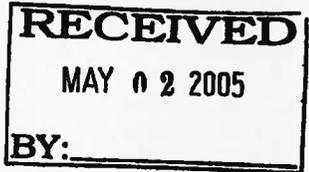




DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

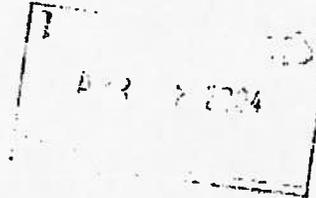
MAR 31 2004



Operations Division
Eastern Evaluation Section

SUBJECT: EDD 20-040-0451

NOAA Fisheries
Baton Rouge Field Office
c/o Louisiana State University
Baton Rouge, Louisiana 70803-7535



Gentlemen:

Enclosed is a permit dated this date, subject as above, authorizing work under the Department of the Army permit program.

You are again reminded that any work not in accordance with the approved plans is subject to removal regardless of the expense and the inconvenience that such removal may involve and regardless of the date when the discrepancy is discovered.

Your attention is directed to all the terms and conditions of the approval. In order to have the work approved in accordance with the issued permit, all terms and conditions of the permit and plans shown on the drawings attached thereto must be rigidly adhered to.

It is necessary that you notify the District Engineer, Attention: Eastern Evaluation Section, in writing, prior to commencement of work and also upon its completion. The notification must include the permittee's name, as shown on the permit, and the permit number. Please note the expiration date on the permit. Should the project not be completed by that date, you may request a permit time extension. Such requests must be received before, but no sooner than six months before, the permit expiration date and must show the work completed and the reason the project was not finished within the time period granted by the permit.

A copy of Page 1 of the permit (ENG Form 1721) must be conspicuously displayed at the project site. Also, you must keep a copy of the signed permit at the project site until the work is completed.

Sincerely,

Pete J. Serio
Chief, Eastern Evaluation Section

Enclosures

DEPARTMENT OF THE ARMY PERMIT

Permittee: NOAA Fisheries

Permit No. EDD 20-040-0451

Issuing Office: New Orleans District

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

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

PROJECT DESCRIPTION: Excavation and deposition of fill material (and possible placement of temporary sheet piling or sunken barges), for shoreline stabilization and marsh creation, to implement the Chaland Headland Restoration CWPPRA Project (BA-38-2), in accordance with drawings attached in 14 sheets; sheet 13, dated July 29, 2003; sheet 5, dated October 9, 2003; sheets 8 thru 10, dated October 17, 2003; and sheets 1 thru 4; 6, 7; 11,12; and 14, dated November 17, 2003.

PROJECT LOCATION: On Chaland Headland (between Pas La Mer and Chaland Pass), approximately 48 nautical miles south-southeast of New Orleans, Louisiana, in Plaquemines Parish, and in the Gulf of Mexico, as shown on the attached drawings.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on APRIL 30, 2009. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least 1 month before the above date is reached.
2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.
3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions: Page(s) 4

Further Information:

1. **Congressional Authorities:** You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. **Limits of this authorization.**

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. **Limits of Federal Liability.** In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

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

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

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

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

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

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

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

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

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

x Rich Hartman (for)
(PERMITTEE) NOAA Fisheries

x 3/23/04
(DATE)

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

Pete Serio
Pete J. Serio, Chief Eastern Evaluation Section
for Peter J. Rowan, District Engineer

31 March 2004
(DATE)

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

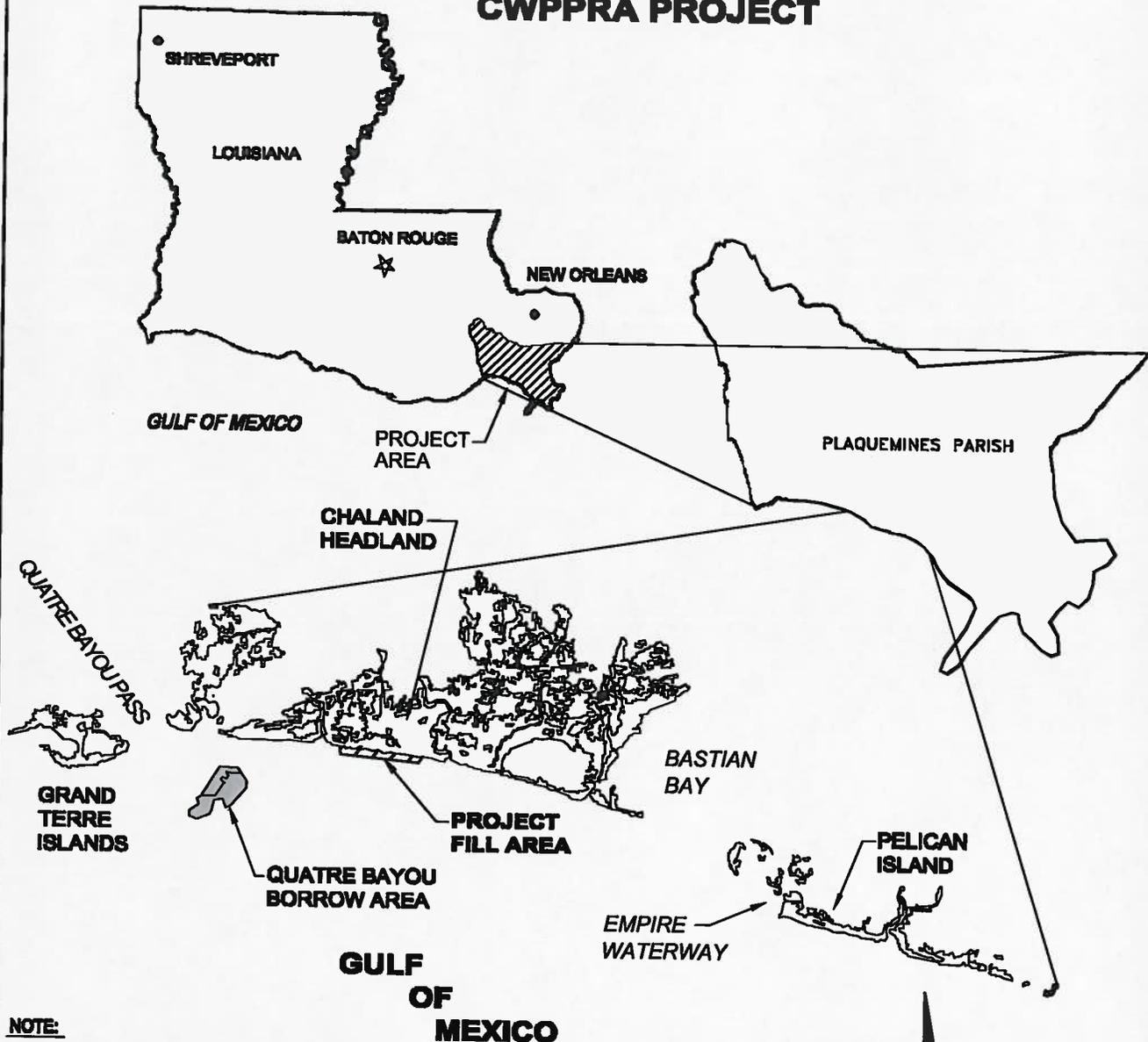
(TRANSFEREE)

(DATE)

Special conditions: EDD 20-040-0451

7. Appropriate erosion and siltation controls must be used and maintained in effective operating condition during construction. This includes the use of water control structures, turbidity screens, etc., in water discharge areas.
8. All exposed soil and other fills must be stabilized and/or planted with appropriate marsh and dune species at the earliest practicable date.
9. All structural elements, such as sheet pile or sunken barges, must be removed prior to project completion.
10. Your use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
11. You must install and maintain at your expense, any safety lights and signals prescribed by the United States Coast Guard, through regulations or otherwise, on your authorized facilities.
12. Special attention must be given to properly marking and/or lighting any temporary obstructions to recreational and commercial fishing resulting from project construction, and to advertising construction periods to these interested parties to the greatest extent practicable.
13. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
14. If the proposed project, or future maintenance work, involves the use of floating construction equipment (barge mounted cranes, barge mounted pile driving equipment, floating dredge equipment, dredge discharge pipelines, etc.) in the waterway, you are advised to notify the Eighth Coast Guard District so that a Notice to Mariners, if required, may be prepared. Notification, with a copy of your permit approval and drawings, should be mailed to the Commander (m), Eighth Coast Guard District, ATTN: Vessel Traffic Management Branch, 501 Magazine Street, New Orleans, Louisiana 70130-3396, about 1 month before you plan to start work. Telephone inquiries can be directed to (504) 589-4686.
15. This permit does not obviate the permittee from obtaining any required permits or approvals from the Louisiana Department of Wildlife and Fisheries or the US Fish and Wildlife Service.

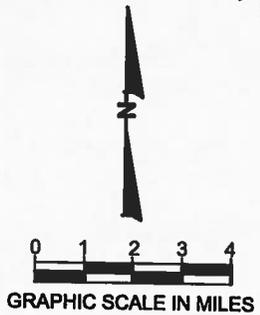
CHALAND HEADLAND RESTORATION (BA-38-2) CWPPRA PROJECT



NOTE:
SOURCE OF MAP: LOUISIANA GIS CD;
A DIGITAL MAP OF THE STATE, 2 CD SET.

SHEET INDEX

NO.	TITLE
1	LOCATION MAP
2-3	PROJECT PLAN VIEW
4	QUATRE BAYOU BORROW AREA BATHYMETRY
5-6	QUATRE BAYOU BORROW AREA CROSS SECTIONS
7-9	FILL CROSS SECTIONS
10	BARGE ACCESS CANAL CROSS SECTION A-A' (TYP.)
11	TYPICAL CANAL CLOSURE PROFILE B-B' (TYP.)
12	TYPICAL CANAL CLOSURE CROSS SECTION C-C' (TYP.)
13	BREACH CLOSURE CROSS SECTION D-D'
14	BREACH CLOSURE PROFILE E-E'



REVISIONS		
DATE	BY	DESCRIPTION

**CHALAND HEADLAND RESTORATION
(BA-38-2) CWPPRA PROJECT
LOCATION MAP**

TITLE

 2461 N.W. BOCA RATON BLVD.
 BOCA RATON, FL 33431
 PH. (561) 391-5102 FAX (561) 391-9116

COASTAL PLANNING & ENGINEERING, INC.

 www.CoastalPlanning.net

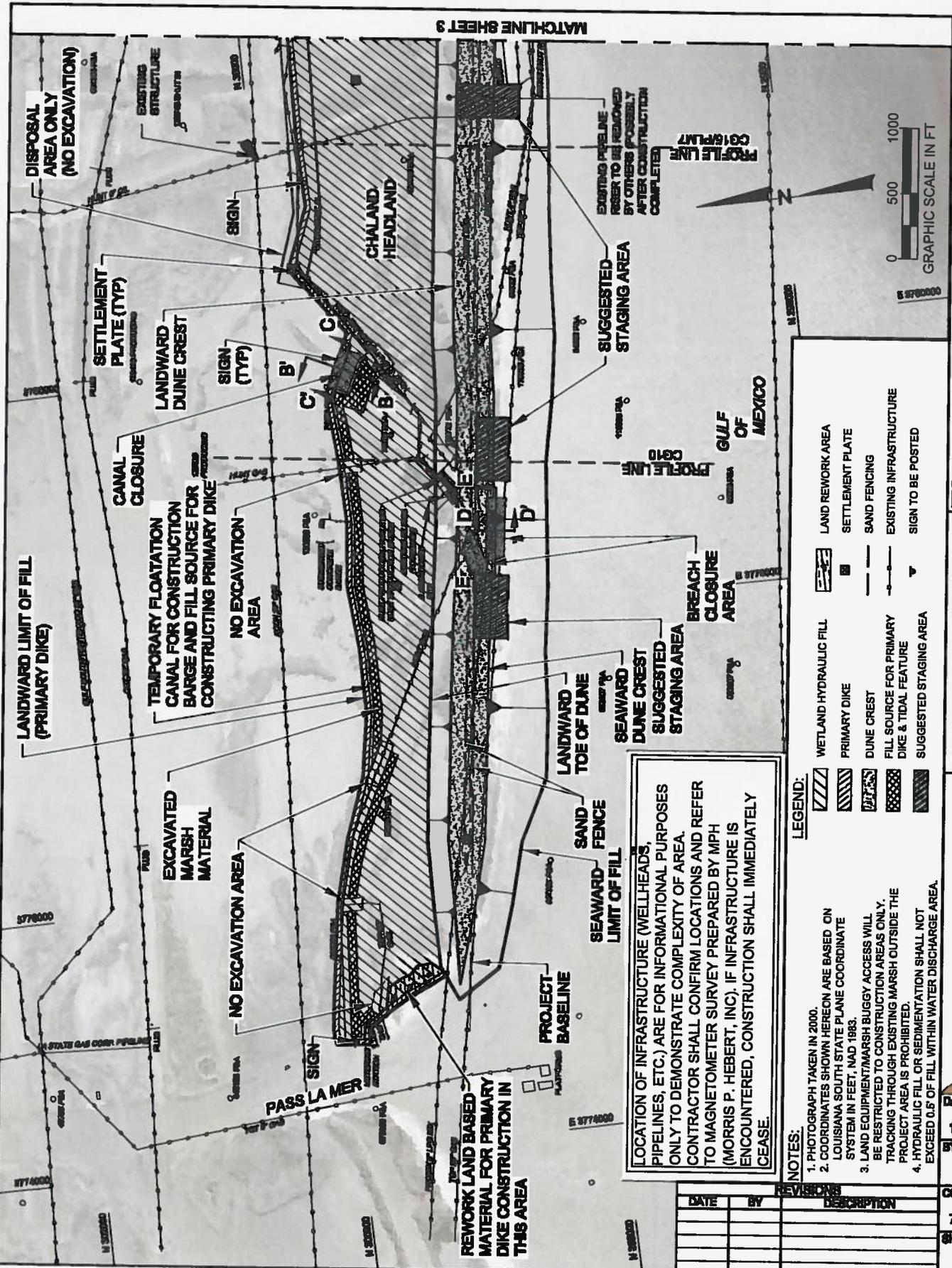
DATE:
11/17/03

BY:
JRC

COMM NO.:
7261.07

SHEET:
1

H:\Louisiana\7261.07\PERMITS\CHALAND\CHALAND LOCATION_MAP.dwg



LOCATION OF INFRASTRUCTURE (WELLHEADS, PIPELINES, ETC.) ARE FOR INFORMATIONAL PURPOSES ONLY TO DEMONSTRATE COMPLEXITY OF AREA. CONTRACTOR SHALL CONFIRM LOCATIONS AND REFER TO MAGNETOMETER SURVEY PREPARED BY MPH (MORRIS P. HEBERT, INC). IF INFRASTRUCTURE IS ENCOUNTERED, CONSTRUCTION SHALL IMMEDIATELY CEASE.

LEGEND:

- WETLAND HYDRAULIC FILL
- PRIMARY DIKE
- DUNE CREST
- FILL SOURCE FOR PRIMARY DIKE & TIDAL FEATURE
- SUGGESTED STAGING AREA
- LAND REWORK AREA
- SETTLEMENT PLATE
- SAND FENCING
- EXISTING INFRASTRUCTURE
- SIGN TO BE POSTED

NOTES:

1. PHOTOGRAPH TAKEN IN 2000.
2. COORDINATES SHOWN HEREON ARE BASED ON LOUISIANA SOUTH STATE PLANE COORDINATE SYSTEM IN FEET, NAD 1983.
3. LAND EQUIPMENT/MARSH BUGGY ACCESS WILL BE RESTRICTED TO CONSTRUCTION AREAS ONLY. TRACKING THROUGH EXISTING MARSH OUTSIDE THE PROJECT AREA IS PROHIBITED.
4. HYDRAULIC FILL OR SEDIMENTATION SHALL NOT EXCEED 0.6' OF FILL WITHIN WATER DISCHARGE AREA.

DATE	BY	REVISIONS	DESCRIPTION

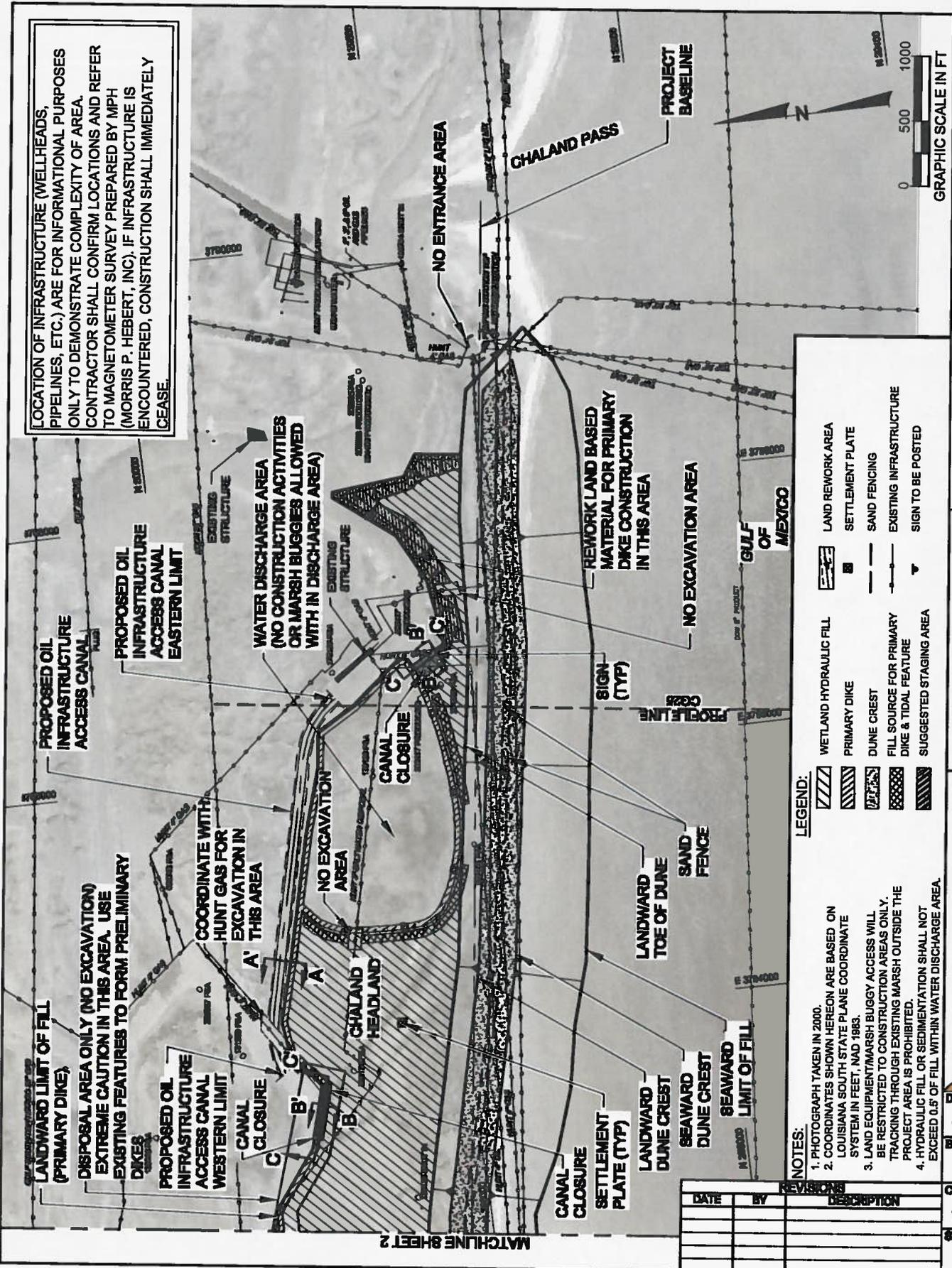
Coastal Planning & Engineering, Inc.
www.CoastalPlanning.net

DATE: 11/17/03
BY: JRC
COMM NO.: 7281.07
SHEET: 2

TITLE: CHALAND HEADLAND RESTORATION (BA-38-2) CWPPRA PROJECT
PLAN VIEW

2481 N.W. BOCA RATON BLVD.
 BOCA RATON, FL 33431
 PH. (561) 381-5102 FAX (561) 381-9118

LOCATION OF INFRASTRUCTURE (WELLHEADS, PIPELINES, ETC.) ARE FOR INFORMATIONAL PURPOSES ONLY TO DEMONSTRATE COMPLEXITY OF AREA. CONTRACTOR SHALL CONFIRM LOCATIONS AND REFER TO MAGNETOMETER SURVEY PREPARED BY MPH (MORRIS P. HEBERT, INC). IF INFRASTRUCTURE IS ENCOUNTERED, CONSTRUCTION SHALL IMMEDIATELY CEASE.



LEGEND:

	WETLAND HYDRAULIC FILL		LAND REWORK AREA
	PRIMARY DIKE		SETTLEMENT PLATE
	DUNE CREST		SAND FENCING
	FILL SOURCE FOR PRIMARY DIKE & TIDAL FEATURE		EXISTING INFRASTRUCTURE
	SUGGESTED STAGING AREA		SIGN TO BE POSTED

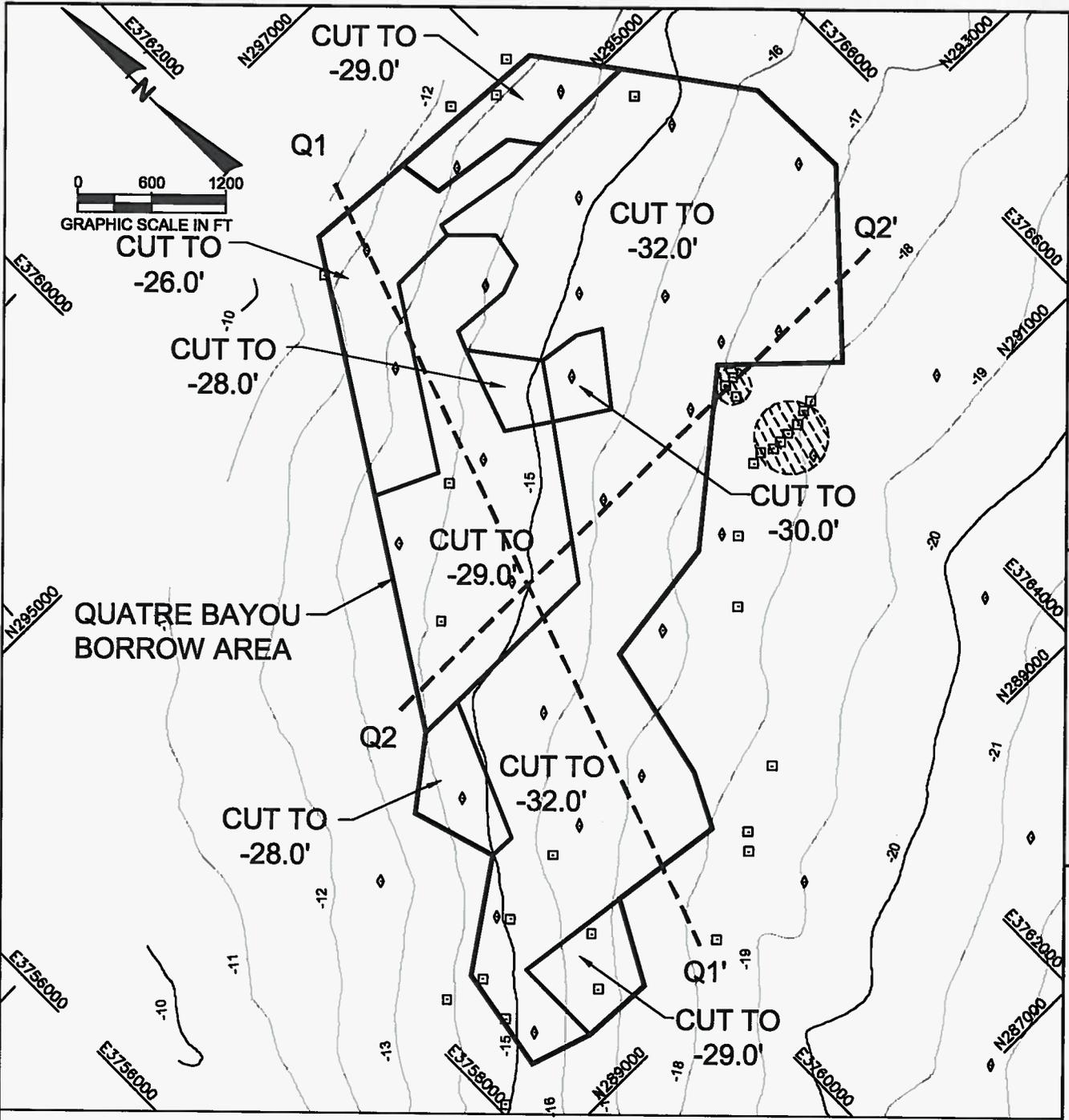
- NOTES:**
1. PHOTOGRAPH TAKEN IN 2000.
 2. COORDINATES SHOWN HEREON ARE BASED ON LOUISIANA SOUTH STATE PLANE COORDINATE SYSTEM IN FEET, NAD 1983.
 3. LAND EQUIPMENT/MARSH BUGGY ACCESS WILL BE RESTRICTED TO CONSTRUCTION AREAS ONLY. TRACKING THROUGH EXISTING MARSH OUTSIDE THE PROJECT AREA IS PROHIBITED.
 4. HYDRAULIC FILL OR SEDIMENTATION SHALL NOT EXCEED 0.5' OF FILL WITHIN WATER DISCHARGE AREA.

DATE	BY	DESCRIPTION

CHALAND HEADLAND RESTORATION (BA-38-2) CWPPRA PROJECT PLAN VIEW

Coastal Planning & Engineering, Inc.
 2481 N.W. BOCA RATON BLVD.
 BOCA RATON, FL 33431
 PH. (561) 391-5102 FAX (561) 391-9116
 www.CoastalPlanning.net

DATE: 11/17/08
BY: JS
SCALE: 7281.07
SHEET NO.: 3



QUATRE BAYOU
BORROW AREA

**CHALAND HEADLAND RESTORATION
(BA-38-2) GWPPRA PROJECT
QUATRE BAYOU BORROW AREA BATHYMETRY**

TITLE
2481 N.W. BOCA RATON BLVD.
BOCA RATON, FL 33481
PH. (561) 391-8102 FAX (561) 391-8118

COASTAL PLANNING & ENGINEERING, INC.
www.CoastalPlanning.net

DATE
11/17/03
BY:
JRC
COMM NO.:
7291.07
SHEET:
4

NOTES:

1. COORDINATES SHOWN HEREON ARE BASED ON LOUISIANA SOUTH STATE PLANE COORDINATE SYSTEM IN FEET, NAD 1983.
 2. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.
- CONTOURS SHOWN HEREON ARE IN FEET AND DERIVED FROM THE BATHYMETRIC SURVEY CONDUCTED BY CPE ON 8/6/02 - 8/15/02.

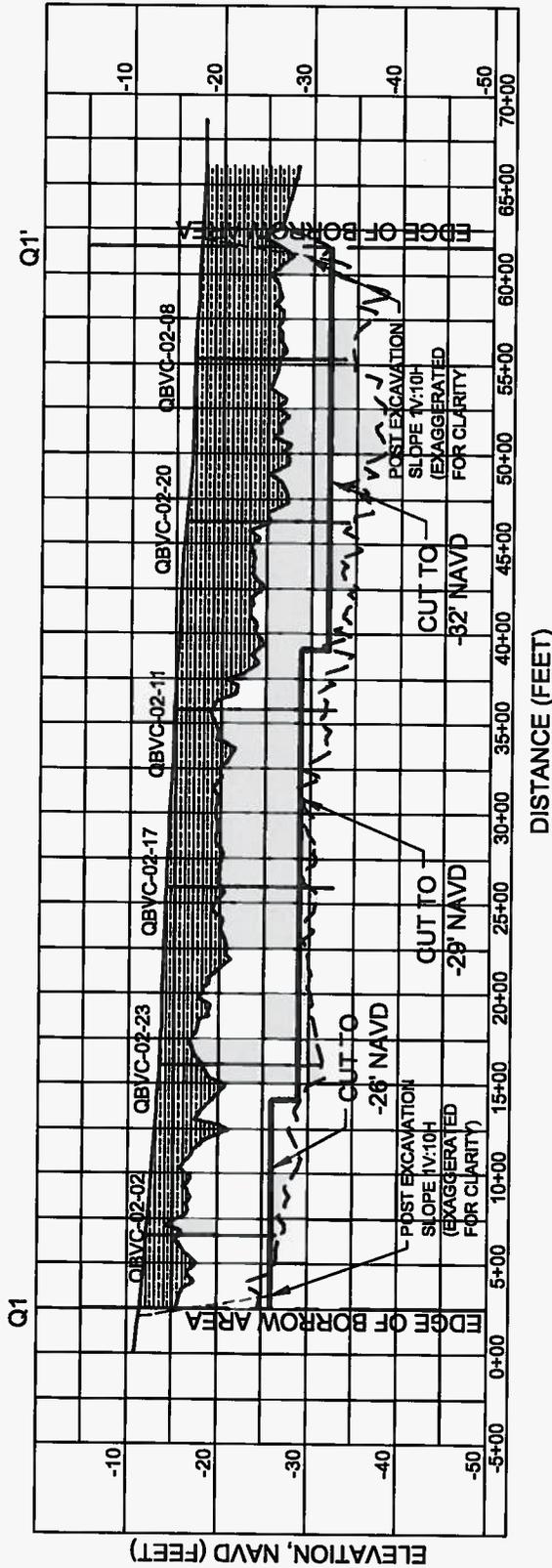
LEGEND:

- ◆ DENOTES CPE 2002 VIBRACORE LOCATION
- DENOTES 2002 MAGNETOMETER HIT
- ⊙ DENOTES BSS CORE LOCATIONS (FROM USGS FILE REPORT NO. 01-384, DATED SEPTEMBER 2001, APPENDIX B CD ROM)
- ⊙ DENOTES MAGNETIC ANOMALY WITH BUFFER

REVISIONS		
DATE	BY	DESCRIPTION

H:\Louisiana\728107\PERMITS\CHALAND\CHALAND BORROW AREA P.V.DWG

QUATRE BAYOU BORROW AREA CROSS SECTION Q1-1'



SCALE: 1"= 1000' HORIZONTAL
1"=20' VERTICAL

LEGEND:

QBVC-02-17 DENOTES CPE 2002 VIBRACORE LOCATION

[Symbol] BEACH COMPATIBLE SEDIMENTS

[Symbol] SURFACE SILT/CLAY LAYER (TO BE USED FOR MARSH CONSTRUCTION)

[Symbol] INTERMITTENT ACOUSTIC REFLECTOR WITHIN SAND DEPOSIT

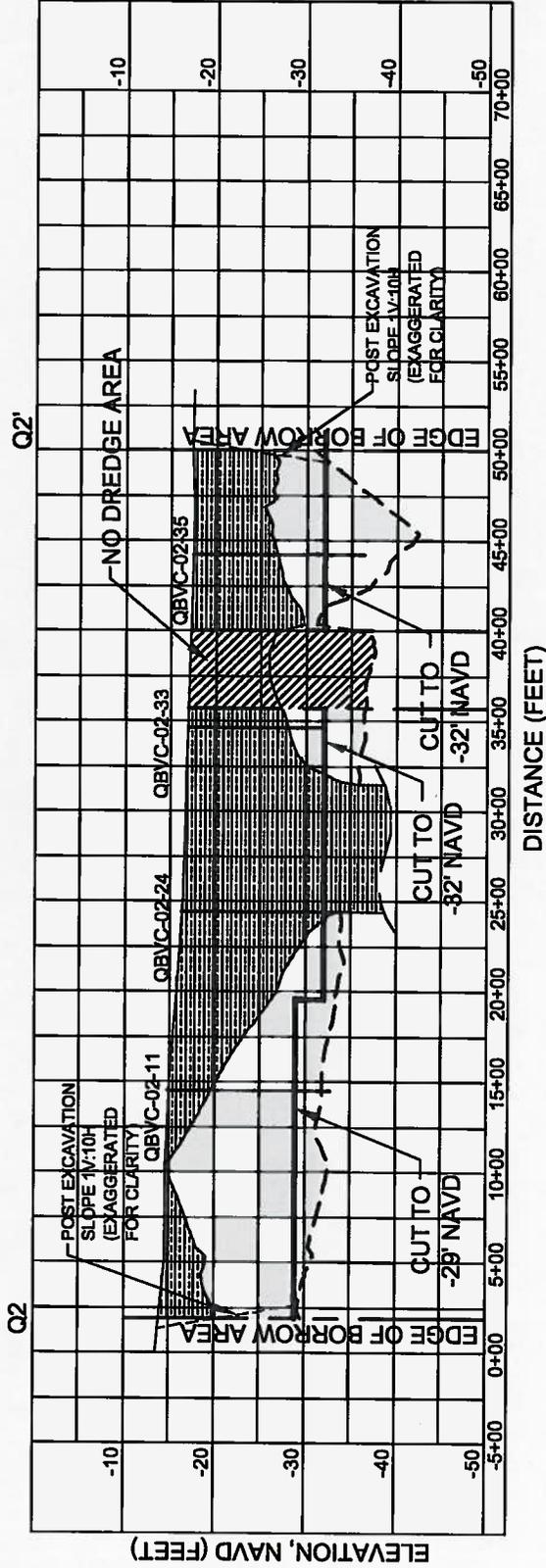
NOTES:

- VIBRACORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO REPRESENT SIMILAR MATERIAL.
- SEE SHEET 4 FOR LOCATION OF CROSS SECTION LINES.
- ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 88.

DATE	BY	REVISIONS	DESCRIPTION

<p>DATE: 10/03</p> <p>BY: JFC</p> <p>COMM NO.: 7281.07</p> <p>SHEET: 6</p>		<p>COASTAL PLANNING & ENGINEERING, INC.</p> <p>2481 N.W. BOCA RATON BLVD. BOCA RATON, FL 33481 PH. (561) 391-8102 FAX (561) 391-8118</p> <p>www.CoastalPlanning.net</p>	<p>TITLE</p> <p>CHALAND HEADLAND RESTORATION QUATRE BAYOU BORROW AREA Q1-Q1' CROSS SECTION</p>
----------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------

QUATRE BAYOU BORROW AREA CROSS SECTION Q2-2'



DISTANCE (FEET)

SCALE: 1"= 1000' HORIZONTAL
1"=20' VERTICAL

LEGEND:

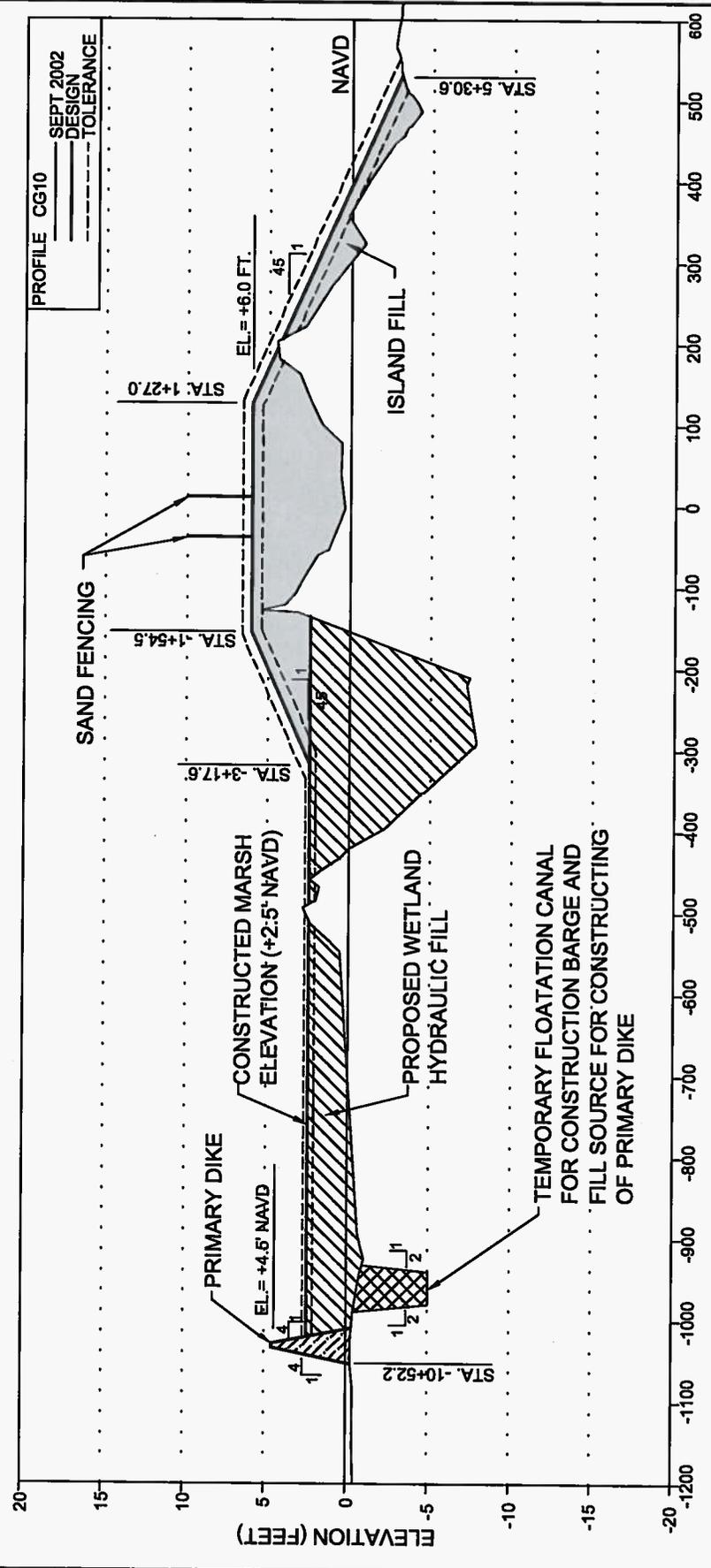
- QBVC-02-17 DENOTES CPE 2002 VIBRACORE LOCATION
- BEACH COMPATIBLE SEDIMENTS
- SURFACE SILT/CLAY LAYER (TO BE USED FOR MARSH CONSTRUCTION)
- NO DREDGE AREA - MAGNETIC ANOMALIES
- INTERMITTENT ACOUSTIC REFLECTOR WITHIN SAND DEPOSIT

NOTES:

1. VIBRACORES MAY NOT FALL DIRECTLY ON CROSS SECTION LINE, BUT ARE LOCATED SUFFICIENTLY CLOSE TO REPRESENT SIMILAR MATERIAL.
2. SEE SHEET 4 FOR LOCATION OF CROSS SECTION LINES.
3. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 88.

REVISIONS	
DATE	DESCRIPTION

DATE: 11/17/08	TITLE: CHALAND HEADLAND RESTORATION QUATRE BAYOU BORROW AREA Q2-Q2' CROSS SECTION
BY: JC	2481 N.W. BOCA RATON BLVD. BOCA RATON, FL 33431 PH. (561) 391-8102 FAX (561) 391-6118
COMM NO.: 7261.07	COASTAL PLANNING & ENGINEERING, INC. www.CoastalPlanning.net



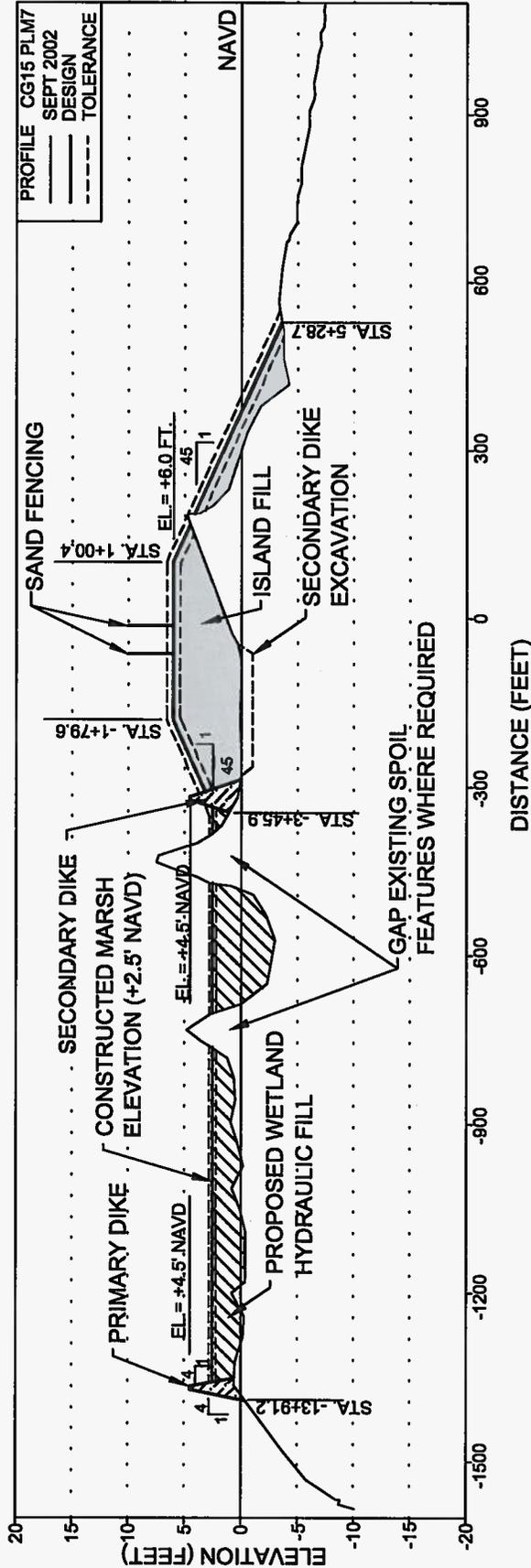
DISTANCE (FEET)

DATE	BY	REVISIONS	DESCRIPTION

- LEGEND:**
- DENOTES WETLAND HYDRAULIC FILL
 - DENOTES ISLAND FILL
 - DENOTES PRIMARY DIKE
 - DENOTES EXCAVATED MARSH MATERIAL TO BE USED FOR PRIMARY DIKE

NOTE:
1. ELEVATIONS SHOWN HEREON ARE IN FEET
BASED ON NAVD 1988.

<p>CHALAND HEADLAND RESTORATION (BA-38-2) CWP/PRA PROJECT FILL CROSS SECTION CG10</p>	
<p>2491 N.W. BOCA RATON BLVD. BOCA RATON, FL 33431 PH. (561) 391-8102 FAX (561) 391-9116</p>	<p>Coastal Planning & Engineering, Inc. www.CoastalPlanning.net</p>
<p>DATE: 11/17/08 BY: TW COMM NO.: 7281.07 SHEET: 7</p>	<p>SCALE: 1"= 200' HORIZONTAL 1"=10' VERTICAL</p>



REVISIONS		
DATE	BY	DESCRIPTION

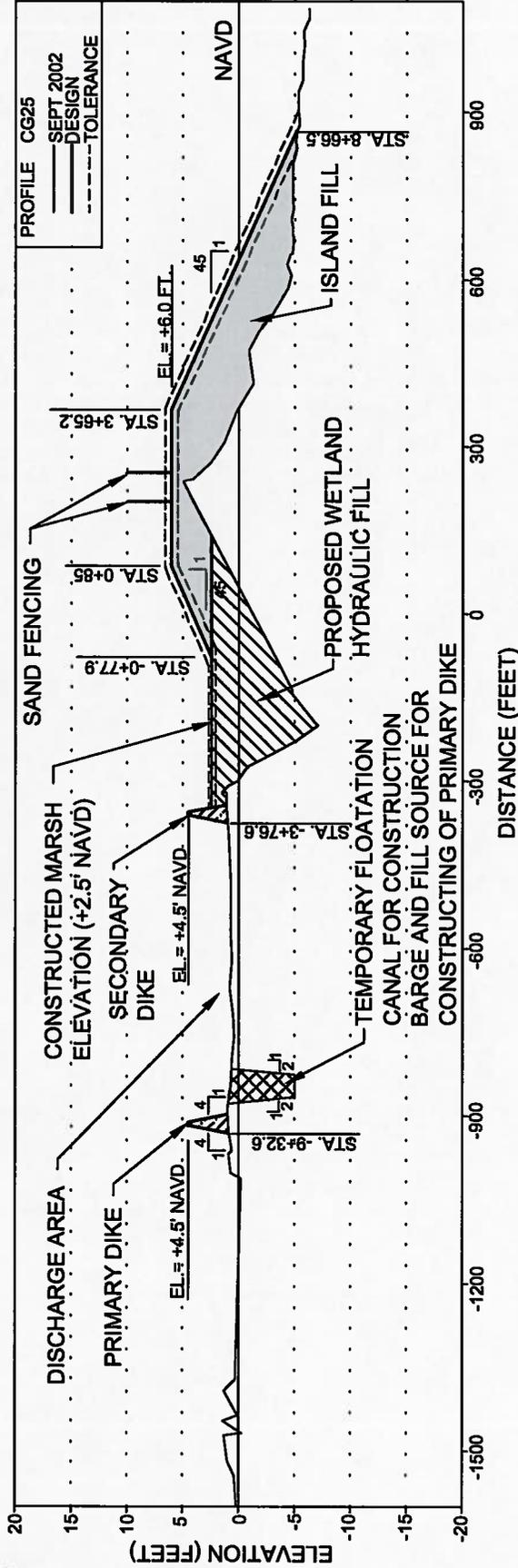
LEGEND:

- DENOTES WETLAND HYDRAULIC FILL
- DENOTES ISLAND FILL
- DENOTES PRIMARY DIKE

NOTE:
1. ELEVATIONS SHOWN HEREON ARE IN FEET
BASED ON NAVD 1988.

SCALE: 1"= 300' HORIZONTAL
1"=15' VERTICAL

PROFILE CG15 PLM7 SEPT 2002 DESIGN TOLERANCE		CHALAND HEADLAND RESTORATION (BA-38-2) CWFPPRA PROJECT FILL CROSS SECTION CG15 PLM7	
COASTAL PLANNING & ENGINEERING, INC. 2481 N.W. BOCA RATON BLVD. BOCA RATON, FL 33431 PH. (561) 391-8102 FAX (561) 391-9116 www.CoastalPlanning.net		TITLE	
DATE:	10/17/08	BY:	TW
COMM NO.:	7281.07	SHEET:	8



DATE	BY	DESCRIPTION

LEGEND:

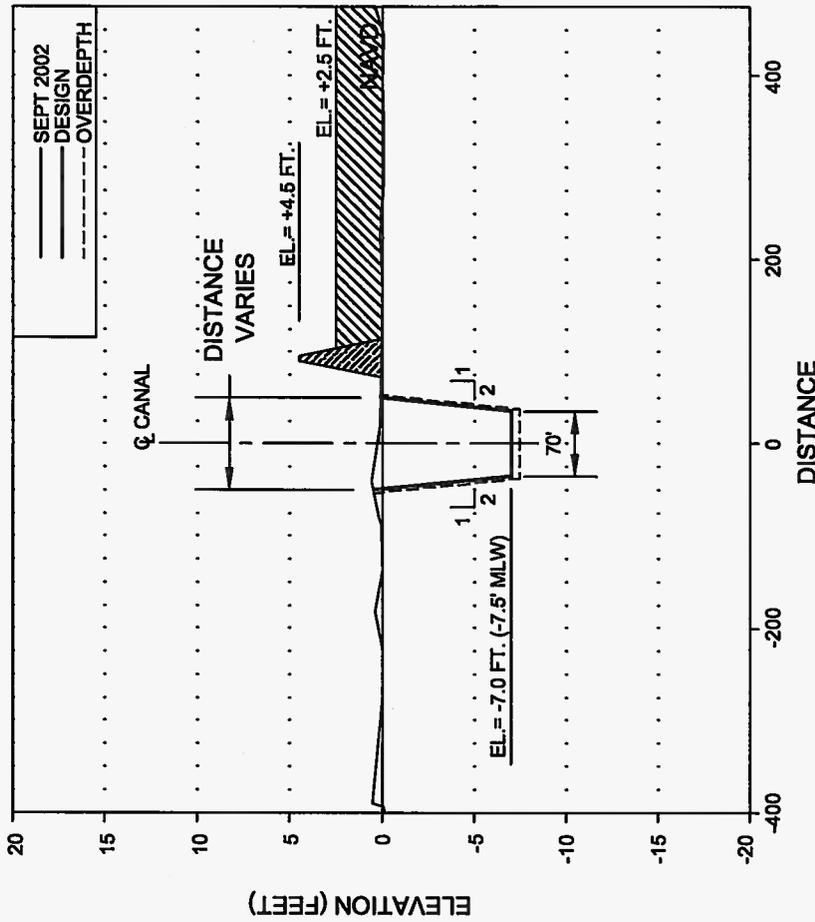
- DENOTES WETLAND HYDRAULIC FILL
- DENOTES ISLAND FILL
- DENOTES PRIMARY DIKE
- DENOTES EXCAVATED MARSH MATERIAL TO BE USED FOR PRIMARY DIKE

NOTE:

1. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.

SCALE: 1"= 300' HORIZONTAL
1"=15' VERTICAL

<p>COASTAL PLANNING & ENGINEERING, INC. www.CoastalPlanning.net</p>	<p>DATE: 10/17/08</p> <p>BY: TW</p> <p>COMM NO.: 7261.07</p> <p>SHEET: 9</p>
<p>2461 N.W. BOCA RATON BLVD. BOCA RATON, FL 33431 PH. (561) 391-8102 FAX (561) 391-9116</p>	
<p>CHALAND HEADLAND RESTORATION (BA-39-2) CWPPRA PROJECT FILL CROSS SECTION CG25</p>	



ACCESS CANAL CROSS SECTION A-A' (TYPICAL)

NOTE:

- 1. ELEVATIONS SHOWN HEREON ARE IN FEET
BASED ON NAVD 1988.
- 2. OVERDEPTH IS 0.5 FEET

LEGEND:

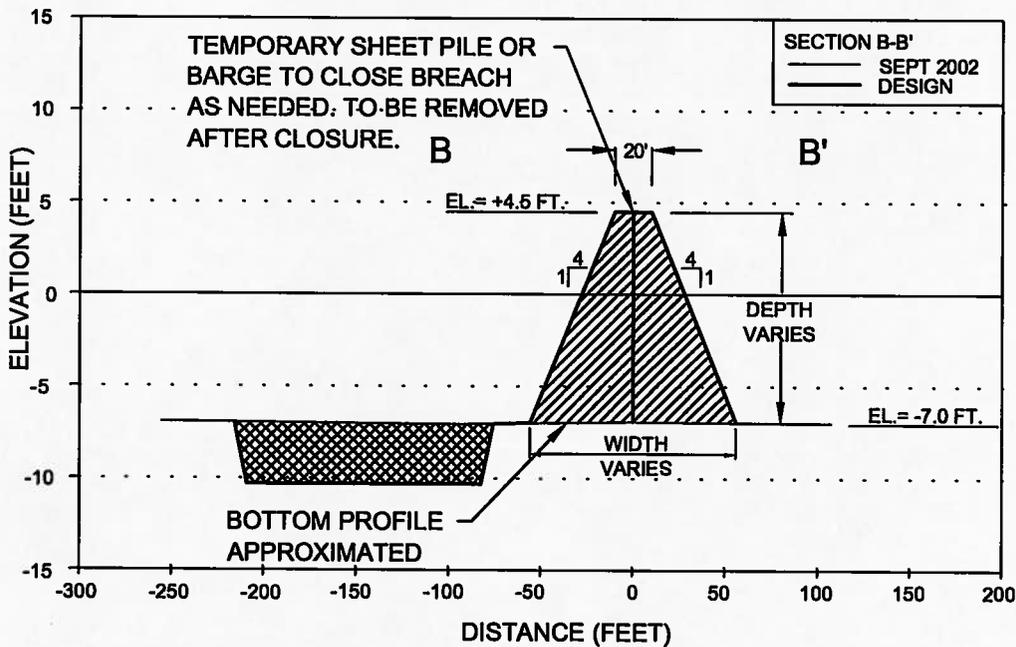
- DENOTES CONTAINMENT DIKE
- DENOTES WETLAND FILL

SCALE: 1"= 200' HORIZONTAL
1"=10' VERTICAL

REVISIONS	
DATE	DESCRIPTION

DATE	10/17/08	BY	TW	COMM NO.:	7281.07
SHEET:	10	TITLE			
COASTAL PLANNING & ENGINEERING, INC. www.CoastalPlanning.net		2481 N.W. BOCA RATON BLVD. BOCA RATON, FL 33431 PH. (561) 391-8102 FAX (561) 391-8116			
CHALAND HEADLAND RESTORATION (BA-38-2) CWP/PRA PROJECT OIL INFRASTRUCTURE BARGE ACCESS CANAL CROSS SECTION A-A' (TYP.)					

H:\Louisiana\1728107\PERMITS\CHALAND\CHALAND PERMIT CANAL ACCESS AND CLOSURE X-SECTIONS.dwg



CANAL CLOSURE CROSS SECTION B-B' (TYPICAL)

LEGEND:

-  FILL MATERIAL TO CLOSE CANAL
-  DENOTES EXCAVATED MARSH MATERIAL TO BE USED FOR CANAL CLOSURE

NOTE:

1. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.

SCALE: 1"= 100' HORIZONTAL
1"=10' VERTICAL

REVISIONS		
DATE	BY	DESCRIPTION

**CHALAND HEADLAND RESTORATION
(BA-38-2) CWP/PRA PROJECT
CLOSURE PROFILE B-B' (TYP.)**

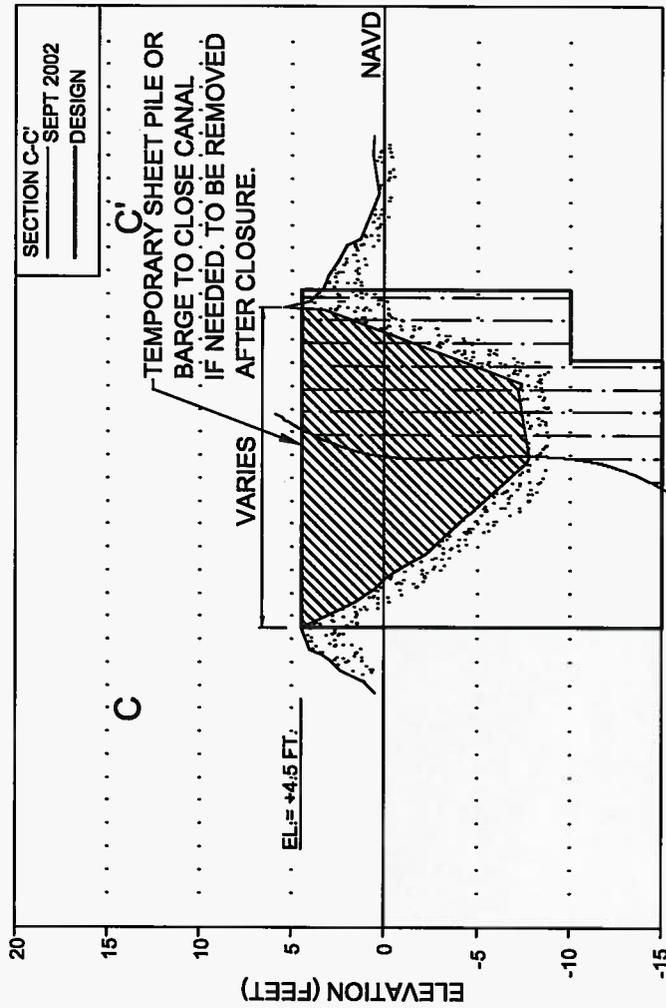
TITLE

2461 N.W. BOCA RATON BLVD.
BOCA RATON, FL 33431
PH: (561) 361-8102 FAX (561) 361-9116

COASTAL PLANNING & ENGINEERING, INC.

www.CoastalPlanning.net

DATE:	11/17/08
BY:	TW
COMM NO.:	7281.07
SHEET:	11



CANAL CLOSURE CROSS SECTION C-C' (TYPICAL)

NOTE:

- 1. ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.

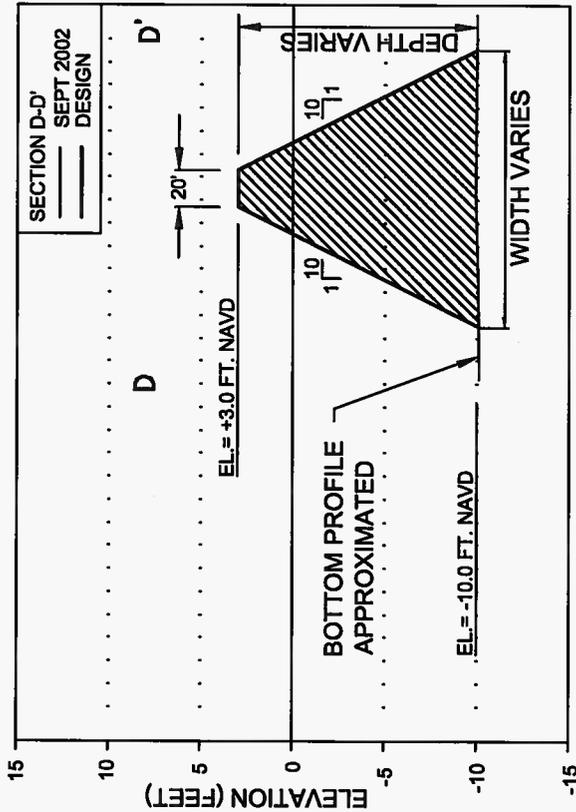
LEGEND:

 FILL MATERIAL TO CLOSE CANAL

SCALE: 1"= 200' HORIZONTAL
1"=10' VERTICAL

REVISIONS	
DATE	DESCRIPTION

 COASTAL PLANNING & ENGINEERING, INC. www.CoastalPlanning.net	2451 N.W. BOCA RATON BLVD. BOCA RATON, FL 33431 PH. (561) 391-8102 FAX (561) 391-8118	TITLE CHALAND HEADLAND RESTORATION (BA-38-2) GWPPRA PROJECT CANAL CLOSURE CROSS SECTION C-C' (TYP.)
	DATE: 11/17/08	BY: TW
SHEET: 12		SCALE: 1"= 200' HORIZONTAL 1"=10' VERTICAL



BREACH CLOSURE CROSS SECTION D-D'

NOTES:

- ELEVATIONS SHOWN HEREON ARE IN FEET BASED ON NAVD 1988.
- DEPTH AND WIDTH OF BREACH VARIES.

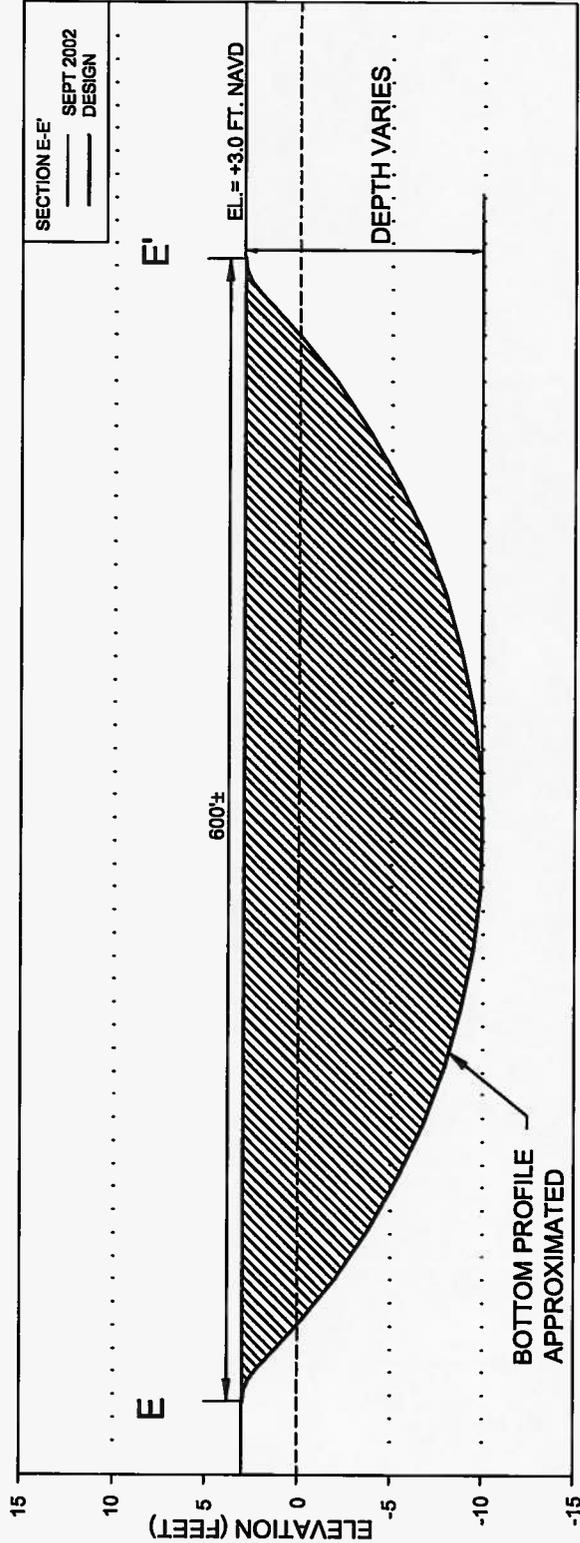
LEGEND:

- FILL MATERIAL TO CLOSE BREACH

SCALE: 1"= 100' HORIZONTAL
1"=10' VERTICAL

REVISIONS		
DATE	BY	DESCRIPTION

DATE: 7/28/03	<p>COASTAL PLANNING & ENGINEERING, INC. BOCA RATON, FL 33431 PH. (561) 391-9112 FAX (561) 391-9116 www.CoastalPlanning.net</p>	TITLE: CHALAND HEADLAND RESTORATION (BA-38-2) CWP/PRA PROJECT BREACH CLOSURE CROSS SECTION D-D'
BY: TW		2461 N.W. BOCA RATON BLVD. BOCA RATON, FL 33431 PH. (561) 391-9112 FAX (561) 391-9116
COMM NO.: 7281.07	SHEET: 13	



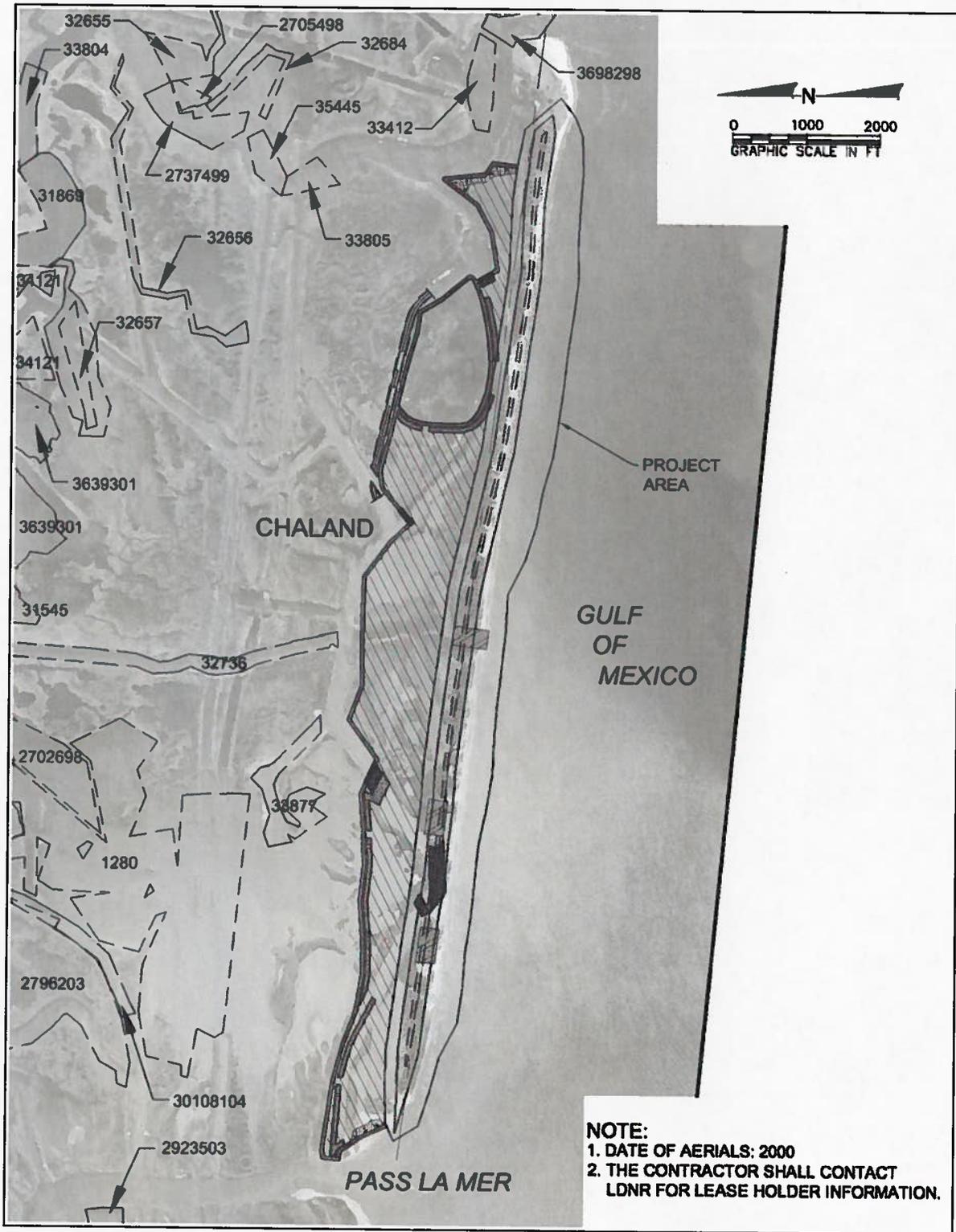
BREACH CLOSURE PROFILE E-E'

SCALE: 1" = 100' HORIZONTAL
 1" = 10' VERTICAL

DATE	BY	DESCRIPTION

COASTAL PLANNING & ENGINEERING, INC. www.CoastalPlanning.net		2481 N.W. BOCA RATON BLVD. BOCA RATON, FL 33431 PH. (561) 391-8102 FAX (561) 391-8116	TITLE CHALAND HEADLAND RESTORATION (BA-38-2) CWP/PRA PROJECT BREACH CLOSURE PROFILE E-E'
DATE	BY	TW	
11/17/08			
COMNO:			
7281.07			
SHEET:			
14			

APPENDIX II
OYSTER LEASES IN PROJECT VICINITY



APPENDIX III
WATER QUALITY MONITORING PROTOCOL

APPENDIX III

WATER QUALITY MONITORING PROTOCOL

Parameter: Turbidity – Nephelometric Turbidity Units (NTUs)

Frequency: Twice daily

Background Reading: At least 1,500 feet from any discharge location and outside of any visible turbidity plume. Samples shall be collected from the surface and 1 meter from the bottom if water depth is 1.5 meters or greater. For water depths less than 1 meter only the surface sample is required.

Compliance Reading: No more than 1,000 feet from the discharge point within the densest portion of any visible turbidity plume. Samples shall be collected from the surface and 1 meter from the bottom if water depth is 1.5 meters or greater. For water depths less than 1 meter only the surface sample is required.

If turbidity readings at the compliance sites are greater than 29 NTUs above the associated background turbidity levels, construction activities shall cease immediately and not resume until corrective measures have been taken and turbidity has returned to acceptable levels

Reporting Requirements: Weekly summaries of all monitoring data shall be submitted to the GOVERNMENT. The reports shall include:

1. The data and time of sampling and analysis
2. Sample locations
3. Water depth
4. Weather conditions
5. Wind direction and velocity
6. Wave conditions
7. Tide stage and direction of flow
8. A statement by the individual responsible for sampling attesting to the compliance of the readings with the protocol and the accuracy of the measurements.