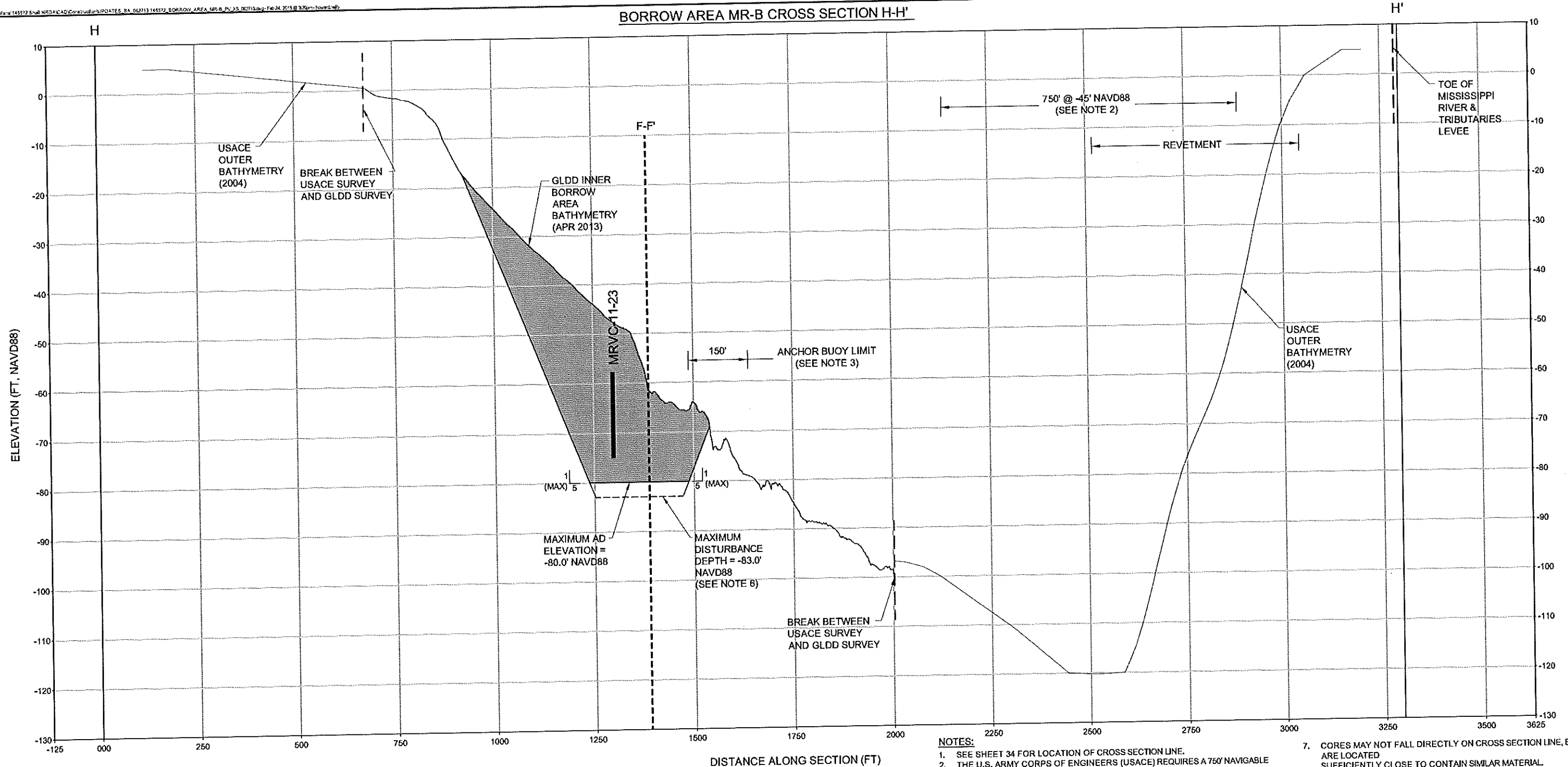
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DRAWN BY: GK  
DESIGNED BY: WT

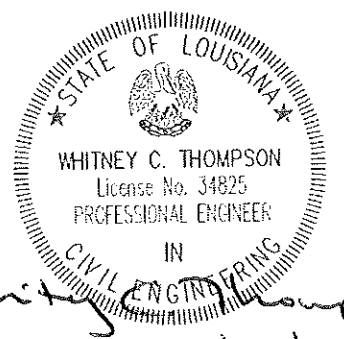
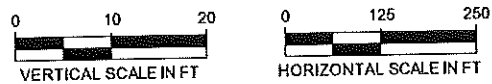
**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
STATE PROJECT NUMBER: BA-111  
FEDERAL PROJECT NUMBER:  
APPROVED BY: GT

**BORROW AREA MR-B CROSS SECTION G-G'**  
DATE: 02/20/15  
SHEET 37 OF 70

BORROW AREA MR-B CROSS SECTION H-H'



- NOTES:**
- SEE SHEET 34 FOR LOCATION OF CROSS SECTION LINE.
  - THE U.S. ARMY CORPS OF ENGINEERS (USACE) REQUIRES A 750' NAVIGABLE CHANNEL BELOW THE -45' NAVD88 CONTOUR.
  - THE ANCHOR BUOY LIMIT FOR MR-B IS OFFSET 150 FEET TOWARD THE RIGHT DESCENDING BANK FROM THE "750' @ -45' NAVD88" LINE UNTIL THE OFFSET FROM THIS LINE IS GREATER THAN 150 FEET, AT WHICH POINT THE ANCHOR BUOY LIMIT IS OFFSET 150 FEET TOWARD THE LEFT DESCENDING BANK FROM THE EASTERN EDGE OF THE BORROW AREA.
  - ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
  - THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
  - THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
  - CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO CONTAIN SIMILAR MATERIAL.
  - WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.
  - BORROW AREA SURVEY CONDUCTED IN APRIL 2013. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
  - DATE OF DATE OF THE GREAT LAKES DREDGE & DOCK COMPANY, LLC (GLDD) BATHYMETRIC SURVEY IS APRIL, 2013.
  - DATE OF THE USACE BATHYMETRIC SURVEY IS 2004.



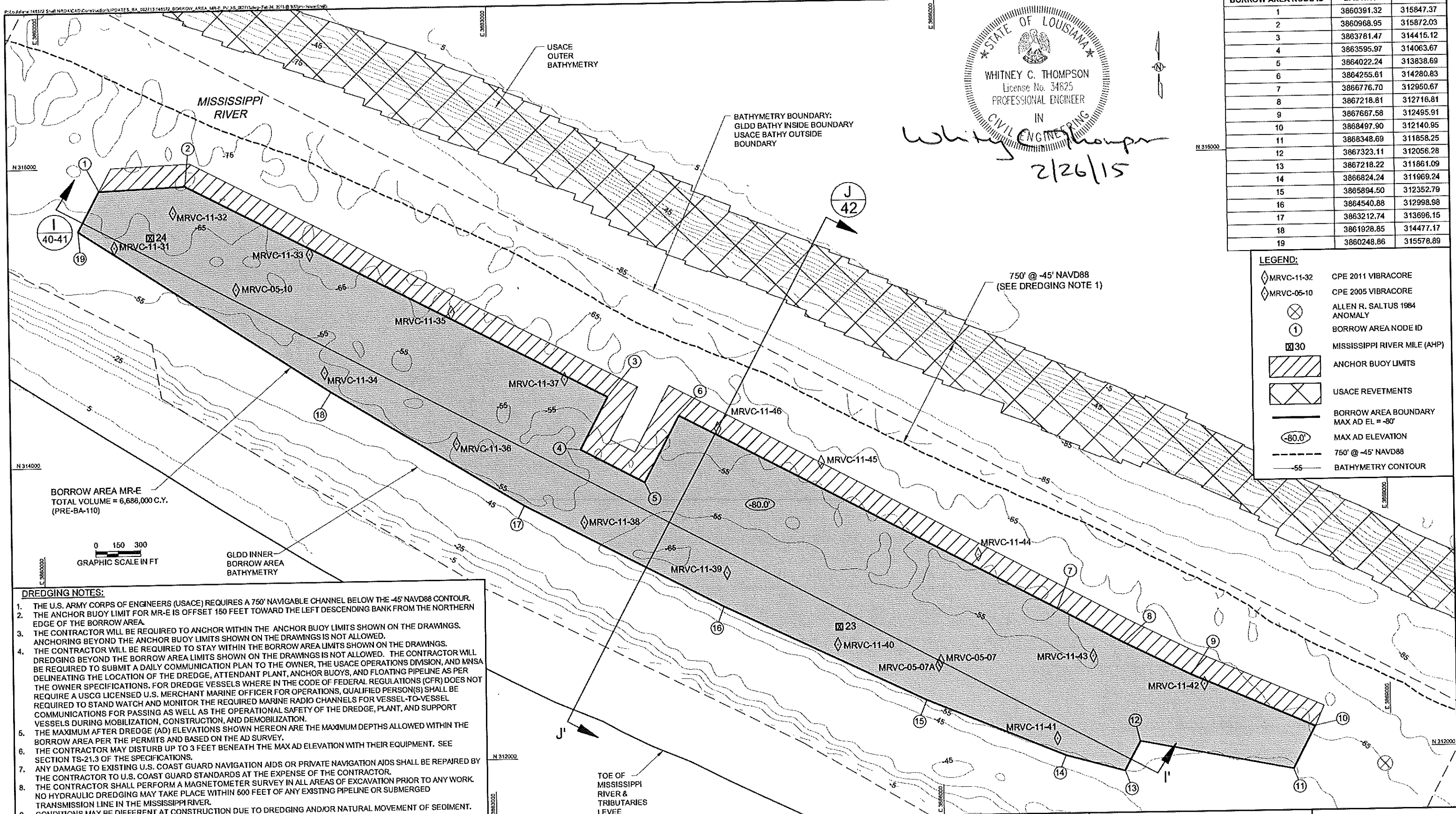
REV.	DATE	DESCRIPTION	BY
1	10/24/12	Created BA Plans	KD
2	5/21/13	Updated BA Plans	KM
3	6/27/13	Updated notes	KM
4	10/10/13	CPRA Comments	KM

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH (561) 391-8102  
 FAX (561) 391-9116  
 C.O.A. FL. #4028  
 C.O.A. LA. #2531  
 www.CBI.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**BORROW AREA MR-B CROSS SECTION H-H'**  
 DATE: 02/20/15  
 SHEET 38 OF 70



Whitney C. Thompson  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 IN  
 CIVIL ENGINEERING  
*Whitney Thompson*  
 2/26/15

BORROW AREA NODE ID	EASTING	NORTHING
1	3860391.32	315847.37
2	3860968.95	315872.03
3	3863781.47	314415.12
4	3863595.97	314063.67
5	3864022.24	313838.69
6	3864255.61	314280.83
7	3866776.70	312950.67
8	3867218.81	312716.81
9	3867667.58	312495.91
10	3868497.90	312140.95
11	3868348.69	311858.25
12	3867323.11	312056.28
13	3867218.22	311861.09
14	3866824.24	311969.24
15	3865894.50	312352.79
16	3864540.88	312998.98
17	3863212.74	313696.15
18	3861928.85	314477.17
19	3860248.86	315578.89

**LEGEND:**

	CPE 2011 VIBRACORE
	CPE 2005 VIBRACORE
	ALLEN R. SALTUS 1984 ANOMALY
	BORROW AREA NODE ID
	MISSISSIPPI RIVER MILE (AHP)
	ANCHOR BUOY LIMITS
	USACE REVETMENTS
	BORROW AREA BOUNDARY
	MAX AD EL = -80'
	MAX AD ELEVATION
	750' @ -45' NAVD88
	BATHYMETRY CONTOUR

BORROW AREA MR-E  
TOTAL VOLUME = 6,686,000 C.Y.  
(PRE-BA-110)

0 150 300  
GRAPHIC SCALE IN FT

- DREDGING NOTES:**
- THE U.S. ARMY CORPS OF ENGINEERS (USACE) REQUIRES A 750' NAVIGABLE CHANNEL BELOW THE -45' NAVD88 CONTOUR.
  - THE ANCHOR BUOY LIMIT FOR MR-E IS OFFSET 150 FEET TOWARD THE LEFT DESCENDING BANK FROM THE NORTHERN EDGE OF THE BORROW AREA.
  - THE CONTRACTOR WILL BE REQUIRED TO ANCHOR WITHIN THE ANCHOR BUOY LIMITS SHOWN ON THE DRAWINGS. ANCHORING BEYOND THE ANCHOR BUOY LIMITS SHOWN ON THE DRAWINGS IS NOT ALLOWED.
  - THE CONTRACTOR WILL BE REQUIRED TO STAY WITHIN THE BORROW AREA LIMITS SHOWN ON THE DRAWINGS. DREDGING BEYOND THE BORROW AREA LIMITS SHOWN ON THE DRAWINGS IS NOT ALLOWED. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A DAILY COMMUNICATION PLAN TO THE OWNER, THE USACE OPERATIONS DIVISION, AND MNSA DELINEATING THE LOCATION OF THE DREDGE, ATTENDANT PLANT, ANCHOR BUOYS, AND FLOATING PIPELINE AS PER THE OWNER SPECIFICATIONS. FOR DREDGE VESSELS WHERE IN THE CODE OF FEDERAL REGULATIONS (CFR) DOES NOT REQUIRE A USCG LICENSED U.S. MERCHANT MARINE OFFICER FOR OPERATIONS, QUALIFIED PERSON(S) SHALL BE REQUIRED TO STAND WATCH AND MONITOR THE REQUIRED MARINE RADIO CHANNELS FOR VESSEL-TO-VESSEL COMMUNICATIONS FOR PASSING AS WELL AS THE OPERATIONAL SAFETY OF THE DREDGE, PLANT, AND SUPPORT VESSELS DURING MOBILIZATION, CONSTRUCTION, AND DEMOBILIZATION.
  - THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
  - THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
  - 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.
  - THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY IN ALL AREAS OF EXCAVATION PRIOR TO ANY WORK. NO HYDRAULIC DREDGING MAY TAKE PLACE WITHIN 500 FEET OF ANY EXISTING PIPELINE OR SUBMERGED TRANSMISSION LINE IN THE MISSISSIPPI RIVER.
  - CONDITIONS MAY BE DIFFERENT AT CONSTRUCTION DUE TO DREDGING AND/OR NATURAL MOVEMENT OF SEDIMENT.

- NOTES:**
- COORDINATES SHOWN HEREON ARE BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83.
  - ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
  - DATE OF THE GREAT LAKES DREDGE & DOCK COMPANY, LLC. (GLDD) BATHYMETRIC SURVEY IS APRIL, 2013. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
  - DATE OF THE USACE BATHYMETRIC SURVEY IS 2004.
  - EASTINGS AND NORTHINGS SHOWN ALONG DRAWING BOUNDARY FOR GRID REFERENCE.

REV.	DATE	DESCRIPTION	BY
1	10/24/12	Created BA Plans	KD
2	05/21/13	Updated BA Plans	KM
3	6/27/13	Updated notes/legend	KM
4	10/10/13	CPRA Comments	KM

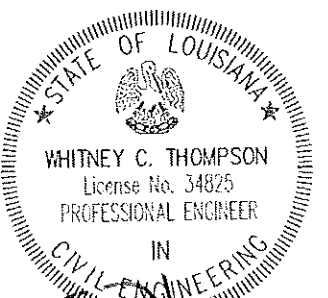
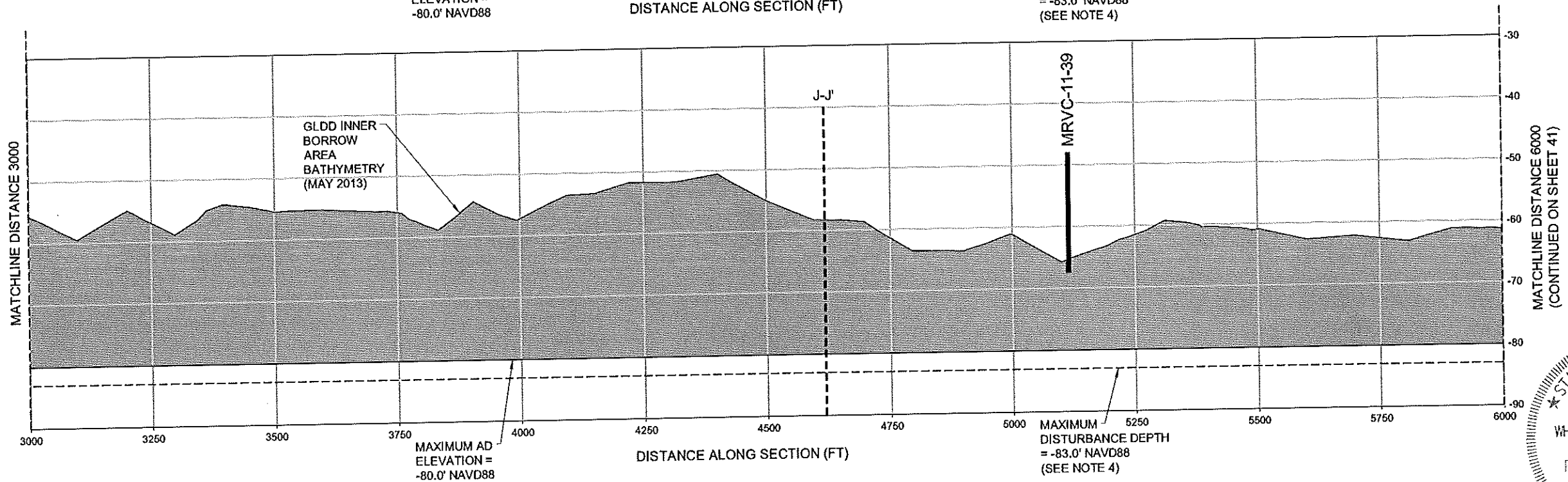
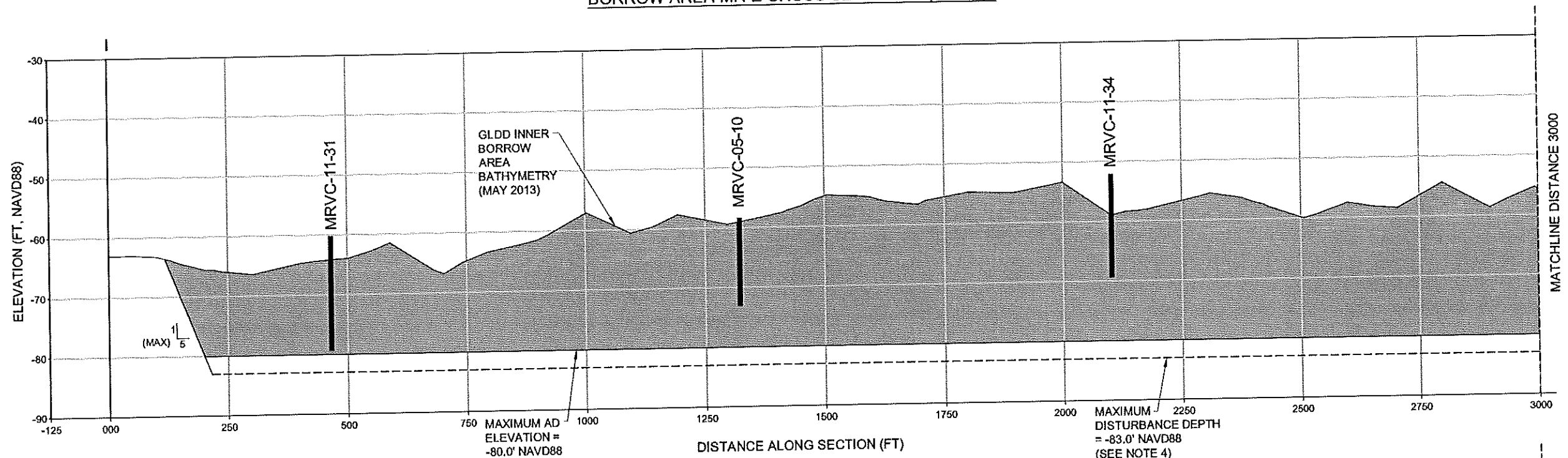
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
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 C.O.A. FL. #4828  
 C.O.A. LA. #2531  
 www.CBI.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**BORROW AREA MR-E PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 39 OF 70

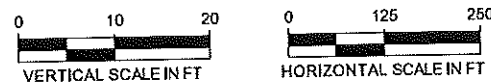
BORROW AREA MR-E CROSS SECTION I-I' (1 OF 2)



*Whitney C. Thompson*  
2/26/15

NOTES:

- SEE SHEET 39 FOR LOCATION OF CROSS SECTION LINE.
- ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
- THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
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- CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO CONTAIN SIMILAR MATERIAL.
- WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.
- BORROW AREA SURVEY CONDUCTED IN MAY 2013. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
- DATE OF DATE OF THE GREAT LAKES DREDGE & DOCK COMPANY, LLC. (GLDD) BATHYMETRIC SURVEY IS APRIL, 2013.



REV.	DATE	DESCRIPTION	BY
1	10/24/12	Created BA Plans	KD
2	05/21/13	Updated BA Plans	KM
3	6/27/13	Updated notes	KM
4	10/10/13	CPRA Comments	KM

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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: GK

DESIGNED BY: WT

SHELL ISLAND WEST NRDA RESTORATION PROJECT

STATE PROJECT NUMBER: BA-111

FEDERAL PROJECT NUMBER:

APPROVED BY: GT

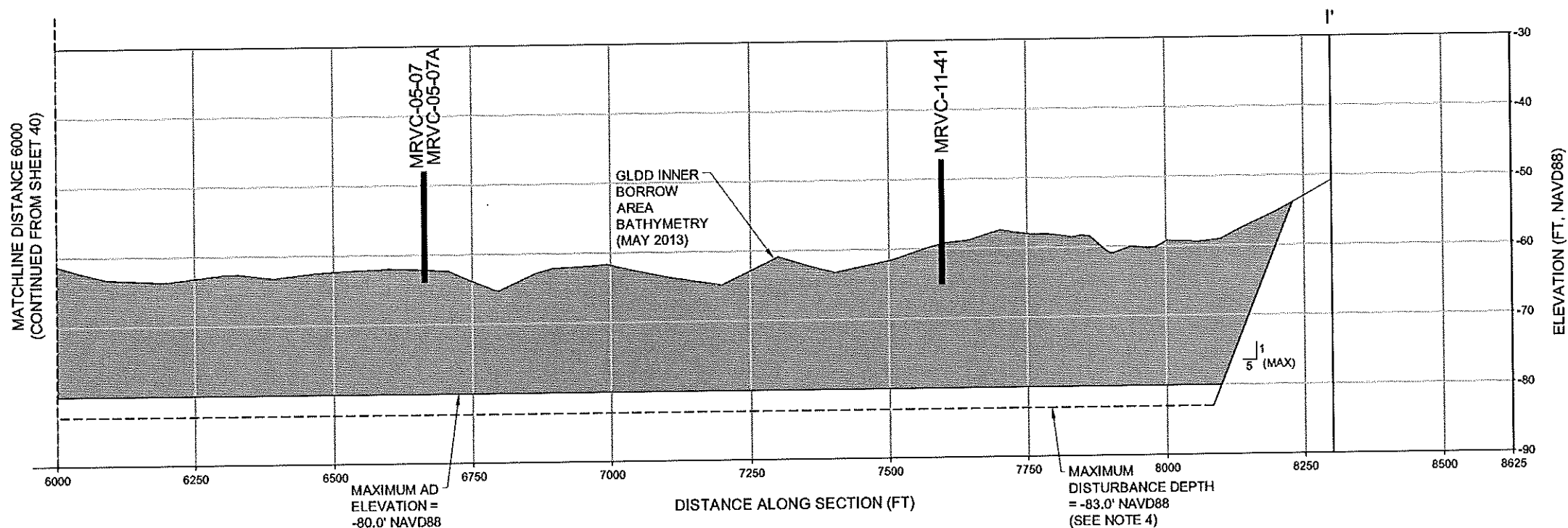
BORROW AREA MR-E CROSS SECTION I-I' (1 OF 2)

DATE: 02/20/15

SHEET 40 OF 70

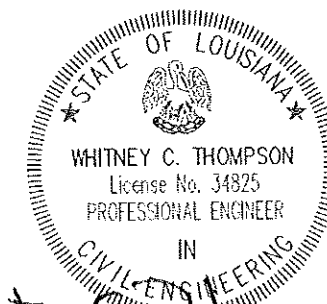
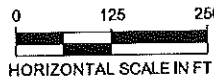
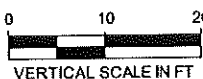


BORROW AREA MR-E CROSS SECTION I-I' (2 OF 2)



NOTES:

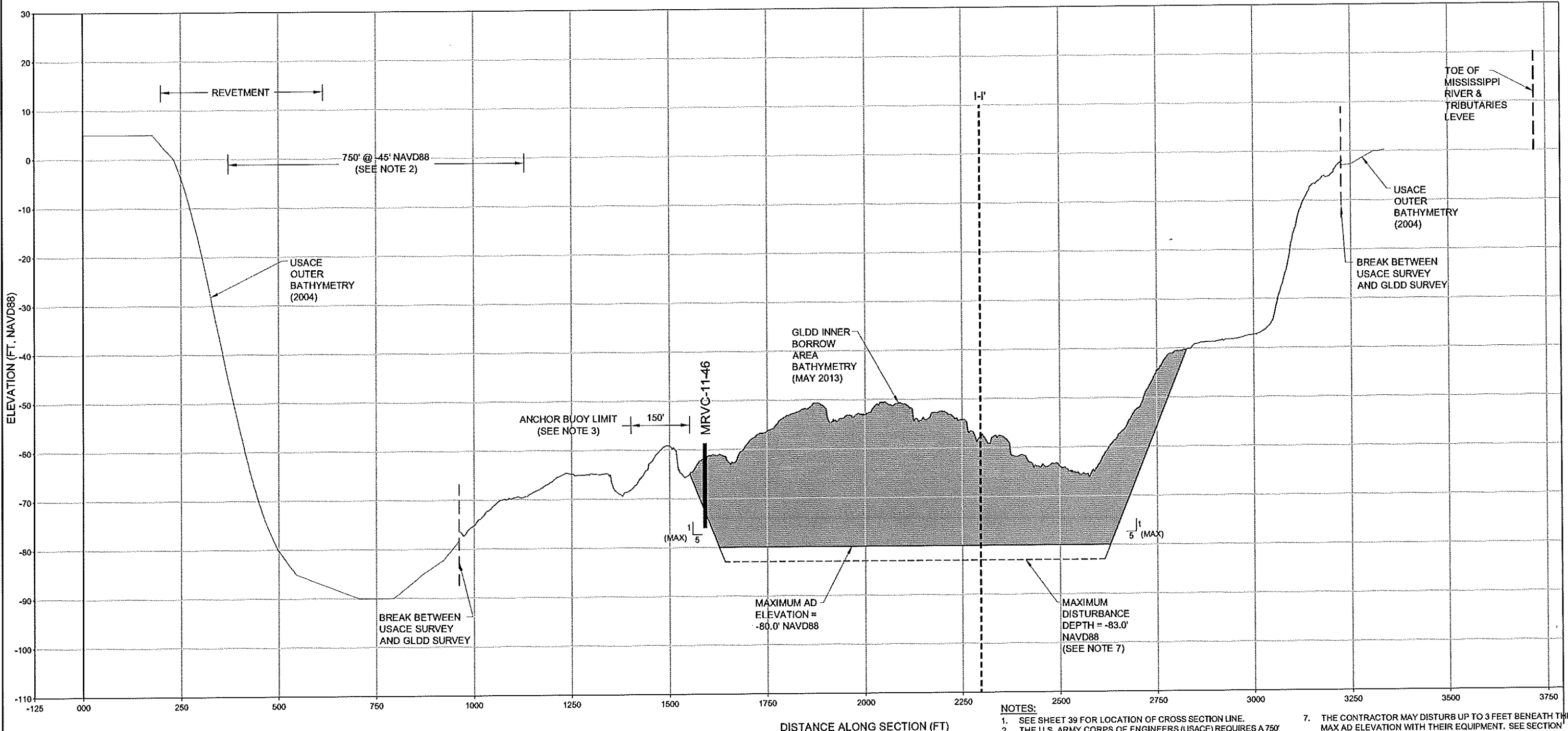
- SEE SHEET 39 FOR LOCATION OF CROSS SECTION LINE.
- ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
- THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
- THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
- CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO CONTAIN SIMILAR MATERIAL.
- WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.
- BORROW AREA SURVEY CONDUCTED IN MAY 2013. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
- DATE OF DATE OF THE GREAT LAKES DREDGE & DOCK COMPANY, LLC. (GLDD) BATHYMETRIC SURVEY IS MAY, 2013.



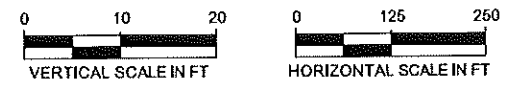
*Whitney C. Thompson*  
2/26/15

1	01/24/12	Created BA Plans	KD	<b>CB&amp;I COASTAL PLANNING &amp; ENGINEERING, INC.</b> 2481 N.W. BOCA RATON BOULEVARD BOCA RATON, FLORIDA 33431 PH (561) 391-6102 FAX (561) 391-6116 C.O.A. FL #4028 C.O.A. LA #2531 www.CBICOM	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	SHELL ISLAND WEST NRDA RESTORATION PROJECT		BORROW AREA MR-E CROSS SECTION I-I' (2 OF 2) DATE: 02/20/15 SHEET 41 OF 70
2	05/21/13	Updated BA Plans	KM			STATE PROJECT NUMBER: BA-111		
3	6/27/13	Updated notes	KM			FEDERAL PROJECT NUMBER:		
4	10/10/13	CPRA Comments	KM			APPROVED BY: GT		
REV.	DATE	DESCRIPTION	BY	DRAWN BY: GK		DESIGNED BY: WT		

BORROW AREA MR-E CROSS SECTION J-J'



- NOTES:**
- SEE SHEET 39 FOR LOCATION OF CROSS SECTION LINE.
  - THE U.S. ARMY CORPS OF ENGINEERS (USACE) REQUIRES A 750' NAVIGABLE CHANNEL BELOW -45' NAVD88 CONTOUR.
  - THE ANCHOR BUOY LIMIT FOR MR-E IS OFFSET 150 FEET TOWARD THE LEFT DESCENDING BANK FROM THE NORTHERN EDGE OF THE BORROW AREA.
  - THE CONTRACTOR WILL BE REQUIRED TO ANCHOR WITHIN THE ANCHOR BUOY LIMITS SHOWN ON THE DRAWINGS. ANCHORING BEYOND THE ANCHOR BUOY LIMITS SHOWN ON THE DRAWINGS IS NOT ALLOWED.
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  - BORROW AREA SURVEY CONDUCTED IN MAY 2013. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
  - DATE OF DATE OF THE GREAT LAKES DREDGE & DOCK COMPANY, LLC. (GLDD) BATHYMETRIC SURVEY IS MAY, 2013.
  - DATE OF THE USACE BATHYMETRIC SURVEY IS 2004.



*Whitney C. Thompson*  
2/26/15

REV.	DATE	DESCRIPTION	BY
1	10/24/12	Created BA Plans	KD
2	05/21/13	Updated BA Plans	KM
3	6/27/13	Updated notes	KM
4	10/10/13	CPRA Comments	KM

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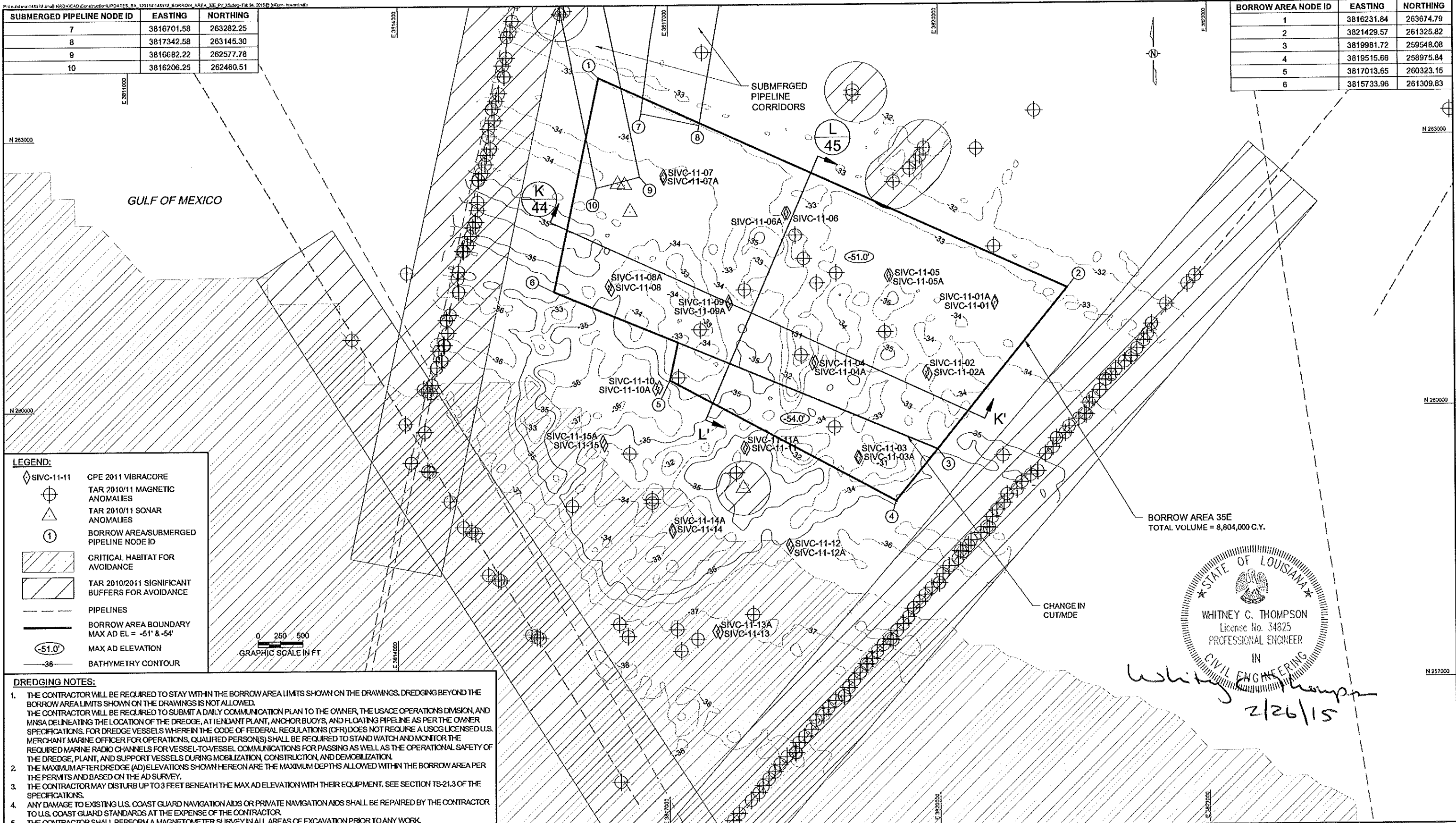
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**BORROW AREA MR-E CROSS SECTION J-J'**  
 DATE: 02/20/15  
 SHEET 42 OF 70

SUBMERGED PIPELINE NODE ID	EASTING	NORTHING
7	3816701.58	263282.25
8	3817342.58	263145.30
9	3816682.22	262577.78
10	3816206.25	262460.51

BORROW AREA NODE ID	EASTING	NORTHING
1	3816231.84	263674.79
2	3821429.57	261325.82
3	3819981.72	259548.08
4	3819515.66	258975.84
5	3817013.65	260323.15
6	3815733.96	261309.83



**LEGEND:**

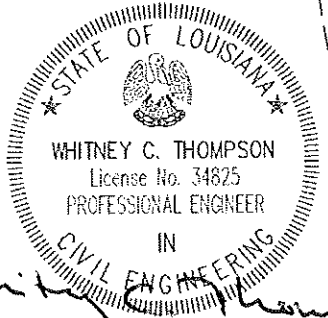
- ◇ SIVC-11-11 CPE 2011 VIBRACORE
- ⊕ TAR 2010/11 MAGNETIC ANOMALIES
- △ TAR 2010/11 SONAR ANOMALIES
- ① BORROW AREA/SUBMERGED PIPELINE NODE ID
- ▨ CRITICAL HABITAT FOR AVOIDANCE
- ▩ TAR 2010/2011 SIGNIFICANT BUFFERS FOR AVOIDANCE
- PIPELINES
- BORROW AREA BOUNDARY MAX AD EL = -51' & -54'
- (-51.0') MAX AD ELEVATION
- (-36) BATHYMETRY CONTOUR

**DREDGING NOTES:**

- THE CONTRACTOR WILL BE REQUIRED TO STAY WITHIN THE BORROW AREA LIMITS SHOWN ON THE DRAWINGS. DREDGING BEYOND THE BORROW AREA LIMITS SHOWN ON THE DRAWINGS IS NOT ALLOWED. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A DAILY COMMUNICATION PLAN TO THE OWNER, THE USACE OPERATIONS DIVISION, AND MNSA DELINEATING THE LOCATION OF THE DREDGE, ATTENDANT PLANT, ANCHOR BUOYS, AND FLOATING PIPELINE AS PER THE OWNER SPECIFICATIONS. FOR DREDGE VESSELS WHEREIN THE CODE OF FEDERAL REGULATIONS (CFR) DOES NOT REQUIRE A USCG LICENSED U.S. MERCHANT MARINE OFFICER FOR OPERATIONS, QUALIFIED PERSON(S) SHALL BE REQUIRED TO STAND WATCH AND MONITOR THE REQUIRED MARINE RADIO CHANNELS FOR VESSEL-TO-VESSEL COMMUNICATIONS FOR PASSING AS WELL AS THE OPERATIONAL SAFETY OF THE DREDGE, PLANT, AND SUPPORT VESSELS DURING MOBILIZATION, CONSTRUCTION, AND DEMOBILIZATION.
- THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
- THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
- 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.
- THE CONTRACTOR SHALL PERFORM A MAGNETOMETER SURVEY IN ALL AREAS OF EXCAVATION PRIOR TO ANY WORK.

BORROW AREA 35E  
TOTAL VOLUME = 8,804,000 C.Y.

CHANGE IN CUT/DE



*Whitney C. Thompson*  
2/26/15

**NOTES:**

- COORDINATES SHOWN HEREON ARE BASED ON LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NAD83.
- ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
- DATE OF THE COASTAL PLANNING & ENGINEERING, INC. BATHYMETRIC SURVEY IS SEPTEMBER, 2011. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.
- EASTINGS AND NORTHINGS SHOWN ALONG DRAWING BOUNDARY FOR GRID REFERENCE.

REV.	DATE	DESCRIPTION	BY
1	12/01/14	Updated BA Plans/X-Sects	KM

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
2431 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

PH (561) 391-8102  
FAX (561) 391-8116

C.O.A. FL #4028  
C.O.A. LA #2531  
www.CB&I.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: GK  
DESIGNED BY: WT

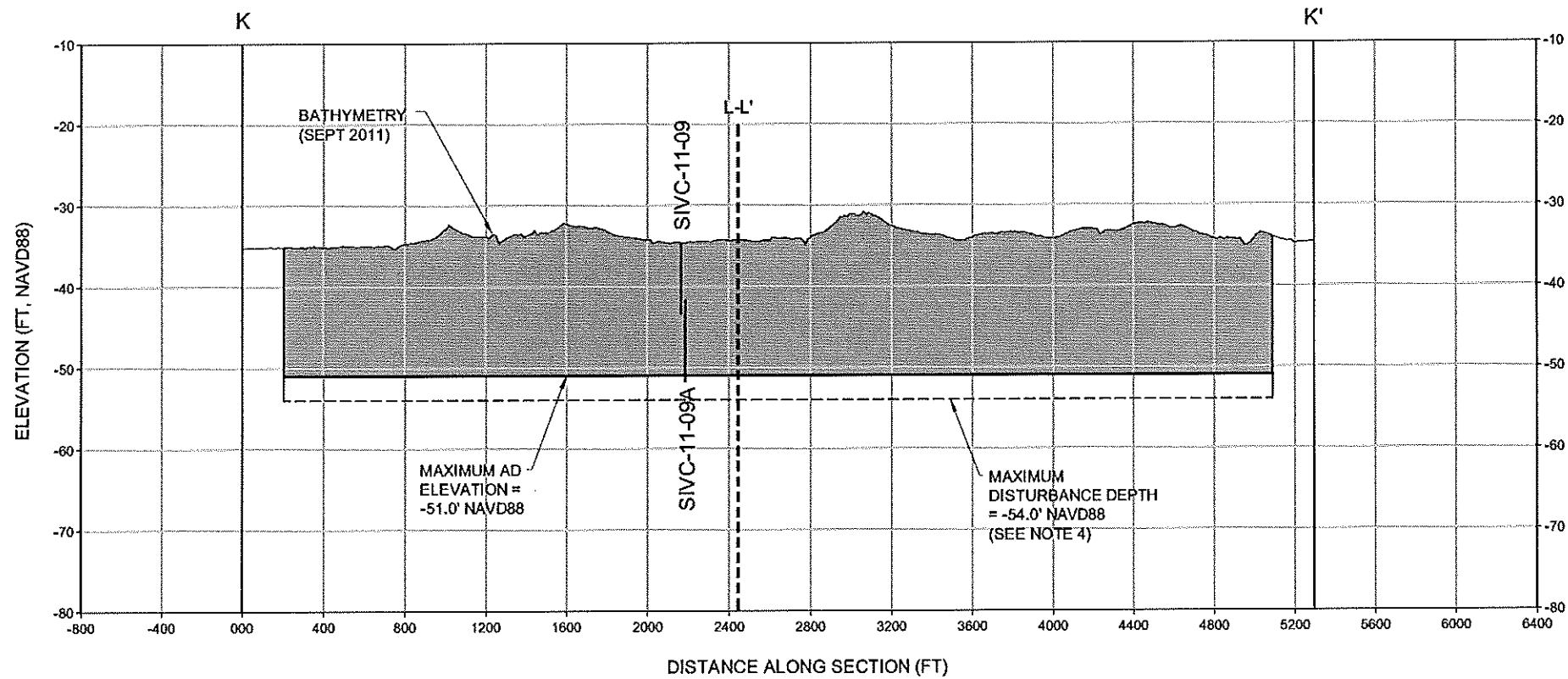
**SHELL ISLAND WEST NRDA RESTORATION PROJECT**

STATE PROJECT NUMBER: BA-111  
FEDERAL PROJECT NUMBER:  
APPROVED BY: GT

**BORROW AREA 35E PLAN VIEW**

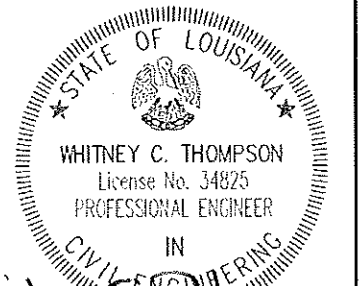
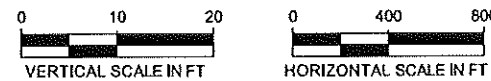
DATE: 02/20/15  
SHEET 43 OF 70

**BORROW AREA 35E CROSS SECTION K-K'**



**NOTES:**

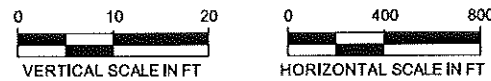
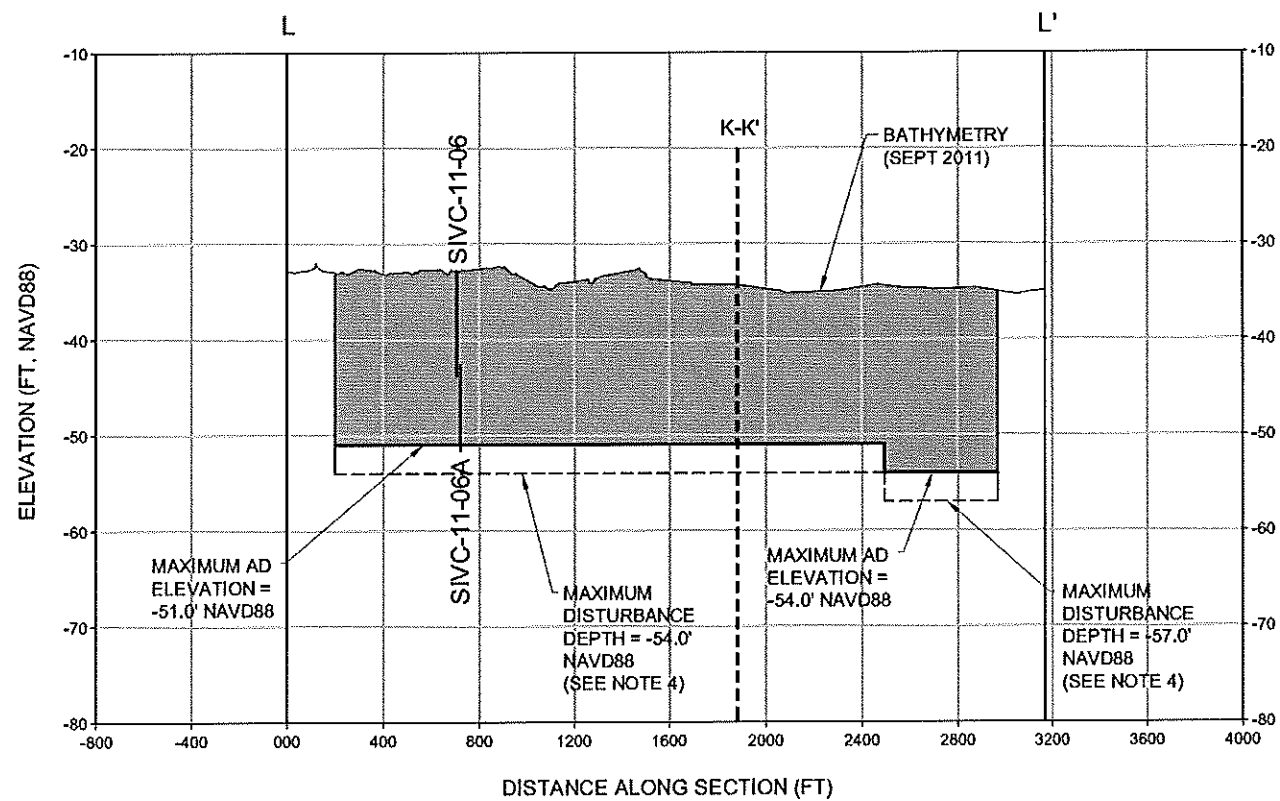
- SEE SHEET 43 FOR LOCATION OF CROSS SECTION LINE.
- ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
- THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
- THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS.
- CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO CONTAIN SIMILAR MATERIAL.
- WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.
- DATE OF THE COASTAL PLANNING & ENGINEERING, INC. BATHYMETRIC SURVEY IS SEPTEMBER, 2011. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.



*Whitney C. Thompson*  
2/26/15

1	12/01/14	Updated BA Plans/X-Sects	KM	<b>CB&amp;I COASTAL PLANNING &amp; ENGINEERING, INC.</b> 2481 N.W. BOCA RATON BOULEVARD BOCA RATON, FLORIDA 33431 PH. (561) 391-8102 FAX (561) 391-9115 C.O.A. FL #4028 C.O.A. LA #2531 www.CBLCOM	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	SHELL ISLAND WEST NRDA RESTORATION PROJECT		BORROW AREA 35E CROSS SECTION K-K'
REV.	DATE	DESCRIPTION	BY			STATE PROJECT NUMBER: BA-111	FEDERAL PROJECT NUMBER:	
				DRAWN BY: GK	DESIGNED BY: WT	APPROVED BY: GT	SHEET 44 OF 70	

**BORROW AREA 35E CROSS SECTION L-L'**



- NOTES:**
- SEE SHEET 43 FOR LOCATION OF CROSS SECTION LINE.
  - ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988, GEOID 2009.
  - THE MAXIMUM AFTER DREDGE (AD) ELEVATIONS SHOWN HEREON ARE THE MAXIMUM DEPTHS ALLOWED WITHIN THE BORROW AREA PER THE PERMITS AND BASED ON THE AD SURVEY.
  - THE CONTRACTOR MAY DISTURB UP TO 3 FEET BENEATH THE MAX AD ELEVATION WITH THEIR EQUIPMENT. SEE SECTION TS-21.3 OF THE SPECIFICATIONS
  - CORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO CONTAIN SIMILAR MATERIAL.
  - WIDTH OF LAYERS IS REPRESENTATIVE ONLY. ACTUAL MATERIAL MAY VARY.
  - DATE OF THE COASTAL PLANNING & ENGINEERING, INC. BATHYMETRIC SURVEY IS SEPTEMBER, 2011. CONDITIONS MAY HAVE CHANGED. CONTRACTOR SHALL PERFORM A PRE-CONSTRUCTION SURVEY TO DETERMINE CONDITIONS.

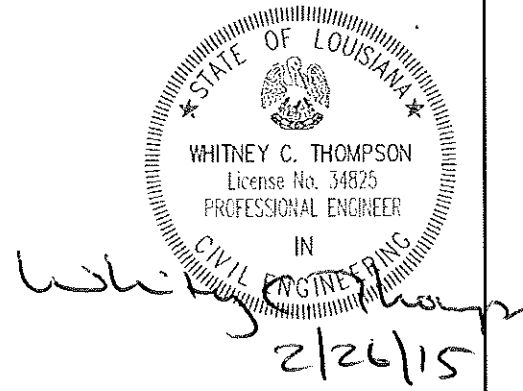
REV.	DATE	DESCRIPTION	BY
1	12/01/14	Updated BA Plans/X-Sects	KM

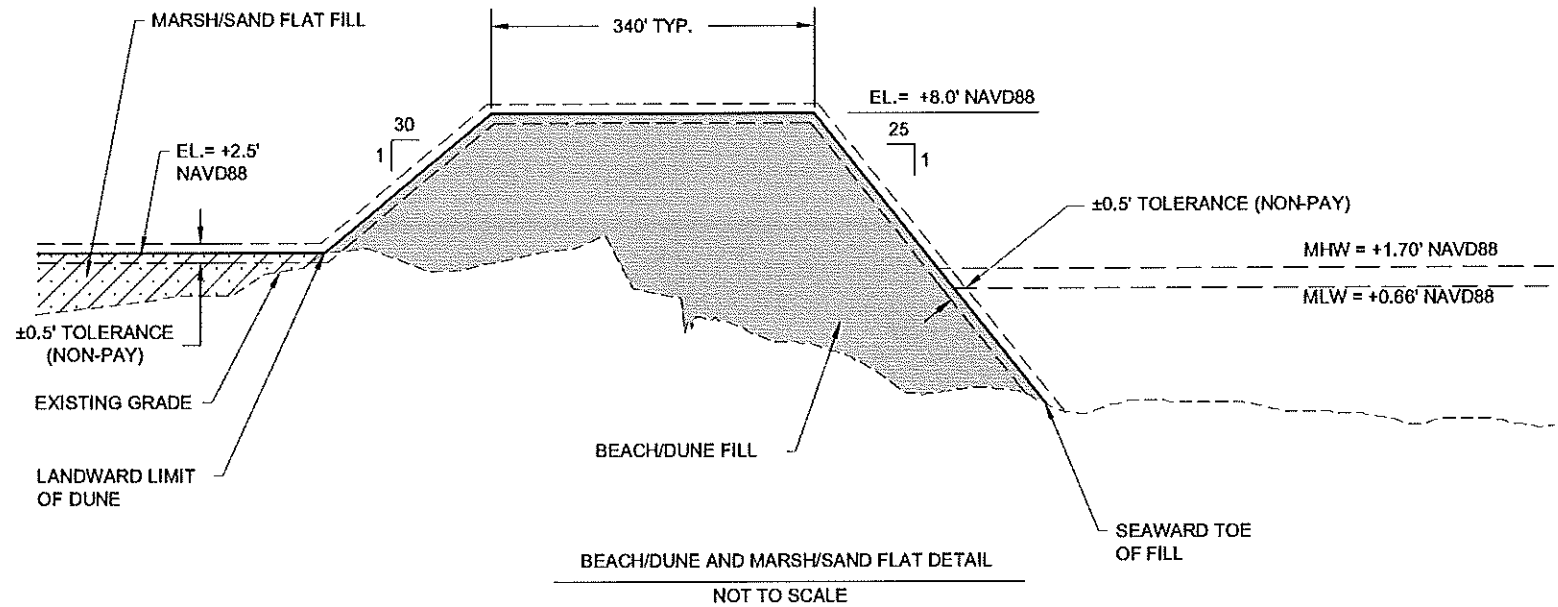
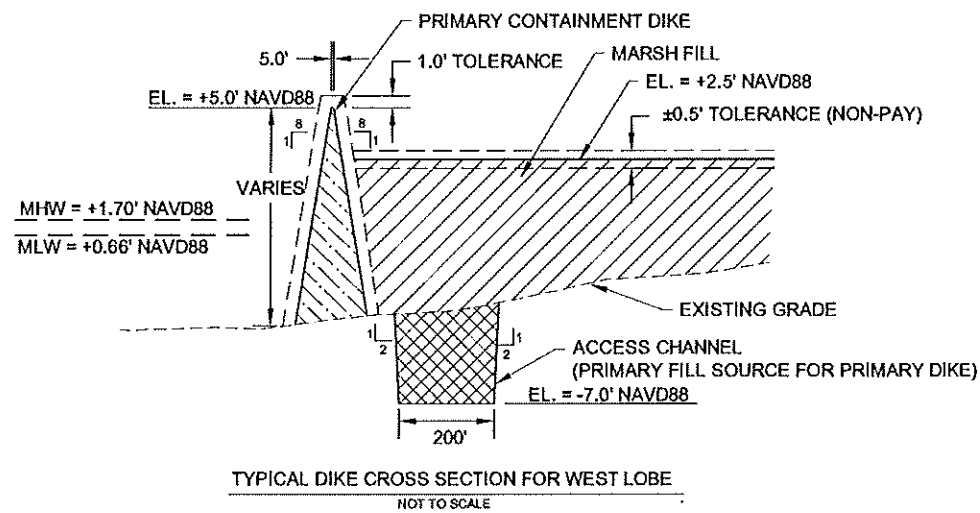
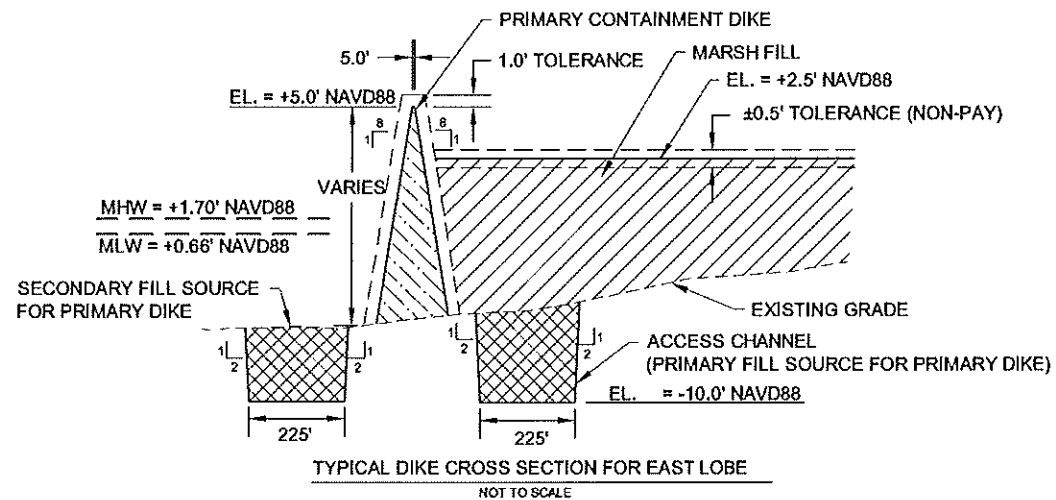
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH. (561) 391-8102  
 FAX (561) 391-8118  
 C.O.A. FL. #4028  
 C.O.A. LA. #2531  
 www.CBICOM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**BORROW AREA 35E CROSS SECTION L-L'**  
 DATE: 02/20/15  
 SHEET 45 OF 70





WEST LOBE

SETTLEMENT PLATE LOCATIONS		
STATION	RANGE	LOCATION
20+00	-11+72	CENTER LINE OF DIKE
20+00	-5+55	MARSH
20+00	4+18	DUNE
30+00	-7+53	MARSH
30+00	4+33	DUNE
40+00	4+43	DUNE
50+00	-12+72	CENTER LINE OF DIKE
50+00	-5+20	MARSH
50+00	5+16	DUNE
60+00	3+87	DUNE

EAST LOBE

SETTLEMENT PLATE LOCATIONS		
STATION	RANGE	LOCATION
15+67	-12+28	CENTER LINE OF DIKE
15+67	-7+25	MARSH
15+67	0+55	DUNE
31+78	-5+70	MARSH (CHANNEL)
35+54	-3+74	MARSH
35+54	-5+60	MARSH
35+54	1+00	DUNE
45+54	-5+26	MARSH
60+54	0+28	SAND FLAT
60+54	2+33	DUNE
86+22	-3+76	MARSH

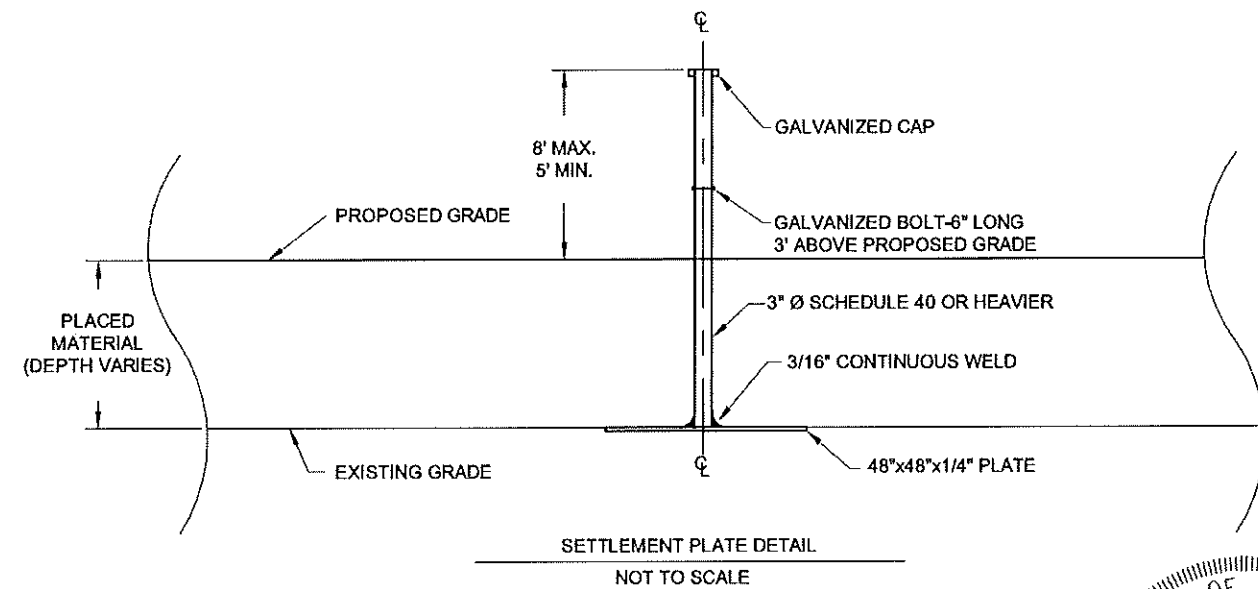
MARSH DEWATERING LOCATIONS

EASTING	NORTHING
3807909.1	293177.6
3808124.7	293304.2
3812379.2	293949.5
3812628.7	293932.4

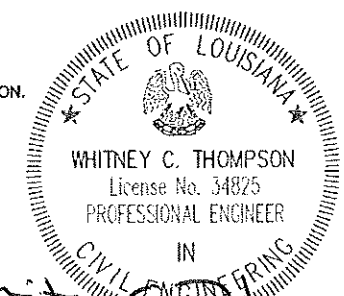
MARSH DEWATERING LOCATION

EASTING	NORTHING
3821422.3	292607.3
3821652.3	292705.4

NOTE: COORDINATES ARE IN STATE PLANE, NAD 1983, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.



NOTE: SETTLEMENT PLATES SHALL BE BUILT USING ASTM A36 STEEL AND HOT-DIPPED GALVANIZED AFTER FABRICATION. A 6" LONG HHMB HOT-DIPPED GALVANIZED BOLT & WASHER SHALL BE INSTALLED 3" ABOVE PROPOSED GRADE.



*Whitney C. Thompson*  
2/26/15

NOTE: COORDINATES ARE IN STATE PLANE, NAD83, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.

LEGEND:

	BEACH/DUNE FILL
	PRIMARY DIKE FILL
	MARSH FILL
	MARSH/SAND FLAT FILL
	EXCAVATED MATERIAL

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**

2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

PH: (561) 391-8102  
FAX: (561) 391-8116

C.O.A. FL. #4028  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: GK

DESIGNED BY: WT

SHELL ISLAND WEST NRDA RESTORATION PROJECT

STATE PROJECT NUMBER: BA-111

FEDERAL PROJECT NUMBER:

APPROVED BY: GT

CONSTRUCTION DETAILS

DATE: 02/20/15

SHEET 46 OF 70

EAST LOBE

SAND FENCE LAYOUT POINTS

EASTING	NORTHING	EASTING	NORTHING
3821055.4	292424.8	3823483.6	288577.9
3821136.6	292011.5	3823741.5	288209.1
3821123.0	292039.4	3823730.9	288238.3
3821146.5	291919.9	3823988.8	287869.5
3821334.5	291651.0	3823965.0	287889.5
3821323.9	291680.1	3824022.6	287807.3
3821581.8	291311.4	3824228.9	287525.0
3821558.0	291331.4	3824217.8	287554.0
3821815.9	290962.6	3824483.4	287190.8
3821805.3	290991.8	3824459.1	287210.2
3822063.2	290623.0	3824626.0	286982.0
3822039.4	290643.0	3824764.3	286887.9
3822297.3	290274.2	3824744.0	286911.4
3822286.7	290303.4	3825116.0	286658.2
3822544.6	289934.6	3825086.7	286668.5
3822520.8	289954.6	3825458.7	286415.3
3822778.7	289585.9		
3822768.1	289615.0		
3823026.0	289246.3		
3823002.2	289266.3		
3823260.1	288897.5		
3823249.5	288926.7		
3823507.4	28857.9		

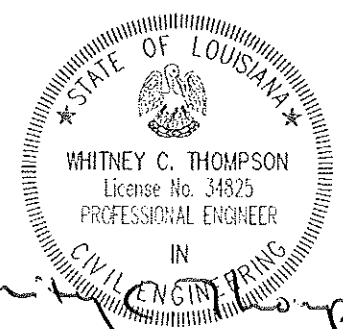
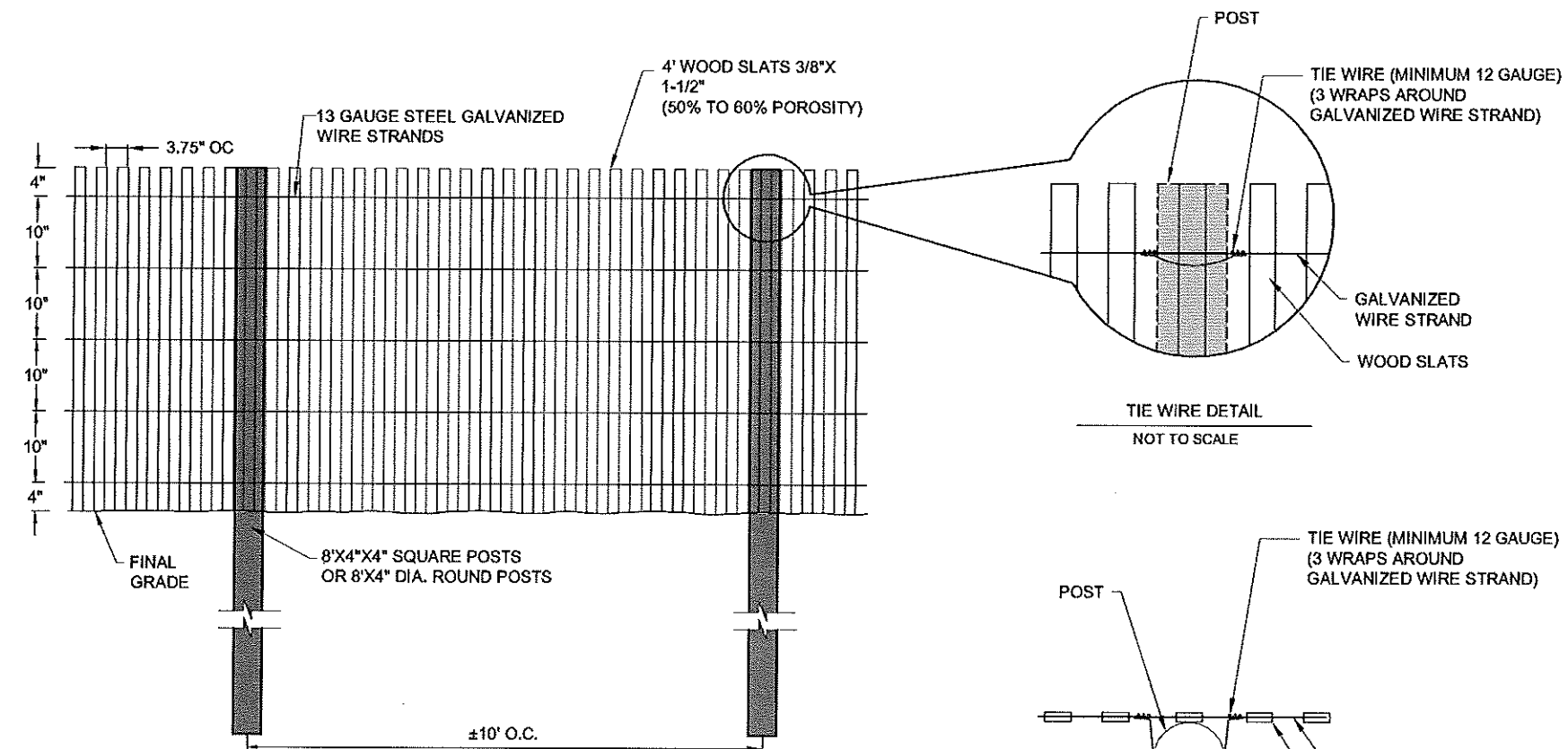
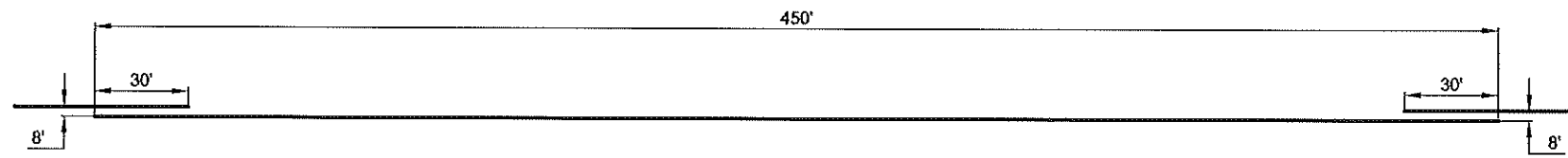
NOTE: COORDINATES ARE IN STATE PLANE, NAD 1983, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.

WEST LOBE

SAND FENCE LAYOUT POINTS

EASTING	NORTHING	EASTING	NORTHING	EASTING	NORTHING
3807640.8	292283.7	3809697.4	291875.1	3811635.8	292484.6
3808079.3	292198.3	3810139.1	291789.0	3811719.4	292523.9
3808048.4	292196.2	3810111.2	291802.6	3812005.9	292737.9
3808490.1	292110.2	3810162.7	291792.6	3811986.6	292713.5
3808462.2	292123.8	3810522.5	291961.6	3812347.2	292982.8
3808903.9	292037.8	3810498.7	291941.6	3812318.3	292971.3
3808872.9	292035.6	3810906.0	292133.0	3812678.8	293240.6
3809314.6	291949.6	3810875.5	292127.5	3812659.6	293216.2
3809286.7	291963.2	3811282.8	292318.8	3813006.5	293475.4
3809728.4	291877.2	3811259.0	292298.8		
		3811666.3	292490.1		

NOTE: COORDINATES ARE IN STATE PLANE, NAD83, LOUISIANA SOUTH ZONE, U.S. SURVEY FEET.



*Whitney C. Thompson*  
2/26/15

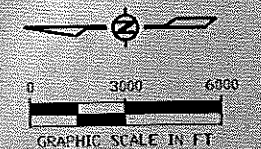
REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
PH: (561) 391-8102  
FAX: (561) 391-9116  
C.O.A. FL #4028  
C.O.A. LA #2531  
www.CBICOM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801  
DRAWN BY: GK  
DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
STATE PROJECT NUMBER: BA-111  
FEDERAL PROJECT NUMBER:  
APPROVED BY: GT

**SAND FENCING DETAILS**  
DATE: 02/20/15  
SHEET 47 OF 70



**LEGEND:**

- CONVEYANCE CORRIDOR ALIGNMENT
- TEMPORARY MOORING AREA
- SURVEY MONUMENT
- 22 ● MISSISSIPPI RIVER MILE MARKER ABOVE HEAD OF PASSES

STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 37823  
 PROFESSIONAL ENGINEER  
 CIVIL ENGINEERING  
*Whitney C. Thompson*  
 2/26/15

**NOTES:**

1. SEE SHEET 2 FOR SURVEY MONUMENT COORDINATES.
2. CURRENTLY PERMITTED UNDER C.U.P. P20101416 AND C.O.E. MVN-2008-03033-ETT.

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
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**SHELL ISLAND WEST NRDA RESTORATION PROJECT**

STATE PROJECT NUMBER: BA-111  
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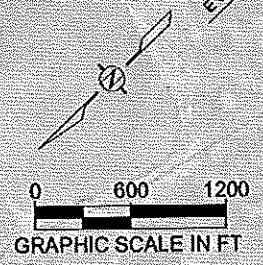
APPROVED BY: GT

**EMPIRE WATERWAY CONVEYANCE CORRIDOR LAYOUT**

DATE: 02/20/15  
 SHEET 48 OF 70



- NOTES:**
1. SEE SHEETS 56-66 FOR LEVEE CROSSINGS, HIGHWAY CROSSINGS, EMPIRE HARBOR CANAL CROSSING, AND EMPIRE MARSH / ROCK REVETMENT CROSSING.
  2. SEE SHEET 70 FOR CONVEYANCE CORRIDOR ALIGNMENT COORDINATES.
  3. CONVEYANCE CORRIDOR CONSTRUCTION EQUIPMENT RIGHT OF WAY IS TO THE LIMITS OF THE CONVEYANCE CORRIDOR.
  4. SEE TS-23 OF THE SPECIFICATIONS FOR INFORMATION ON TEMPORARY MOORING AREA AND CONVEYANCE CORRIDOR.
  5. PIPELINE INFORMATION SHOWN ON PLANS WAS OBTAINED FROM THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, COASTAL MANAGEMENT DIVISION (2008) AND IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION AS PER SECTION TS-27 OF THE SPECIFICATIONS.
  6. THE CONTRACTOR SHALL LOCATE AND IDENTIFY ALL ABOVE AND BELOW GROUND UTILITIES AND COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE OWNERS FOR THE DURATION OF CONSTRUCTION.
  7. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF ANY PIPELINE(S) PREVIOUSLY UNIDENTIFIED SO THAT THE OWNER MAY ISSUE NOTICE(S) OF CONSTRUCTION PRIOR TO WORK.
  8. ALL PIPELINES AND UTILITIES LOCATED WITHIN 150' OF THE CONVEYANCE CORRIDOR AND FILL AREAS SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SECTIONS GP-25 AND SP-7 OF THE SPECIFICATIONS.
  9. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.

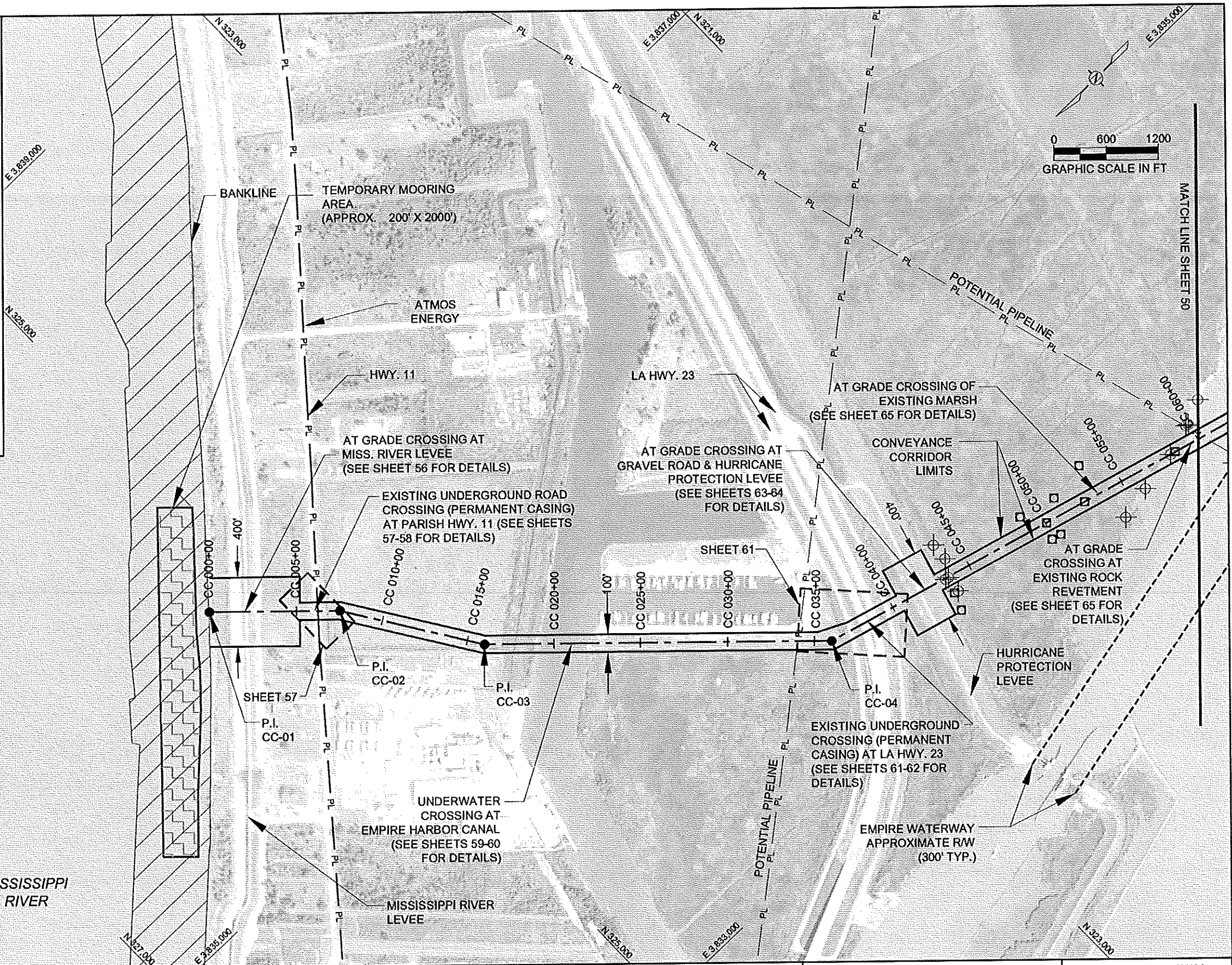


STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 IN  
 CIVIL ENGINEERING  
 2/26/15

**LEGEND:**

- CONVEYANCE CORRIDOR
- EMPIRE WATERWAY APPROX. RW
- POINT OF INFLECTION (P.I. CC-01)
- POTENTIAL OIL & GAS PIPELINE
- SURVEY BASELINE
- TEMPORARY MOORING AREA
- MISSISSIPPI RIVER REVETMENT
- RIVER MILE MARKER ABOVE HEAD OF PASSES
- POSSIBLE PIPELINE MAG HIT
- MAGNETIC ANOMALY

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS



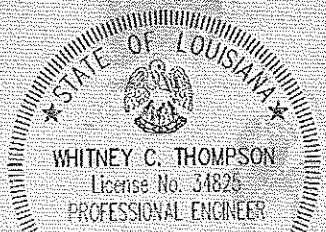
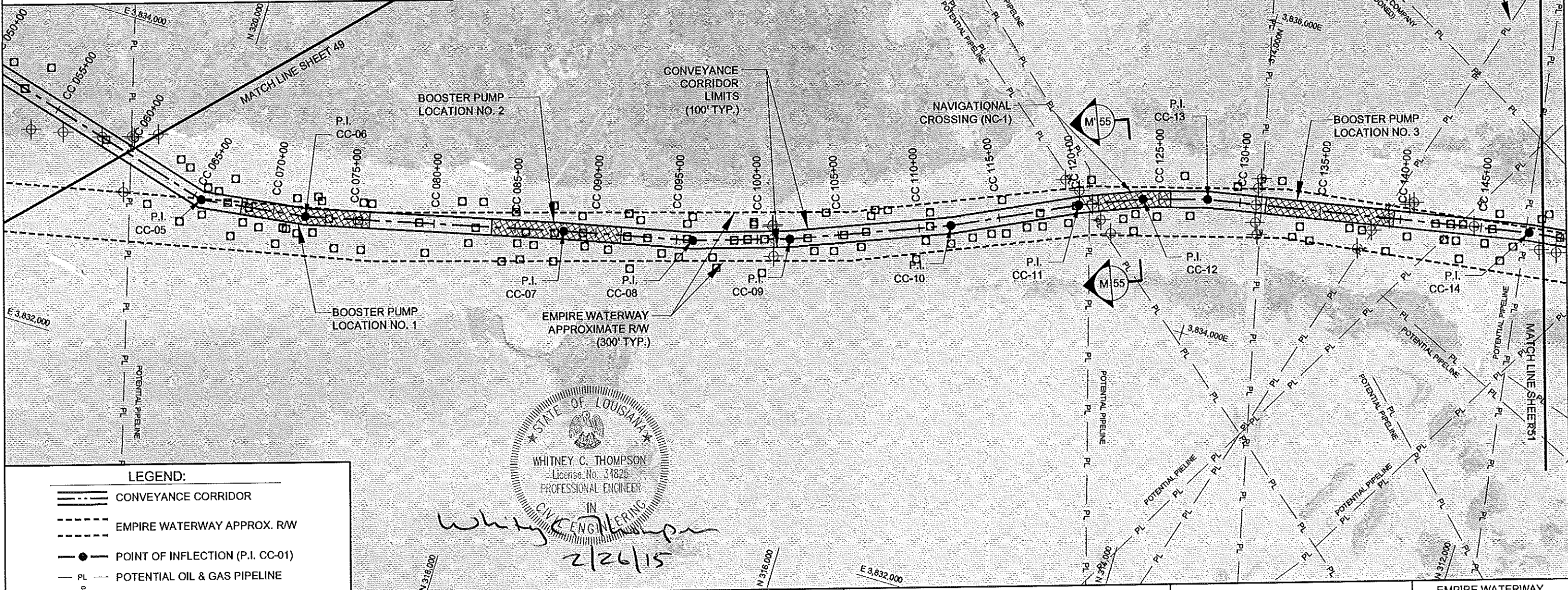
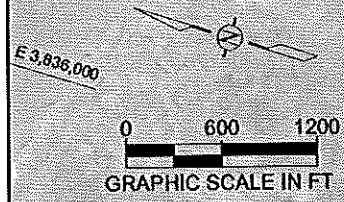
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
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 PH. (561) 391-8102  
 FAX (561) 391-9116  
 C.O.A. FL #4028  
 C.O.A. LA #2631  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EMPIRE WATERWAY CONVEYANCE CORRIDOR LAYOUT**  
 STA. CC 0+00 TO CC 60+00  
 DATE: 02/20/15  
 SHEET 49 OF 70

- NOTES:**
1. SEE SHEETS 66-67 FOR NAVIGATIONAL CROSSING AND BOOSTER LOCATION DETAILS.
  2. SEE SHEET 70 FOR CONVEYANCE CORRIDOR ALIGNMENT COORDINATES.
  3. CONVEYANCE CORRIDOR CONSTRUCTION EQUIPMENT RIGHT OF WAY IS TO THE LIMITS OF THE CONVEYANCE CORRIDOR.
  4. SEE TS-23 OF THE SPECIFICATIONS FOR INFORMATION ON THE CONVEYANCE CORRIDOR.
  5. PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION PER TS-27 OF THE SPECIFICATIONS.
  6. PIPELINE INFORMATION SHOWN ON PLANS WAS OBTAINED FROM THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, COASTAL MANAGEMENT DIVISION (2008) AND IS APPROXIMATE.
  7. ALL PIPELINES LOCATED WITHIN 150' OF THE CONVEYANCE CORRIDOR AND FILL AREAS SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SECTIONS GP-25 AND SP-7 OF THE SPECIFICATIONS.
  8. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.



*Whitney C. Thompson*  
 CIVIL ENGINEERING  
 2/26/15

**LEGEND:**

- CONVEYANCE CORRIDOR
- EMPIRE WATERWAY APPROX. RW
- POINT OF INFLECTION (P.I. CC-01)
- POTENTIAL OIL & GAS PIPELINE
- SURVEY BASELINE
- EXCAVATION
- POSSIBLE PIPELINE MAG HIT
- MAGNETIC ANOMALY

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

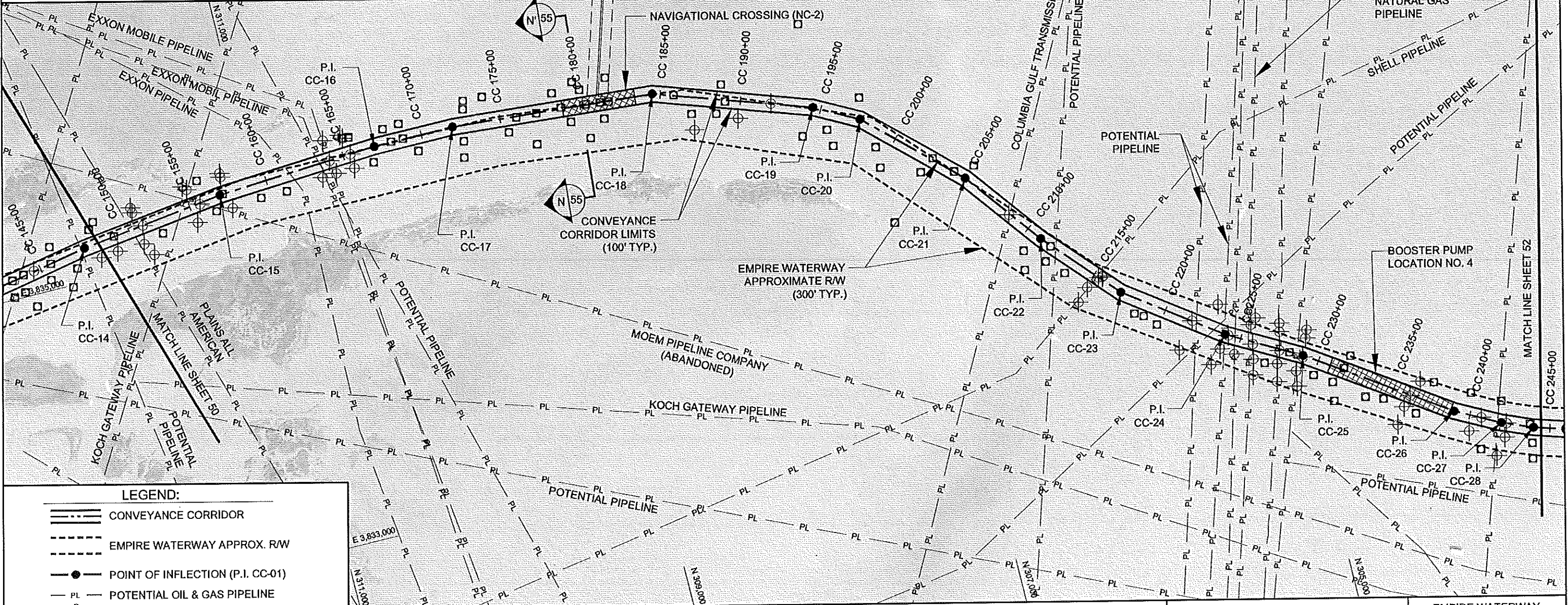
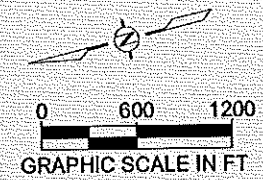
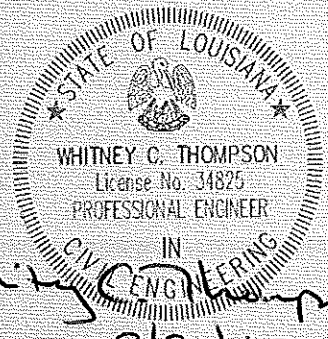
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
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 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EMPIRE WATERWAY CONVEYANCE CORRIDOR LAYOUT**  
 STA. CC 60+00 TO CC 148+00  
 DATE: 02/20/15  
 SHEET 50 OF 70

- NOTES:**
1. SEE SHEETS 66-67 FOR NAVIGATIONAL CROSSING AND BOOSTER LOCATION DETAILS.
  2. SEE SHEET 70 FOR CONVEYANCE CORRIDOR ALIGNMENT COORDINATES.
  3. CONVEYANCE CORRIDOR CONSTRUCTION EQUIPMENT RIGHT OF WAY IS TO THE LIMITS OF THE CONVEYANCE CORRIDOR.
  4. SEE TS-23 OF THE SPECIFICATIONS FOR INFORMATION ON THE CONVEYANCE CORRIDOR.
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  7. ALL PIPELINES LOCATED WITHIN 150' OF THE CONVEYANCE CORRIDOR AND FILL AREAS SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SECTIONS GP-25 AND SP-7 OF THE SPECIFICATIONS.
  8. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.



**LEGEND:**

- CONVEYANCE CORRIDOR
- EMPIRE WATERWAY APPROX. R/W
- POINT OF INFLECTION (P.I. CC-01)
- POTENTIAL OIL & GAS PIPELINE
- SURVEY BASELINE
- EXCAVATION
- POSSIBLE PIPELINE MAG HIT
- MAGNETIC ANOMALY

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

1	10/10/13	CPRA Comments	DS
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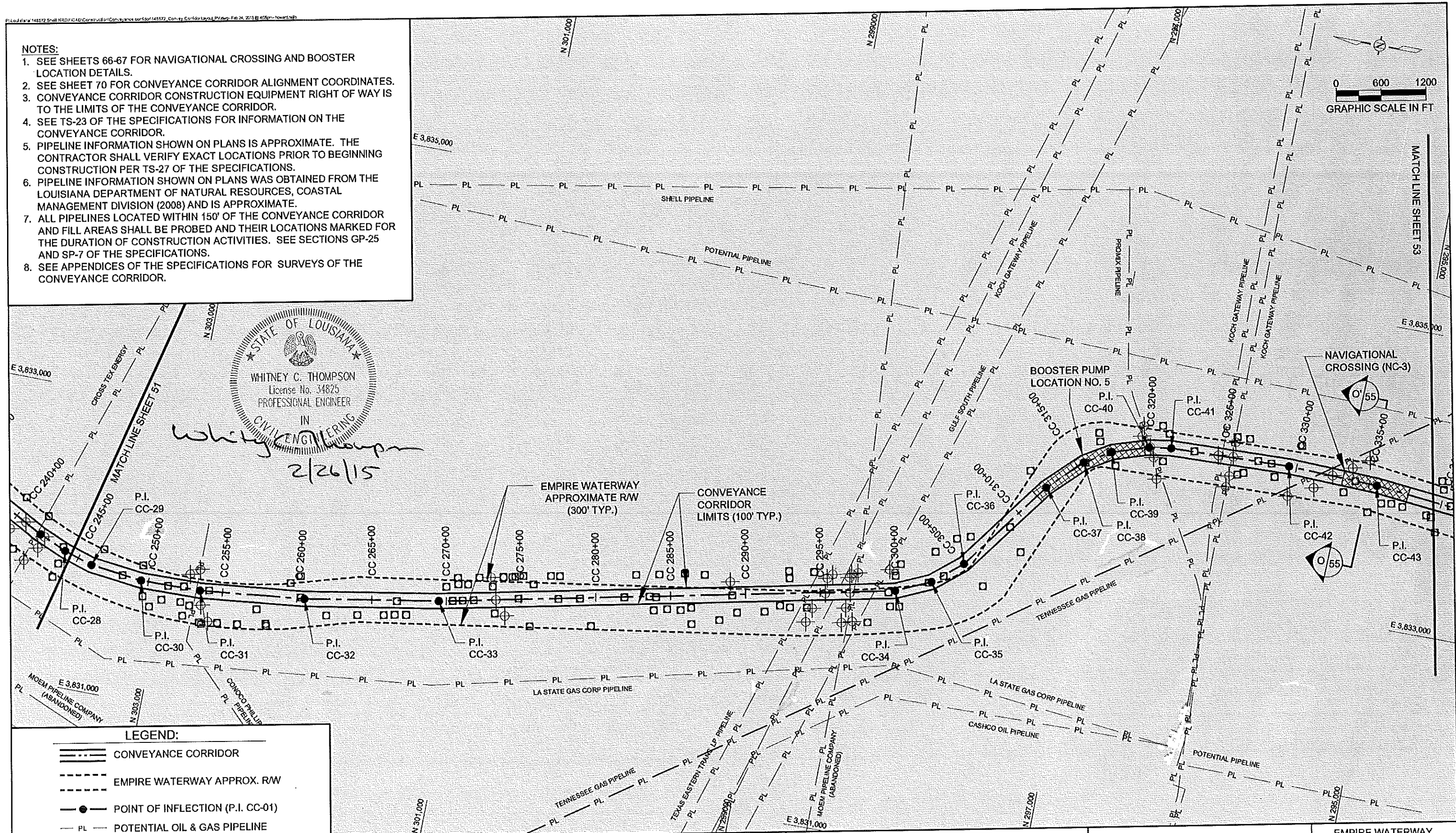
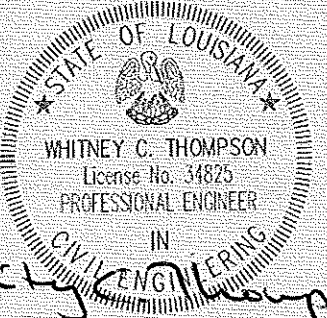
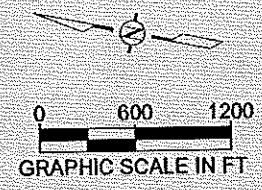
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
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**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
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 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EMPIRE WATERWAY CONVEYANCE CORRIDOR LAYOUT**  
 STA. CC 148+00 TO CC 244+00  
 DATE: 02/20/15  
 SHEET 51 OF 70

- NOTES:**
1. SEE SHEETS 66-67 FOR NAVIGATIONAL CROSSING AND BOOSTER LOCATION DETAILS.
  2. SEE SHEET 70 FOR CONVEYANCE CORRIDOR ALIGNMENT COORDINATES.
  3. CONVEYANCE CORRIDOR CONSTRUCTION EQUIPMENT RIGHT OF WAY IS TO THE LIMITS OF THE CONVEYANCE CORRIDOR.
  4. SEE TS-23 OF THE SPECIFICATIONS FOR INFORMATION ON THE CONVEYANCE CORRIDOR.
  5. PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION PER TS-27 OF THE SPECIFICATIONS.
  6. PIPELINE INFORMATION SHOWN ON PLANS WAS OBTAINED FROM THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, COASTAL MANAGEMENT DIVISION (2008) AND IS APPROXIMATE.
  7. ALL PIPELINES LOCATED WITHIN 150' OF THE CONVEYANCE CORRIDOR AND FILL AREAS SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SECTIONS GP-25 AND SP-7 OF THE SPECIFICATIONS.
  8. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.



- LEGEND:**
- CONVEYANCE CORRIDOR
  - EMPIRE WATERWAY APPROX. RW
  - POINT OF INFLECTION (P.I. CC-01)
  - POTENTIAL OIL & GAS PIPELINE
  - SURVEY BASELINE
  - EXCAVATION
  - POSSIBLE PIPELINE MAG HIT
  - MAGNETIC ANOMALY

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH. (561) 391-6102  
 FAX (561) 391-9116  
 C.O.A. FL #4028  
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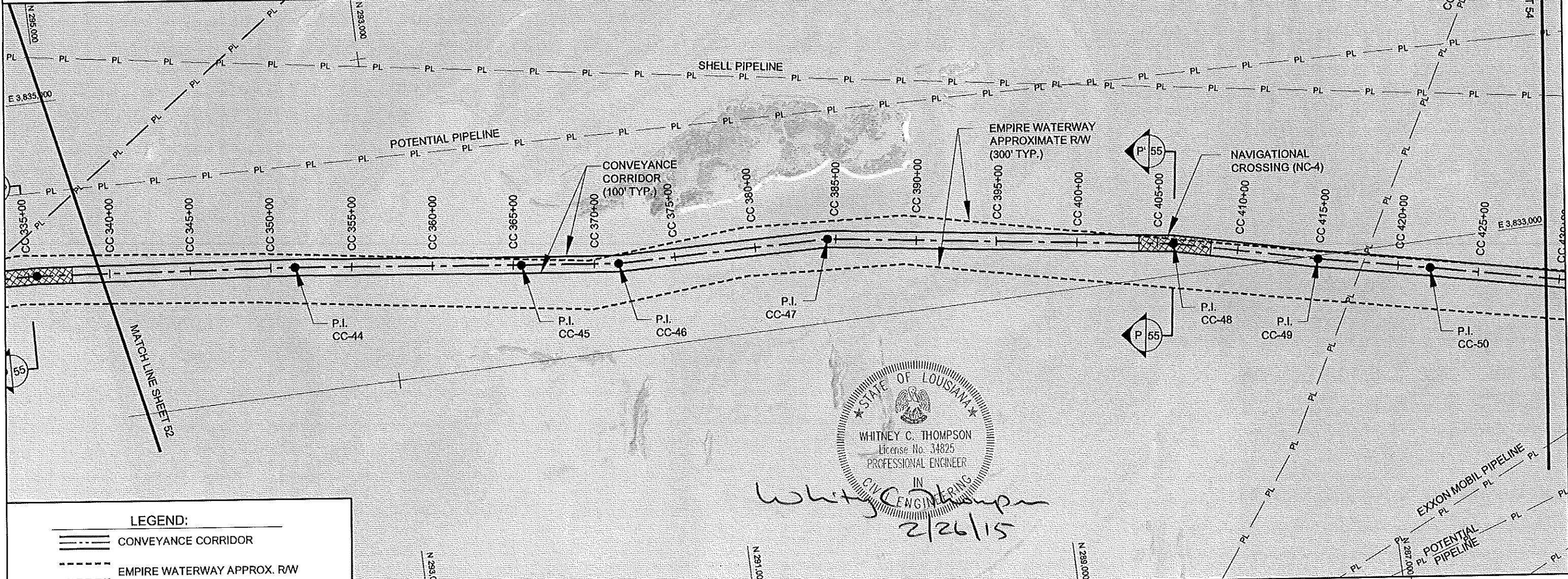
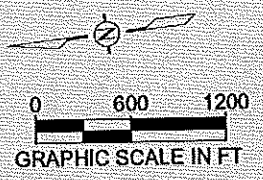
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EMPIRE WATERWAY CONVEYANCE CORRIDOR LAYOUT**  
 STA. CC 244+00 TO CC 339+00  
 DATE: 02/20/15  
 SHEET 62 OF 70

**NOTES:**

1. SEE SHEETS 66-67 FOR NAVIGATION CROSSING AND BOOSTER LOCATION DETAILS.
2. SEE SHEET 70 FOR CONVEYANCE CORRIDOR ALIGNMENT COORDINATES.
3. CONVEYANCE CORRIDOR CONSTRUCTION EQUIPMENT RIGHT OF WAY IS TO THE LIMITS OF THE CONVEYANCE CORRIDOR.
4. SEE TS-23 OF THE SPECIFICATIONS FOR INFORMATION ON THE CONVEYANCE CORRIDOR.
5. PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION PER TS-27 OF THE SPECIFICATIONS.
6. PIPELINE INFORMATION SHOWN ON PLANS WAS OBTAINED FROM THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, COASTAL MANAGEMENT DIVISION (2008) AND IS APPROXIMATE.
7. ALL PIPELINES LOCATED WITHIN 150' OF THE CONVEYANCE CORRIDOR AND FILL AREAS SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SECTIONS GP-25 AND SP-7 OF THE SPECIFICATIONS.
8. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.



STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 CIVIL ENGINEERING  
*Whitney C. Thompson*  
 2/26/15

**LEGEND:**

- CONVEYANCE CORRIDOR
- EMPIRE WATERWAY APPROX. R/W
- POINT OF INFLECTION (P.I. CC-01)
- POTENTIAL OIL & GAS PIPELINE
- SURVEY BASELINE
- EXCAVATION

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

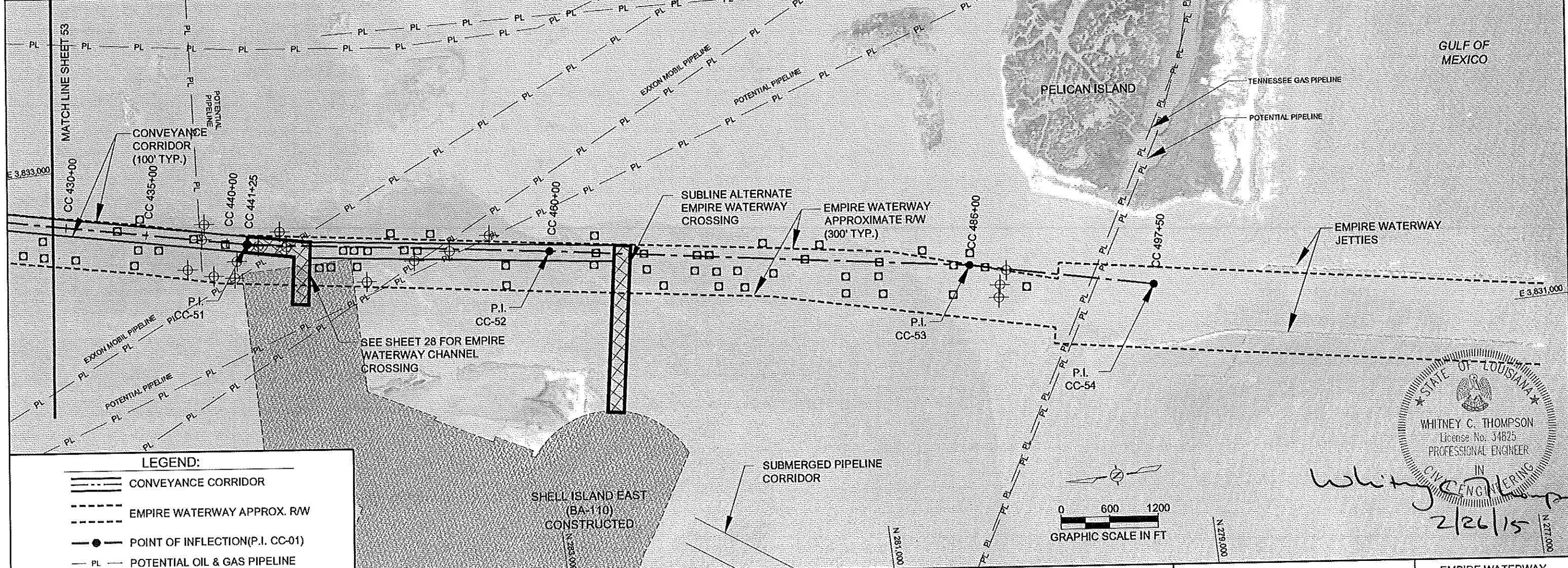
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH. (561) 391-6102  
 FAX (561) 391-9116  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EMPIRE WATERWAY CONVEYANCE CORRIDOR LAYOUT**  
 STA. CC 339+00 TO CC 429+00  
 DATE: 02/20/15  
 SHEET 53 OF 70

- NOTES:**
1. SHEETS 66-67 FOR NAVIGATION CROSSING AND BOOSTER LOCATION DETAILS.
  2. SEE SHEET 70 FOR CONVEYANCE CORRIDOR ALIGNMENT COORDINATES.
  3. CONVEYANCE CORRIDOR CONSTRUCTION EQUIPMENT RIGHT OF WAY IS TO THE LIMITS OF THE CONVEYANCE CORRIDOR.
  4. SEE TS-23 OF THE SPECIFICATIONS FOR INFORMATION ON THE CONVEYANCE CORRIDOR.
  5. PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION PER TS-27 OF THE SPECIFICATIONS.
  6. PIPELINE INFORMATION SHOWN ON PLANS WAS OBTAINED FROM THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES, COASTAL MANAGEMENT DIVISION (2008) AND IS APPROXIMATE.
  7. ALL PIPELINES LOCATED WITHIN 150' OF THE CONVEYANCE CORRIDOR AND FILL AREAS SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SECTIONS GP-25 AND SP-7 OF THE SPECIFICATIONS.
  8. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.
  9. PLACEMENT OF TEMPORARY DREDGE PIPELINE ALONG THE LENGTH OF THE BA-110 BEACH/DUNE SHALL BE DESCRIBED IN THE WORK PLAN FOR APPROVAL BY THE ENGINEER.



**LEGEND:**

- CONVEYANCE CORRIDOR
- EMPIRE WATERWAY APPROX. RW
- POINT OF INFLECTION (P.I. CC-01)
- POTENTIAL OIL & GAS PIPELINE
- SURVEY BASELINE
- EXCAVATION
- POSSIBLE PIPELINE MAG HIT
- MAGNETIC ANOMALY

REV.	DATE	DESCRIPTION	BY
1	0/10/13	CPRA Comments	DS

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 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH (561) 391-6102  
 FAX (561) 391-9116  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
 www.CB&I.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
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 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

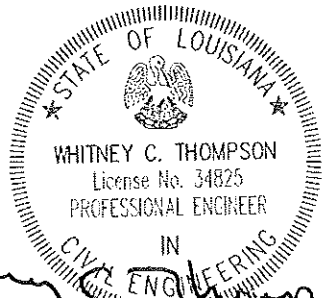
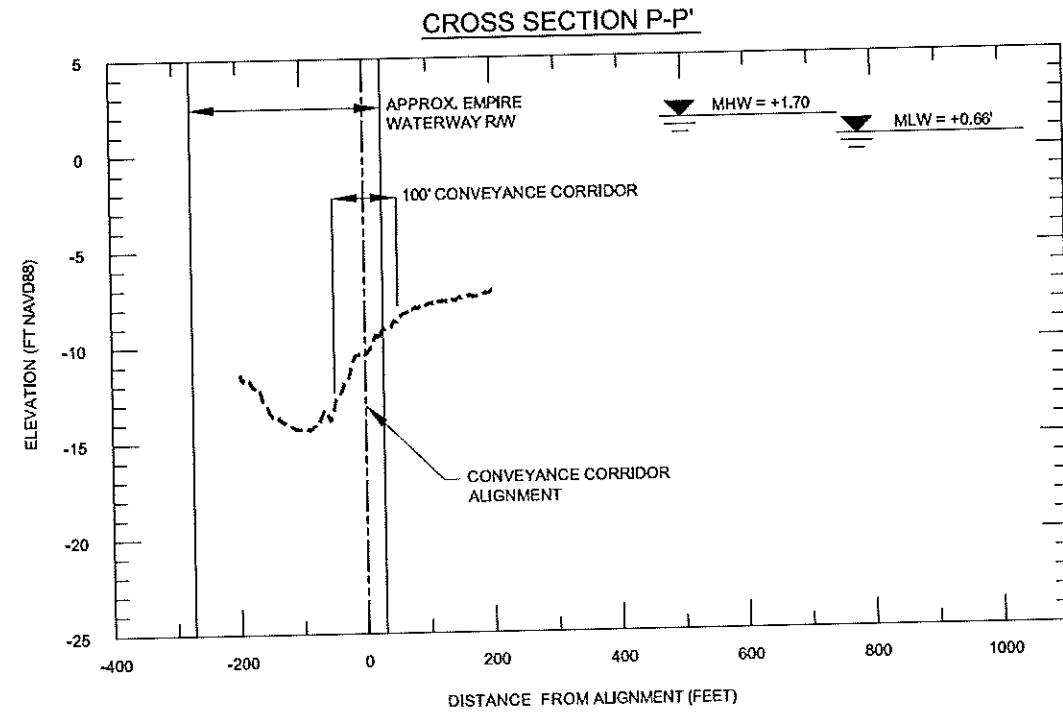
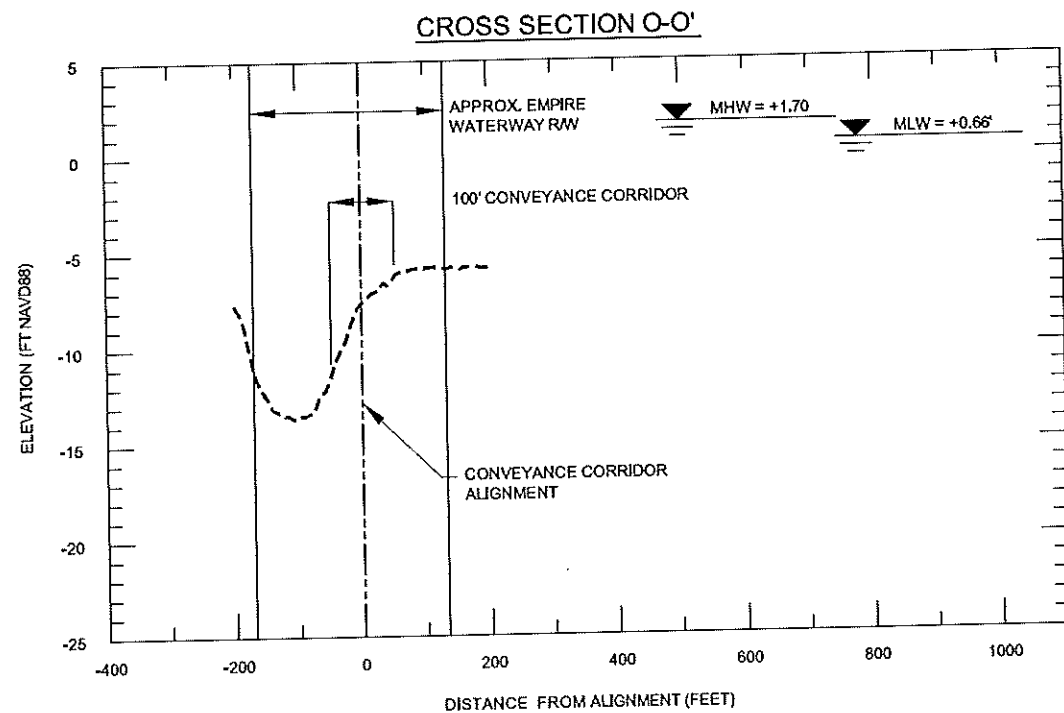
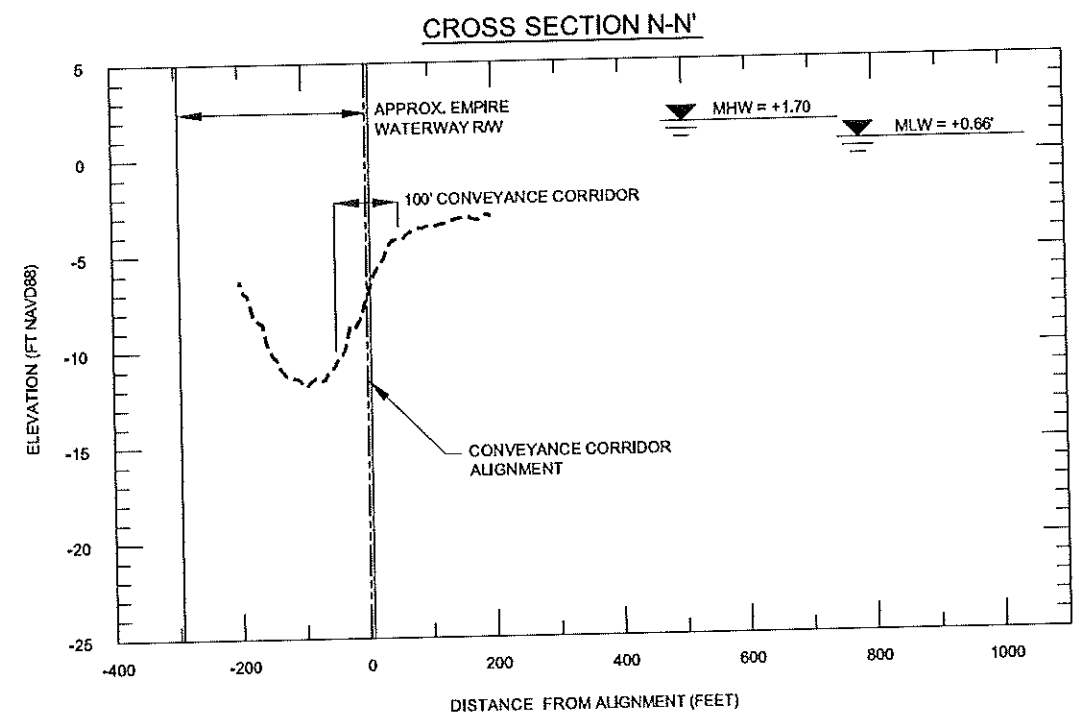
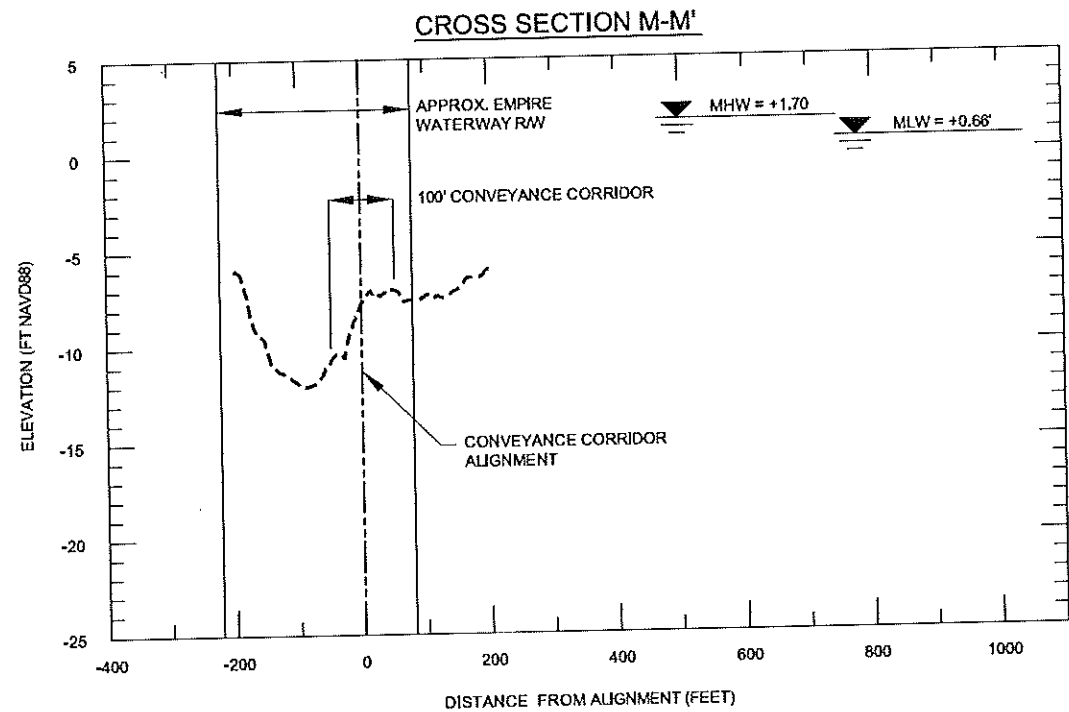
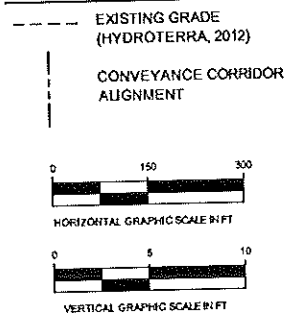
**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EMPIRE WATERWAY CONVEYANCE CORRIDOR LAYOUT**  
 STA. CC 429+00 TO CC 441+25  
 DATE: 02/20/15  
 SHEET 54 OF 70

STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 CIVIL ENGINEERING  
 2/26/15



**LEGEND:**



*Whitney C. Thompson*  
2/26/15

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPR Comments	DS

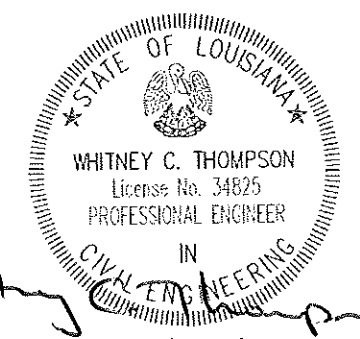
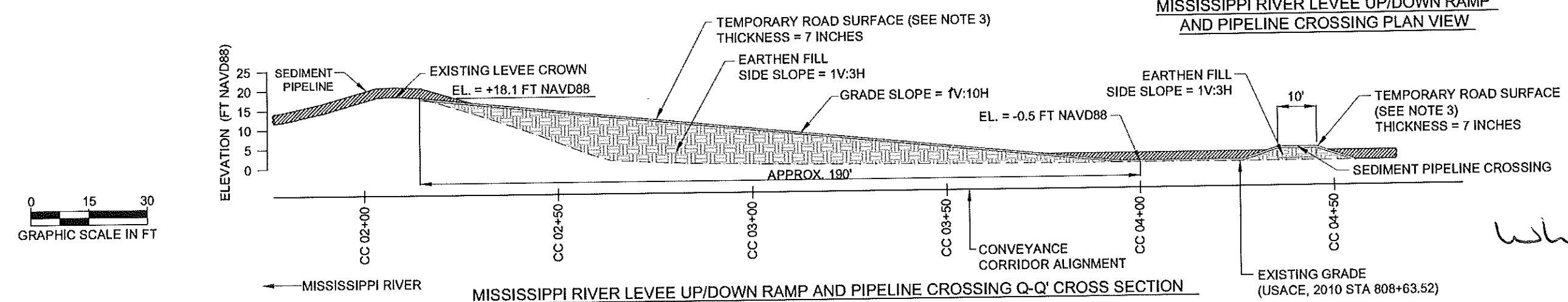
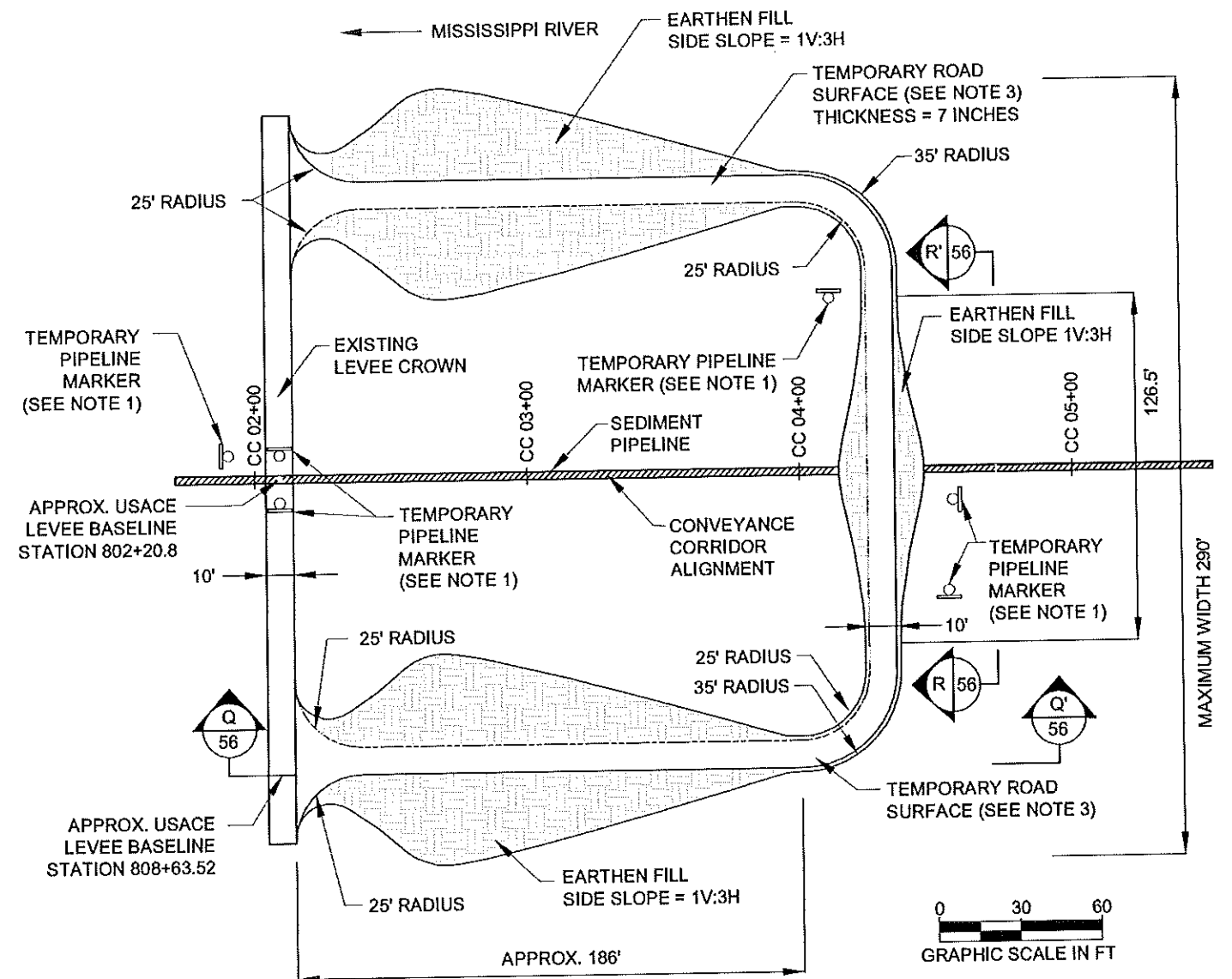
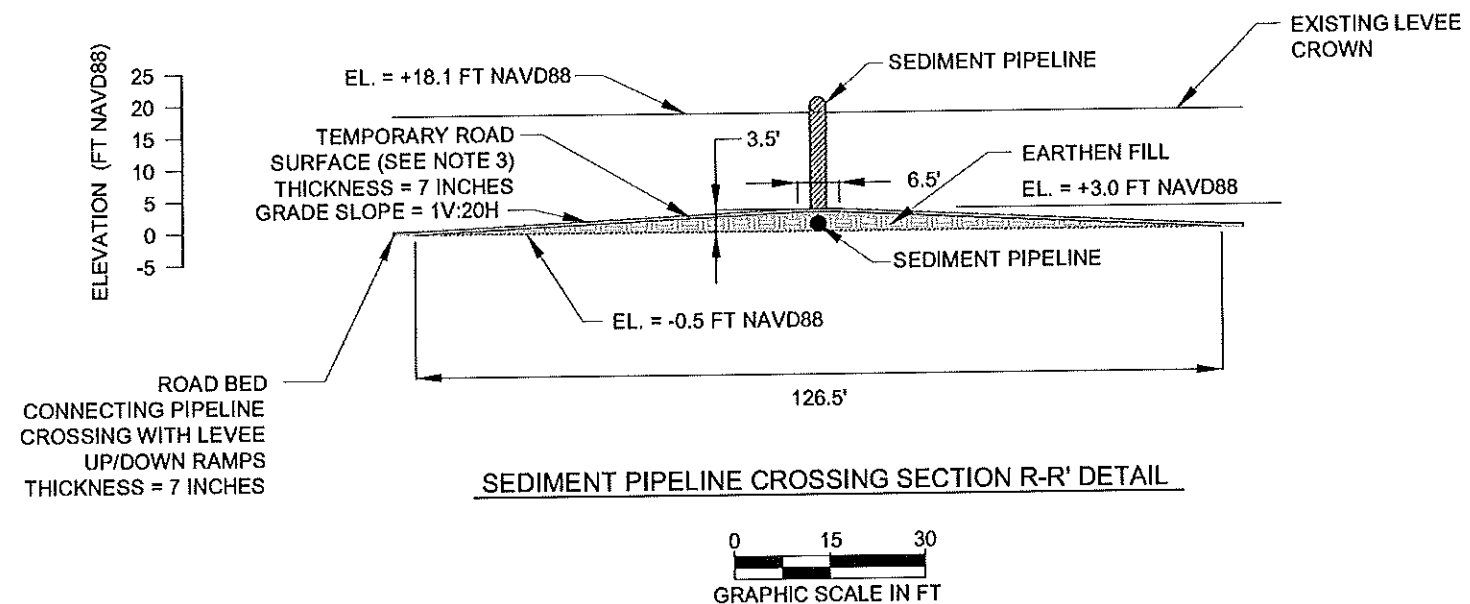
**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
2481 NW BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
PH: (561) 391-8102  
FAX: (561) 391-9116  
C.O.A. FL #4828  
C.O.A. LA #2531  
www.CBLCOM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801  
DRAWN BY: GK  
DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
STATE PROJECT NUMBER: BA-111  
FEDERAL PROJECT NUMBER:  
APPROVED BY: GT

**EMPIRE WATERWAY CONVEYANCE CORRIDOR TYPICAL SECTIONS**  
DATE: 02/20/15  
SHEET 55 OF 70

- NOTES:**
1. TEMPORARY PIPELINE MARKERS INDICATING OWNER, CONTENTS, AND ADDRESS FOR CONTACTING OWNER SHALL BE PLACED AND MAINTAINED AT EACH TOE OF THE LEVEE ADJACENT TO THE SEDIMENT PIPELINE, TO EACH SIDE OF THE SEDIMENT PIPELINE ON THE LEVEE CROWNS, AND AT EACH PIPELINE CROSSING APPROACH RAMP IN ACCORDANCE WITH SECTION TS-20.2.5 OF THE SPECIFICATIONS. SEE SHEET 68 FOR TEMPORARY PIPELINE MARKER DETAILS.
  2. SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
  3. SEE SECTION TS-23.3 OF THE SPECIFICATIONS FOR INFORMATION REGARDING LEVEE CROSSING APPROACH RAMP, TEMPORARY ROAD SURFACE, AND SEDIMENT PIPELINE CROSSING CONSTRUCTION DETAILS.
  4. SURVEYS CONDUCTED BY USACE, 2010 STA 808+63.52. (CHECKED X-SECTION.DGN, 04/27/2011).
  5. MINIMUM FILL OVER PIPELINE AT CROSSING IS 1 FOOT.
  6. REFER TO SECTION TS-23.4 OF THE SPECIFICATIONS FOR GUIDELINES ON REMOVAL OF VEGETATION FOR CONSTRUCTION ACCESS AND MEASURES FOR RESTORATION OF DAMAGES TO MARSH. SEE ALSO SECTIONS EP-6.1 AND EP-9.
  7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING HIS WORK.



1	01/10/13	CPRA Comments	DS	<b>CB&amp;I COASTAL PLANNING &amp; ENGINEERING, INC.</b> 2481 N.W. BOCA RATON BOULEVARD BOCA RATON, FLORIDA 33431 PH: (561) 391-8102 FAX: (561) 391-9115 C.O.A. FL #4028 C.O.A. LA #2531 www.CBI.COM	<b>COASTAL PROTECTION AND RESTORATION AUTHORITY</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	SHELL ISLAND WEST NRDA RESTORATION PROJECT STATE PROJECT NUMBER: BA-111 FEDERAL PROJECT NUMBER:	MISSISSIPPI RIVER LEVEE CROSSING PLAN VIEW AND SECTIONS DATE: 02/20/15 SHEET 56 OF 70
REV.	DATE	DESCRIPTION	BY				



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**LEGEND:**

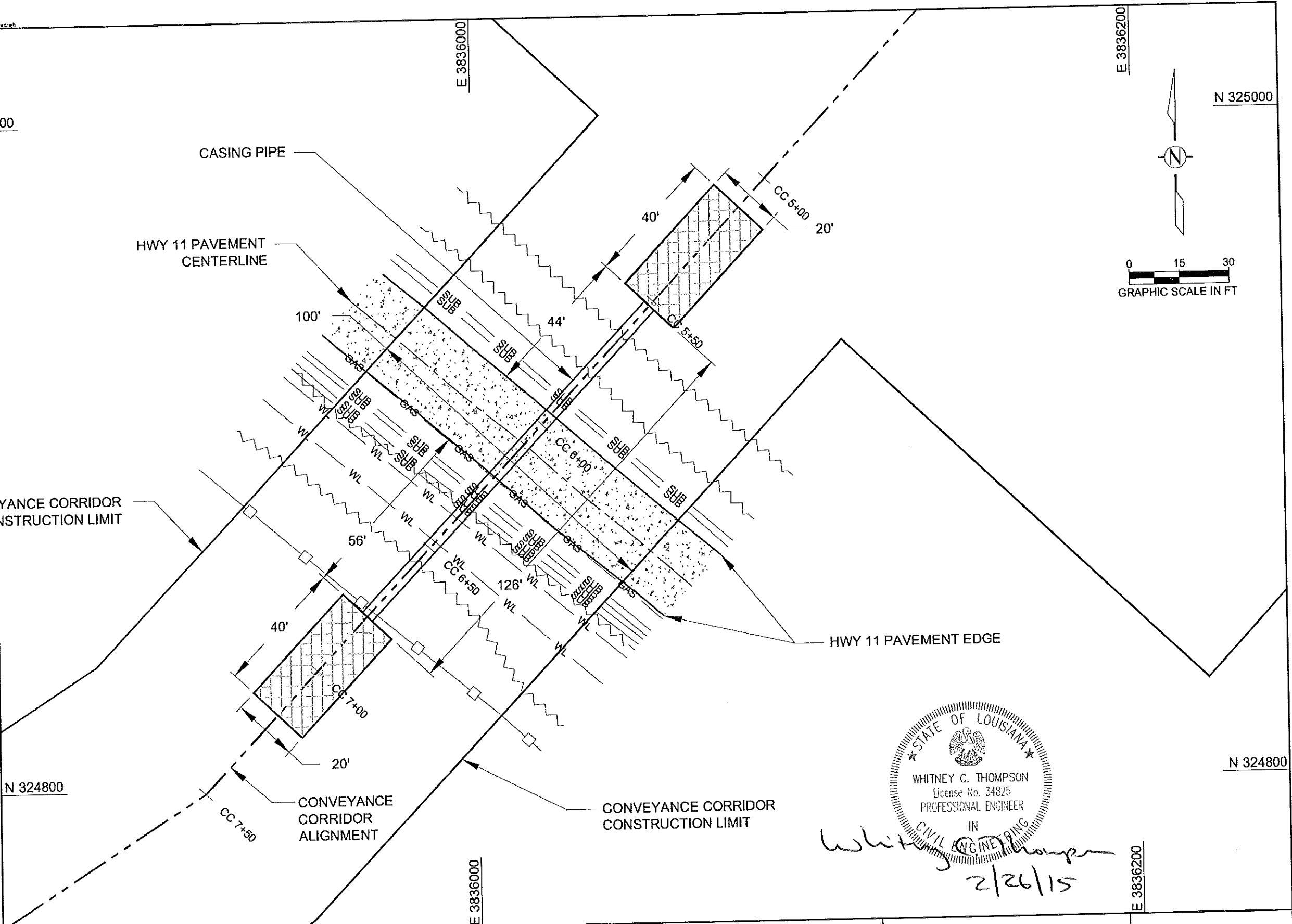
- CONVEYANCE CORRIDOR
- SURVEY BASELINE
- GAS PIPELINE
- WATER LINE
- UNDERGROUND UTILITY
- FENCE LINE
- TOP OF DITCH
- BRACED CONSTRUCTION PIT EXCAVATION AREA FOR CASING PIPE ACCESS
- HIGHWAY

N 325000

E 3836200

0 15 30  
GRAPHIC SCALE IN FT

- NOTES:**
- SEE SHEET 58 FOR HIGHWAY CROSSING DETAIL.
  - SEE SHEET 70 FOR CORRIDOR ALIGNMENT COORDINATES.
  - CONVEYANCE CORRIDOR CONSTRUCTION EQUIPMENT RIGHT OF WAY IS TO THE LIMITS OF THE CONVEYANCE CORRIDOR.
  - SEE SECTION TS-23 OF THE SPECIFICATIONS FOR CONVEYANCE CORRIDOR DETAILS AND BRACED CONSTRUCTION PIT REQUIREMENTS.
  - PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION PER SECTION TS-27 OF THE SPECIFICATIONS.
  - THE CONTRACTOR SHALL LOCATE AND IDENTIFY ALL ABOVE AND BELOW GROUND UTILITIES AND COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE OWNERS FOR THE DURATION OF CONSTRUCTION.
  - THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF ANY PIPELINE(S) PREVIOUSLY UNIDENTIFIED SO THAT THE OWNER MAY ISSUE A NOTICE(S) OF CONSTRUCTION PRIOR TO WORK. THE CONTRACTOR SHALL ALSO NOTIFY LOUISIANA ONE CALL AT 1-800-272-3020 REGARDING THE PREVIOUSLY UNIDENTIFIED PIPELINE(S) PRIOR TO WORK.
  - ALL PIPELINES AND UTILITIES LOCATED WITHIN 150' OF THE CONVEYANCE CORRIDOR AND FILL AREAS SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES. SEE SECTIONS GP-25 AND SP-7 OF THE SPECIFICATIONS.
  - SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.



STATE OF LOUISIANA

WHITNEY C. THOMPSON  
License No. 34825  
PROFESSIONAL ENGINEER

IN CIVIL ENGINEERING

*Whitney C. Thompson*  
2/26/15

REV.	DATE	DESCRIPTION	BY
1	0/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

PH: (561) 391-8192  
FAX: (561) 391-9116

C.O.A. FL #4028  
C.O.A. LA #2531  
www.CBI.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: GK      DESIGNED BY: WT

SHELL ISLAND WEST NRDA RESTORATION PROJECT

STATE PROJECT NUMBER: BA-111

FEDERAL PROJECT NUMBER:

APPROVED BY: GT

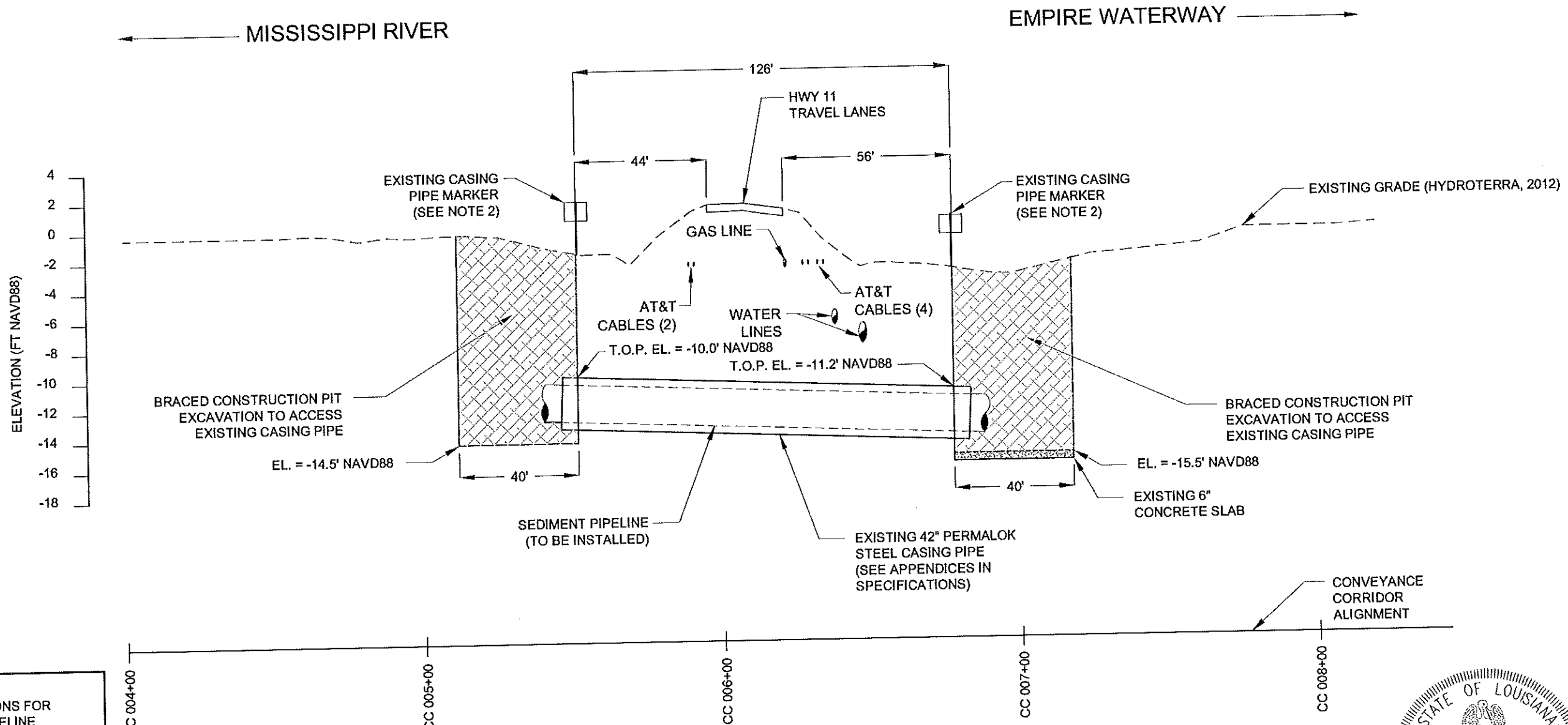
HIGHWAY 11 CROSSING PLAN VIEW

DATE: 02/20/15

SHEET 57 OF 70

**LEGEND:**

- EXISTING GRADE
- WATER LINES
- GAS LINE
- ⋯ AT & T CABLE
- ▨ EXISTING CONCRETE SLAB
- ▩ BRACED CONSTRUCTION PIT EXCAVATION AREA FOR CASING PIPE ACCESS



**HIGHWAY 11 CROSSING DETAIL**  
SCALE AS SHOWN

- NOTES:**
- SEE SECTION TS-23 OF THE SPECIFICATIONS FOR INFORMATION REGARDING SEDIMENT PIPELINE HIGHWAY CROSSINGS AND BRACED CONSTRUCTION PIT REQUIREMENTS.
  - SEE SHEET 68 FOR CASING PIPE MARKER CONSTRUCTION DETAILS.
  - SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
  - ADDITIONAL UTILITIES AND/OR PIPELINES NOT SHOWN COULD BE PRESENT IN THE VICINITY OF THE CONVEYANCE CORRIDOR CROSSING OF HIGHWAY 11.
  - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING FEATURES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MAY BE ATTRIBUTED TO FAILURE TO ACCURATELY LOCATE AND PRESERVE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES.
  - EXISTING ELEVATIONS, UTILITIES, STRUCTURES, AND FEATURES SHOWN TAKEN FROM HYDROTERRA TOPOGRAPHIC SURVEY CONDUCTED IN 2012.
  - SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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BOCA RATON, FLORIDA 33431

PH (561) 391-8102  
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C.O.A. FL #4028  
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DRAWN BY: GK      DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**

STATE PROJECT NUMBER: BA-111

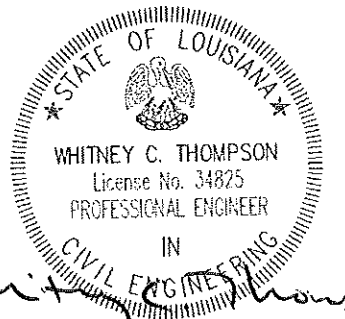
FEDERAL PROJECT NUMBER:

APPROVED BY: GT

**HIGHWAY 11 CROSSING DETAIL**

DATE: 02/20/15


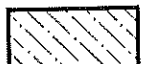
SHEET 58 OF 70

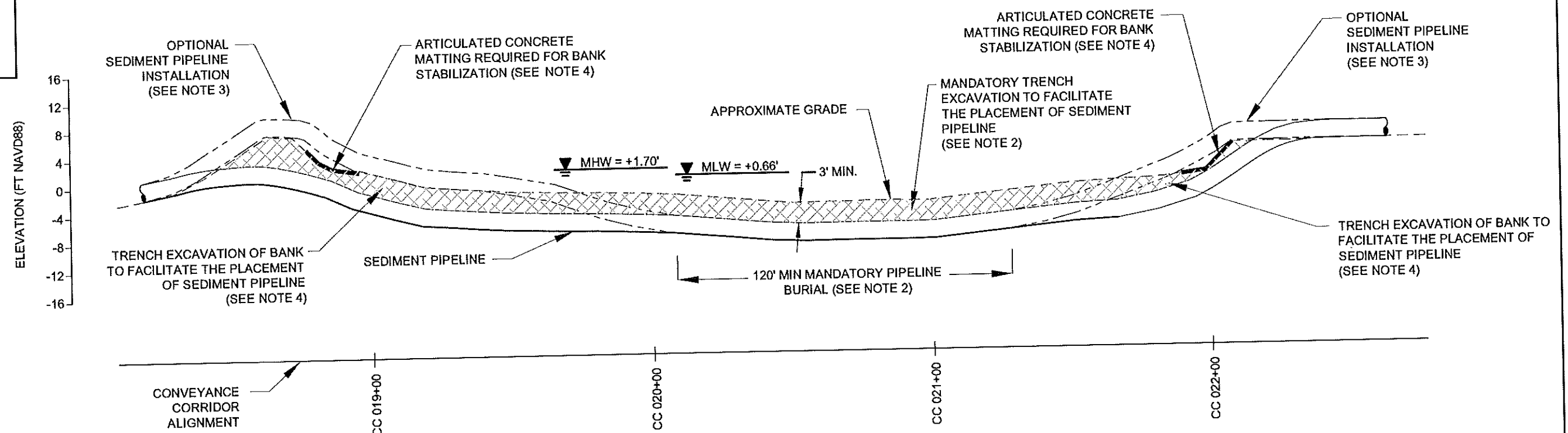


*Whitney C. Thompson*  
2/26/15

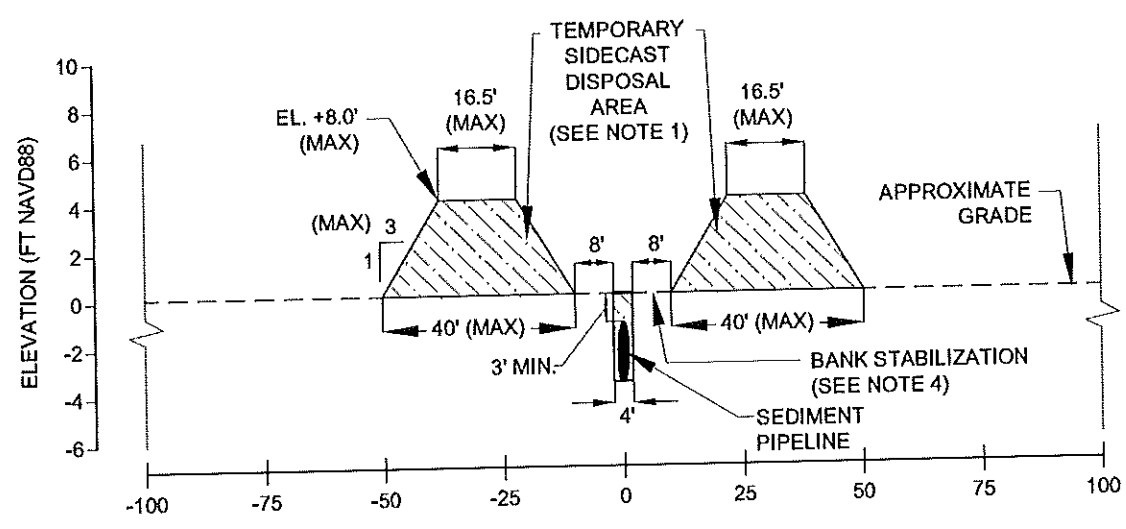
Project: 148372 Shell NRDA CAD Contour/Soil Contour/Coastal Protection and Restoration/CC 15118 Empire Harbor 21st 9/20/15 2/26/15

**LEGEND:**

-  MANDATORY TRENCH EXCAVATION
-  TEMPORARY SIDECAST DISPOSAL AREA



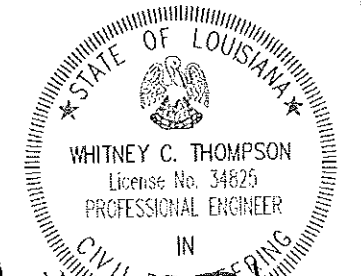
**EMPIRE HARBOR CANAL CROSSING PROFILE DETAIL**  
(SCALE AS SHOWN)



**EMPIRE HARBOR CANAL SECTION DETAIL @ STA. CC 022+00**  
(SCALE AS SHOWN)

**NOTES:**

- EXCAVATED MATERIAL SHALL BE PLACED IN THE CONFINES OF THE TEMPORARY DISPOSAL PLACEMENT AREAS. SEE SHEET 60 FOR TEMPORARY DISPOSAL AREA PLACEMENT HORIZONTAL DIMENSIONS. THERE SHALL BE NO SIDECASTING OF EXCAVATED MATERIAL WITHIN THE CROSSING LIMITS.
- TO ENABLE NAVIGATIONAL PASSAGE, THE PIPELINE MUST BE BURIED WITH MINIMUM OF 3 FEET OF COVER OVER A MINIMUM DISTANCE OF 120 FEET CENTERED AT THE LOWEST ELEVATION WITHIN THE EMPIRE HARBOR CANAL CROSSING.
- IF THE CONTRACTOR DOES NOT ELECT TO EXCAVATE THE CANAL BANK, SEDIMENT PIPELINE SHALL BE MARKED IN ACCORDANCE WITH USCG REGULATIONS FOR SAFE NAVIGATIONAL CROSSING OF THE SEDIMENT PIPELINE.
- IF THE CONTRACTOR ELECTS TO TRENCH EXCAVATE THE CANAL BANKS FOR SEDIMENT PIPELINE INSTALLATION, BANK STABILIZATION MEASURES SHALL BE REQUIRED. THE CONTRACTOR SHALL BACKFILL THE CANAL BANKS AS A FOUNDATION FOR THE INSTALLATION OF THE ARTICULATED CONCRETE MATS. INSTALLATION AND REPLACEMENT OF THE ARTICULATED CONCRETE MATS SHALL BE CONDUCTED FOLLOWING SEDIMENT PIPELINE INSTALLATION AND REMOVAL. SEE SHEET 60 FOR BANK STABILIZATION DETAILS.
- IF NO EXCAVATION IS CONDUCTED ABOVE MEAN LOW WATER, BANK STABILIZATION SHALL NOT BE REQUIRED.
- SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
- SEE SECTION TS-22 OF THE SPECIFICATIONS FOR INFORMATION REGARDING SEDIMENT PIPELINE.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING FEATURES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MAY BE ATTRIBUTED TO FAILURE TO ACCURATELY LOCATE AND PRESERVE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES.
- SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.



*Whitney C. Thompson*  
2/26/15

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

PH (561) 391-8102  
FAX (561) 391-9116

C.O.A. FL #4028  
C.O.A. LA #2531  
www.CB&I.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: GK      DESIGNED BY: WT

SHELL ISLAND WEST NRDA RESTORATION PROJECT

STATE PROJECT NUMBER: BA-111

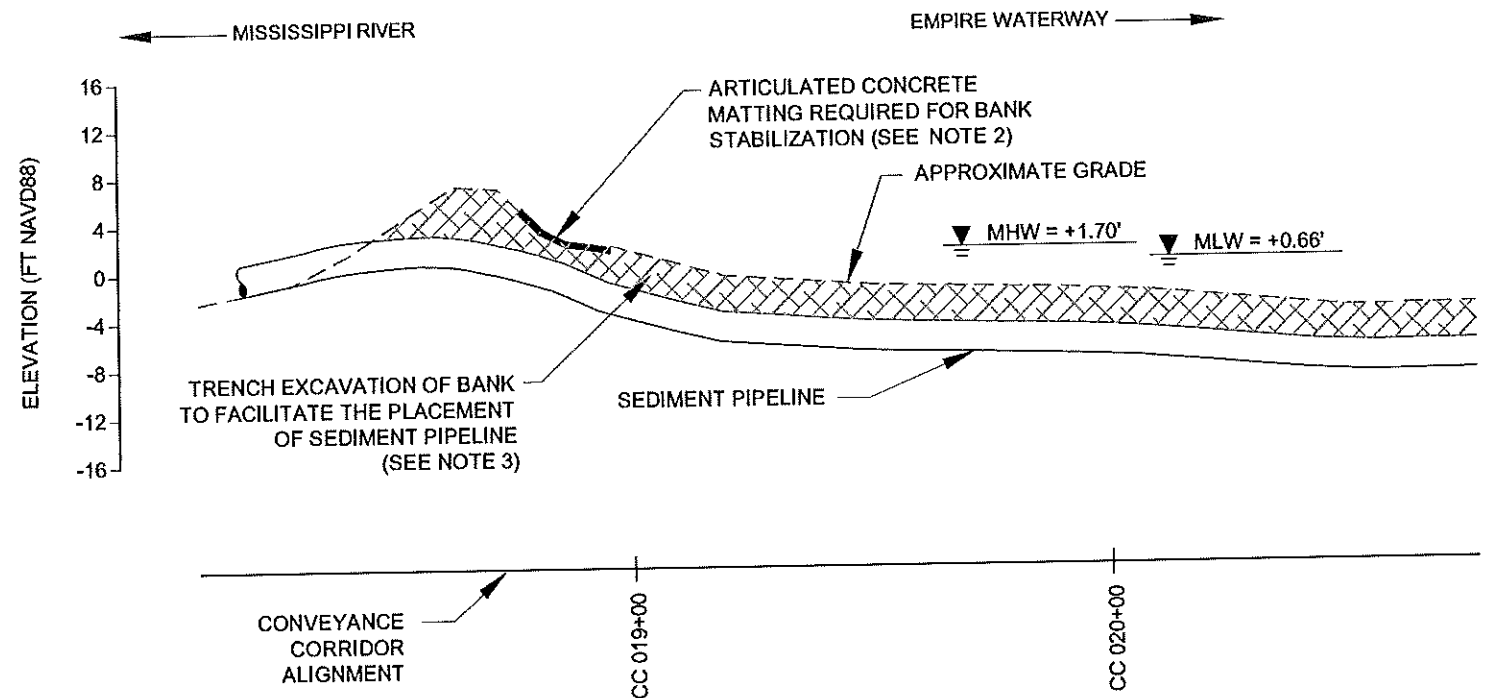
FEDERAL PROJECT NUMBER:

APPROVED BY: GT

EMPIRE HARBOR CANAL CROSSING DETAILS

DATE: 02/20/15

SHEET 69 OF 70



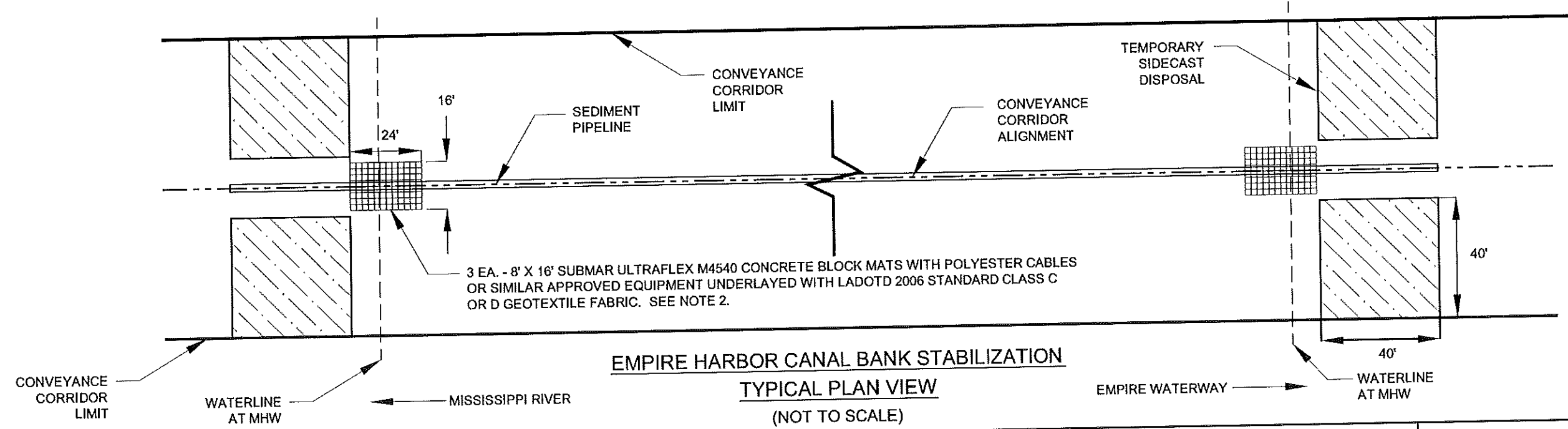
**EMPIRE HARBOR CANAL BANK STABILIZATION PROFILE DETAIL**  
(SCALE AS SHOWN)

**NOTES:**

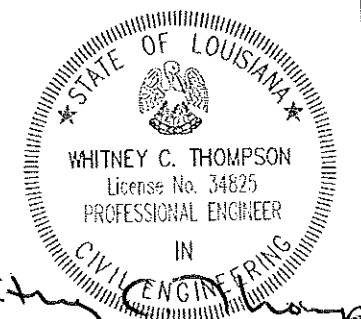
- EXCAVATED MATERIAL SHALL BE PLACED IN THE CONFINES OF THE TEMPORARY DISPOSAL PLACEMENT AREAS. THERE SHALL BE NO SIDECASTING OF EXCAVATED MATERIAL WITHIN THE CROSSING LIMITS.
- SEE TS-23.6.9 OF THE SPECIFICATIONS FOR ARTICULATED CONCRETE STABILIZATION MAT CONSTRUCTION AND INSTALLATION DETAILS.
- IF THE CONTRACTOR ELECTS TO TRENCH EXCAVATE THE CANAL BANKS FOR SEDIMENT PIPELINE INSTALLATION, BANK STABILIZATION MEASURES SHALL BE REQUIRED. THE CONTRACTOR SHALL BACKFILL THE CANAL BANKS AS A FOUNDATION FOR THE INSTALLATION OF THE ARTICULATED CONCRETE MATS. INSTALLATION AND REPLACEMENT OF THE ARTICULATED CONCRETE MATS SHALL BE CONDUCTED FOLLOWING SEDIMENT PIPELINE INSTALLATION AND REMOVAL.
- SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
- SEE SECTIONS TS-22 AND TS-23 OF THE SPECIFICATIONS FOR INFORMATION REGARDING SEDIMENT PIPELINE CROSSINGS.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING FEATURES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MAY BE ATTRIBUTED TO FAILURE TO ACCURATELY LOCATE AND PRESERVE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES.
- SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.

**LEGEND:**

	CONVEYANCE CORRIDOR
	PIPELINE ALIGNMENT
	EXCAVATION FOR CASING PIPE ACCESS
	TEMPORARY SIDECAST DISPOSAL AREA
	SUBMAR ULTRAFLEX CONCRETE BLOCK MATS



**EMPIRE HARBOR CANAL BANK STABILIZATION TYPICAL PLAN VIEW**  
(NOT TO SCALE)



*Whitney C. Thompson*  
2/26/15

REV.	DATE	DESCRIPTION	BY
1	10/10/13	CPRA Comments	DS

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BOCA RATON, FLORIDA 33431  
PH. (561) 391-8102  
FAX (561) 391-8116  
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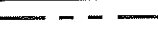
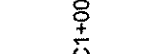
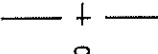
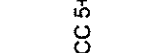
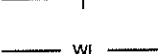
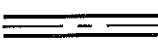


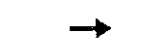
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801  
DRAWN BY: GK  
DESIGNED BY: WT

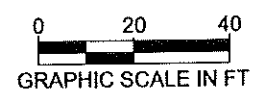
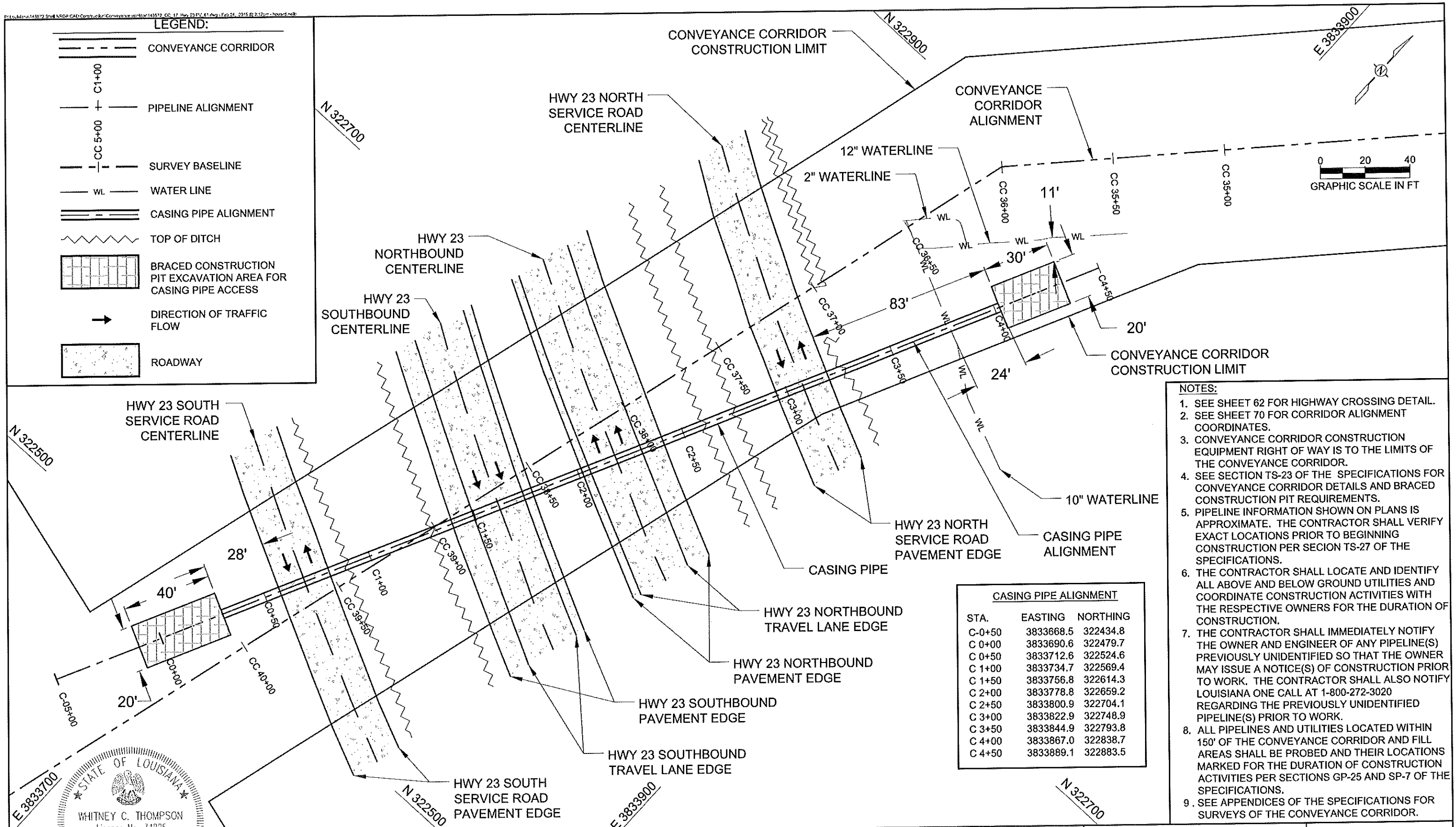
SHELL ISLAND WEST NRDA RESTORATION PROJECT  
STATE PROJECT NUMBER: BA-111  
FEDERAL PROJECT NUMBER:  
APPROVED BY: GT

EMPIRE HARBOR CANAL BANK STABILIZATION TYPICAL DETAIL  
DATE: 02/20/15  
SHEET 60 OF 70

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**LEGEND:**

-  CONVEYANCE CORRIDOR
-  PIPELINE ALIGNMENT
-  SURVEY BASELINE
-  WATER LINE
-  CASING PIPE ALIGNMENT
-  TOP OF DITCH
-  BRACED CONSTRUCTION PIT EXCAVATION AREA FOR CASING PIPE ACCESS
-  DIRECTION OF TRAFFIC FLOW
-  ROADWAY



- NOTES:**
1. SEE SHEET 62 FOR HIGHWAY CROSSING DETAIL.
  2. SEE SHEET 70 FOR CORRIDOR ALIGNMENT COORDINATES.
  3. CONVEYANCE CORRIDOR CONSTRUCTION EQUIPMENT RIGHT OF WAY IS TO THE LIMITS OF THE CONVEYANCE CORRIDOR.
  4. SEE SECTION TS-23 OF THE SPECIFICATIONS FOR CONVEYANCE CORRIDOR DETAILS AND BRACED CONSTRUCTION PIT REQUIREMENTS.
  5. PIPELINE INFORMATION SHOWN ON PLANS IS APPROXIMATE. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS PRIOR TO BEGINNING CONSTRUCTION PER SECTION TS-27 OF THE SPECIFICATIONS.
  6. THE CONTRACTOR SHALL LOCATE AND IDENTIFY ALL ABOVE AND BELOW GROUND UTILITIES AND COORDINATE CONSTRUCTION ACTIVITIES WITH THE RESPECTIVE OWNERS FOR THE DURATION OF CONSTRUCTION.
  7. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF ANY PIPELINE(S) PREVIOUSLY UNIDENTIFIED SO THAT THE OWNER MAY ISSUE A NOTICE(S) OF CONSTRUCTION PRIOR TO WORK. THE CONTRACTOR SHALL ALSO NOTIFY LOUISIANA ONE CALL AT 1-800-272-3020 REGARDING THE PREVIOUSLY UNIDENTIFIED PIPELINE(S) PRIOR TO WORK.
  8. ALL PIPELINES AND UTILITIES LOCATED WITHIN 150' OF THE CONVEYANCE CORRIDOR AND FILL AREAS SHALL BE PROBED AND THEIR LOCATIONS MARKED FOR THE DURATION OF CONSTRUCTION ACTIVITIES PER SECTIONS GP-25 AND SP-7 OF THE SPECIFICATIONS.
  9. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.

CASING PIPE ALIGNMENT		
STA.	EASTING	NORTHING
C-0+50	3833668.5	322434.8
C 0+00	3833690.6	322479.7
C 0+50	3833712.6	322524.6
C 1+00	3833734.7	322569.4
C 1+50	3833756.8	322614.3
C 2+00	3833778.8	322659.2
C 2+50	3833800.9	322704.1
C 3+00	3833822.9	322748.9
C 3+50	3833844.9	322793.8
C 4+00	3833867.0	322838.7
C 4+50	3833889.1	322883.5

STATE OF LOUISIANA  
 WHITNEY C. THOMPSON  
 License No. 34825  
 PROFESSIONAL ENGINEER  
 IN  
 CIVIL ENGINEERING  
 2/26/15

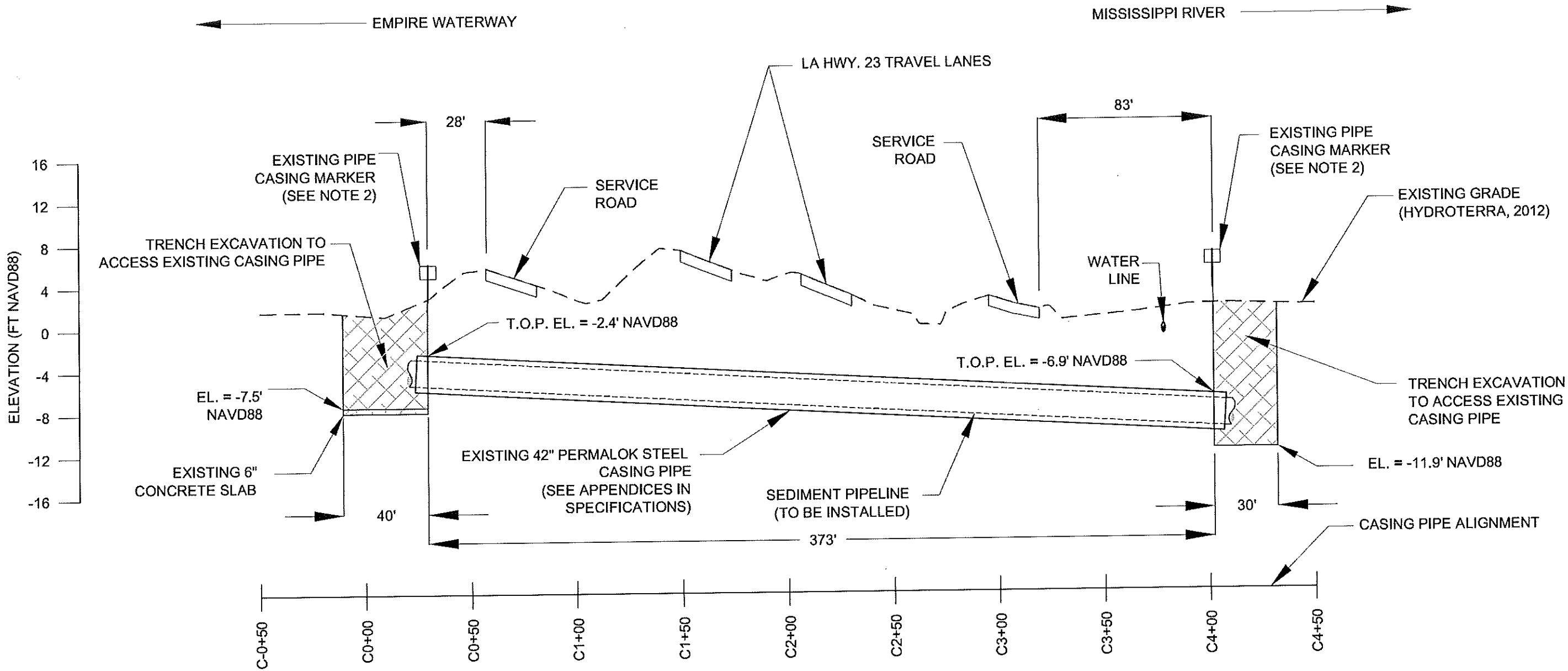
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 PH. (561) 391-6102  
 FAX (561) 391-9116  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

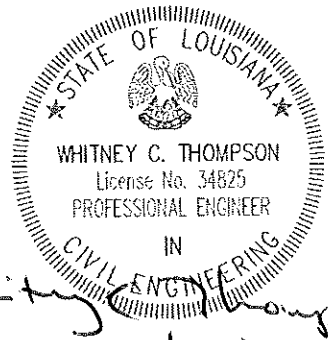
SHELL ISLAND WEST NRDA RESTORATION PROJECT  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

LA HIGHWAY 23 CROSSING PLAN VIEW  
 DATE: 02/20/15  
 SHEET 61 OF 70



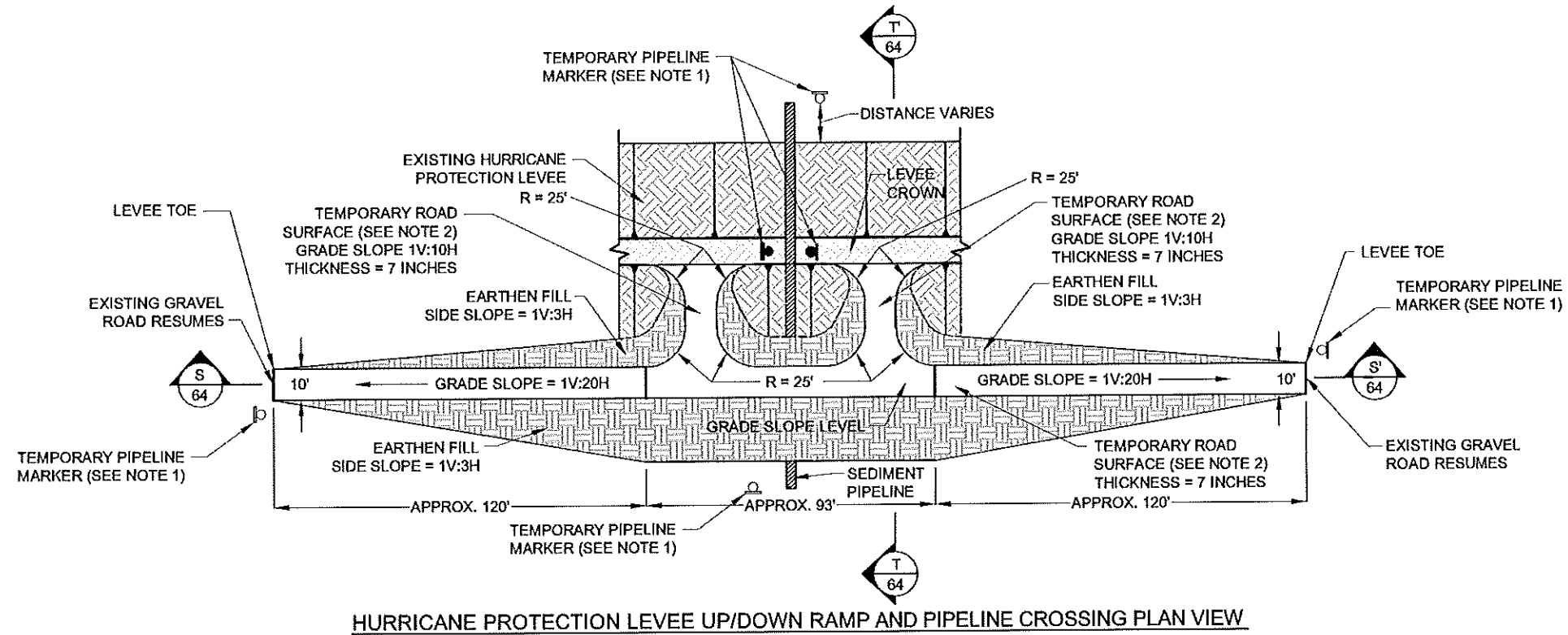
- NOTES:**
- SEE SECTION TS-23 OF THE SPECIFICATIONS FOR INFORMATION REGARDING SEDIMENT PIPELINE HIGHWAY CROSSINGS AND BRACED CONSTRUCTION PIT REQUIREMENTS.
  - SEE SHEET 68 FOR CASING PIPE MARKER CONSTRUCTION DETAILS.
  - SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
  - ADDITIONAL UTILITIES AND/OR PIPELINES NOT SHOWN COULD BE PRESENT IN THE VICINITY OF THE CONVEYANCE CORRIDOR CROSSING OF HIGHWAY 23.
  - PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING FEATURES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MAY BE ATTRIBUTED TO FAILURE TO ACCURATELY LOCATE AND PRESERVE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES.
  - EXISTING UTILITIES, STRUCTURES, AND FEATURES SHOWN TAKEN FROM HYDROTERRA TOPOGRAPHIC SURVEY CONDUCTED IN 2012. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.

DISTANCE ALONG CASING PIPE ALIGNMENT (FT)  
**HIGHWAY 23 CROSSING DETAIL**  
 (SCALE AS SHOWN)



*Whitney C. Thompson*  
 2/26/15

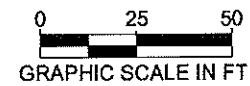
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						FEDERAL PROJECT NUMBER: APPROVED BY: GT	DATE: 02/20/15 SHEET 62 OF 70
REV.	DATE	DESCRIPTION	BY	DRAWN BY: GK DESIGNED BY: WT			



HURRICANE PROTECTION LEVEE UP/DOWN RAMP AND PIPELINE CROSSING PLAN VIEW

NOTES:

1. TEMPORARY PIPELINE MARKERS INDICATING OWNER, CONTENTS, AND ADDRESS FOR CONTACTING OWNER SHALL BE PLACED AND MAINTAINED AT EACH TOE OF THE LEVEE ADJACENT TO THE SEDIMENT PIPELINE, TO EACH SIDE OF THE SEDIMENT PIPELINE ON THE LEVEE CROWNS, AND AT EACH PIPELINE CROSSING APPROACH RAMP IN ACCORDANCE WITH SECTION TS-20.2.5 OF THE SPECIFICATIONS. SEE SHEET 68 FOR TEMPORARY PIPELINE MARKER DETAILS.
2. SEE SECTION TS-23.3 OF THE SPECIFICATIONS FOR INFORMATION REGARDING LEVEE CROSSING APPROACH RAMPS, TEMPORARY ROAD SURFACE AND SEDIMENT PIPELINE CROSSING CONSTRUCTION DETAILS.
3. SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
4. SEE SHEET 64 FOR HURRICANE PROTECTION LEVEE CROSSING SECTIONS.
5. SEE SECTION TS-23.4 OF THE SPECIFICATIONS FOR CONSTRUCTION ACCESS VEGETATION REMOVAL GUIDELINES. SEE ALSO SECTIONS EP-6.1 AND EP-9.
6. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING FEATURES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MAY BE ATTRIBUTED TO FAILURE TO ACCURATELY LOCATE AND PRESERVE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES.
7. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.
8. THE CONTRACTOR SHALL COORDINATE THE HURRICANE PROTECTION LEVEE CROSSING WORK WITH THE CONSTRUCTION OF THE U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS TO VENICE PROJECT NOV-7a.



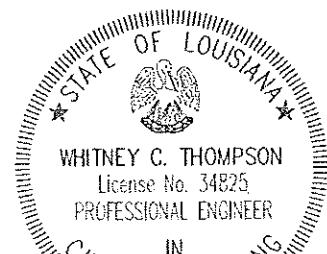
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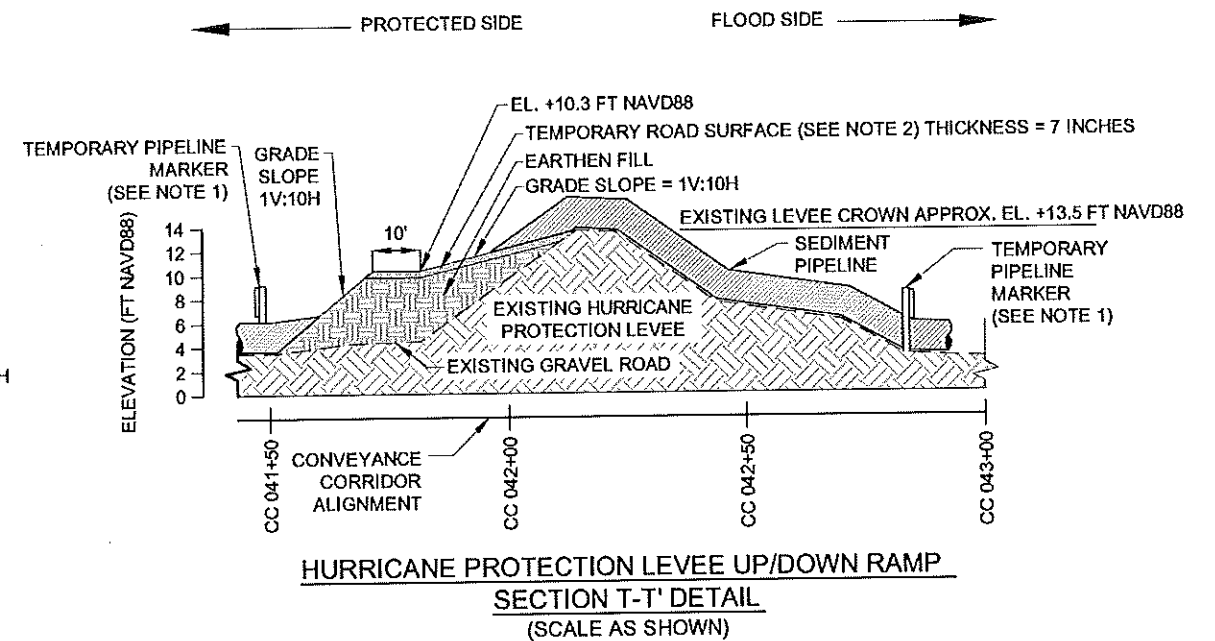
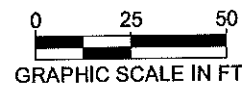
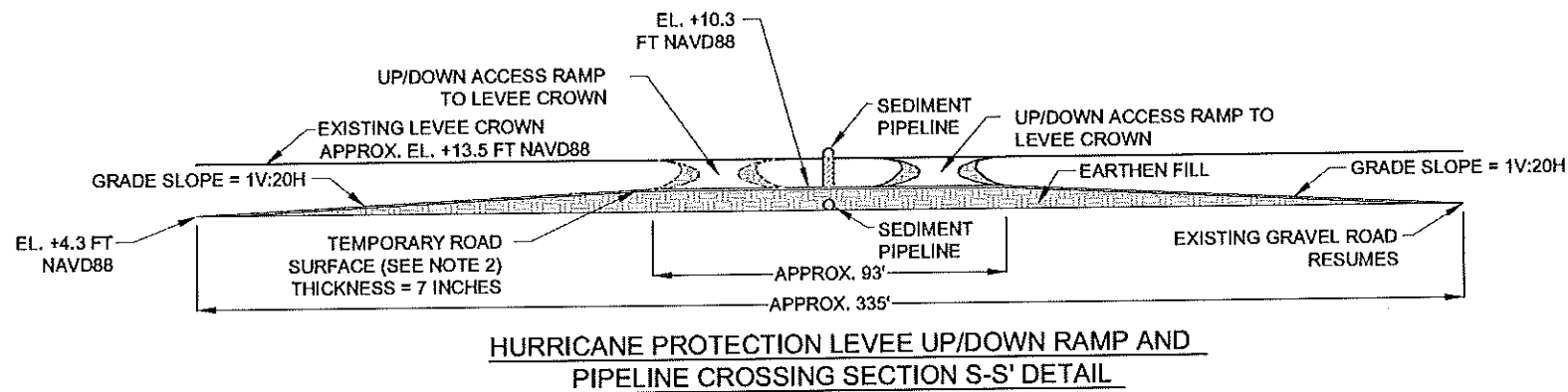
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**HURRICANE PROTECTION LEVEE CROSSING PLAN VIEW**  
 DATE: 02/20/15  
 SHEET 63 OF 70



*Whitney C. Thompson*  
 2/26/15



**NOTES:**

- TEMPORARY PIPELINE MARKERS INDICATING OWNER, CONTENTS, AND ADDRESS FOR CONTACTING OWNER SHALL BE PLACED AND MAINTAINED AT EACH TOE OF THE LEVEE ADJACENT TO THE SEDIMENT PIPELINE, TO EACH SIDE OF THE SEDIMENT PIPELINE ON THE LEVEE CROWNS, AND AT EACH PIPELINE CROSSING APPROACH RAMP IN ACCORDANCE WITH SECTION TS-20.2.5 OF THE SPECIFICATIONS. SEE SHEET 68 FOR TEMPORARY PIPELINE MARKER DETAILS.
- SEE SECTION TS-23.3 OF THE SPECIFICATIONS FOR INFORMATION REGARDING LEVEE CROSSING APPROACH RAMP, TEMPORARY ROAD SURFACE AND SEDIMENT PIPELINE CROSSING CONSTRUCTION DETAILS.
- SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
- MINIMUM FILL OVER PIPELINE AT CROSSING IS 1 FOOT.
- SEE SECTIONS TS-23.4 OF THE SPECIFICATIONS FOR CONSTRUCTION ACCESS VEGETATION REMOVAL GUIDELINES. SEE ALSO SECTIONS EP-6.1 AND EP-9.
- ELEVATIONS BASED ON SURVEYS PERFORMED BY SJB GROUP, LLC. 2008.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING FEATURES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MAY BE ATTRIBUTED TO FAILURE TO ACCURATELY LOCATE AND PRESERVE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES.
- SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.
- THE CONTRACTOR SHALL COORDINATE THE HURRICANE PROTECTION LEVEE CROSSING WORK WITH THE CONSTRUCTION OF THE U.S. ARMY CORPS OF ENGINEERS NEW ORLEANS TO VENICE PROJECT NOV-7a.

**LEGEND:**

- SEDIMENT PIPELINE
- TEMPORARY ROAD SURFACE
- EARTHEN FILL
- EXISTING HURRICANE PROTECTION LEVEE

STATE OF LOUISIANA

★ ★

WHITNEY C. THOMPSON  
License No. 34825  
PROFESSIONAL ENGINEER

IN  
CIVIL ENGINEERING

*Whitney Thompson*  
2/26/15

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2481 N.W. BOCA RATON BOULEVARD  
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PH (561) 391-8102  
FAX (561) 391-9116

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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: GK      DESIGNED BY: WT

SHELL ISLAND WEST NRDA RESTORATION PROJECT

STATE PROJECT NUMBER: BA-111

FEDERAL PROJECT NUMBER:

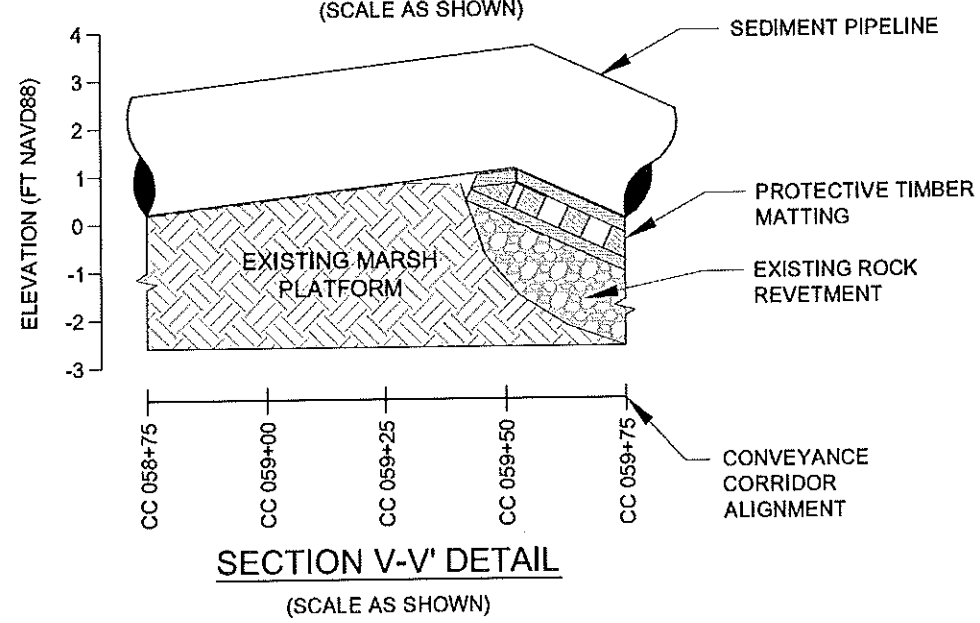
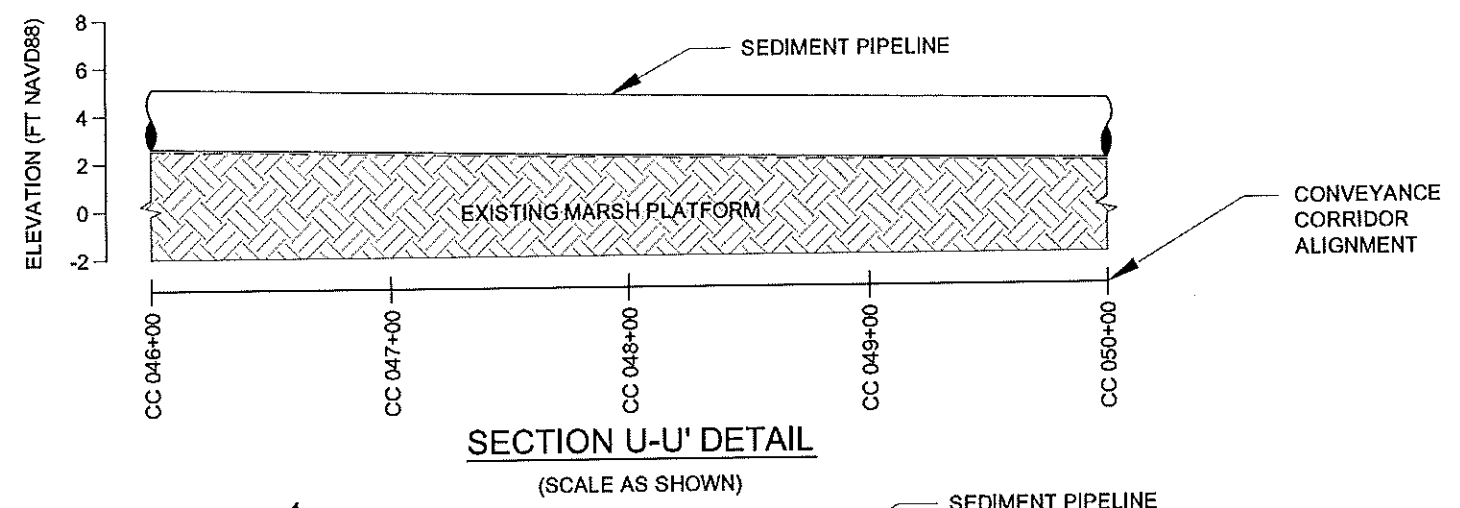
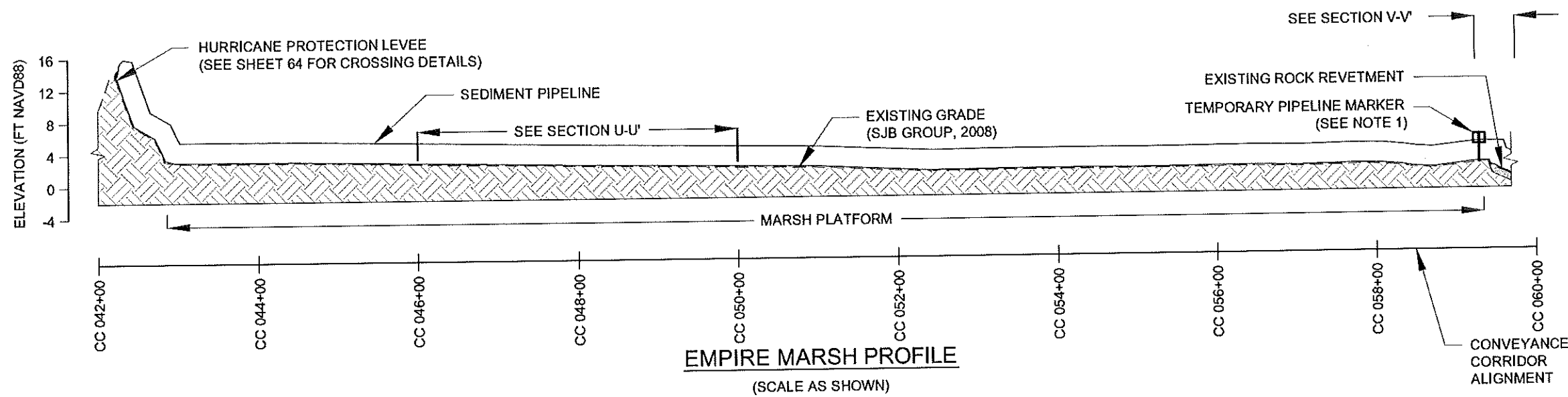
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HURRICANE PROTECTION LEVEE CROSSING SECTIONS

DATE: 02/20/15

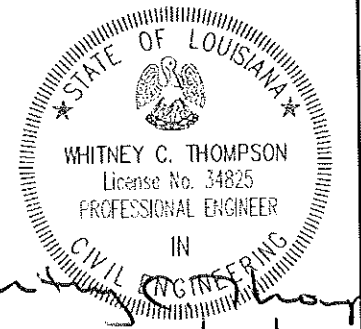
SHEET 64 OF 70





**NOTES:**

1. SEE SHEET 68 FOR TEMPORARY PIPELINE MARKER DETAILS
2. SEE SECTION 23.6.10 OF THE SPECIFICATIONS FOR INFORMATION REGARDING SEDIMENT PIPELINE MARSH AND ROCK REVETMENT CROSSINGS.
3. SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING UTILITIES, STRUCTURES AND OTHER EXISTING FEATURES. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES THAT MAY BE ATTRIBUTED TO FAILURE TO ACCURATELY LOCATE AND PRESERVE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES.
5. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.
6. ELEVATIONS BASED ON SURVEYS PERFORMED BY SJB GROUP, LLC IN 2008.



1	10/10/13	CPRA Comments	DS
REV.	DATE	DESCRIPTION	BY


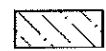

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 BOCA RATON, FLORIDA 33431  
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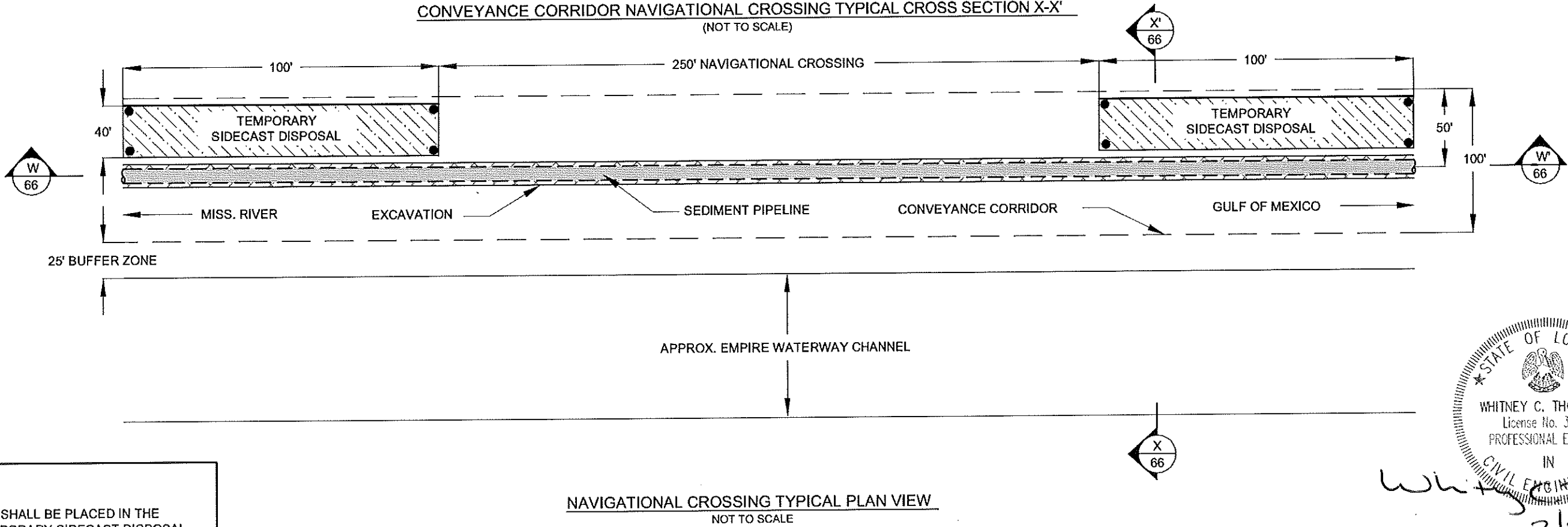
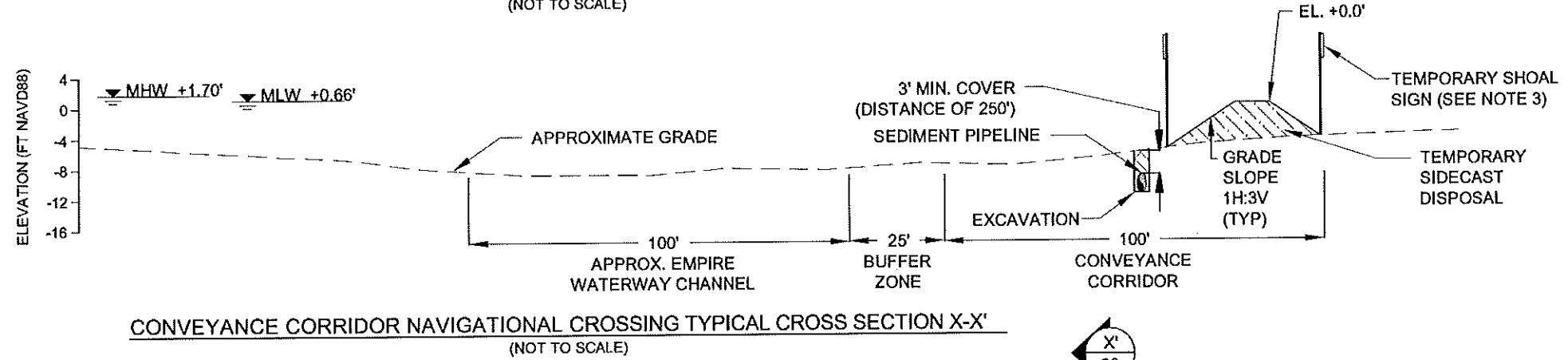
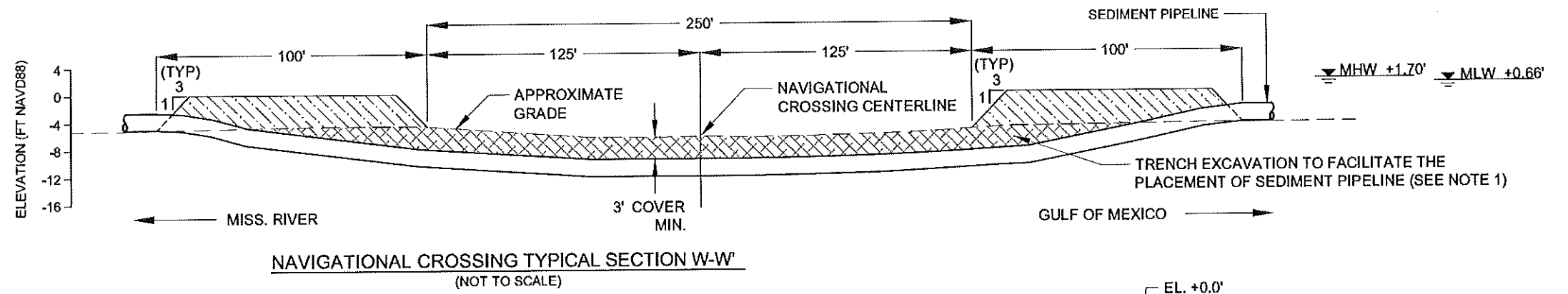
**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK      DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**EMPIRE MARSH AND ROCK REVETMENT CROSSING DETAILS**  
 DATE: 02/20/15  
 SHEET 65 OF 70

**LEGEND**

-  TRENCH EXCAVATION  
(EXTENDS TO BOTTOM OF PIPE)
-  TEMPORARY SIDECAST  
DISPOSAL
-  TEMPORARY SHOAL SIGN  
(SEE NOTE 3)



**NOTES:**

1. EXCAVATED MATERIAL SHALL BE PLACED IN THE CONFINES OF THE TEMPORARY SIDECAST DISPOSAL PLACEMENT AREAS. THERE SHALL BE NO SIDECASTING WITHIN CROSSING LIMITS.
2. SEE SECTION TS-23.6.11.4 OF THE SPECIFICATIONS FOR NAVIGATIONAL CROSSING DETAILS.
3. SEE SHEET 69 FOR SHOAL SIGN CONSTRUCTION DETAILS.
4. SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
5. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.

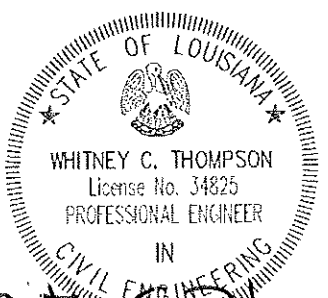
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 PH. (561) 391-8102  
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 C.O.A. FL #4028  
 C.O.A. LA #2631  
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**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
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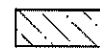

**EMPIRE WATERWAY NAVIGATIONAL CROSSING TYPICAL DETAILS**  
 DATE: 02/20/15  
 SHEET 66 OF 70

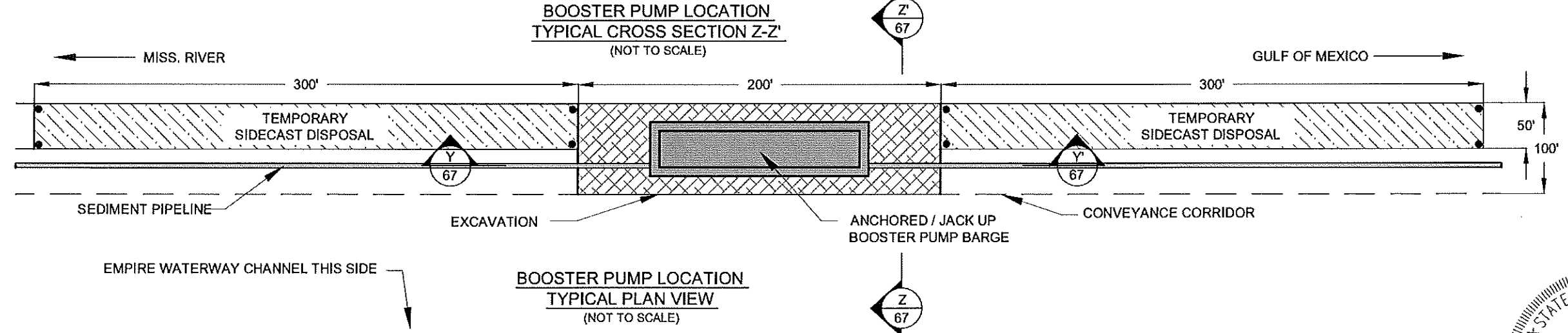
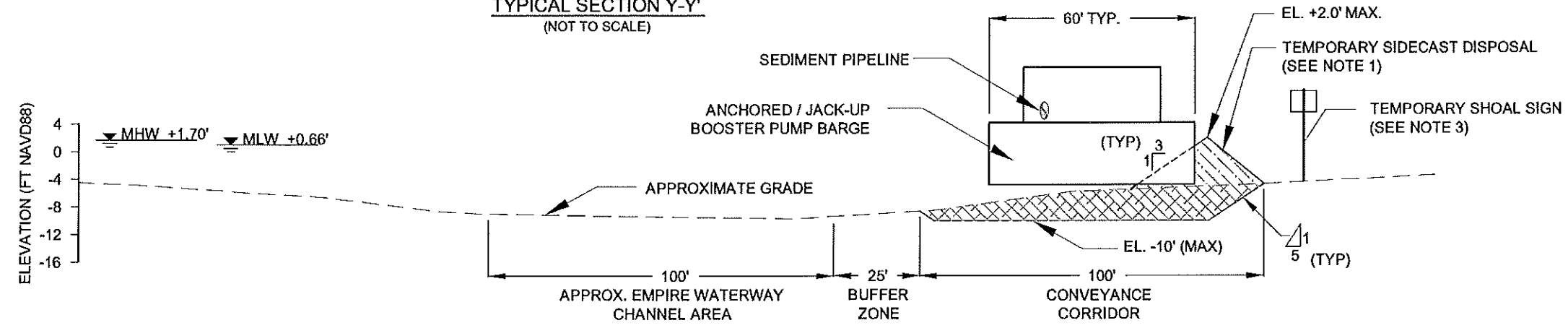
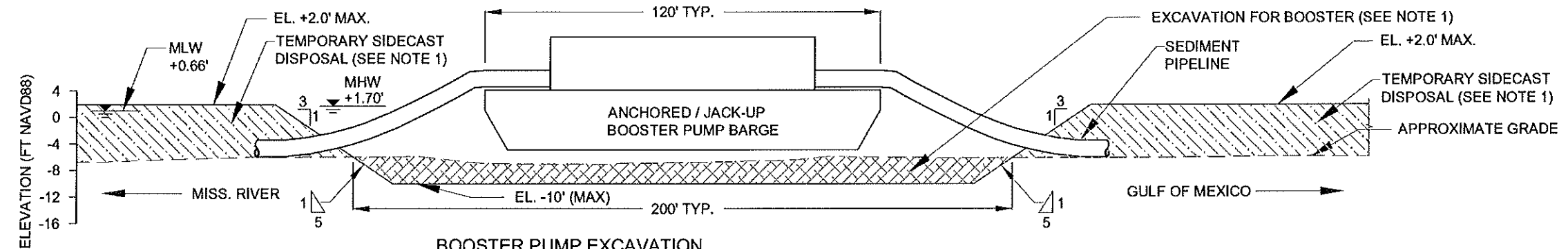


*Whitney C. Thompson*  
 2/26/15

Plot: 144572\_Shell\_NRDA\_Coastal\_Protection\_and\_Restoration\_Authority\_02/26/15\_02\_23\_Booster\_Sig\_07.dwg; Tab: 01; 2/26/15; 10:45:11

**LEGEND**

-  TRENCH EXCAVATION FOR BOOSTER COOLING
-  TEMPORARY SIDECAST DISPOSAL
-  TEMPORARY SHOAL SIGN (SEE NOTE 3)



- NOTES:**
1. EXCAVATED MATERIAL SHALL BE PLACED IN THE CONFINES OF THE TEMPORARY SIDECAST DISPOSAL PLACEMENT AREAS. THERE SHALL BE NO SIDECASTING WITHIN BOOSTER PUMP LOCATION EXCAVATION AREA.
  2. SEE SECTION TS-23.6.11.6 OF THE SPECIFICATIONS FOR BOOSTER PUMP LOCATION DETAILS.
  3. SEE SHEET 69 FOR SHOAL SIGN CONSTRUCTION DETAILS.
  4. SEE SHEETS 48-54 FOR CONVEYANCE CORRIDOR ALIGNMENT.
  5. SEE APPENDICES OF THE SPECIFICATIONS FOR SURVEYS OF THE CONVEYANCE CORRIDOR.

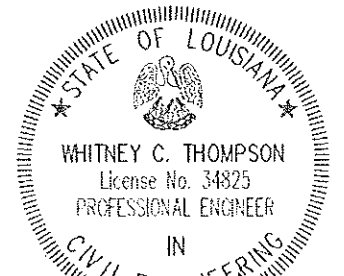
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**CB&I COASTAL PLANNING & ENGINEERING, INC.**  
 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH (561) 391-6102  
 FAX (561) 391-6116  
 C.O.A. FL #4028  
 C.O.A. LA #2531  
 www.CB&I.COM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
 450 LAUREL STREET  
 BATON ROUGE, LOUISIANA 70801  
 DRAWN BY: GK  
 DESIGNED BY: WT

**SHELL ISLAND WEST NRDA RESTORATION PROJECT**  
 STATE PROJECT NUMBER: BA-111  
 FEDERAL PROJECT NUMBER:  
 APPROVED BY: GT

**BOOSTER PUMP LOCATION TYPICAL DETAILS**  
 DATE: 02/20/15  
 SHEET 67 OF 70



*Whitney C. Thompson*  
 2/26/15

**SEDIMENT DELIVERY PIPELINE**

PIPE SIZE  
CONTENTS

CONTACT: CONTRACTOR  
PHONE NUMBER  
STREET ADDRESS  
CITY, STATE, ZIP CODE

**TEMPORARY PIPELINE MARKER DETAIL**  
(NOT TO SCALE)

**TEMPORARY PIPELINE MARKER NOTES:**

1. MARKERS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH LADOTD 2006 STANDARD SPECIFICATION 729.
2. PROPOSED DRAWING SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL IN THE WORK PLAN PRIOR TO CONSTRUCTION.
3. MARKERS SHALL BE PLACED PRIOR TO SEDIMENT PIPELINE INSTALLATION AND REMOVED FOLLOWING SEDIMENT PIPELINE REMOVAL.
4. SEE SECTION 20.2.5 OF THE SPECIFICATIONS FOR TEMPORARY PIPELINE MARKER DETAILS.

42 INCH SEDIMENT DELIVERY STEEL CASING PIPE

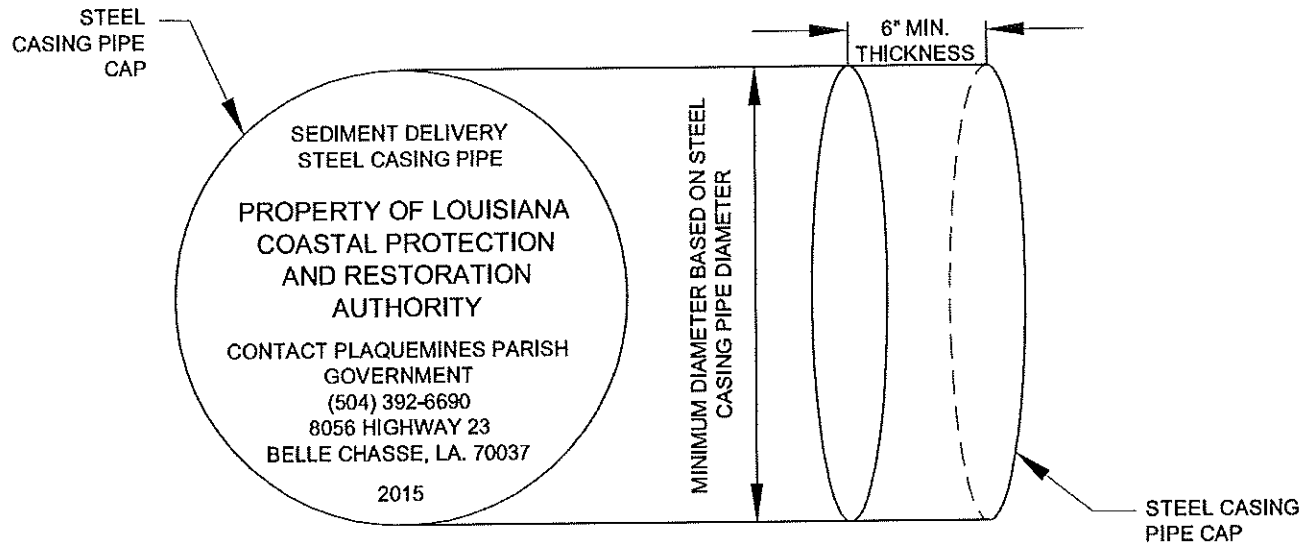
PROPERTY OF LOUISIANA COASTAL PROTECTION AND RESTORATION AUTHORITY

CONTACT PLAQUEMINES PARISH GOVERNMENT  
(504) 392-6690  
8056 HIGHWAY 23  
BELLE CHASSE, LA. 70037

**CASING PIPE MARKER DETAIL**  
(NOT TO SCALE)

**CASING PIPE MARKER NOTES:**

1. EXISTING MARKERS ON EACH SIDE OF LOUISIANA HIGHWAY 23 & HIGHWAY 11 AT EACH END OF THE CASING PIPES SHALL BE TEMPORARILY REMOVED AND RE-INSTALLED IN ACCORDANCE WITH LADOTD 2006 STANDARD SPECIFICATION 729.
2. PROPOSED DRAWING SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL IN THE WORK PLAN PRIOR TO CONSTRUCTION.
3. MARKERS SHALL BE REPLACED SUBSEQUENT TO BACKFILLING THE PIT AND PRIOR TO DEMOBILIZATION.
4. SEE SECTION 23.6.8 OF THE SPECIFICATIONS FOR DETAILS.



**CASING PIPE CAP DETAIL**  
(NOT TO SCALE)

**CASING PIPE CAP NOTES:**

1. EXISTING STEEL CASING PIPE SHALL BE REMOVED AND DISPOSED OF IN APPROVED OFFSITE DISPOSAL AREA.
2. STEEL CASING PIPE CAPS SHALL BE 6" THICK AND SHALL BE COATED WITH COAL TAR EPOXY-POLYAMIDE PAINT, IN ACCORDANCE WITH THE LADOTD 2006 STANDARD SPECIFICATION 1008.04.
3. CAPS SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS. CAPS SHALL BE WELDED TO CASING PIPE AND SHALL BE WATER TIGHT.
4. SEE SECTION 23.6.8 OF THE SPECIFICATIONS FOR DETAILS.



*Whitney C. Thompson*  
2/26/15

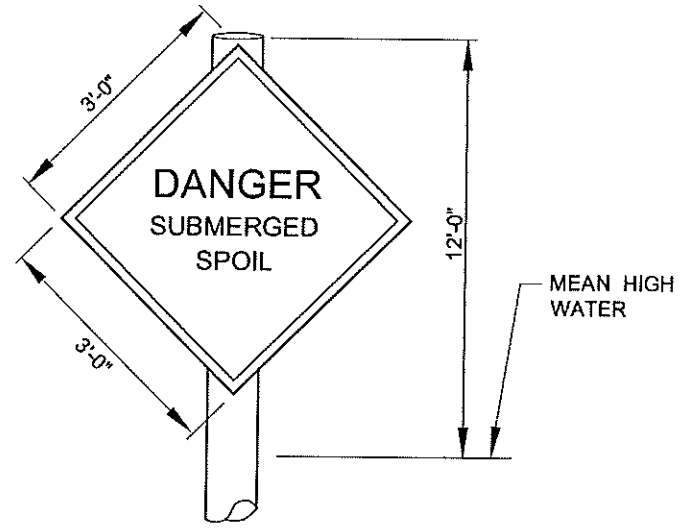
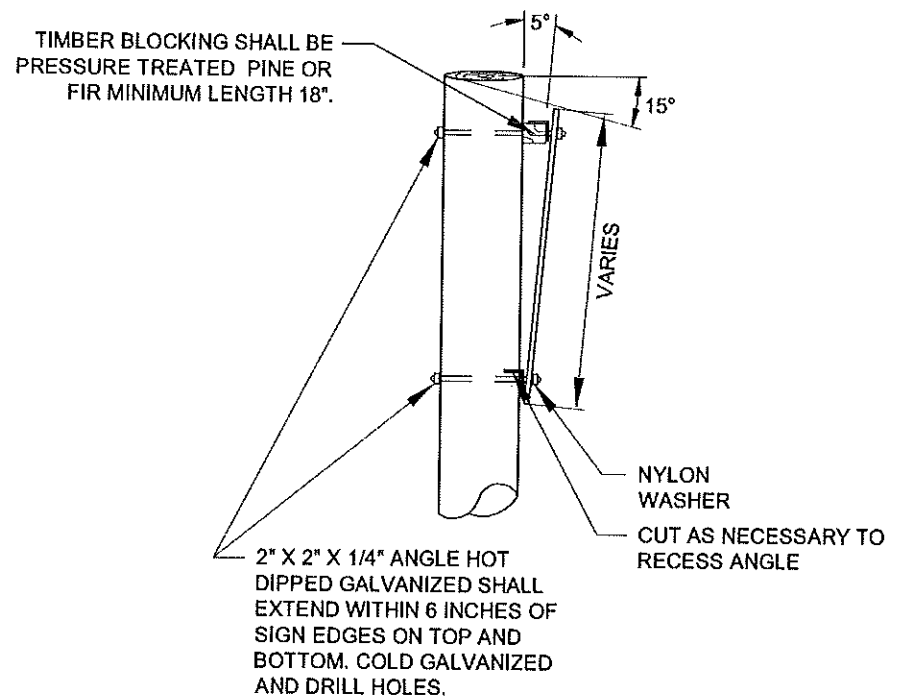
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2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431  
PH. (561) 391-8102  
FAX (561) 391-9118  
C.O.A. FL. #4028  
C.O.A. LA. #2531  
www.CBICOM

**COASTAL PROTECTION AND RESTORATION AUTHORITY**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801  
DRAWN BY: GK  
DESIGNED BY: WT

SHELL ISLAND WEST NRDA RESTORATION PROJECT  
STATE PROJECT NUMBER: BA-111  
FEDERAL PROJECT NUMBER:  
APPROVED BY: GT

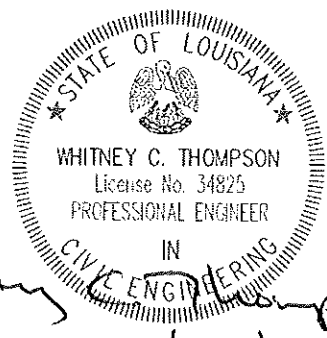
TEMPORARY PIPELINE MARKER AND CASING PIPE CAP / MARKER DETAIL  
DATE: 02/20/15  
SHEET 68 OF 70



SHOAL SIGN (S)  
(NOT TO SCALE)

NOTES:

1. SEE SECTION TS-30 OF THE SPECIFICATIONS FOR SHOAL SIGN DETAILS.
2. SHOAL SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH U.S.C.G. STANDARDS 33 CFR 330.4 (a) (1) FOR TEMPORARY SIDECAST DISPOSAL AREAS.
3. SEE SHEETS 66 AND 67 FOR TYPICAL INSTALLATION LOCATIONS.
4. THE SHOAL SIGNS SHALL HAVE THE DIMENSIONS AND MESSAGES SHOWN. THERE IS ONE SIGN PER PILE FOR SHOAL SIGNS. THE CONTRACTOR SHALL CONFIRM WITH THE ENGINEER THE DIRECTION THE SIGNS SHOULD FACE.
5. THE SHOAL SIGNS SHALL BE CONSTRUCTED WITH 125 GAUGE 61TS ALUMINUM, COVERED WITH WHITE, ENGINEER GRADE, REFLECTIVE SHEETING; BLACK SCREENED LETTERING AND DESIGN; AND ORANGE, ENGINEER GRADE, REFLECTIVE BORDER.
6. TIMBER PILING SHALL BE A MINIMUM OF 12 INCHES IN DIAMETER (NOMINAL END) AND OF SUCH LENGTH THAT THE PILE HAS A MINIMUM OF 40% OF THE PILE'S TOTAL LENGTH AS BOTTOM PENETRATION AND A MARKER TOP ELEVATION OF 12 FEET ABOVE MEAN HIGH WATER.
7. HARDWARE FOR TIMBER CONNECTIONS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH SECTION 811.5 OF THE LOUISIANA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, 2006.
8. THE CONTRACTOR HAS THE OPTION OF USING TEMPORARY BUOYS FOR SHOAL SIGNS IN LIEU OF TIMBER PILES. BUOYS MUST BE APPROVED BY THE OWNER AND ENGINEER PRIOR TO MOBILIZATION AND MUST BE TO U.S. COAST GUARD STANDARDS.
9. MARKERS, SIGNS, AND SUPPORTS SHALL BE REMOVED AND PROPERLY DISPOSED OF PRIOR TO DEMOBILIZATION. IF PILES CANNOT BE REMOVED COMPLETELY, THEY MUST BE REMOVED TO 10 FEET BELOW THE EXISTING MUDLINE.



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 2481 N.W. BOCA RATON BOULEVARD  
 BOCA RATON, FLORIDA 33431  
 PH. (561) 391-6102  
 FAX (561) 391-6116  
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SIGNAGE DETAILS  
 DATE: 02/20/15  
 SHEET 69 OF 70

CONVEYANCE CORRIDOR ALIGNMENT

PI NUMBER	STATION	NORTHING	EASTING	LATITUDE	LONGITUDE	BEARING TO NEXT PI	DEFLECTION	DEFLECTION TO LEFT OR RIGHT	DISTANCE TO NEXT PI
CC-01	000+00	325,343.96	3,836,432.99	29°22'58.7511" N	89°35'19.6272" W	S 43°24'44.64" W			750.00'
CC-02	007+50	324,799.14	3,835,917.56	29°22'53.4358" N	89°35'25.5463" W	S 57°11'03.13" W	13°46'18.49"	RIGHT	850.00'
CC-03	016+00	324,338.49	3,835,203.20	29°22'48.9836" N	89°35'33.6989" W	S 43°29'51.89" W	13°41'11.24"	LEFT	2,000.00'
CC-04	036+00	322,887.69	3,833,826.55	29°22'34.8295" N	89°35'49.5059" W	S 15°21'32.51" W	28°08'19.38"	LEFT	2,950.00'
CC-05	065+00	320,043.05	3,833,045.19	29°22'06.7889" N	89°35'58.8227" W	S 07°32'33.84" E	22°54'06.35"	LEFT	650.00'
CC-06	072+00	319,398.67	3,833,130.51	29°22'00.3977" N	89°35'57.9688" W	S 13°30'16.62" E	05°57'42.78"	LEFT	1,800.00'
CC-07	088+00	317,842.91	3,833,504.15	29°21'44.9420" N	89°35'54.0128" W	S 12°34'21.98" E	00°55'54.63"	RIGHT	800.00'
CC-08	091+00	317,062.09	3,833,678.30	29°21'37.1869" N	89°35'52.1786" W	S 17°33'28.02" E	04°59'06.03"	LEFT	600.00'
CC-09	102+00	316,490.04	3,833,859.30	29°21'31.4973" N	89°35'50.2313" W	S 21°25'10.78" E	03°51'42.76"	LEFT	1,000.00'
CC-10	112+00	315,559.11	3,834,224.49	29°21'22.2277" N	89°35'46.2644" W	S 25°45'45.57" E	04°20'34.79"	LEFT	800.00'
CC-11	120+00	314,838.63	3,834,572.21	29°21'15.0438" N	89°35'42.4590" W	S 21°42'36.31" E	04°03'09.26"	RIGHT	400.00'
CC-12	124+00	314,467.00	3,834,720.17	29°21'11.3430" N	89°35'40.8509" W	S 16°22'28.08" E	05°20'08.23"	RIGHT	400.00'
CC-13	128+00	314,083.23	3,834,832.94	29°21'07.5273" N	89°35'39.6426" W	S 10°40'57.63" E	05°41'30.45"	RIGHT	2,000.00'
CC-14	148+00	312,117.89	3,835,203.68	29°20'48.0177" N	89°35'35.7910" W	S 07°06'44.20" E	03°34'13.43"	RIGHT	900.00'
CC-15	157+00	311,224.82	3,835,315.11	29°20'39.1608" N	89°35'34.6853" W	S 03°17'30.16" E	03°49'14.04"	RIGHT	1,000.00'
CC-16	167+00	310,226.47	3,835,372.53	29°20'29.2700" N	89°35'34.2079" W	S 00°19'54.26" W	03°37'24.42"	RIGHT	600.00'
CC-17	172+00	309,726.47	3,835,369.63	29°20'24.3212" N	89°35'34.3265" W	S 04°52'20.23" W	04°32'25.97"	RIGHT	1,250.00'
CC-18	184+50	308,480.99	3,835,263.47	29°20'12.0088" N	89°35'35.7395" W	S 19°10'55.52" W	14°18'35.29"	RIGHT	1,000.00'
CC-19	194+50	307,536.50	3,834,934.89	29°20'02.7091" N	89°35'39.6133" W	S 28°33'09.11" W	09°22'13.59"	RIGHT	300.00'
CC-20	197+50	307,272.99	3,834,791.50	29°20'00.1223" N	89°35'41.2783" W	S 43°27'07.50" W	14°53'58.39"	RIGHT	750.00'
CC-21	205+00	306,728.53	3,834,275.69	29°19'54.8104" N	89°35'47.1983" W	S 52°52'29.09" W	09°25'21.59"	RIGHT	600.00'
CC-22	211+00	306,366.39	3,833,797.30	29°19'51.2975" N	89°35'52.6643" W	S 48°00'27.50" W	04°52'01.59"	LEFT	600.00'
CC-23	217+00	305,964.97	3,833,351.36	29°19'47.3908" N	89°35'57.7704" W	S 36°18'52.70" W	11°41'34.80"	LEFT	700.00'
CC-24	224+00	305,400.93	3,832,936.81	29°19'41.8698" N	89°36'02.5495" W	S 29°26'45.38" W	06°52'07.32"	LEFT	500.00'
CC-25	229+00	304,965.52	3,832,691.01	29°19'37.5966" N	89°36'05.4005" W	S 34°34'03.52" W	05°07'18.14"	RIGHT	1,000.00'
CC-26	239+00	304,142.06	3,832,123.63	29°19'29.5304" N	89°36'11.9498" W	S 28°09'16.41" W	06°24'47.10"	LEFT	300.00'
CC-27	242+00	303,877.56	3,831,982.07	29°19'26.9334" N	89°36'13.5939" W	S 22°49'24.87" W	05°19'51.55"	LEFT	200.00'
CC-28	244+00	303,693.22	3,831,904.49	29°19'25.1203" N	89°36'14.5018" W	S 17°20'52.88" W	05°28'31.99"	LEFT	200.00'
CC-29	246+00	303,502.32	3,831,844.86	29°19'23.2396" N	89°36'15.2077" W	S 06°42'10.31" W	10°38'42.55"	LEFT	350.00'
CC-30	249+50	303,154.71	3,831,804.01	29°19'19.8049" N	89°36'15.7284" W	S 00°51'44.31" E	07°33'54.65"	LEFT	400.00'
CC-31	253+50	302,754.75	3,831,810.03	29°19'15.8450" N	89°36'15.7285" W	S 06°08'34.80" E	05°16'50.35"	LEFT	700.00'

CONVEYANCE CORRIDOR ALIGNMENT

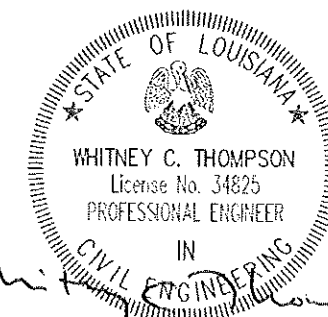
PI NUMBER	STATION	NORTHING	EASTING	LATITUDE	LONGITUDE	BEARING TO NEXT PI	DEFLECTION	DEFLECTION TO LEFT OR RIGHT	DISTANCE TO NEXT PI
CC-32	260+50	302,058.78	3,831,884.93	29°19'08.9447" N	89°36'15.0012" W	S 09°41'50.00" E	03°33'15.34"	LEFT	900.00'
CC-33	269+50	301,171.54	3,832,036.54	29°19'00.1397" N	89°36'13.4400" W	S 11°50'18.43" E	02°08'28.43"	LEFT	3,050.00'
CC-34	300+00	298,186.42	3,832,662.26	29°18'30.4979" N	89°36'06.8823" W	S 20°08'03.65" E	12°17'45.22"	LEFT	250.00'
CC-35	302+50	297,958.57	3,832,764.35	29°18'28.2273" N	89°36'05.7682" W	S 39°12'17.08" E	15°07'13.43"	LEFT	250.00'
CC-36	305+00	297,764.84	3,832,922.37	29°18'26.2860" N	89°36'04.0166" W	S 53°12'51.55" E	14°00'34.47"	LEFT	750.00'
CC-37	312+50	297,315.73	3,833,523.03	29°18'21.7506" N	89°35'57.3098" W	S 44°07'59.36" E	09°04'52.19"	RIGHT	300.00'
CC-38	315+50	297,100.41	3,833,731.93	29°18'18.5879" N	89°35'54.9875" W	S 30°58'32.85" E	13°09'28.51"	RIGHT	200.00'
CC-39	317+50	296,928.93	3,833,834.87	29°18'17.8751" N	89°35'53.8543" W	S 17°30'56.31" E	13°27'36.50"	RIGHT	250.00'
CC-40	320+00	296,690.52	3,833,910.11	29°18'15.5039" N	89°35'53.0453" W	S 08°14'26.13" E	09°16'30.18"	RIGHT	150.00'
CC-41	321+50	296,542.07	3,833,931.61	29°18'14.0313" N	89°35'52.8279" W	S 01°39'44.23" E	06°34'41.90"	RIGHT	800.00'
CC-42	329+50	295,742.41	3,833,954.81	29°18'06.1124" N	89°35'52.7027" W	S 01°50'34.80" W	03°30'19.04"	RIGHT	600.00'
CC-43	335+50	295,142.72	3,833,935.52	29°18'00.1792" N	89°35'53.0231" W	S 05°39'39.47" W	03°49'04.70"	RIGHT	1,600.00'
CC-44	351+50	293,550.44	3,833,777.68	29°17'44.4417" N	89°35'55.0778" W	S 07°03'04.23" W	01°23'24.76"	RIGHT	1,400.00'
CC-45	365+50	292,161.03	3,833,605.82	29°17'30.7144" N	89°35'57.2559" W	S 06°42'13.20" W	00°20'51.20"	LEFT	600.00'
CC-46	371+50	291,565.21	3,833,535.78	29°17'24.8272" N	89°35'58.1486" W	S 01°01'17.34" W	05°40'55.69"	LEFT	1,300.00'
CC-47	384+50	290,265.33	3,833,512.61	29°17'11.9638" N	89°35'58.6323" W	S 08°30'26.34" W	07°29'09.00"	RIGHT	2,150.00'
CC-48	406+00	288,138.99	3,833,194.55	29°16'50.9639" N	89°36'02.5866" W	S 13°45'02.62" W	05°14'36.28"	RIGHT	900.00'
CC-49	415+00	287,264.78	3,832,980.82	29°16'42.3425" N	89°36'05.1512" W	S 12°16'33.90" W	01°28'28.72"	LEFT	700.00'
CC-50	422+00	286,580.79	3,832,831.78	29°16'35.5943" N	89°36'06.9483" W	S 12°54'29.83" W	00°37'55.93"	RIGHT	1,925.00'
CC-51	441+25	284,704.79	3,832,401.83	29°16'17.0890" N	89°36'12.1222" W	S 07°56'50.40" W	04°57'39.30"	LEFT	1,874.05
CC-52	460+00	282,853.40	3,832,110.61	29°15'58.8066" N	89°36'15.7254" W	S 09°41'01.10" W	01°44'10.70"	RIGHT	2,599.99
CC-53	486.00	280,290.45	3,831,673.27	29°15'33.5026" N	89°36'21.0987" W	S 13°36'13.30" W	03°55'12.20"	RIGHT	1,150.00
CC-54	497+50	279,172.71	3,831,402.78	29°15'22.4790" N	89°36'24.3422" W				

BOOSTER PUMP LOCATIONS

DESIGNATION	NORTHING	EASTING	LATITUDE	LONGITUDE
NO. 01	319,398.67	3,833,130.51	29°22'00.3977" N	89°35'57.9687" W
NO. 02	317,885.88	3,833,492.86	29°21'45.3690" N	89°35'54.1330" W
NO. 03	313,336.59	3,834,973.78	29°21'00.1155" N	89°35'38.1793" W
NO. 04	304,489.71	3,832,363.16	29°19'32.9358" N	89°36'09.1849" W
NO. 05	297,084.84	3,833,741.28	29°18'19.4324" N	89°35'54.8845" W

NAVIGATION CROSSING LOCATIONS

DESIGNATION	NORTHING	EASTING	LATITUDE	LONGITUDE
NC-01	314,534.83	3,834,747.50	29°21'12.0103" N	89°35'40.5305" W
NC-02	308,911.48	3,835,300.16	29°20'16.2645" N	89°35'35.2511" W
NC-03	295,147.59	3,833,935.67	29°18'00.2274" N	89°35'53.0206" W
NC-04	288,130.57	3,833,192.49	29°16'50.8808" N	89°36'02.6113" W



*Whitney C. Thompson*  
2/26/15

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2481 N.W. BOCA RATON BOULEVARD  
BOCA RATON, FLORIDA 33431

PH (561) 391-8102  
FAX (561) 391-9116

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**ALIGNMENT TABLES**

DATE: 02/20/15

SHEET 70 OF 70