OPERATION, MAINTENANCE, AND REHABILITATION PLAN FOR THE POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT
TE-22



April 24,2002

OPERATION, MAINTENANCE, AND REHABILITATION PLAN FOR POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT TE-22

April 24, 2002

Prepared by:
Louisiana Department of Natural Resources
Coastal Restoration Division
Baton Rouge, Louisiana

and

Pyburn & Odom, Inc.
8178 GSRI Avenue
Baton Rouge, Louisiana 70820

Table of Contents

History of Revisions	iii
Section 1. Project Description, Purpose, and Location	2
Section 2. Construction Completion	3
Section 3. Project Permits	3
Section 4. Items Requiring Operation, Maintenance, and Rehabilitation	4
Section 5. Operation and Maintenance Budget	5
Section 6. Responsibilities – Maintenance and Rehabilitation	5
Signature Sheet	7

Attachment I.	Cooperative Agreement
Attachment II.	Memorandum of Agreement
Attachment III.	Project Features
Attachment IV.	Final Report
Attachment V.	Construction Drawings
Attachment VI.	Project Permits and Permit Amendments
Attachment VII.	Maintenance and Rehabilitation Budget
Attachment VIII.	Annual Inspections

History of Revisions

02/01/2001	Pyburn & Odom submit draft plan to LDNR.
02/28/2003	O&M Plan finalized
09/2005	Amendment to Attachment IV to include the 2003 Breach Repair Project-Completion Report
10/04/2005	Amendment to Attachment V to include the 2003 Breach Repair Project - Asbuilt Drawings

OPERATIONS, MAINTENANCE, AND REHABILITATION PLAN FOR THE POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22)

The Louisiana Department of Natural Resources (LDNR) and the United States Department of Commerce National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS) agree to carry out the terms of this plan for the Operation, Maintenance, Repair and Rehabilitation Plan (hereinafter referred to as the "Plan") of the accepted completed project features in accordance with the U.S. Department of Commerce NOAA Cooperative Agreement No. NA 47FZ0099 with LDNR awarded January 1, 1994, with amendments effective January 1, 1996 (Amendment No.1), July 1, 1996 (Amendment No.2), January 1, 1997 (Amendment No.3) and February 1, 1997 (Amendment No.4). The Cooperative Agreement No. NA47FZ0099 initiating Phase I and II of the the Point Au Fer Project is shown in Attachment I. Phase III of the Point Au Fer Island Hydrologic Restoration Project was funded under Cooperative Agreement No. NA97FZ0485. This agreement is also included in Attachment I. The Memorandum of Agreement between LDNR, NOAA and the U.S. Corps of Engineers fully executed February 10, 1999 specifies the arrangement between parties to execute and fund long-term project activities, i.e. operation and maintenance, and monitoring is shown in Attachment II.

Construction of Point Au Fer Island Hydrologic Restoration Project was authorized by Section 303(a) of Title III Public Law 101-646, the Coastal Wetlands Planning Protection and Restoration Act (CWPPRA) enacted on November 29, 1990 as amended. The Point Au Fer Project was approved on the second (2^{nd}) Priority Project List.

The project features covered by this plan are inclusive of and are identified as the Point Au Fer Island Hydrologic Restoration Project (TE-22). The intention of the provisions of this Plan is to maintain this project in a condition that will generally provide the anticipated benefits that the project was based on. There is no requirement that this project function to any standard beyond the 20-year economic life; except that it is not left as a hazard to navigation or a detriment to the environment.

The property associated with the Point Au Fer Project is owned by the Terrebonne Parish School Board, Point Au Fer L.L.C., and the Roman Catholic Church of the Arch Diocese of New Orleans.

1. PROJECT DESCRIPTION, PURPOSE, AND LOCATION

The Point Au Fer Hydrologic Restoration Project encompasses 5,230 acres of intermediate and brackish marsh and open water on Point Au Fer Island approximately 30 miles south of Morgan City, Louisiana, in Terrebonne Parish. Point Au Fer Island lies approximately six(6) miles southeast of the mouth of the Atchafalaya River. The island is bordered by the Gulf of Mexico to the south, Atchafalaya Bay to the west, Four League Bay to the north and northeast and Oyster Bayou tidal pass to the east. The marsh habitat on the island is predominantly brackish marsh with intermediate marsh in the interior of the island. Certain areas of Point Au Fer had become weakened and avenues for saltwater intrusion from the Gulf of Mexico are threatening. The Mobil Canal levee (Area 2) was breached during Hurricane Andrew and the Transco Canal (Area 1) was almost breached into the Gulf of Mexico. This project was constructed to reduce the potential for storm surges and high tides penetrating the canal in Area 1, thereby decreasing the salinties in the surrounding marsh and to prevent the repeat breaching of the shoreline between the Gulf of Mexico and Mobile Canal. A project map showing the project features is included in Attachment III.

The Point Au Fer Island Hydrologic Restoration Project was constructed in three (3) phases. Phase I consisted of seven(7) plugs, five (5) of these plugs were of timber construction and two(2) of the plugs were reef shell construction.

Phase II consisted of rock shoreline protection of Areas 1 and 2 along the Gulf of Mexico adjacent to Mobil Canal and near the end of Locust Bayou.

Phase III consisted of adding an additional lift of rock to the shoreline protection placed in Phase II, extending the rock approximately 3,000 linear feet to the east and 600 linear feet to the west, and reconstruction of Plug #4 using the reef shell remaining in the canal and armoring Plug#4 with prefabricated articulated concrete mats.

The project has a twenty-year (20-year) economic life which began in May 1999.

The principal project features include:

Phase I: Construction of timber and shell plugs in the Hester and Transco pipeline canal.

- Plug No.1.- Timber pile construction located at the west end of Hester Canal. near Mosquito Bay.
- Plug No. 2.-Timber pile construction located in Hester Canal just west of Transco Canal.
- Plug No. 3.- Reef shell construction located in the Transco Canal north of the Hester Canal.
- Plug No. 4.- Reef shell construction located in Transco Canal at the Gulf of Mexico end.
- Plug No. 6.-Timber pile construction located in Transco Canal just south of Hester Canal.

- Plug No. 7.- Timber pile construction located in Hester Canal just east of Transco Canal.
- Plug No. 8.- Timber pile construction located at the east end of Hester Canal Near Bay Castagnier.

(Note: During construction, modifications were made to drawings for the installation of additional piles to plugs No. 1, 2 and 7.)

Phase II: 3,500 LF. of rock shoreline protection of the beach separating the Gulf Of Mexico from the Mobil Canal and Locust Bayou.

- Area 1 - 1,800 LF of rock dike protecting the beach long the Gulf of Mexico separating Mobil Canal and the Gulf.
- Area 2 - 400 LF of rock dike protecting the beach along the Gulf of Mexico near the end of Locust Bayou.
- Between Area 1 and Area 2 - 1,300 LF of rock dike along the shoreline of the Gulf between Area 1 and Area 2 which was constructed with funds provided by Mobil paid directly to the contractor.

Phase III: Modifications/additions to the rock shoreline protection of the beach separating the Gulf of Mexico from the Mobil Canal, including extending the existing rock structure 600 LF on the west end, 3,000 LF on the east end, and adding an additional 16" lift to the existing rock structure placed in Phase II.

Modification/reconstructing shell Plug 4 and armoring the plug with 125 prefabricated, articulated concrete mats.

2. CONSTRUCTION COMPLETION

Project completion reports for the Point Au Fer Island Hydrologic Restoration Project were never completed. However, upon completion of construction, LDNR had prepared a Final Report for the project which is included in Attachment IV. As-built drawings updated with all field changes and modifications that accurred during construction are included in Attachment V.

3. PROJECT PERMITS

Project permit applications were completed and submitted to appropriate agencies and permits were received prior to construction. These permits and permit amendments are included within Attachment VI.

4. ITEMS REQUIRING MAINTENANCE AND REHABILITATION

The following completed structural components project features jointly accepted by LDNR and NMFS will require maintenance, repair, and/or rehabilitation throughout the twenty (20) year life of the project.

Phase I: Timber and shell plugs located in the Hester and Transco Pipeline Canals.

A. Site/Canal Plug No. 1 - 200 LF timber plug across the Hester Canal, consisting of timber piles, timber batter piles, wood walers, and 2" x 8" wood sheet pile, metal bolted components, creosote treated galvanized pile caps, shell backfill, and warning signs.

B. Site/Canal Plug No. 2 - 270 LF timber plug across the Hester Canal, consisting of timber piles, timber batter piles, wood walers, and 2" x 8" wood sheet piles, metal bolted components, creosote treated galvanized pile caps, shell backfill, and warning signs.

C. Site/Canal Plug No.3A - 240.5 LF shell plug across the Transco Canal consisting of reef shell construction and warning signs.

D. Site/Canal Plug No.4 - 136 LF shell plug across the Transco Canal consisting of reef shell construction core armored with 125 prefabricated, articulated concrete mats and warning signs.

E. Site/Canal Plug No.6 - 180 LF timber plug, across the Transco Canal consisting of timber piles, wood walers and 2"x 8" wood sheet piles, metal bolted components, creosote treated galvanized pile caps, shell backfill, and warning signs.

F. Site/Canal Plug No.7 - 200 LF timber plug, across the Hester Canal. consisting of timber piles, timber batter piles, wood walers and 2"x 8" wood sheet piles, metal components, creosote treated galvanized pile caps, shell backfill, and warning signs.

G. Site/Canal Plug No.8 - 180 LF timber plugs, across the Hester Canal, consisting of timber piles, wood walers and 2"x 8" wood sheet piles, metal bolted components, creosote treated galvanized pile caps, shell backfill, and warning signs.

Phase II and Phase III: Shoreline Protection consisting of 7,500 LF of rock structure, 32 inches of 250 lb rip-rap. Armament stone underlain by a woven geotextile fabric approximately 25 feet wide.

Navigational Aids:
Where applicable, project navigation aids and warning signs shall be inspected and maintained for the twenty year (20) project life.

5. OPERATION AND MAINTENANCE BUDGET

Phase I and II - cost associated with the Operation and Maintenance of project features outlined in Section 4 for the twenty year (20) project life were provided for in Cooperative Agreement No. NA47FZ0099 and are shown in Attachment VII.

Phase III - Cooperative Agreement No. NA97FZ0485 initiated for Phase III of the Point Au Fer Island Project does not provide funds for operation and maintenance.

6. RESPONSIBILITIES-MAINTENANCE AND REHABILITATION

A. LDNR will:

1. In accordance with the Cooperative Agreement Nos. NA47FZ0099 and NA97FZ0485, assume all responsibilities for maintenance and rehabilitation of the accepted completed project features identified in Section 4.

2 Conduct joint site inspections with NMFS of the project site at least annually and after major storm events if determined to be necessary by LDNR and/or NMFS. LDNR will submit to NMFS, a report detailing the condition of the project features and recommendations for any corrective action. If LDNR recommends that corrective actions are needed, the report will include the entire estimated cost for engineering and design, supervision and inspection, construction, contingencies, and the urgency of such action.

3. Perform of have performed any corrective actions needed, if such corrective actions have been approved by LDNR or NMFS. NMFS will participate with LDNR, or its appointed representative, in the engineering and design phases of the corrective actions for the project. Oversight engineering and construction of the corrective actions for the project will be the responsibility of LDNR or its appointed representative. At least thirty (30) calendar days prior to the date of formal request for construction bids, LDNR or its appointed representative shall provide NMFS with final copies of all project corrective action designs and specifications for review and concurrence by NMFS. LDNR or its appointed representative shall approve the final designs and specifications prior to proceeding with bid solicitations on all project corrective action construction contracts in coordination with NMFS. Any plan and/or

specification changes both before and after award of construction contracts, shall be approved by LDNR in coordination with NMFS.

4. The DNR and NMFS representatives shall meet as necessary during the periods of construction to address any corrective actions needed and shall make such recommendations as they deem necessary.

5. Facilitate the Federal contribution towards operation and maintenance activities as specified in the Memorandum of Agreement between LDNR, NMFS and the U.S. Corps of Engineers.

B. NMFS will:

1. Conduct joint site inspections with LDNR of the project site at least annually and after major storm events if determined to be necessary by LDNR or NMFS.

2. Provide guidance for the development of plans and implementation of the project, review final copies of any maintenance and rehabilitation project designs and specifications and provide review and approval of all planning and construction details, prior to formal request for construction bids or any corrective actions for the project.

3. Provide a total contribution equal to the amount outlined in the Cooperative Agreement (Cost Sharing Agreement) for the maintenance and rehabilitation cost needed for the twenty (20) year life of the project.

4. Facilitate the Federal contribution towards operation and maintenance activities as specified in the Memorandum of Agreement between LDNR, NMFS and the U.S. Corps of Engineers.

The undersigned parties, acting on behalf of their respective agencies, agree to operate, maintain, and rehabilitate the Point Au Fer Island Hydrologic Restoration Project (TE-22) according to this document, referenced Cooperative Agreement, plans, and all applicable permits and laws.

UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

By: Eric C. Schwab Date: 2/13/03

Title: PROGRAM MANAGER

LOUISIANA DEPARTMENT OF NATURAL RESOURCES

By: [signature] Date: 2/28/03

Title: Deputy Assistant Secretary

ATTACHMENT I

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

COOPERATIVE AGREEMENT

State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

March 10, 1997

Rimas T. Liogys, Team Leader
Grants Management Division
U.S. Department of Commerce, NOAA
1325 East-West Highway
SSMC2 - OFA521 - Fifth Floor
Silver Spring, Maryland 20910-3283

RE: NOAA Award No. NA47FZ0099

Dear Mr. Liogys:

Enclosed are two signed originals of Amendment No. 4 to the above referenced agreement, as requested in your letter dated February 28, 1997.

If you have any questions or need additional information, please contact Karen Lewis at (504) 342-4539.

We appreciate NOAA staff assistance in obtaining approval of this amendment.

Sincerely,

Cheryl Y. Bennett KYL

Cheryl Y. Bennett
Contracts & Grants Administrator

CYB/KYL/kfh

Enclosures

c: Brian Kendrick, Coastal Restoration Division
Verlie Wims, Fiscal Officer

FORM [illegible]-451
(REV. [illegible] 93)
DAO 203-26

U.S. DEPARTMENT OF COMMERCE

OA321/RTL/RTL

☐ GRANT ☒ COOPERATIVE AGREEMENT

AMENDMENT TO FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE: 7FKH300/RL1A9F00/4119

AWARD NUMBER: NA47FZ0099

RECIPIENT NAME: LOUISIANA DEPT OF NATURAL RESOURCES

AMENDMENT NUMBER: 4

STREET ADDRESS: P.O. BOX 94396
STATE LAND AND NATURAL RESOURCES BUILDING

EFFECTIVE DATE: FEBRUARY 1, 1997

CITY, STATE, ZIP CODE: BATON ROUGE, LOUISIANA 70804-9396

EXTEND WORK COMPLETION TO: N/A

DEPARTMENT OF COMMERCE OPERATING UNIT: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

COSTS ARE REVISED AS FOLLOWS:	PREVIOUS ESTIMATED COST	ADD	DEDUCT	TOTAL ESTIMATED COST
FEDERAL SHARE OF COST	$ 912,290	$ 140,000	$ -0-	$ 1,052,290
RECIPIENT SHARE OF COST	$ 334,250	$ 55,000	$ -0-	$ 389,250
TOTAL ESTIMATED COST	$ 1,246,540	$ 195,000	$ -0-	$ 1,441,540

REASON(S) FOR AMENDMENT

1. To provide supplemental funds in the amount of $140,000, for the project entitled 'Point Au Fer Island Hydrologic Restoration Project (PTE-22/24)', as requested in the Recipient's application dated December 12, 1996, and revision by letter dated February 13, 1997, incorporated by reference.

2. To revise and add NOAA Administrative Special Award Conditions.

3. To revise the Statutory Authority to 16 USC 3951 et seq. and P.L. 104-303.

This Amendment approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. Upon acceptance by the Recipient, two signed Amendment documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Amendment null and void.

☒ Special Award Conditions (ATTACHMENT B [X] ADMINISTRATIVE [ ] PROGRAMMATIC)

☒ Line Item Budget (ATTACHMENT A)

☐ Other(s): _____

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER	TITLE	DATE
by Stephen Dresch	NOAA GRANTS OFFICER	28 1997
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL	TITLE	DATE
[signature]	DNR Secretary	3/10/97

OMB Approved No. 0348-0041

BUDGET INFORMATION — Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	Grant Supplement a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
1. Administrative and legal expenses	$ .00	$ .00	$ .00
2. Land, structures, rights-of-way, appraisals, etc.	$ .00	$ .00	$ .00
3. Relocation expenses and payments	$ .00	$ .00	$ .00
4. Architectural and engineering fees	$ .00	$ .00	$ .00
5. Other architectural and engineering fees	$ 15,000 .00	$ .00	$ .00
6. Project inspection fees	$ .00	$ .00	$ 15,000 .00
7. Site work	$ .00	$ .00	$ .00
8. Demolition and removal	$ .00	$ .00	$ .00
9. Construction	$ .00	$ .00	$ .00
10. Equipment	$ 180,000 .00	$ .00	$ 180,000 .00
11. Miscellaneous	$ .00	$ .00	$ .00
12. SUBTOTAL	$ .00	$ .00	$ .00
13. Contingencies (sum of lines 1-11)	$ 195,000 .00	$ .00	$ 195,000 .00
14. SUBTOTAL	$ .00	$ .00	$ .00
15. Project (program) income	$ .00	$ .00	$ .00
16. TOTAL PROJECT COSTS (subtract #15 from # 14)	$ .00	$ .00	$ .00
	$ 195,000 .00	$ .00	$ 195,000 .00

FEDERAL FUNDING

17. ssistance requested, calculate as follows: Enter eligible costs from line 16c Multiply X 71.7949 %
ederal agency for Federal percentage share). Phase I = $0
esulting Federal share. Phase II $195,000

Attachment A
NOAA Award No. NA4 Amd

NOAA ADMINISTRATIVE SPECIAL AWARD CONDITIONS

(Revise) 3. The Budget Period for this amendment is February 1, 1997, through June 30, 1997.

(Revise) 4. Since this award requires the Recipient to provide $389,250 (27%) in project-related matching costs from non-Federal sources, the Recipient must maintain in its official accounting records an accounting for $1,441,540.

(Add) 25. When issuing statements, press releases, requests for proposals, bid solicitations and other documents describing projects or programs funded in whole or in part with Federal money, all grantees receiving Federal funds, including but not limited to State and local governments and Recipients of Federal research grants, shall clearly state (1) the percentage of the total costs of the project or program which will be financed with Federal money, (2) the dollar amount of Federal funds for the project or program, and (3) percentage and dollar amount of the total costs of the project or program that will be financed by nongovernmental sources.

(Add) 26. Notwithstanding Department of Commerce Financial Assistance Standard Terms and Conditions A.04c and A.05.b, the Recipient may transfer funds between direct costs and indirect costs if all of the following conditions apply:

(a) If a transfer of funds among direct cost categories in accordance with Department of Commerce Financial Assistance Standard Term and Condition A.04b would result in a revision to the amount of indirect costs approved in the line item budget;

(b) If the authorized transfer of funds and the adjustment of the amount of indirect costs do not exceed the approved total project costs;

(c) If the indirect cost rate does not change; and

(d) If the adjustment of the amount of indirect costs does not result in a change to the approved scope of work of the award.

(REV. 10-93)
DAO 203-26

U.S. DEPARTMENT OF COMMERCE

☐ GRANT ☒ COOPERATIVE AGREEMENT

AMENDMENT TO FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE: N/A

AWARD NUMBER: NA47FZ0099

RECIPIENT NAME: LOUISIANA DEPT OF NATURAL RESOURCES

AMENDMENT NUMBER: 3

STREET ADDRESS: P.O. BOX 94396
STATE LAND AND NATURAL RESOURCES BUILDING

EFFECTIVE DATE: JANUARY 1, 1997

CITY, STATE, ZIP CODE: BATON ROUGE, LOUISIANA 70804-9396

EXTEND WORK COMPLETION TO: JUNE 30, 1997

DEPARTMENT OF COMMERCE OPERATING UNIT: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

COSTS ARE REVISED AS FOLLOWS:	PREVIOUS ESTIMATED COST	ADD	DEDUCT	TOTAL ESTIMATED COST
FEDERAL SHARE OF COST	$ 912,290	$ -0-	$ -0-	$ 912,290
RECIPIENT SHARE OF COST	$ 334,250	$ -0-	$ -0-	$ 334,250
TOTAL ESTIMATED COST	$ 1,246,540	$ -0-	$ -0-	$ 1,246,540

REASON(S) FOR AMENDMENT

1. To extend the award completion date for six months through June 30, 1997, for the project entitled, 'Point Au Fer Island Plugs (PTE-22/24)', as requested in the Recipient's letters dated August 30, September 19, and November 1, 1996, which are incorporated by reference and the Program Officer's recommendations dated September 10, and October 4, 1996.

2. To revise NOAA Administrative Special Award Conditions.

This Amendment approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. Upon acceptance by the Recipient, two signed Amendment documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Amendment null and void.

☒ Special Award Conditions (ATTACHMENT B [X] ADMINISTRATIVE [ ] PROGRAMMATIC)

☒ Line Item Budget (ATTACHMENT A)

☐ Other(s): _____

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER	TITLE	DATE
Kris Dixon for	NOAA GRANTS OFFICER	NOV 06 1996
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL	TITLE	DATE
[signature]	Secretary	11/18/96

GRANTS COPY - RETURN

FORM CD-451
(REV. 10-93)
DAO 203-26

U.S. DEPARTMENT OF COMMERCE

OAG21/JAJ/JAJ

☐ GRANT ☒ COOPERATIVE AGREEMENT

AMENDMENT TO FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE: N/A

AWARD NUMBER: NA47FZ0099

RECIPIENT NAME: LOUISIANA DEPT OF NATURAL RESOURCES

AMENDMENT NUMBER: 3

STREET ADDRESS: P.O. BOX 94396
STATE LAND AND NATURAL RESOURCES BUILDING

EFFECTIVE DATE: JANUARY 1, 1997

CITY, STATE, ZIP CODE: BATON ROUGE, LOUISIANA 70804-9396

EXTEND WORK COMPLETION TO: JUNE 30, 1997

DEPARTMENT OF COMMERCE OPERATING UNIT: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

COSTS ARE REVISED AS FOLLOWS:	PREVIOUS ESTIMATED COST	ADD	DEDUCT	TOTAL ESTIMATED COST
FEDERAL SHARE OF COST	$ 912,290	$ -0-	$ -0-	$ 912,290
RECIPIENT SHARE OF COST	$ 334,250	$ -0-	$ -0-	$ 334,250
TOTAL ESTIMATED COST	$ 1,246,540	$ -0-	$ -0-	$ 1,246,540

REASON(S) FOR AMENDMENT

1 To extend the award completion date for six months through June 30, 1997, for the project entitled, 'Point Au Fer Island Plugs (PTE-22/24)', as requested in the Recipient's letters dated August 30, September 19, and November 1, 1996, which are incorporated by reference and the Program Officer's recommendations dated September 10, and October 4, 1996.

2. To revise NOAA Administrative Special Award Conditions.

This Amendment approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. Upon acceptance by the Recipient, two signed Amendment documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Amendment null and void.

☒ Special Award Conditions (ATTACHMENT B [X] ADMINISTRATIVE [ ] PROGRAMMATIC)

☒ Line Item Budget (ATTACHMENT A)

☐ Other(s): _____

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER	TITLE	DATE
Kris Dyson for	NOAA GRANTS OFFICER	NOV 06 1996
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL	TITLE	DATE

RECIPIENT COPY - RETAIN

005

OMB Approved No. 0348-0041

BUDGET INFORMATION — Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
1. Administrative and legal expenses	$ 5,000 .00	$ .00	$ 5,000 .00
2. Land, structures, rights-of-way, appraisals, etc.	$ .00	$ .00	$ .00
3. Relocation expenses and payments	$ .00	$ .00	$ .00
4. Architectural and engineering fees	$ .00	$ .00	$ .00
5. Other architectural and engineering fees	$ .00	$ .00	$ .00
6. Project Inspection fees	$ 10,000 .00	$ .00	$ 10,000 .00
7. Site work	$ .00	$ .00	$ .00
8. Demolition and removal	$ .00	$ .00	$ .00
9. Construction	$ 285,658 .00	$ .00	$ 285,658 .00
10. Equipment	$ .00	$ .00	$ .00
11. Miscellaneous (Phase III Monitoring)	$ 49,430 .00	$ .00	$ 49,430 .00
12. SUBTOTAL	$ .00	$ .00	$ .00
13. Contingencies (sum of lines 1-11)	$ .00	$ .00	$ .00
14. SUBTOTAL	$ .00	$ .00	$ .00
15. Project (program) income	$ .00	$ .00	$ .00
16. TOTAL PROJECT COSTS (subtract #15 from #14)	$ 350,088 .00	$ .00	$ 350,088 .00
FEDERAL FUNDING			
17. Federal assistance requested, calculate as follows: Enter eligible costs from line 16c Multiply X 74.0 % (Consult Federal agency for Federal percentage share). Enter the resulting Federal share.			$ 257,387 .00

11/01/96 FRI 14:52 FAX 1 504 6104 DNR MGT & FINANCE 1 504 6104

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ATTACHMENT B
AWARD NO. NA47FZ0099
AMENDMENT NO. 3

NOAA ADMINISTRATIVE SPECIAL AWARD CONDITIONS

(Revise) 2. The Project Period for this award is January 1, 1994, through June 30, 1997.

(Revise) 3. The Budget Period for this amendment is January 1, 1997, through June 30, 1997.

Book 74 - 04

State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

August 19, 1996

Patricia A. Rauch, Team Leader
Grants Management Division
U.S. Department of Commerce, NOAA
1325 East-West Highway
SSMC2 - OA321 - Fifth Floor
Silver Spring, Maryland 20910-3283

RE: NOAA Award No. NA47FZ0099

Dear Ms. Rauch:

Enclosed are two signed originals of Amendment No. 2 to the above referenced agreement, as requested in your letter dated August 2, 1996, received in this office on August 7, 1996. Also enclosed are the Department's indirect cost rates which were approved by the U.S. Department of Environmental Protection in June of 1996.

If you have any questions or need additional information, please contact Karen Lewis at (504) 342-4539.

We appreciate NOAA staff assistance in obtaining approval of this amendment.

Sincerely,

Cheryl Y. Bennett
Contracts & Grants Administrator

CYB/kyl

Enclosure

c: Van Cook, Coastal Restoration Division
Verlie Wims, Fiscal Officer

FORM CD-451
(REV. 10-93)
DAO 203-26

U.S. DEPARTMENT OF COMMER.

OA321/RTL/RTL

☐ GRANT ☒ COOPERATIVE AGREEMENT

AMENDMENT TO FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE: 6FJ5000/RL1A9F00/4119

AWARD NUMBER: NA47FZ0099

RECIPIENT NAME: LOUISIANA DEPT OF NATURAL RESOURCES

AMENDMENT NUMBER: 2

STREET ADDRESS: P.O. BOX 94396
STATE LAND AND NATURAL RESOURCES BUILDING

EFFECTIVE DATE: JULY 1, 1996

CITY, STATE, ZIP CODE: BATON ROUGE, LOUISIANA 70804-9396

EXTEND WORK COMPLETION TO:

DEPARTMENT OF COMMERCE OPERATING UNIT: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

COSTS ARE REVISED AS FOLLOWS:	PREVIOUS ESTIMATED COST	ADD	DEDUCT	TOTAL ESTIMATED COST
FEDERAL SHARE OF COST	$ 724,740	$ 187,550	$ -0-	$ 912,290
RECIPIENT SHARE OF COST	$ 267,400	$ 66,850	$ -0-	$ 334,250
TOTAL ESTIMATED COST	$ 992,140	$ 254,400	$ -0-	$ 1,246,540

REASON(S) FOR AMENDMENT

To provide additional funding for the project entitled 'Point Au Fer Island Plugs (PTE-22/24)', as requested in the recipient's application dated June 20, 1996, and revised by letter dated July 19, 1996, incorporated by reference.

2. To acknowledge compliance with NOAA Programmatic Special Award Conditions numbers 1 & 2.

3. To revise NOAA Administrative Special Award Conditions.

This Amendment approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. Upon acceptance by the Recipient, two signed Amendment documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Amendment null and void.

☒ Special Award Conditions (ATTACHMENT B [X] ADMINISTRATIVE [ ] PROGRAMMATIC)

☒ Line Item Budget (ATTACHMENT A)

☐ Other(s): _____

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER	TITLE	DATE
Patricia A. Rauch	NOAA GRANTS OFFICER	AUG -2 1996
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL	TITLE	DATE
[signature]	SECRETARY	8/15/96

BUDGET INFORMATION — Construction Programs

OMB Approved No. 0348-0044

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	Grant Supplement a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
1. Administrative and legal expenses	$ 10,000 .00	$ .00	$ 10,000 .00
2. Land, structures, rights-of-way, appraisals, etc.	$ .00	$ .00	$ .00
3. Relocation expenses and payments	$ .00	$ .00	$ .00
4. Architectural and engineering fees	$ .00	$ .00	$ .00
5. Other architectural and engineering fees	$ .00	$ .00	$ .00
6. Project inspection fees	$ 40,000 .00	$ .00	$ 40,000 .00
7. Site work	$ .00	$ .00	$ .00
8. Demolition and removal	$ .00	$ .00	$ .00
9. Construction	$ 204,400 .00	$ .00	$ 204,400 .00
10. Equipment	$ .00	$ .00	$ .00
11. Miscellaneous	$ .00	$ .00	$ .00
12. SUBTOTAL	$ .00	$ .00	$ .00
13. Contingencies (sum of lines 1-11)	$ .00	$ .00	$ .00
14. SUBTOTAL	$ 254,400 .00	$ .00	$ 254,400 .00
15. Project (program) Income	$ .00	$ .00	$ .00
16. TOTAL PROJECT COSTS (subtract #15 from # 14)	$ 254,400 .00	$ .00	$ 254,400 .00

FEDERAL FUNDING

17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share). Enter the resulting Federal share.	Enter eligible costs from line 16c	Multiply x 73.7225 %	$ 187,550 .00
	Phase I =0 Phase II= $254,400 Phase III= 0	Phase II $254,400 NMFS Admin.= 13,000 $267,400	

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Standard Form 424C (4-88)
Prescribed by OMB Circular A-102

Attachment A
NOAA Award No. NA47FZ0099, Amd 2

NOAA ADMINISTRATIVE SPECIAL AWARD CONDITIONS

(Revise) 3. The Budget Period for this amendment is July 1, 1996, through December 31, 1996.

(Revise) 4. Since this award requires the Recipient to provide $334,250 (26%) in project-related matching costs from non-Federal sources, the Recipient must maintain in its official accounting records an accounting for $1,246,540.

(Revise) 16. The recipient will be required to obtain approval before making any substantive changes in the project objectives, methods, budget, or schedule, (except provided by Expanded Authorities). Requests for changes shall be submitted in writing to the Program Officer. Final approval will be issued in writing by the Grants Officer. The Recipient is not authorized to proceed with any changes until final written approval is received from the Grants Officer.

State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

March 26, 1996

Amend #1

Patricia A. Rauch, Team Leader
Grants Management Division
U. S. Department of Commerce, NOAA
1325 East West Highway
SSMC2 - OA321 - Fifth Floor
Silver Spring, Maryland 20910-3283

RE: NOAA Award No. NA47FZ0099

Dear Ms. Rauch:

Enclosed are two signed originals of Amendment No. 1 to the above referenced agreement, as requested in your letter dated March 4, 1996, received in this office March 11, 1996.

We appreciate NOAA staff assistance in obtaining approval of this amendment.

Sincerely,

Cheryl Y. Bennett

Cheryl Y. Bennett
Contracts and Grants Administrator

Enclosures

c: Tim Osborn, NMFS
Van Cook, Coastal Restoration Division
Verlie Wims, Fiscal Officer

OA321/RTL/JMG

FORM CD-451
(REV. 10-93)
DAO 203-26

U.S. DEPARTMENT OF COMMERCE

☐ GRANT ☒ COOPERATIVE AGREEMENT

AMENDMENT TO FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE: N/A

AWARD NUMBER: NA47FZ0099

RECIPIENT NAME: LOUISIANA DEPT OF NATURAL RESOURCES

AMENDMENT NUMBER: 1

STREET ADDRESS: P.O. BOX 94396
STATE LAND AND NATURAL RESOURCES BUILDING

EFFECTIVE DATE: JANUARY 1, 1996

CITY, STATE, ZIP CODE: BATON ROUGE, LOUISIANA 70804-9396

EXTEND WORK COMPLETION TO: DECEMBER 31, 1996

DEPARTMENT OF COMMERCE OPERATING UNIT: NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

COSTS ARE REVISED AS FOLLOWS:	PREVIOUS ESTIMATED COST	ADD	DEDUCT	TOTAL ESTIMATED COST
FEDERAL SHARE OF COST	$ 724,740	$ -0-	$ -0-	$ 724,740
RECIPIENT SHARE OF COST	$ 267,400	$ -0-	$ -0-	$ 267,400
TOTAL ESTIMATED COST	$ 992,140	$ -0-	$ -0-	$ 992,140

(S) FOR AMENDMENT

1. To extend the award completion date through December 31, 1996 for the project entitled 'Point Au Fer Island Plugs (PTE-22/24), as requested in the Recipient's letter dated February 7, 1996, incorporated by reference, and the Program Officer's recommendation.

2. To revise and incorporate NOAA Administrative Special Award Conditions.

3. To incorporate revised Department of Commerce Financial Assistance
(CONTINUED ON NEXT PAGE FOR ADDITIONAL REASONS FOR AMENDMENT)

This Amendment approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. Upon acceptance by the Recipient, two signed Amendment documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Amendment null and void.

☒ Special Award Conditions (ATTACHMENT B [X] ADMINISTRATIVE [ ] PROGRAMMATIC)

☒ Line Item Budget (ATTACHMENT A)

☒ Other(s): DOC Financial Asst. Standard Terms & Conditions dtd 3/95 (ATTACHMENT C), and OMB Circular A-87

NAME OF DEPARTMENT OF COMMERCE GRANTS OFFICER	TITLE	DATE
Patricia A. Rauch	NOAA GRANTS OFFICER	
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL	TITLE	DATE
[signature]	Secretary	3/21/96

RECIPIENT COPY - RETAIN

AMENDMENT NO: 1
GRANT NO: NA47FZ0099
RECIPIENT NAME: LOUISIANA DEPT OF NATURAL RESOURCES

REASONS FOR AMENDMENT:

Standard Terms and Conditions dated March 1995.

4. To incorporate revised OMB Circular A-87, effective September 1, 1995.

NOAA ADMINISTRATIVE SPECIAL AWARD CONDITIONS

(Revise) 2. The Project Period for this award is January 1, 1994, through December 31, 1996.

(Revise) 3. The Budget Period for this amendment is January 1, 1996, through December 31, 1996.

(New) 23. Recipients are hereby notified that they are encouraged, to the greatest extent practicable, to purchase American-made equipment and products with funding provided under this award.

(New) 24. Pursuant to Executive Order 12889, the Department of Commerce, (DoC) is required to notify the owner of any valid patent covering technology whenever the DoC or its financial assistance Recipients, without making a patent search, knows (or has demonstrable reasonable grounds to know) that technology covered by a valid United States patent has been or will be used without a license from the owner. To ensure prior notification, if the Recipient uses or has used patented technology under this award without a license or permission from the owner, the Recipient must notify the DoC Patent Counsel at the following address, with a copy to the Grants Officer:

Department of Commerce
Office of Chief Counsel for Technology
Patent Counsel
14th Street and Constitution Avenue, N.W.
Room H-4610
Washington, D.C. 20230

The notification shall include the following information:

- the award number
- the name of the DoC awarding agency
- a copy of the patent
- a description of how the patented technology was used
- the name of the Recipient contact, including an address and telephone number

State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

JOHN F. ALES
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

March 11, 1994

94 MAR 14 P1:30

COASTAL RESTORATION

Jean B. West, Chief
Grants Operation Branch
1325 East-West Highway
SSMC2 - OA321 - Fifth Floor
Silver Spring, MD 20910

RE: NOAA Award No. NA47FZ0099

Dear Ms. West:

Enclosed are two signed originals of the above referenced award, as requested in your letter dated February 17, 1994, received in our office February 25, 1994.

We appreciate NOAA staff assistance in obtaining approval of this cooperative agreement.

Sincerely,

Cheryl Y. Bennett

Cheryl Y. Bennett
Contracts and Grants Administrator

CYB/lhb

Enclosure

c: Verlie Wims, Fiscal Officer
Bill Good, Coastal Restoration Division Administrator

OA321:RTL/SLH

FORM CD-450
(REV 10-93)
DAO 203-26

U.S. DEPARTMENT OF COMMERCE

☐ GRANT ☒ COOPERATIVE AGREEMENT

FINANCIAL ASSISTANCE AWARD

ACCOUNTING CODE
See Below*

RECIPIENT NAME
Louisiana Department of Natural Resources

AWARD NUMBER
NA47FZ0099

STREET ADDRESS
Coastal Restoration Division, P.O. Box 94396

FEDERAL SHARE OF COST
$724,740

CITY, STATE, ZIP CODE
Baton Rouge, Louisiana 70804

RECIPIENT'S SHARE OF COST
$267,400

AWARD PERIOD
January 1, 1994, through December 31, 1995

TOTAL ESTIMATED COST
$992,140

DEPARTMENT OF COMMERCE OPERATING UNIT
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

AUTHORITY
P.L. 101-646, Coastal Wetlands Planning, Protection, and Restoration Act.

PROJECT TITLE
Point Au Fer Island Plugs (PTE-22/24)

This Award approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Award provisions checked below and attached. Upon acceptance by the Recipient, two signed Award documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Award null and void.

☒ Department of Commerce Financial Assistance Standard Terms and Conditions (ATTACHMENT C)

Special Award Conditions (ATTACHMENT B, ☒ Administrative ☒ Programmatic)

☒ Line Item Budget (ATTACHMENT A)

☐ OMB Circular A-21, Cost Principles for Educational Institutions

☒ OMB Circular A-87, Cost Principles for State and Local Governments

☐ OMB Circular A-110, Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations Uniform Administrative Requirements, dated 11/29/93

☐ OMB Circular A-122 Cost Principles for Nonprofit Organizations

☒ 15 CFR Part 24, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments

☒ 15 CFR Part 29a, Audit Requirements for State and Local Governments

☐ 15 CFR Part 29b, Audit Requirements for Institutions of Higher Education and Other Nonprofit Organizations

☐ 48 CFR Part 31, Contract Cost Principles and Procedures

☐ Other(s): _____

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER	TITLE	DATE
Jean B. West	NOAA GRANTS OFFICER	FEB 17 1994
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL	**TITLE**	**DATE**
John F. Ales	Secretary	3/7/94

BUDGET INFORMATION — Non-Construction Programs

(Phase 1) Engineering & Design

SECTION A – BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Point Au Fer Island (PL 101-646)		$ 0	$ 13,892	$ 37,648 *	$	$ 51,540
2.						
3.						
4.						
5. TOTALS		$	$ 13,892	$ 37,648 *	$	$ 51,540

SECTION B – BUDGET CATEGORIES

6 Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY (1)	(2)	(3)	(4)	Total (5)
a. Personnel	$ 6,797	$	$	$	$ 6,797
b. Fringe Benefits	1,121				1,121
c. Travel	1,750				1,750
d. Equipment					
e. Supplies (field supplies and boat rental)	2,600				2,600
f. Contractual	32,540				32,540
g. Construction					
h. Other (Aerial Photography) (contract to aerial co.)	3,900				3,900
i. Total Direct Charges (sum of 6a - 6h)	48,708				48,708
j. Indirect Charges	2,832				2,832
k. TOTALS (sum of 6i and 6j)	$ 51,540	$	$	$	$ 51,540
7. Program Income	$	$	$	$	$

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Prescribed by OMB Circular A-102

Attachment A (1 of 2)
Award No. NA47FZ0099

Point Au Fer - Phase II & III

BUDGET INFORMATION — Construction Programs

OMB Approved No. 0348-0041

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Column a-b)
1. Administrative and legal expenses	$ 16,720 .00	$ .00	$ 16,720 .00
2. Land, structures, rights-of-way, appraisals, etc.	$ 4,000 .00	$ .00	$ 4,000 .00
3. Relocation expenses and payments	$ .00	$ .00	$ .00
4. Architectural and engineering fees	$ .00	$ .00	$ .00
5. Other architectural and engineering fees	$ .00	$ .00	$ .00
6. Project Inspection fees	$ .00	$ .00	$ .00
7. Site work	$ 55,000 .00	$ .00	$ 55,000 .00
8. Demolition and removal	$ .00	$ .00	$ .00
9. Construction	$ .00	$ .00	$ .00
10. Equipment	$ 815,450 .00	$ .00	$ 815,450 .00
11. Miscellaneous Phase III Monitoring	$ .00	$ .00	$ .00
12. SUBTOTAL	$ 49,430 .00	$ .00	$ 49,430 .00
13. Contingencies (sum of lines 1-11)	$ .00	$ .00	$ .00
14. SUBTOTAL	$ .00	$ .00	$ .00
15. Project (program) Income	$ 940,600 .00	$ .00	$ 940,600 .00
16. TOTAL PROJECT COSTS (subtract #15 from # 14)	$ 0 .00	$ .00	$ 0 .00
	$ 940,600 ✓ .00	$ .00	$ 940,600 .00

FEDERAL FUNDING

17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share). Enter the resulting Federal share.	Enter eligible costs from line 16c	Multiply X .73 %		
	Phase I - $51,540 Ph. II,III-$940,600	Phases I,II,III NMFS Admin. Total	$992,140 52,000 $1,044,140	$ $687,092 * .00

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Standard Form 424C (4-88)
Prescribed by OMB Circular A-102

*Total Federal Funds Authorized

Non-Construction	$ 37,648
Construction	$687,092
Total	$724,740

Attachment A (2 of 2)
Award No. NA47FZ0099

NOAA ADMINISTRATIVE SPECIAL AWARD CONDITIONS

1. *Accounting Codes: 4FH5000/RL1A35/4119 - $ 36,255
4FH5000/RL1A7F/4119 - $ 36,255
4FH5000/RL1A9F/4119 - $652,230

2. The Project Period for this award is from January 1, 1994, through December 31, 1995.

3. The Budget Period for this award is from January 1, 1994, through December 31, 1995.

4. Since this grant requires the Recipient to provide $267,400 (27%) in project-related matching costs from non-Federal sources, the Recipient must maintain in its official accounting records an accounting for $992,140.

5. This award number NA47FZ0099, to Louisiana Department of Natural Resources supports the work described in the Recipient's proposal entitled "Coastal Wetlands Planning, Protection, and Restoration Act (PL 101-646); Point Au Fer Island Plugs (PTE-22/24)" dated September 13, 1993, and revised by application dated November 12, 1993, which are incorporated into the award by reference. Where the terms of the award and proposal differ, the terms of the award shall prevail.

6. The Recipient Contact's name, title, address, and telephone number are:

Cheryl Bennett
Louisiana Department of Natural Resources
Coastal Restoration Division
P.O. Box 94396
Baton Rouge, Louisiana 70804
(504) 342-4500

7. The Grants Officer's name, address, and telephone number are:

Jean B. West
U.S. Department of Commerce, NOAA
Grants Operations Branch, ATTN: OA321
1325 East West Highway, Room 5410, SSMC2
Silver Spring, MD 20910
301-713-0926

applies to equipment not specifically identified and justified in the recipient's proposal and approved budget.

16. The Recipient will be required to obtain the approval of the Grants Officer prior to making any substantive changes in project objectives or methods.

17. If applicable, cost sharing is to be calculated on the basis of the total financial award to the recipient. The Government does not recognize funds made in overmatch subsequent to making an award.

18. Two copies of all publications or reports printed with grant or cooperative agreement funds and intended for public distribution will be furnished to the Government (one to the Program Officer and one to the Grants Officer). The financial assistance award number will be acknowledged as the basis for funding the publication.

    Such publications or reports shall bear the NOAA logo on the cover or first page, and the following: "A publication (or report) of the Louisiana Department of Natural Resources pursuant to National Oceanic and Atmospheric Administration Award No. NA47FZ0099."

    If the recipient or its employee(s) use NOAA financial assistance to publish a paper based in whole or in part on the work funded by this grant/cooperative agreement, the author shall assure that the paper bears the following notation: "This paper is funded ('in part' if appropriate) by a grant/cooperative agreement from the National Oceanic and Atmospheric Administration. The views expressed herein are those of the author(s) and do not necessarily reflect the views of NOAA or any of its sub-agencies."

    This requirement does not apply to reports submitted only to NOAA and which are not intended for public distribution, such as project progress reports and financial reports.

19. If applicable, the Recipient shall submit to the Grants Officer an annual inventory of Federally-owned property used in conjunction with this project. This listing shall be submitted with the final Financial Status Report. Federally-owned property is described as property purchased or owned by the Federal Government and loaned to the Recipient for use in conjunction with grant-related project work. The listing shall include the following information and must include the title and signature of an authorized representative of the Recipient organization.

    a. Government ID number and Fed Strip Number (FSN);
    b. Description of Item;

The National Marine Fisheries Service (NMFS) will provide guidance for the applicant's development of plans, and implementation of the restoration project. NMFS will review and approve all planning and construction details for the project. During post-restoration, NMFS will be directly involved in the monitoring of the success of the project. Quarterly budget meetings will be conducted by NMFS. Site visit to the restoration site will be conducted jointly with State DNR Staff. Quarterly reviews of the State's progress against the goals and objectives of the cooperative agreement will be made by NMFS.

PROGRAMMATIC SPECIAL AWARD CONDITIONS

1. Phase I deliverables must be received, reviewed and approved by the Coastal Wetlands Planning, Protection and Restoration Act Program Office (National Marine Fisheries Service) from the State before federal funds can be expended for use in the implementation of Phase II of the project. Phase I deliverables are specified in the cooperative agreement as: 1) final engineering and design report, 2) federal and state project permits, 3) land owner notification, 4) project monitoring plan and 5) baseline monitoring plan. The final engineering and design report will include detailed budgetary and cost information for the construction phase of this project. The State must also have completed the environmental permitting of the project with all applicable Federal and State agencies.

2. At the end of Phase I of this agreement, the State and the National Marine Fisheries Service must seek the concurrence of the Coastal Wetlands Planning, Protection and Restoration Act Task Force before funds can be expended for use in implementation of the construction portion of Phase II of the project.

3. The attached NOAA Progress Report Format should be used by the applicant as a guide for all Quarterly Progress Reports and for the Annual Project Reports.

i. The Safe Drinking Water Act of 1972, as amended (42 U.S.C. 300f-j9);

j. The Energy Conservation and Production Act (applicable to construction of new residential and commercial structures) (42 U.S.C. 6801, et seq.);

k. The Wild and Scenic Rivers Act, as amended (16 U.S.C. 1271, et seq.);

l. The Historical and Archeological Data Preservation Act, as amended (16 U.S.C. 469a, et seq.);

m. Executive Order 11990, Protection of Wetlands, May 24, 1977;

n. P.L. 90-480, as amended (42 U.S.C. 4151, et seq.), and the regulations issued thereunder, prescribing standards for the design and construction of any building or facility intended to be accessible to the public or that may result in the employment of handicapped persons therein;

o. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, P.L. 91-646, as amended (42 U.S.C. 4601, et seq.); and 15 CFR Part 11;

p. The Flood Disaster Protection Act of 1973, P.L. 93-234, as amended (42 U.S.C. 4002, et seq.), and regulations and guidelines issued thereunder by the Federal Emergency Management Administration (FEMA);

q. The National Environmental Policy Act of 1969 (P.L. 91-190); the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.); Executive Order 11593 of May 13, 1971, and all pertinent rules and regulations issued thereunder;

r. The Lead-based Paint Poisoning Prevention Act of 1976, as amended (42 U.S.C. 6901);

s. The Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6901);

t. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (42 U.S.C. 9601 et seq.); and

u. The Drug-Free Workplace Act of 1988, P.L. 100-690, Title V, Subtitle D, and 15 CFR Part 26 (55 FR 21678, May 25, 1990) for projects approved on or after March 18, 1989. A Drug-Free Workplace Act certificate is required prior to award approval.

DEPARTMENT OF COMMERCE
FINANCIAL ASSISTANCE
STANDARD TERMS AND CONDITIONS



NOVEMBER 1993
(Revised 03/95)

DEPARTMENT OF COMMERCE
FINANCIAL ASSISTANCE STANDARD TERMS AND CONDITIONS

Page

A. FINANCIAL REQUIREMENTS 1

.01 Financial Reports 1
.02 Award Payments 1
.03 Federal and Non-Federal Sharing 2
.04 Budget Changes and Transfer of Funds Among Categories . . 2
.05 Indirect Costs 2
.06 Incurring Costs or Obligating Federal Funds Beyond the Expiration Date 4
.07 Tax Refunds 4

B. PROGRAMMATIC REQUIREMENTS 4

.01 Performance (Technical) Reports 4
.02 Unsatisfactory Performance 4
.03 Programmatic Changes 5
.04 Other Federal Awards with Similar Programmatic Activities 5

C. NON-DISCRIMINATION REQUIREMENTS 5

.01 Statutory Provisions 5
.02 Other Provisions 6

D. AUDITS 6

.01 Organization-Wide and Project Audits 6
.02 Audit Resolution Process 7

E. DEBTS 8

.01 Payment of Debts Owed the Federal Government 8
.02 Late Payment Charges. 8

F. NAME CHECK 9

.01 Results of Name Check 9
.02 Action(s) Taken as a Result of Name Check Review 9

G. GOVERNMENTWIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT) . . . 9

H. DRUG-FREE WORKPLACE 10

I. LOBBYING RESTRICTIONS 10

.01 Statutory Provisions 10
.02 Disclosure of Lobbying Activities 10

A. FINANCIAL REQUIREMENTS

.01 Financial Reports

a. The Recipient shall submit a "Financial Status Report" (SF-269) on a calendar quarter basis for the periods ending March 31, June 30, September 30, and December 31, or any portion thereof, unless otherwise specified in a special award condition. Reports are due no later than 30 days following the end of each reporting period. A final SF-269 shall be submitted within 90 days after the expiration date of the award.

b. The Recipient shall submit a "Federal Cash Transactions Report" (SF-272) for each award where funds are advanced to Recipients. The SF-272 is due 15 working days following the end of each calendar quarter for awards under $1 million dollars; or 15 working days following the end of each month for awards over $1 million dollars; or unless otherwise specified in a special award condition.

c. All financial reports shall be submitted in triplicate (one original and two copies) to the Grants Officer.

.02 Award Payments

a. Unless otherwise specified in a special award condition, the method of payment for the award shall be through advance or reimbursement.

b. The Recipient shall submit a "Request for Advance or Reimbursement" (SF-270) no more frequently than monthly to request payment. The SF-270 shall be submitted in triplicate (an original and two copies) to the Grants Officer.

c. Payments will be made via wire transfer which transfers funds directly to a Recipient's bank account. The Recipient must complete the enclosed payment information form and return it to the Grants Officer. The award number must be included on the payment information form. If wire transfer is not available, payments shall be made by direct Treasury check.

d. Advances shall be limited to the minimum amounts necessary to meet immediate disbursement needs. Advanced funds not disbursed in a timely manner will be promptly returned to the Department of Commerce (DoC). Advances shall be approved for periods not to exceed 30 days. The Grants Officer determines the appropriate method of payment. If a Recipient demonstrates an unwillingness or inability to establish procedures which will minimize the time elapsing between the transfer of funds and disbursement, the Grants Officer may change the method of payment to reimbursement only.

b. Any actual indirect costs incurred by the Recipient which are greater than the indirect cost line item in the budget will not be treated as a cost of the award by the DoC for the purpose of final cost settlement.

c. Excess indirect costs may not be used to offset unallowable direct costs.

d. If the Recipient has not previously established an indirect cost rate with a Federal agency, the negotiation and approval of a rate is subject to the procedures in the applicable cost principles and the following subparagraphs:

1. The Office of Inspector General (OIG) is authorized to negotiate indirect cost rates on behalf of the DoC for those organizations for which the DoC is cognizant. The OIG will negotiate only fixed rates. The Recipient shall submit to the OIG within 90 days of the award start date, documentation (indirect cost proposal, cost allocation plan, etc.) necessary to establish such rates. The Recipient shall provide the Grants Officer with a copy of the transmittal letter to the OIG.

2. When a cognizant Federal agency other than the DoC has responsibility for establishing an indirect cost rate, the Recipient shall submit to that cognizant Federal agency within 90 days of the award start date the documentation (indirect cost proposal, cost allocation plan, etc.) necessary to establish such rates. The Recipient shall provide both the Grants Officer and the DoC OIG with a copy of the transmittal letter to the cognizant Federal agency.

3. If the Recipient fails to submit the required documentation to the OIG or other cognizant Federal agency within 90 days of the award start date, the Grants Officer shall amend the award to preclude the recovery of any indirect costs under the award. If the DoC OIG or cognizant Federal agency determines there is a finding of good and sufficient cause to excuse the Recipient's delay in submitting the documentation, an extension of the 90-day due date may be approved by the Grants Officer.

4. Regardless of any approved indirect cost rate applicable to the award at the time of award, the maximum dollar amount of allocable indirect costs for which the DoC will reimburse the Recipient shall be the lesser of:

(a) The line item amount for the Federal share of indirect costs contained in the approved budget of the award; or

(b) The Federal share of the total allocable indirect costs of the award based on the negotiated rate with the cognizant Federal agency as established by audit or negotiation.

special award conditions or taking further action as specified in the standard term and condition entitled "Non-Compliance With Award Provisions."

.03 Programmatic Changes

a. The Recipient shall not make any programmatic changes to the award without prior written approval by the Grants Officer.

b. Any requests by the Recipient for programmatic changes must be submitted to the Federal Program Officer who shall review and make recommendations to the Grants Officer. The Grants Officer shall make the final determination and notify the Recipient in writing.

.04 Other Federal Awards with Similar Programmatic Activities

The Recipient shall immediately provide written notification to the Federal Program Officer and the Grants Officer in the event that, subsequent to receipt of the DoC award, other Federal financial assistance is received relative to the scope of work of the DoC award.

C. NON-DISCRIMINATION REQUIREMENTS

No person in the United States shall, on the ground of race, color, national origin, handicap, religion, or sex, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance. The Recipient agrees to comply with the non-discrimination requirements below:

.01 Statutory Provisions

a. Title VI of the Civil Rights Act of 1964 (42 USC §§ 2000d et seq.) and DoC implementing regulations published at 15 CFR Part 8 which prohibit discrimination on the grounds of race, color, or national origin under programs or activities receiving Federal financial assistance;

b. Title IX of the Education Amendments of 1972 (20 USC §§ 1681 et seq.) prohibiting discrimination on the basis of sex under Federally assisted education programs or activities;

c. Section 504 of the Rehabilitation Act of 1973, as amended (29 USC § 794) and DoC implementing regulations published at 15 CFR Part 8b prohibiting discrimination on the basis of handicap under any program or activity receiving or benefitting from Federal assistance;

b. For-profit Recipients shall have a project audit performed no less than once every two years in accordance with Federal Government auditing standards.

c. The Recipient shall submit copies of audits to each Federal agency that directly provides funds. Audits shall be submitted to the DoC OIG at the following address with a copy of the transmittal letter to the Grants Officer:

Office of Inspector General
U.S. Department of Commerce
Atlanta Regional Office of Audits
401 West Peachtree Street, N.W., Suite 2342
Atlanta, GA 30308

d. Recipients receiving Federal awards over $100,000 shall also submit a copy of organization-wide audits to the Bureau of the Census, which has been designated by OMB as a central clearinghouse. The address is:

Federal Audit Clearinghouse
Bureau of the Census
1201 E. 10th Street
Jeffersonville, IN 47132

.02 Audit Resolution Process

a. An audit of the award may result in the disallowance of costs incurred by the Recipient and the establishment of a debt (account receivable) due DoC. For this reason, the Recipient should take seriously its responsibility to respond to all audit findings and recommendations with adequate explanations and supporting evidence whenever audit results are disputed.

b. A Recipient whose award is audited has the following opportunities to dispute the proposed disallowance of costs and the establishment of a debt:

1. Unless the Inspector General determines otherwise, the Recipient has 30 days from the date of the transmittal of the draft audit report to submit written comments and documentary evidence.

2. The Recipient has 30 days from the date of the transmittal of the final audit report to submit written comments and documentary evidence. There will be no extension of this deadline.

3. The DoC shall review the documentary evidence submitted by the Recipient and shall notify the Recipient of the results in an Audit Resolution Determination Letter. The Recipient has 30 days from the date of receipt of the Audit Resolution Determination

b. A penalty charge shall be assessed on any portion of a debt that is delinquent for more than 90 days, although the charge will accrue and be assessed from the date the debt became delinquent.

c. An administrative charge shall be assessed to cover processing and handling the amount due.

d. State and local governments are not subject to penalty and administrative charges.

F. NAME CHECK

A name check review shall be performed by the OIG on key individuals associated with non-profit and for-profit organizations, unless an exemption has been authorized by the Inspector General.

.01 Results of Name Check

DoC reserves the right to take any of the actions described in section F.02 if any of the following occurs as a result of the name check review:

a. A key individual fails to submit the required form "Identification - Applicant for Funding Assistance (CD-346);

b. A key individual made an incorrect statement or omitted a material fact on the CD-346; or

c. The name check reveals significant adverse findings that reflect on the integrity or responsibility of the Recipient and/or key individual.

.02 Action(s) Taken as a Result of Name Check Review

If any situation noted in F.01 occurs, DoC, at its discretion, may take one or more of the following actions:

a. Terminate the award immediately for cause;

b. Require the removal of any key individual from association with the management of and/or implementation of the award; and/or

c. Make appropriate provisions or revisions at DoC's discretion with respect to the method of payment and/or financial reporting requirements.

G. GOVERNMENTWIDE DEBARMENT AND SUSPENSION (NONPROCUREMENT)

The Recipient shall comply with the provisions of Executive Order 12549, "Debarment and Suspension" and DoC's implementing

.02 **Applicability of Provisions to Subawards, Contracts, and Subcontracts**

a. The Recipient shall include the following notice in each request for applications or bids:

> Applicants/bidders for a lower tier covered transaction (except for goods and services under the $25,000 small purchase threshold and where the lower tier Recipient will have no critical influence on or substantive control over the award) are subject to 15 CFR Part 26, Subparts A through E, "Governmentwide Debarment and Suspension (Nonprocurement). In addition, applicants/bidders for a lower tier covered transaction for a subaward, contract, or subcontract greater than $100,000 of Federal funds at any tier are subject to 15 CFR Part 28, "New Restrictions on Lobbying." Applicants/bidders should familiarize themselves with these provisions, including the certification requirements. Therefore, applications for a lower tier covered transaction must include a "Certifications Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions and Lobbying" (CD-512) completed without modification.

b. The Recipient shall include a statement in all lower tier covered transactions (subawards, contracts, and subcontracts), that the award is subject to Executive Order 12549, "Debarment and Suspension" and DoC implementing regulations published at 15 CFR Part 26, Subparts A through E, "Governmentwide Debarment and Suspension (Nonprocurement)."

c. The Recipient shall include a statement in all lower tier covered transactions (subawards, contracts, and subcontracts) exceeding $100,000 in Federal funds, that the subaward, contract, or subcontract is subject to Section 319 of Public Law 101-121, which added Section 1352, regarding lobbying restrictions, to Chapter 13 of Title 31 of the United States Code as implemented at 15 CFR Part 28, "New Restrictions on Lobbying." The Recipient shall further require the subrecipient, contractor, or subcontractor to submit a completed "Disclosure of Lobbying Activities" (SF-LLL) regarding the use of non-Federal funds for lobbying. The SF-LLL shall be submitted within 15 days following the end of the calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed. The SF-LLL shall be submitted from tier to tier until received by the Recipient. The Recipient must submit all disclosure forms received, including those that report lobbying activity on its own behalf, to the Grants Officer within 30 days following the end of the calendar quarter.

Any inventory listings stipulated under the applicable uniform administrative requirements shall be submitted on the "Report of Government Property in Possession of Contractor" (CD-281). The CD-281 shall be submitted in triplicate (an original and two copies) to the Grants Officer.

.02 Rights to Inventions

The policy and procedures set forth in DoC regulations 37 CFR Part 401, "Rights to Inventions made by Nonprofit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements," shall apply to all grants and cooperative agreements made to nonprofit organizations and small business firms where the purpose of the award is to accomplish experimental, developmental, or research work.

L. MISCELLANEOUS REQUIREMENTS

01. Non-Compliance With Award Provisions

Failure to comply with any or all of the provisions of the award may be considered grounds for any or all of the following actions: establishment of an account receivable, withholding payments under any DoC awards to the Recipient, changing the method of payment from advance or reimbursement to reimbursement only, termination of any DoC active awards, and may have a negative impact on future funding by the DoC.

.02 Prohibition Against Assignment

Notwithstanding any other provision of the award, the Recipient shall not transfer, pledge, mortgage, or otherwise assign the award, or any interest therein, or any claim arising thereunder, to any party or parties, bank trust companies, or other financing or financial institutions.

.03 Internal Revenue Service (IRS) Information

a. A Recipient classified for tax purposes as an individual, partnership, proprietorship, or medical corporation is required to submit a taxpayer identification number (TIN) (either social security number or employer identification number as applicable) on Form W-9, "Payer's Request for Taxpayer Identification Number." Tax-exempt organizations and corporations (with the exception of medical corporations) are excluded from this requirement. Form W-9 shall be submitted to the Grants Officer within 60 days of the award start date. The TIN will be provided to the IRS by DoC on Form 1099-G, "Statement for Recipients of Certain Government Payments." Applicable Recipients who either fail to provide their TIN or provide an incorrect TIN may have funding suspended until the requirement is met.

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

FROM: Alice M. Rivlin
Director

SUBJECT: Cost Principles for State, Local, and Indian Tribal Governments

1. Purpose. This Circular establishes principles and standards for determining costs for Federal awards carried out through grants, cost reimbursement contracts, and other agreements with State and local governments and federally-recognized Indian tribal governments (governmental units).

2. Authority. This Circular is issued under the authority of the Budget and Accounting Act of 1921, as amended; the Budget and Accounting Procedures Act of 1950, as amended; the Chief Financial Officers Act of 1990; Reorganization Plan No. 2 of 1970; and Executive Order No. 11541 ("Prescribing the Duties of the Office of Management and Budget and the Domestic Policy Council in the Executive Office of the President").

3. Background. An interagency task force was established in 1987 to review existing cost principles for Federal awards to State, local, and Indian tribal governments. The task force studied Inspector General reports and recommendations, solicited suggestions for changes to the Circular from governmental units, and compared for consistency the provisions of other OMB cost principles circulars covering non-profit organizations and universities. A proposed revised Circular reflecting the results of those efforts was issued on October 12, 1988, and August 19, 1993. Extensive comments on the proposed revisions, discussions with interest groups, and related developments were considered in developing this revision.

4. Rescissions. This Circular rescinds and supersedes Circular A-87, issued January 15, 1981.

5. Policy. This Circular establishes principles and standards to provide a uniform approach for determining costs and to promote effective program delivery, efficiency, and better relationships between governmental units and the Federal Government. The principles are for determining allowable costs only. They are not intended to identify the circumstances or to dictate the extent of Federal and governmental unit participation in the financing of a particular Federal award. Provision for profit or other increment above cost is outside the scope of this Circular.

6. Definitions. Definitions of key terms used in this Circular are contained in Attachment A, Section B.

7. Required Action. Agencies responsible for administering programs that involve cost reimbursement contracts, grants, and other agreements with governmental units shall issue codified regulations to implement the provisions of this Circular and its Attachments by September 1, 1995.

8. OMB Responsibilities. The Office of Management and Budget (OMB) will review agency regulations and implementation of this Circular, and will provide policy interpretations and assistance to insure effective and efficient implementation. Any exceptions will be subject to approval by OMB. Exceptions will only be made in particular cases where adequate justification is presented.

9. Information Contact. Further information concerning this Circular may be obtained by contacting the Office of Federal Financial Management, Financial Standards and Reporting Branch, Office of Management and Budget, Washington, DC 20503, telephone 202-395-3993.

10. Policy Review Date. OMB Circular A-87 will have a policy review three years from the date of issuance.

11. Effective Date. This Circular is effective as follows:

- For costs charged indirectly or otherwise covered by the cost allocation plans described in Attachments C, D and E, this revision shall be applied to cost allocation plans and indirect cost proposals submitted or prepared for a governmental unit's fiscal year that begins on or after September 1, 1995.
- For other costs, this revision shall be applied to all awards or amendments, including continuation or renewal awards, made on or after September 1, 1995.

Attachments

OMB CIRCULAR NO. A-87
Revised

COST PRINCIPLES FOR STATE, LOCAL AND INDIAN TRIBAL GOVERNMENTS

TABLE OF CONTENTS

Attachment A - General Principles for Determining Allowable Costs
Attachment B - Selected Items of Cost
Attachment C - State/Local-Wide Central Service Cost Allocation Plans
Attachment D - Public Assistance Cost Allocation Plans
Attachment E - State and Local Indirect Cost Rate Proposals

Attachment A

GENERAL PRINCIPLES FOR DETERMINING ALLOWABLE COSTS

TABLE OF CONTENTS

A. Purpose and Scope
   1. Objectives
   2. Policy guides
   3. Application
B. Definitions
   1. Approval or authorization of the awarding or cognizant Federal agency
   2. Award
   3. Awarding agency
   4. Central service cost allocation plan
   5. Claim
   6. Cognizant agency
   7. Common rule
   8. Contract
   9. Cost
   10. Cost allocation plan
   11. Cost objective
   12. Federally-recognized Indian tribal government
   13. Governmental unit
   14. Grantee department or agency
   15. Indirect cost rate proposal

allocated or billed to users.

5. "Claim" means a written demand or written assertion by the governmental unit or grantor seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of award terms, or other relief arising under or relating to the award. A voucher, invoice or other routine request for payment that is not a dispute when submitted is not a claim. Appeals, such as those filed by a governmental unit in response to questioned audit costs, are not considered claims until a final management decision is made by the Federal awarding agency.

6. "Cognizant agency" means the Federal agency responsible for reviewing, negotiating, and approving cost allocation plans or indirect cost proposals developed under this Circular on behalf of all Federal agencies. OMB publishes a listing of cognizant agencies.

7. "Common Rule" means the "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments; Final Rule" originally issued at 53 FR 8034- 8103 (March 11, 1988). Other common rules will be referred to by their specific titles.

8. "Contract" means a mutually binding legal relationship obligating the seller to furnish the supplies or services (including construction) and the buyer to pay for them. It includes all types of commitments that obligate the government to an expenditure of appropriated funds and that, except as otherwise authorized, are in writing. In addition to bilateral instruments, contracts include (but are not limited to): awards and notices of awards; job orders or task orders issued under basic ordering agreements; letter contracts; orders, such as purchase orders, under which the contract becomes effective by written acceptance or performance; and, bilateral contract modifications. Contracts do not include grants and cooperative agreements covered by 31 U.S.C. 6301 et seq.

9. "Cost" means an amount as determined on a cash, accrual, or other basis acceptable to the Federal awarding or cognizant agency. It does not include transfers to a general or similar fund.

10. "Cost allocation plan" means central service cost allocation plan, public assistance cost allocation plan, and indirect cost rate proposal. Each of these terms are further defined in this section.

11. "Cost objective" means a function, organizational subdivision, contract, grant, or other activity for which cost data are needed and for which costs are incurred.

12. "Federally-recognized Indian tribal government" means the governing body or a governmental agency of any Indian tribe, band, nation, or other organized group or community (including any native village as defined in Section 3 of the Alaska Native Claims Settlement Act, 85 Stat. 688) certified by the Secretary of the Interior as eligible for the special programs and services provided through the Bureau of Indian Affairs.

13. "Governmental unit" means the entire State, local, or federally-recognized Indian tribal government, including any component thereof. Components of governmental units may function independently of the governmental unit in accordance with the term of the award.

14. "Grantee department or agency" means the component of a State, local, or federally-recognized Indian tribal government which is responsible for the performance or administration of all or some part of a Federal award.

15. "Indirect cost rate proposal" means the documentation prepared by a governmental unit or component thereof to substantiate its request for the establishment of an indirect cost rate as described in Attachment E of this Circular.

16. "Local government" means a county, municipality, city, town, township, local public authority, school district, special district, intrastate district, council of governments (whether or not incorporated as a non-profit corporation under State law), any other regional or interstate government entity, or any agency or instrumentality of a local government.

17. "Public assistance cost allocation plan" means a narrative description of the procedures that will be used in identifying, measuring and allocating all administrative costs to all of the programs administered or supervised by State public assistance agencies as described in Attachment D of this Circular.

18. "State" means any of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, any territory or possession of the United States, or any agency or instrumentality of a State exclusive of local governments.

C. Basic Guidelines

1. **Factors affecting allowability of costs.** To be allowable under Federal awards, costs must meet the following general criteria:

a. Be necessary and reasonable for proper and efficient performance and administration of Federal awards.

b. Be allocable to Federal awards under the provisions of this Circular.

c. Be authorized or not prohibited under State or local laws or regulations.

d. Conform to any limitations or exclusions set forth in these principles, Federal laws, terms and conditions of the Federal award, or other governing regulations as to types or amounts of cost items.

e. Be consistent with policies, regulations, and procedures that apply uniformly to both Federal awards and other activities of the governmental unit.

f. Be accorded consistent treatment. A cost may not be assigned to a Federal award as a direct cost if any other cost incurred for the same purpose in like circumstances has been allocated to the Federal award as an indirect cost.

g. Except as otherwise provided for in this Circular, be determined in accordance with generally accepted accounting principles.

h. Not be included as a cost or used to meet cost sharing or matching requirements of any other Federal award in either the current or a prior period, except as specifically provided by Federal law or regulation.

i. Be the net of all applicable credits.

j. Be adequately documented.

2. **Reasonable costs.** A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost. The question of reasonableness is particularly important when governmental units or components are predominately federally-funded. In determining reasonableness of a given cost, consideration shall be given to:

a. Whether the cost is of a type generally recognized as ordinary and necessary for the operation of the governmental unit or the performance of the Federal award.

H. Required Certifications. Each cost allocation plan or indirect cost rate proposal required by Attachments C and E must comply with the following:

1. No proposal to establish a cost allocation plan or an indirect cost rate, whether submitted to a Federal cognizant agency or maintained on file by the governmental unit, shall be acceptable unless such costs have been certified by the governmental unit using the Certificate of Cost Allocation Plan or Certificate of Indirect Costs as set forth in Attachments C and E. The certificate must be signed on behalf of the governmental unit by an individual at a level no lower than chief financial officer of the governmental unit that submits the proposal or component covered by the proposal.

2. No cost allocation plan or indirect cost rate shall be approved by the Federal Government unless the plan or rate proposal has been certified. Where it is necessary to establish a cost allocation plan or an indirect cost rate and the governmental unit has not submitted a certified proposal for establishing such a plan or rate in accordance with the requirements, the Federal Government may either disallow all indirect costs or unilaterally establish such a plan or rate. Such a plan or rate may be based upon audited historical data or such other data that have been furnished to the cognizant Federal agency and for which it can be demonstrated that all unallowable costs have been excluded. When a cost allocation plan or indirect cost rate is unilaterally established by the Federal Government because of failure of the governmental unit to submit a certified proposal, the plan or rate established will be set to ensure that potentially unallowable costs will not be reimbursed.

Attachment B

SELECTED ITEMS OF COST

TABLE OF CONTENTS

1. Accounting
2. Advertising and public relations costs
3. Advisory councils
4. Alcoholic beverages
5. Audit services
6. Automatic electronic data processing
7. Bad debts
8. Bonding costs
9. Budgeting
10. Communications
11. Compensation for personnel services
    a. General
    b. Reasonableness
    c. Unallowable costs
    d. Fringe benefits
    e. Pension plan costs
    f. Post-retirement health benefits
    g. Severance Pay
    h. Support of salaries and wages
    i. Donated services
12. Contingencies
13. Contributions and donations
14. Defense and prosecution of criminal and civil proceedings, and claims
15. Depreciation and use allowances
16. Disbursing service
17. Employee morale, health, and welfare costs
18. Entertainment
19. Equipment and other capital expenditures
20. Fines and penalties
21. Fund raising and investment management costs
22. Gains and losses on disposition of depreciable property and other capital assets and substantial relocation of Federal programs.
23. General government expenses
24. Idle facilities and idle capacity
25. Insurance and indemnification
26. Interest
27. Lobbying
28. Maintenance, operations, and repairs
29. Materials and supplies
30. Memberships, subscriptions, and professional activities
31. Motor pools
32. Pre-award costs
33. Professional service costs
34. Proposal costs
35. Publication and printing costs
36. Rearrangements and alterations
37. Reconversion costs
38. Rental costs
39. Taxes
40. Training
41. Travel costs
42. Underrecovery of costs under Federal agreements

Sections 1 through 42 provide principles to be applied in establishing the allowability or unallowability of certain items of cost. These principles apply whether a cost is treated as direct or indirect. A cost is allowable for Federal reimbursement only to the extent of benefits received by Federal awards and its conformance with the general policies and principles stated in Attachment A to this Circular. Failure to mention a particular item of cost in these sections is not intended to imply that it is either allowable or unallowable; rather, determination of allowability in each case should be based on the treatment or standards provided for similar or related items of cost.

1. Accounting. The cost of establishing and maintaining accounting and other information systems is allowable.

2. Advertising and public relations costs.

a. The term "advertising costs" means the costs of advertising media and collateral administrative costs. Advertising media include magazines, newspapers, radio and television programs, direct mail, exhibits, and the like.

b. The term "public relations" includes community relations and means those activities dedicated to maintaining the image of the governmental unit or maintaining or promoting understanding and favorable relations with the community or public at large or any segment of the public.

c. Advertising costs are allowable only when incurred for the recruitment of personnel, the procurement of goods and services, the disposal of surplus materials, and any other specific purposes necessary to meet the requirements of the Federal award. Advertising costs associated with the disposal of surplus materials are not allowable where all disposal costs are reimbursed based on a standard rate as specified in the grants management common rule.

d. Public relations costs are allowable when:

governmental unit or component.

(4) The accrual basis may be only used for those types of leave for which a liability as defined by Generally Accepted Accounting Principles (GAAP) exists when the leave is earned. When a governmental unit uses the accrual basis of accounting, in accordance with GAAP, allowable leave costs are the lesser of the amount accrued or funded.

(5) The cost of fringe benefits in the form of employer contributions or expenses for social security; employee life, health, unemployment, and worker's compensation insurance (except as indicated in section 25, Insurance and indemnification); pension plan costs (see subsection e.); and other similar benefits are allowable, provided such benefits are granted under established written policies. Such benefits, whether treated as indirect costs or as direct costs, shall be allocated to Federal awards and all other activities in a manner consistent with the pattern of benefits attributable to the individuals or group(s) of employees whose salaries and wages are chargeable to such Federal awards and other activities.

e. **Pension plan costs.** Pension plan costs may be computed using a pay-as-you-go method or an acceptable actuarial cost method in accordance with established written policies of the governmental unit.

(1) For pension plans financed on a pay-as-you-go method, allowable costs will be limited to those representing actual payments to retirees or their beneficiaries.

(2) Pension costs calculated using an actuarial cost-based method recognized by GAAP are allowable for a given fiscal year if they are funded for that year within six months after the end of that year. Costs funded after the six month period (or a later period agreed to by the cognizant agency) are allowable in the year funded. The cognizant agency may agree to an extension of the six month period if an appropriate adjustment is made to compensate for the timing of the charges to the Federal Government and related Federal reimbursement and the governmental unit's contribution to the pension fund. Adjustments may be made by cash refund or other equitable procedures to compensate the Federal Government for the time value of Federal reimbursements in excess of contributions to the pension fund.

(3) Amounts funded by the governmental unit in excess of the actuarially determined amount for a fiscal year may be used as the governmental unit's contribution in future periods.

(4) When a governmental unit converts to an acceptable actuarial cost method, as defined by GAAP, and funds pension costs in accordance with this method, the unfunded liability at the time of conversion shall be allowable if amortized over a period of years in accordance with GAAP.

(5) The Federal Government shall receive an equitable share of any previously allowed pension costs (including earnings thereon) which revert or inure to the governmental unit in the form of a refund, withdrawal, or other credit.

f. **Post-retirement health benefits.** Post-retirement health benefits (PRHB) refers to costs of health insurance or health services not included in a pension plan covered by subsection e. for retirees and their spouses, dependents, and survivors. PRHB costs may be computed using a pay-as-you-go method or an acceptable actuarial cost method in accordance with established written polices of the governmental unit.

(1) For PRHB financed on a pay as-you-go method, allowable costs will be limited to those representing actual payments to retirees or their beneficiaries.

(2) PRHB costs calculated using an actuarial cost method recognized by GAAP are allowable if they are funded for that year within six months after the end of that year. Costs funded after the six month period (or a later period agreed to by the cognizant agency) are allowable in the year funded. The cognizant agency may agree to an extension of the six month period if an appropriate adjustment is made to compensate for the timing of the charges to the Federal Government and related Federal reimbursements and the governmental unit's contributions to the PRHB fund. Adjustments may be made by cash refund, reduction in current year's PRHB costs, or other equitable procedures to compensate the Federal Government for the time value of Federal reimbursements in excess of contributions to the PRHB fund.

(3) Amounts funded in excess of the actuarially determined amount for a fiscal year may be used as the government's contribution in a future period.

(4) When a governmental unit converts to an acceptable actuarial cost method and funds PRHB costs in accordance with this method, the initial unfunded liability attributable to prior years shall be allowable if amortized over a period of years in accordance with GAAP, or, if no such GAAP period exists, over a period negotiated with the cognizant agency.

(5) To be allowable in the current year, the PRHB costs must be paid either to:

(a) An insurer or other benefit provider as current year costs or premiums, or

(b) An insurer or trustee to maintain a trust fund or reserve for the sole purpose of providing post-retirement benefits to retirees and other beneficiaries.

(6) The Federal Government shall receive an equitable share of any amounts of previously allowed post-retirement benefit costs (including earnings thereon) which revert or inure to the governmental unit in the form of a refund, withdrawal, or other credit.

g. **Severance pay.**

(1) Payments in addition to regular salaries and wages made to workers whose employment is being terminated are allowable to the extent that, in each case, they are required by (a) law, (b) employer-employee agreement, or (c) established written policy.

(2) Severance payments (but not accruals) associated with normal turnover are allowable. Such payments shall be allocated to all activities of the governmental unit as an indirect cost.

(3) Abnormal or mass severance pay will be considered on a case-by-case basis and is allowable only if approved by the cognizant Federal agency.

h. **Support of salaries and wages.** These standards regarding time distribution are in addition to the standards for payroll documentation.

(1) Charges to Federal awards for salaries and wages, whether treated as direct or indirect costs, will be based on payrolls documented in accordance with generally accepted practice of the governmental unit and approved by a responsible official(s) of the governmental unit.

(2) No further documentation is required for the salaries and wages of employees who work in a single indirect cost activity.

(3) Where employees are expected to work solely on a single Federal award or cost objective, charges for their salaries and wages will be supported by periodic certifications

b. Legal expenses required in the administration of Federal programs are allowable. Legal expenses for prosecution of claims against the Federal Government are unallowable.

15. Depreciation and use allowances.

a. Depreciation and use allowances are means of allocating the cost of fixed assets to periods benefitting from asset use. Compensation for the use of fixed assets on hand may be made through depreciation or use allowances. A combination of the two methods may not be used in connection with a single class of fixed assets (e.g., buildings, office equipment, computer equipment, etc.) except as provided in subsection g. Except for enterprise funds and internal service funds that are included as part of a State/local cost allocation plan, classes of assets shall be determined on the same basis used for the government-wide financial statements.

b. The computation of depreciation or use allowances shall be based on the acquisition cost of the assets involved. Where actual cost records have not been maintained, a reasonable estimate of the original acquisition cost may be used. The value of an asset donated to the governmental unit by an unrelated third party shall be its fair market value at the time of donation. Governmental or quasi-governmental organizations located within the same State shall not be considered unrelated third parties for this purpose.

c. The computation of depreciation or use allowances will exclude:

(1) The cost of land;

(2) Any portion of the cost of buildings and equipment borne by or donated by the Federal Government irrespective of where title was originally vested or where it presently resides; and

(3) Any portion of the cost of buildings and equipment contributed by or for the governmental unit, or a related donor organization, in satisfaction of a matching requirement.

d. Where the use allowance method is followed, the use allowance for buildings and improvements (including land improvements, such as paved parking areas, fences, and sidewalks) will be computed at an annual rate not exceeding two percent of acquisition costs. The use allowance for equipment will be computed at an annual rate not exceeding 6 2/3 percent of acquisition cost. When the use allowance method is used for buildings, the entire building must be treated as a single asset; the building's components (e.g., plumbing system, heating and air conditioning, etc.) cannot be segregated from the building's shell. The two percent limitation, however, need not be applied to equipment which is merely attached or fastened to the building but not permanently fixed to it and which is used as furnishings or decorations or for specialized purposes (e.g., dentist chairs and dental treatment units, counters, laboratory benches bolted to the floor, dishwashers, modular furniture, carpeting, etc.). Such equipment will be considered as not being permanently fixed to the building if it can be removed without the destruction of, or need for costly or extensive alterations or repairs, to the building or the equipment. Equipment that meets these criteria will be subject to the 6 2/3 percent equipment use allowance limitation.

e. Where the depreciation method is followed, the period of useful service (useful life) established in each case for usable capital assets must take into consideration such factors as type of construction, nature of the equipment used, historical usage patterns, technological developments, and the renewal and replacement policies of the governmental unit followed for the individual items or classes of assets involved. In the absence of clear evidence indicating that the expected consumption of the asset will be significantly greater in the early portions than in the later portions of its useful life, the straight line method of depreciation shall be used. Depreciation methods once used shall not be changed unless approved by the Federal cognizant or awarding agency. When the depreciation method is introduced for application to an asset previously subject to a use allowance, the annual depreciation charge thereon may not exceed the amount that would have resulted had the depreciation method been in effect from the date of acquisition of the asset. The combination of use allowances and depreciation applicable to the asset shall not exceed the total acquisition cost of the asset or fair market value at time of donation.

f. When the depreciation method is used for buildings, a building's shell may be segregated from the major component of the building (e.g., plumbing system, heating, and air conditioning system, etc.) and each major component depreciated over its estimated useful life, or the entire building (i.e., the shell and all components) may be treated as a single asset and depreciated over a single useful life.

g. A reasonable use allowance may be negotiated for any assets that are considered to be fully depreciated, after taking into consideration the amount of depreciation previously charged to the government, the estimated useful life remaining at the time of negotiation, the effect of any increased maintenance charges, decreased efficiency due to age, and any other factors pertinent to the utilization of the asset for the purpose contemplated.

h. Charges for use allowances or depreciation must be supported by adequate property records. Physical inventories must be taken at least once every two years (a statistical sampling approach is acceptable) to ensure that assets exist, and are in use. Governmental units will manage equipment in accordance with State laws and procedures. When the depreciation method is followed, depreciation records indicating the amount of depreciation taken each period must also be maintained.

16. Disbursing service. The cost of disbursing funds by the Treasurer or other designated officer is allowable.

17. Employee morale, health, and welfare costs. The costs of health or first-aid clinics and/or infirmaries, recreational facilities, employee counseling services, employee information publications, and any related expenses incurred in accordance with a governmental unit's policy are allowable. Income generated from any of these activities will be offset against expenses.

18. Entertainment. Costs of entertainment, including amusement, diversion, and social activities and any costs directly associated with such costs (such as tickets to shows or sports events, meals, lodging, rentals, transportation, and gratuities) are unallowable.

19. Equipment and other capital expenditures.

a. As used in this section the following terms have the meanings as set forth below:

(1) "Capital expenditure" means the cost of the asset including the cost to put it in place. Capital expenditure for equipment means the net invoice price of the equipment, including the cost of any modifications, attachments, accessories, or auxiliary apparatus necessary to make it usable for the purpose for which it is acquired. Ancillary charges, such as taxes, duty, protective in transit insurance, freight, and

(1) "Facilities" means land and buildings or any portion thereof, equipment individually or collectively, or any other tangible capital asset, wherever located, and whether owned or leased by the governmental unit.

(2) "Idle facilities" means completely unused facilities that are excess to the governmental unit's current needs.

(3) "Idle capacity" means the unused capacity of partially used facilities. It is the difference between (a) that which a facility could achieve under 100 percent operating time on a one-shift basis less operating interruptions resulting from time lost for repairs, setups, unsatisfactory materials, and other normal delays and (b) the extent to which the facility was actually used to meet demands during the accounting period. A multi-shift basis should be used if it can be shown that this amount of usage would normally be expected for the type of facility involved.

(4) "Cost of idle facilities or idle capacity" means costs such as maintenance, repair, housing, rent, and other related costs, e.g., insurance, interest, and depreciation or use allowances.

b. The costs of idle facilities are unallowable except to the extent that:

(1) They are necessary to meet fluctuations in workload; or

(2) Although not necessary to meet fluctuations in workload, they were necessary when acquired and are now idle because of changes in program requirements, efforts to achieve more economical operations, reorganization, termination, or other causes which could not have been reasonably foreseen. Under the exception stated in this subsection, costs of idle facilities are allowable for a reasonable period of time, ordinarily not to exceed one year, depending on the initiative taken to use, lease, or dispose of such facilities.

c. The costs of idle capacity are normal costs of doing business and are a factor in the normal fluctuations of usage or indirect cost rates from period to period. Such costs are allowable, provided that the capacity is reasonably anticipated to be necessary or was originally reasonable and is not subject to reduction or elimination by use on other Federal awards, subletting, renting, or sale, in accordance with sound business, economic, or security practices. Widespread idle capacity throughout an entire facility or among a group of assets having substantially the same function may be considered idle facilities.

25. Insurance and indemnification.

a. Costs of insurance required or approved and maintained, pursuant to the Federal award, are allowable.

b. Costs of other insurance in connection with the general conduct of activities are allowable subject to the following limitations:

(1) Types and extent and cost of coverage are in accordance with the governmental unit's policy and sound business practice.

(2) Costs of insurance or of contributions to any reserve covering the risk of loss of, or damage to, Federal Government property are unallowable except to the extent that the awarding agency has specifically required or approved such costs.

c. Actual losses which could have been covered by permissible insurance (through a self-insurance program or otherwise) are unallowable, unless expressly provided for in the Federal award or as described below. However, the Federal Government will participate in actual losses of a self insurance fund that are in excess of reserves. Costs incurred because of losses not covered under nominal deductible insurance coverage provided in keeping with sound management practice, and minor losses not covered by insurance, such as spoilage, breakage, and disappearance of small hand tools, which occur in the ordinary course of operations, are allowable.

d. Contributions to a reserve for certain self-insurance programs including workers compensation, unemployment compensation, and severance pay are allowable subject to the following provisions:

(1) The type of coverage and the extent of coverage and the rates and premiums would have been allowed had insurance (including reinsurance) been purchased to cover the risks. However, provision for known or reasonably estimated self-insured liabilities, which do not become payable for more than one year after the provision is made, shall not exceed the discounted present value of the liability. The rate used for discounting the liability must be determined by giving consideration to such factors as the governmental unit's settlement rate for those liabilities and its investment rate of return.

(2) Earnings or investment income on reserves must be credited to those reserves.

(3) Contributions to reserves must be based on sound actuarial principles using historical experience and reasonable assumptions. Reserve levels must be analyzed and updated at least biennially for each major risk being insured and take into account any reinsurance, coinsurance, etc. Reserve levels related to employee-related coverages will normally be limited to the value of claims (a) submitted and adjudicated but not paid, (b) submitted but not adjudicated, and (c) incurred but not submitted. Reserve levels in excess of the amounts based on the above must be identified and justified in the cost allocation plan or indirect cost rate proposal.

(4) Accounting records, actuarial studies, and cost allocations (or billings) must recognize any significant differences due to types of insured risk and losses generated by the various insured activities or agencies of the governmental unit. If individual departments or agencies of the governmental unit experience significantly different levels of claims for a particular risk, those differences are to be recognized by the use of separate allocations or other techniques resulting in an equitable allocation.

(5) Whenever funds are transferred from a self-insurance reserve to other accounts (e.g., general fund), refunds shall be made to the Federal Government for its share of funds transferred, including earned or imputed interest from the date of transfer.

e. Actual claims paid to or on behalf of employees or former employees for workers' compensation, unemployment compensation, severance pay, and similar employee benefits (e.g., subsection 11.f. for post retirement health benefits), are allowable in the year of payment provided (1) the governmental unit follows a consistent costing policy and (2) they are allocated as a general administrative expense to all activities of the governmental unit.

f. Insurance refunds shall be credited against insurance costs in the year the refund is received.

g. Indemnification includes securing the governmental unit against liabilities to third persons and other losses not

commencement of Federal awards, less costs related to normal wear and tear, are allowable.

38. Rental costs.

a. Subject to the limitations described in subsections b. through d. of this section, rental costs are allowable to the extent that the rates are reasonable in light of such factors as: rental costs of comparable property, if any; market conditions in the area; alternatives available; and, the type, life expectancy, condition, and value of the property leased.

b. Rental costs under sale and leaseback arrangements are allowable only up to the amount that would be allowed had the governmental unit continued to own the property.

c. Rental costs under less-than-arms-length leases are allowable only up to the amount that would be allowed had title to the property vested in the governmental unit. For this purpose, less-than-arms-length leases include, but are not limited to, those where:

(1) One party to the lease is able to control or substantially influence the actions of the other;

(2) Both parties are parts of the same governmental unit; or

(3) The governmental unit creates an authority or similar entity to acquire and lease the facilities to the governmental unit and other parties.

d. Rental costs under leases which are required to be treated as capital leases under GAAP are allowable only up to the amount that would be allowed had the governmental unit purchased the property on the date the lease agreement was executed. This amount would include expenses such as depreciation or use allowance, maintenance, and insurance. The provisions of Financial Accounting Standards Board Statement 13 shall be used to determine whether a lease is a capital lease. Interest costs related to capital leases are allowable to the extent they meet the criteria in section 26.

39. Taxes.

a. Taxes that a governmental unit is legally required to pay are allowable, except for self-assessed taxes that disproportionately affect Federal programs or changes in tax policies that disproportionately affect Federal programs. This provision becomes effective for taxes paid during the governmental unit's first fiscal year that begins on or after January 1, 1998, and applies thereafter.

b. Gasoline taxes, motor vehicle fees, and other taxes that are in effect user fees for benefits provided to the Federal Government are allowable.

c. This provision does not restrict the authority of Federal agencies to identify taxes where Federal participation is inappropriate. Where the identification of the amount of unallowable taxes would require an inordinate amount of effort, the cognizant agency may accept a reasonable approximation thereof.

40. Training. The cost of training provided for employee development is allowable.

41. Travel costs.

a. General. Travel costs are allowable for expenses for transportation, lodging, subsistence, and related items incurred by employees traveling on official business. Such costs may be charged on an actual cost basis, on a per diem or mileage basis in lieu of actual costs incurred, or on a combination of the two, provided the method used is applied to an entire trip, and results in charges consistent with those normally allowed in like circumstances in non-federally-sponsored activities.

Notwithstanding the provisions of section 23, travel costs of officials covered by that section, when specifically related to Federal awards, are allowable with the prior approval of a grantor agency.

b. Lodging and subsistence. Costs incurred by employees and officers for travel, including costs of lodging, other subsistence, and incidental expenses, shall be considered reasonable and allowable only to the extent such costs do not exceed charges normally allowed by the governmental unit in its regular operations as a result of the governmental unit's policy. In the absence of a written governmental unit policy regarding travel costs, the rates and amounts established under subchapter I of Chapter 57 of Title 5, United States Code "Travel and Subsistence Expenses; Mileage Allowances," or by the Administrator of General Services, or the President (or his designee) pursuant to any provisions of such subchapter shall be used as guidance for travel under Federal awards (41 U.S.C. 420, "Travel Expenses of Government Contractors").

c. Commercial air travel. Airfare costs in excess of the customary standard (coach or equivalent) airfare, are unallowable except when such accommodations would: require circuitous routing, require travel during unreasonable hours, excessively prolong travel, greatly increase the duration of the flight, result in increased cost that would offset transportation savings, or offer accommodations not reasonably adequate for the medical needs of the traveler. Where a governmental unit can reasonably demonstrate to the awarding agency either the nonavailability of customary standard airfare or Federal Government contract airfare for individual trips or, on an overall basis, that it is the governmental unit's practice to make routine use of such airfare, specific determinations of nonavailability will generally not be questioned by the Federal Government, unless a pattern of avoidance is detected. However, in order for airfare costs in excess of the customary standard commercial airfare to be allowable, e.g., use of first-class airfare, the governmental unit must justify and document on a case-by-case basis the applicable condition(s) set forth above.

d. Air travel by other than commercial carrier. Cost of travel by governmental unit-owned, -leased, or -chartered aircraft, as used in this section, includes the cost of lease, charter, operation (including personnel costs), maintenance, depreciation, interest, insurance, and other related costs. Costs of travel via governmental unit-owned, -leased, or -chartered aircraft are unallowable to the extent they exceed the cost of allowable commercial air travel, as provided for in subsection c.

42. Underrecovery of costs under Federal agreements. Any excess costs over the Federal contribution under one award agreement are unallowable under other award agreements.

show operations including the central service activities of the State/local government whether or not they are shown as benefiting from central service functions; a copy of the Comprehensive Annual Financial Report (or a copy of the Executive Budget if budgeted costs are being proposed) to support the allowable costs of each central service activity included in the plan; and, a certification (see subsection 4.) that the plan was prepared in accordance with this Circular, contains only allowable costs, and was prepared in a manner that treated similar costs consistently among the various Federal awards and between Federal and non-Federal awards/activities.

2. **Allocated central services.** For each allocated central service, the plan must also include the following: a brief description of the service*, an identification of the unit rendering the service and the operating agencies receiving the service, the items of expense included in the cost of the service, the method used to distribute the cost of the service to benefitted agencies, and a summary schedule showing the allocation of each service to the specific benefitted agencies. If any self-insurance funds or fringe benefits costs are treated as allocated (rather than billed) central services, documentation discussed in subsections 3.b. and c. shall also be included.

3. **Billed services.**

a. **General.** The information described below shall be provided for all billed central services, including internal service funds, self-insurance funds, and fringe benefit funds.

b. **Internal service funds.**

(1) For each internal service fund or similar activity with an operating budget of $5 million or more, the plan shall include: a brief description of each service; a balance sheet for each fund based on individual accounts contained in the governmental unit's accounting system; a revenue/expenses statement, with revenues broken out by source, e.g., regular billings, interest earned, etc.; a listing of all non-operating transfers (as defined by Generally Accepted Accounting Principles (GAAP)) into and out of the fund; a description of the procedures (methodology) used to charge the costs of each service to users, including how billing rates are determined; a schedule of current rates; and, a schedule comparing total revenues (including imputed revenues) generated by the service to the allowable costs of the service, as determined under this Circular, with an explanation of how variances will be handled.

(2) Revenues shall consist of all revenues generated by the service, including unbilled and uncollected revenues. If some users were not billed for the services (or were not billed at the full rate for that class of users), a schedule showing the full imputed revenues associated with these users shall be provided. Expenses shall be broken out by object cost categories (e.g., salaries, supplies, etc.).

c. **Self-insurance funds.** For each self-insurance fund, the plan shall include: the fund balance sheet; a statement of revenue and expenses including a summary of billings and claims paid by agency; a listing of all non-operating transfers into and out of the fund; the type(s) of risk(s) covered by the fund (e.g., automobile liability, workers' compensation, etc.); an explanation of how the level of fund contributions are determined, including a copy of the current actuarial report (with the actuarial assumptions used) if the contributions are determined on an actuarial basis; and, a description of the procedures used to charge or allocate fund contributions to benefitted activities. Reserve levels in excess of claims (1) submitted and adjudicated but not paid, (2) submitted but not adjudicated, and (3) incurred but not submitted must be identified and explained.

d. **Fringe benefits.** For fringe benefit costs, the plan shall include: a listing of fringe benefits provided to covered employees, and the overall annual cost of each type of benefit; current fringe benefit policies; and procedures used to charge or allocate the costs of the benefits to benefitted activities. In addition, for pension and post-retirement health insurance plans, the following information shall be provided: the governmental unit's funding policies, e.g., legislative bills, trust agreements, or State-mandated contribution rules, if different from actuarially determined rates; the pension plan's costs accrued for the year; the amount funded, and date(s) of funding; a copy of the current actuarial report (including the actuarial assumptions); the plan trustee's report; and, a schedule from the activity showing the value of the interest cost associated with late funding.

4. **Required certification.** Each central service cost allocation plan will be accompanied by a certification in the following form:

CERTIFICATE OF COST ALLOCATION PLAN

This is to certify that I have reviewed the cost allocation plan submitted herewith and to the best of my knowledge and belief:

(1) All costs included in this proposal [identify date] to establish cost allocations or billings for [identify period covered by plan] are allowable in accordance with the requirements of OMB Circular A-87, "Cost Principles for State and Local Governments," and the Federal award(s) to which they apply. Unallowable costs have been adjusted for in allocating costs as indicated in the cost allocation plan.

(2) All costs included in this proposal are properly allocable to Federal awards on the basis of a beneficial or causal relationship between the expenses incurred and the awards to which they are allocated in accordance with applicable requirements. Further, the same costs that have been treated as indirect costs have not been claimed as direct costs. Similar types of costs have been accounted for consistently.

I declare that the foregoing is true and correct.

Governmental Unit: _____

Signature: _____

Name of Official: _____

Title: _____

Date of Execution: _____

F. **Negotiation and Approval of Central Service Plans.**

1. All proposed central service cost allocation plans that are required to be submitted will be reviewed, negotiated, and approved by the Federal cognizant agency on a timely basis. The cognizant agency will review the proposal within six months of receipt of the proposal and either negotiate/approve the proposal or advise the governmental unit of the additional documentation needed to support/evaluate the proposed plan or the changes required to make the proposal acceptable. Once an agreement with the governmental unit has been reached, the

administering or supervising the administration of one or more public assistance programs operated by the State as identified in Subpart E of 45 CFR Part 95. For the purpose of this Attachment, these programs include all programs administered by the State public assistance agency.

2. "State public assistance agency costs" means all costs incurred by, or allocable to, the State public assistance agency, except expenditures for financial assistance, medical vendor payments, food stamps, and payments for services and goods provided directly to program recipients.

C. Policy. State public assistance agencies will develop, document and implement, and the Federal Government will review, negotiate, and approve, public assistance cost allocation plans in accordance with Subpart E of 45 CFR Part 95. The plan will include all programs administered by the State public assistance agency. Where a letter of approval or disapproval is transmitted to a State public assistance agency in accordance with Subpart E, the letter will apply to all Federal agencies and programs. The remaining sections of this Attachment (except for the requirement for certification) summarize the provisions of Subpart E of 45 CFR Part 95.

D. Submission, Documentation, and Approval of Public Assistance Cost Allocation Plans.

1. State public assistance agencies are required to promptly submit amendments to the cost allocation plan to HHS for review and approval.

2. Under the coordination process outlined in subsection E, affected Federal agencies will review all new plans and plan amendments and provide comments, as appropriate, to HHS. The effective date of the plan or plan amendment will be the first day of the quarter following the submission of the plan or amendment, unless another date is specifically approved by HHS. HHS, as the cognizant agency acting on behalf of all affected Federal agencies, will, as necessary, conduct negotiations with the State public assistance agency and will inform the State agency of the action taken on the plan or plan amendment.

E. Review of Implementation of Approved Plans.

1. Since public assistance cost allocation plans are of a narrative nature, the review during the plan approval process consists of evaluating the appropriateness of the proposed groupings of costs (cost centers) and the related allocation bases. As such, the Federal Government needs some assurance that the cost allocation plan has been implemented as approved. This is accomplished by reviews by the funding agencies, single audits, or audits conducted by the cognizant audit agency.

2. Where inappropriate charges affecting more than one funding agency are identified, the cognizant HHS cost negotiation office will be advised and will take the lead in resolving the issue(s) as provided for in Subpart E of 45 CFR Part 95.

3. If a dispute arises in the negotiation of a plan or from a disallowance involving two or more funding agencies, the dispute shall be resolved in accordance with the appeals procedures set out in 45 CFR Part 75. Disputes involving only one funding agency will be resolved in accordance with the funding agency's appeal process.

4. To the extent that problems are encountered among the Federal agencies and/or governmental units in connection with the negotiation and approval process, the Office of Management and Budget will lend assistance, as required, to resolve such problems in a timely manner.

F. Unallowable Costs. Claims developed under approved cost allocation plans will be based on allowable costs as identified in this Circular. Where unallowable costs have been claimed and reimbursed, they will be refunded to the program that reimbursed the unallowable cost using one of the following methods: (a) a cash refund, (b) offset to a subsequent claim, or (c) credits to the amounts charged to individual awards.

Attachment E

STATE AND LOCAL INDIRECT COST RATE PROPOSALS

TABLE OF CONTENTS

A. General
B. Definitions
   1. Indirect cost rate proposal
   2. Indirect cost rate
   3. Indirect cost pool
   4. Base
   5. Predetermined rate
   6. Fixed rate
   7. Provisional rate
   8. Final rate
   9. Base period
C. Allocation of Indirect Costs and Determination of Indirect Cost Rates
   1. General
   2. Simplified method
   3. Multiple allocation base method
   4. Special indirect cost rates
D. Submission and Documentation of Proposals
   1. Submission of indirect cost rate proposals
   2. Documentation of proposals
   3. Required certification
E. Negotiation and Approval of Rates
F. Other Policies
   1. Fringe benefit rates
   2. Billed services provided by the grantee agency
   3. Indirect cost allocations not using rates
   4. Appeals
   5. Collections of unallowable costs and erroneous payments
   6. OMB assistance

A. General.

1. Indirect costs are those that have been incurred for common or joint purposes. These costs benefit more than one cost objective and cannot be readily identified with a particular final cost objective without effort disproportionate to the results achieved. After direct costs have been determined and assigned directly to Federal awards and other activities as appropriate, indirect costs are those remaining to be allocated to benefitted cost objectives. A cost may not be allocated to a Federal award as an indirect cost if any other cost incurred for the same purpose, in like circumstances, has been assigned to a Federal award as a direct cost.

2. Indirect costs include (a) the indirect costs originating in each department or agency of the governmental unit carrying out Federal awards and (b) the costs of central governmental services distributed through the central service

allocable.

c. The distribution base may be (1) total direct costs (excluding capital expenditures and other distorting items, such as pass-through funds, major subcontracts, etc.), (2) direct salaries and wages, or (3) another base which results in an equitable distribution.

3. Multiple allocation base method.

a. Where a grantee agency's indirect costs benefit its major functions in varying degrees, such costs shall be accumulated into separate cost groupings. Each grouping shall then be allocated individually to benefitted functions by means of a base which best measures the relative benefits.

b. The cost groupings should be established so as to permit the allocation of each grouping on the basis of benefits provided to the major functions. Each grouping should constitute a pool of expenses that are of like character in terms of the functions they benefit and in terms of the allocation base which best measures the relative benefits provided to each function. The number of separate groupings should be held within practical limits, taking into consideration the materiality of the amounts involved and the degree of precision needed.

c. Actual conditions must be taken into account in selecting the base to be used in allocating the expenses in each grouping to benefitted functions. When an allocation can be made by assignment of a cost grouping directly to the function benefitted, the allocation shall be made in that manner. When the expenses in a grouping are more general in nature, the allocation should be made through the use of a selected base which produces results that are equitable to both the Federal Government and the governmental unit. In general, any cost element or related factor associated with the governmental unit's activities is potentially adaptable for use as an allocation base provided that: (1) it can readily be expressed in terms of dollars or other quantitative measures (total direct costs, direct salaries and wages, staff hours applied, square feet used, hours of usage, number of documents processed, population served, and the like), and (2) it is common to the benefitted functions during the base period.

d. Except where a special indirect cost rate(s) is required in accordance with subsection 4, the separate groupings of indirect costs allocated to each major function shall be aggregated and treated as a common pool for that function. The costs in the common pool shall then be distributed to individual Federal awards included in that function by use of a single indirect cost rate.

e. The distribution base used in computing the indirect cost rate for each function may be (1) total direct costs (excluding capital expenditures and other distorting items such as pass-through funds, major subcontracts, etc.), (2) direct salaries and wages, or (3) another base which results in an equitable distribution. An indirect cost rate should be developed for each separate indirect cost pool developed. The rate in each case should be stated as the percentage relationship between the particular indirect cost pool and the distribution base identified with that pool.

4. Special indirect cost rates.

a. In some instances, a single indirect cost rate for all activities of a grantee department or agency or for each major function of the agency may not be appropriate. It may not take into account those different factors which may substantially affect the indirect costs applicable to a particular program or group of programs. The factors may include the physical location of the work, the level of administrative support required, the nature of the facilities or other resources employed, the organizational arrangements used, or any combination thereof. When a particular award is carried out in an environment which appears to generate a significantly different level of indirect costs, provisions should be made for a separate indirect cost pool applicable to that award. The separate indirect cost pool should be developed during the course of the regular allocation process, and the separate indirect cost rate resulting therefrom should be used, provided that: (1) the rate differs significantly from the rate which would have been developed under subsections 2. and 3., and (2) the award to which the rate would apply is material in amount.

b. Although this Circular adopts the concept of the full allocation of indirect costs, there are some Federal statutes which restrict the reimbursement of certain indirect costs. Where such restrictions exist, it may be necessary to develop a special rate for the affected award. Where a "restricted rate" is required, the procedure for developing a non-restricted rate will be used except for the additional step of the elimination from the indirect cost pool those costs for which the law prohibits reimbursement.

D. Submission and Documentation of Proposals.

1. Submission of indirect cost rate proposals.

a. All departments or agencies of the governmental unit desiring to claim indirect costs under Federal awards must prepare an indirect cost rate proposal and related documentation to support those costs. The proposal and related documentation must be retained for audit in accordance with the records retention requirements contained in the Common Rule.

b. A governmental unit for which a cognizant agency assignment has been specifically designated must submit its indirect cost rate proposal to its cognizant agency. The Office of Management and Budget (OMB) will periodically publish lists of governmental units identifying the appropriate Federal cognizant agencies. The cognizant agency for all governmental units or agencies not identified by OMB will be determined based on the Federal agency providing the largest amount of Federal funds. In these cases, a governmental unit must develop an indirect cost proposal in accordance with the requirements of this Circular and maintain the proposal and related supporting documentation for audit. These governmental units are not required to submit their proposals unless they are specifically requested to do so by the cognizant agency. Where a local government only receives funds as a sub-recipient, the primary recipient will be responsible for negotiating and/or monitoring the sub-recipient's plan.

c. Each Indian tribal government desiring reimbursement of indirect costs must submit its indirect cost proposal to the Department of the Interior (its cognizant Federal agency).

d. Indirect cost proposals must be developed (and, when required, submitted) within six months after the close of the governmental unit's fiscal year, unless an exception is approved by the cognizant Federal agency. If the proposed central service cost allocation plan for the same period has not been approved by that time, the indirect cost proposal may be prepared including an amount for central services that is based on the latest federally-approved central service cost allocation plan. The difference between these central service amounts and the amounts ultimately approved will be compensated for by an adjustment in a subsequent period.

allocation methodology should be developed, documented, maintained for audit, or submitted, as appropriate, to the cognizant agency for review, negotiation, and approval.

4. **Appeals.** If a dispute arises in a negotiation of an indirect cost rate (or other rate) between the cognizant agency and the governmental unit, the dispute shall be resolved in accordance with the appeals procedures of the cognizant agency.

5. **Collection of unallowable costs and erroneous payments.** Costs specifically identified as unallowable and charged to Federal awards either directly or indirectly will be refunded (including interest chargeable in accordance with applicable Federal agency regulations).

6. **OMB assistance.** To the extent that problems are encountered among the Federal agencies and/or governmental units in connection with the negotiation and approval process, OMB will lend assistance, as required, to resolve such problems in a timely manner.

FORM CD-450
(REV. 10-93)
DAO 203-29.

U.S. DEPARTMENT OF COMMERCE

OA321/RTL/RTL

☐ GRANT ☒ COOPERATIVE AGREEMENT

FINANCIAL ASSISTANCE AWARD

RECIPIENT NAME Louisiana Department of Natural Resources	ACCOUNTING CODE 9FKH300/RL1AA100/4119
STREET ADDRESS P.O. Box 94396	AWARD NUMBER NA97FZ0485
CITY, STATE, ZIP CODE BATON ROUGE, LOUISIANA 70804	FEDERAL SHARE OF COST $ 680,000
AWARD PERIOD SEPTEMBER 1, 1999 through AUGUST 31, 2000	RECIPIENT SHARE OF COST $ 120,000
DEPARTMENT OF COMMERCE OPERATING UNIT NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	TOTAL ESTIMATED COST $ 800,000

AUTHORITY
16 USC 3951 et seq
11.463 HABITAT CONSERVATION

PROJECT TITLE
COASTAL WETLANDS PLANNING, PROTECTION, AND RESTORATION ACT (PL 101-646) POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECTS, PHASE III:MOBIL CANAL...

This Award approved by the Grants Officer is issued in triplicate and constitutes an obligation of Federal funding. By signing the three documents, the Recipient agrees to comply with the Award provisions checked below and attached. Upon acceptance by the Recipient, two signed Award documents shall be returned to the Grants Officer and the third document shall be retained by the Recipient. If not signed and returned by the Recipient within 15 days of receipt, the Grants Officer may declare this Award null and void.

☒ Department of Commerce Financial Assistance Standard Terms and Conditions
☒ Special Award Conditions (ATTACHMENT B [X] ADMINISTRATIVE [X] PROGRAMMATIC) (ATTACHMENT C)
☒ Line Item Budget (ATTACHMENT A)
☐ OMB Circular A-21, Cost Principles for Educational Institutions
☒ OMB Circular A-87, Cost Principles for State and Local Governments
☐ OMB Circular A-110, Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Nonprofit Organizations Uniform Administrative Requirements
☐ OMB Circular A-122, Cost Principles for Nonprofit Organizations
☒ 15 CFR Part 24, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments
☐ 15 CFR Part 29a, Audit Requirements for State and Local Governments
☐ 15 CFR Part 29b, Audit Requirements for Institutions of Higher Education and Other Nonprofit Organizations
☐ 48 CFR Part 31, Contract Cost Principles and Procedures
☒ Other(s): OMB Circular A-133

09/28/99 Entered P.F.

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER Stephen Orens	TITLE NOAA GRANTS OFFICER	DATE
TYPED NAME AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL Jack C. Caldwell	TITLE Secretary	DATE 9/21/99

RECIPIENT COPY - RETAIN

BUDGET INFORMATION- Non Construction Programs

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non - Federal (d)	Federal (e)	Non - Federal (f)	Total (g)
1. Point Au Fer Island		$	$	$680,000	$120,000	$800,000
2.						
3.						
4.						
5. TOTALS		$	$	$680,000	$120,000	$800,000

SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total (5)
	(1) Federal	(2) State	(3)	(4)	
a. Personnel	$12,242.50	$2,160.50		$	$14,403.00
b. Fringe Benefits	$2,461.00	$434.50			$2,895.50
c. Travel	$1,275.00	$225.00			$1,500.00
d. Equipment	$2,550.00	$450.00			$3,000.00
e. Supplies	$425.00	$75.00			$500.00
f. Contractual - "Surveying"	$14,450.00	$2,550.00			$17,000
g. Construction	$640,900.00	$113,100.00			$754,000
h. Other					
i. Total Direct Charges (sum of 6a - 6h)	$674,303.50	$118,995.00			$793,298.50
j. Indirect Charges	$5,696.50	$1,005.00			$6,701.50
k. TOTALS (sum of 6i and 6j)	$680,000	$120,000			$800,000
7. Program Income	$	$	$	$	$

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Standard From 424A (4-88)
Prescribed by OMB C' A-102

ATTACHMENT A
NOAA AWARD NO. NA97FZ0485 PAGE 1 OF 2

OMB Approved No. 0348-0041

BUDGET INFORMATION— Construction Programs

NOTE: Certain Federal Assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs not Allowable for Participation	c. Total Allowable Costs (Column a-b)
1. Administrative and legal expenses (personnel/fringe benefits, travel, and indirect charges)	$25,500.00	$0.00	$25,500.00
2. Land, structures, right-of-ways, appraisals, etc.	$0.00	$0.00	$0.00
3. Relocation expenses and payments	$0.00	$0.00	$0.00
4. Architectural and engineering fees	$0.00	$0.00	$0.00
5. Other architectural and engineering fees	$0.00	$0.00	$0.00
6. Project inspection fees	$0.00	$0.00	$0.00
7. Site work	$0.00	$0.00	$0.00
8. Demolition and removal	$0.00	$0.00	$0.00
9. Construction	$725,000.00	$0.00	$725,000.00
10. Equipment	$3,000.00	$0.00	$3,000.00
11. Miscellaneous - Supplies	$500.00	$0.00	$500.00
12. SUBTOTAL	$0.00	$0.00	$0.00
13. Contingencies (sum of lines 1 - 11)	$0.00	$0.00	$0.00
14. SUBTOTAL	$0.00	$0.00	$0.00
15. Project (program) income	$0.00	$0.00	$0.00
16. TOTAL PROJECT COSTS (subtract #15 from #14)	$754,000.00	$0.00	$754,000.00

FEDERAL FUNDING

17. Federal assistance requested, calculate as follows: Enter eligible costs from line 16c Multiply X 85 % (Consult Federal agency for Federal percentage share). Enter the resulting Federal share.	STATE $113,100.00 FEDERAL $640,900.00

Standard Form 424C

ATTACHMENT A
NOAA AWARD NO. NA97FZ0485, PAGE 2 OF 2

NOAA ADMINISTRATIVE SPECIAL AWARD CONDITIONS

1. The Project Period for this award is September 1, 1999, through August 31, 2000.

2. The Budget Period for this award is September 1, 1999, through August 31, 2000.

3. Since this award requires the Recipient to provide $120,000 (15%) in project-related matching costs from non-Federal sources, the Recipient must maintain in its official accounting records an accounting for $800,000.

4. Award payments shall be made through the NOAA Financial Assistance Disbursement System (FADS). In accordance with 31 CFR 205 (Treasury Circular 1075 "1977"), the Recipient shall: (1) maintain procedures for fund control to ensure that drawdowns are made only when actually needed for its immediate disbursement needs; (2) comply with timely reporting of cash disbursements and balances as required. If the Recipient does not adhere to these provisions, NOAA may revoke the unobligated portion of the federal award funds. Instructions for use of the FADS are attached.

   FADS is an automated system that allows Recipients to request funds using a touch-tone telephone. FADS will record Recipients' requests and process them automatically, subject to review by NOAA officials. Once approved, funds will be directly deposited in the Recipient organization's bank account.

   The access code for this award is 97140.

5. Recipient point of contact information:

   Karen Lewis
   225-342-4513

6. Federal Program Officer's name and contact information:

   Erik Zobrist
   301-713-0174
   [Internet: Erik.Zobrist@noaa.gov]

7. Grants Office contact information:

Janet A. Johnson, Grants Management Specialist
U.S. Department of Commerce, NOAA
Grants Management Division
1325 East-West Highway
SSMC2 - OFA52 - Room 9356
Silver Spring, Maryland 20910-3283
301-713-0942 or 301-713-0922
fax number: 301-713-0947

8. This award number NA97FZ0485, to the Louisiana Department Of Natural Resources supports the work described in the Recipient's proposal entitled "COASTAL WETLANDS PLANNING, PROTECTION, AND RESTORATION ACT (PL 101-646) POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT, PHASE III: MOBIL CANAL EXTENSION" dated July 16, 1999, and revision by letter dated August 20, 1999 which are incorporated into the award by reference. Where the terms of the award and proposal differ, the terms of the award shall prevail.

9. All financial and progress reports shall be submitted in triplicate (one original and two copies). **Financial Reports** are to be submitted to the NOAA Grants Officer and **Performance (technical) reports** to the NOAA Program Officer.

Notwithstanding Department of Commerce Financial Assistance Standard Term and Condition B.01a, the Recipient **may** submit **performance (technical) reports** on a different frequency.

All reports will be submitted for the periods shown below.

SCHEDULE OF REPORTING REQUIREMENTS

Financial Status Reports (SF-269) - (semi-annual) *

April 1 - September 30 due October 30
October 1 - March 31 due April 30
Final report due 90 days after award expiration

* (If the award start date begins any time other than April 1 or October 1, then the first report would be a portion of the reporting period in which the award starts.)

Federal Cash Transaction Reports (SF-272) - (semi-annual) *

April 1 - September 30 due October 30
October 1 - March 31 due April 30
Final report due 90 days after award expiration

* (If the award start date begins any time other than April 1 or October 1, then the first report would be a portion of the reporting period in which the award starts.)

Performance Reports - (semi-annual)

Semi-annual Performance Reports are required no later than 30 days following the end of each 6-month period from the start date of the award. The final report is due 90 days after the award expiration.

10. The substantial involvement by the Federal government will be as follows:

The National Marine Fisheries Service (NMFS) will provide guidance for the applicant's development of plans, and implementation of the restoration project. NMFS will review and approve all planning and construction details for the project. Quarterly budget meetings will be conducted by NMFS. Quarterly reviews of the State's progress against the goals and objectives of the cooperative agreement will be made by NMFS.

11. Escrow funds will not be treated as a Federal cost to the cooperative agreement when preparing financial reports.

12. Following applies where applicable:

The Recipient agrees that, for the expected useful life of the facility assisted with this award, the project will be properly and efficiently administered, operated and maintained, for the purpose authorized by this award and in accordance with terms, conditions, requirements and provisions of the award. If the Government determines at any time during the useful life of the facility, that the project is not being properly and efficiently administered, operated and maintained, the Government will have a right to cancel the Federal Assistance portion of this award for any additional expenses related to operation and maintenance costs of the award and pursue any other remedies allowed by law.

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
PROGRAMMATIC SPECIAL AWARD CONDITIONS

1. Task I deliverables must be received, reviewed and approved by the Coastal Wetlands Planning, Protection and Restoration Act Program Office (National Marine Fisheries Service) from the State before federal funds can be expended for use in the implementation of Task II of the project. Task I deliverables are specified in the cooperative agreement as: 1) federal and state project permits, 2) final engineering and design report, 3) land owner notification, 4) project report will include detailed budgetary and cost information for the construction phase of this project. The State must also have completed the environmental permitting of the project with all applicable Federal and State agencies.

2. At the end of Task I of this agreement, the State and the National Marine Fisheries Service must seek the concurrence of the Coastal Wetlands Planning, Protection and Restoration Act Task Force before funds can be expended for use in implementation of the construction portion of Task II of the project.

NOAA ADMINISTRATIVE STANDARD AWARD CONDITIONS

A. The Recipient shall submit all refund checks to the Department of Commerce (DoC) accounting office identified below. All checks must contain the name of the DoC funding agency, award number, and no more than a two-word description to identify reason for refund.

U.S. Department of Commerce/NOAA
Finance Division, OFA232
20020 Century Boulevard
Caller Service #7025
Germantown, MD 20874
301-427-2034

B. Program income earned during the award period shall be retained by the Recipient and shall be added to funds committed to the award and used for the purposes and under the conditions applicable to the use of the award funds.

C. The Recipient is prohibited from expending Federal or non-Federal grant funds, or in-kind goods or services, for purposes of providing transportation, travel, and any other expenses for any Federal employee.

D. If applicable, the Recipient must request prior approval from NOAA to purchase equipment costing in excess of $5,000 per unit and having a useful life of more than one year. This condition applies to equipment not specifically identified and justified in the Recipient's proposal and approved budget.

E. If applicable, cost sharing is to be calculated on the basis of the total financial award to the Recipient. The Government does not recognize funds made in overmatch subsequent to making an award.

F. If the Recipient has waived any portion of the approved indirect cost rate, no claim shall be made against this award at a later date.

G. Notwithstanding Department of Commerce Financial Assistance Standard Terms and Conditions A.04.c, the Recipient may transfer funds between direct costs and indirect costs if all of the following conditions apply:

(1) If a transfer of funds among direct cost categories in accordance with Department of Commerce Financial Assistance Standard Term and

ATTACHMENT II

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

MEMORANDUM OF AGREEMENT

M.J. "MIKE" FOSTER, JR.
GOVERNOR

State of Louisiana

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

March 9,1999

MEMORANDUM

TO: Randy Hanchey, Assistant Secretary
Diane Smith, Assistant Administrator
Gerry Duszynski, Assistant Administrator
Rachel Wilson Sweeney, Special Projects Coordinator
Carrol Clark, Engineer Manager
George Boddie, Engineer Manager
Van Cook, Engineer Manager
Greg Steyer, Program Manager
Steve Underwood, Program Manager
Phil Pittman, Program Manager
Helen Hoffpauir, Real Estate Manager

FROM: Chet Fruge, Program Manager CF

RE: **MOA Between the COE, DNR and NMFS, Long Term O,M & M CWPPRA Projects**

Attached is the MOA between the COE, DNR and NMFS for long term reimbursement to DNR for expenditures related to O,M & M of CWPPRA Projects. Item III of the MOA provides that the DNR will submit invoices for expenditures to the NMFS for certification and approval. The NMFS will forward the approved invoices to the COE which will make direct payments to the DNR.

Carrol, George, and Van please forward copies to all project managers for NMFS CWPPRA projects.

CF

cc: Verlie Wims, OMF
Karen Lewis, Contracts and Grants
Lana Humphries, OMF

Coastal Restoration Division
P.O. Box 94396 . Baton Rouge, Louisiana 70804-9396 . Telephone (225) 342-7308 . Fax (225) 342-9417

A Memorandum of Agreement
between
National Oceanic and Atmospheric Administration,
The National Marine Fisheries Service;
The U.S. Army Corps of Engineers, New Orleans District;
and
The State of Louisiana, Department of Natural Resources;
regarding Monitoring, Operations and Maintenance billing under
The Coastal Wetlands Planning, Protection, and Restoration Act.

I. Parties and Scope

This Memorandum of Agreement (MOA) between the National Marine Fisheries Service (NMFS), the U.S. Army Corps of Engineers (USACE), and the State of Louisiana Department of Natural Resources (LDNR) recognizes these three parties' cooperation and participation in the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA), *(16 U.S.C. 777c, §§ 3951-3956)*. As members of the Task Force, established by CWPPRA, the agencies that are parties to this MOA are responsible for among other things, the long-term monitoring of certain coastal wetland restoration project areas and reference sites associated with such projects, as well as the long-term operation, maintenance, repair and rehabilitation (O&M) of authorized project features, where applicable.

This MOA describes the financial instrument and processes to be used to finance long-term monitoring and O&M activities which are outside of the scope of NMFS' Cooperative Agreement and Joint Funding Agreement mechanisms.

II. Purpose

The types of funding instruments currently used by NMFS are not suitable for activities exceeding three to five years (e.g., Cooperative Agreements) unless the agreement is cost shared

equitably (e.g., Joint Funding Agreements).
Monitoring, as well as O&M activities are generally scheduled to last for 20 year periods, except for demonstration projects. Federal/non-federal cost-shares for these activities within CWPPRA are at ratios of 85/15% or 90/10%. Therefore, neither cooperative agreements nor joint funding agreements are appropriate for monitoring or O&M activities.

III. Alternative Funding Instrument

There is an alternative funding instrument, employed between USACE and other Federal agencies for similar activities called a "Government Purchase" Military Interdepartmental Purchase Request (MIPR). A Government Purchase MIPR can be used for long-term activities without cost-shares percentage limitation. It differs from conventional MIPRs in that the sponsoring Federal agency receives no direct reimbursable funding. A Government Purchase MIPR stipulates that invoices for monitoring or O&M activities performed by the state agency (LDNR) will be submitted by the state agency to the sponsoring Federal agency (NMFS) for certification. Approved invoices will be forwarded by NMFS to USACE. The USACE will make direct payments to the State.

IV. Actions of the Parties

Within the CWPPRA program, NMFS, USACE and LDNR will work cooperatively in the implementation of the overall CWPPRA program.

As Chair of the CWPPRA Task Force, USACE is responsible for the administration and disposition of funding for the CWPPRA Program. USACE will continue to provide reimbursable MIPRs to NMFS for short-term activities such as Engineering and Design, or Construction which can be awarded to LDNR through the current cooperative agreement process. USACE will provide "Government Purchase" MIPRs to NMFS for long-term activities when requested

by NMFS, as appropriate.

As a sponsoring Federal agency, NMFS is responsible for implementing a number of wetland restoration projects approved for funding by the Task Force. Within all projects sponsored by NMFS, it is NMFS' and LDNR's joint responsibility to administer, short-term activities such as engineering and design and construction; and long-term activities such as monitoring, and O&M of authorized project features. To carry out long-term responsibilities, NMFS will request from the Chair of the Task Force, USACE, funding in the form of a Government Purchase MIPR. Using this funding instrument NMFS will certify invoices from LDNR as approved for payment, and forward the approved invoices to USACE for payment directly to LDNR, subject to the availability of funds and satisfactory performance.

LDNR, as the non-federal partner, will conduct long-term monitoring, and O&M activities of authorized project features. LDNR will submit invoices to NMFS on a regular basis after monitoring and O&M work is conducted. Invoices will clearly specify whether the bill is for monitoring activities, or O&M activities.

Upon re-authorization of CWPPRA, or any other legislative or administrative changes to the program, this MOA may be amended, modified or terminated as mutually agreed upon by the signatory parties.

The undersigned individuals attest that they are authorized to bind their respective agencies to this MOA. On behalf of their respective agencies, they have signed this MOA on the day and year appearing with the signature of each authorized representative.

U.S. ARMY CORPS OF ENGINEERS

William L Conner
Colonel William Conner
District Engineer
U. S. Army Corps of Engineers
Department of Defense

10 Feb 99
Date

NATIONAL MARINE FISHERIES SERVICE

Rolland A. Schmitten
Assistant Administrator
National Marine Fisheries Service
National Oceanic and Atmospheric Administration
Department of Commerce

SEP 21 1998
Date

STATE OF LOUISIANA, DEPARTMENT OF NATURAL RESOURCES

Jack C. Caldwell
Secretary
Department of Natural Resources
State of Louisiana

2-3-99
Date

Mary White, CRD
Carrie Schmidt, CRD

Attachment

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

REPLY TO
ATTENTION OF:

March 1, 1999

Planning, Programs and Project
Management Division
CWPPRA Branch

Mr. Tim Osborn
National Marine Fisheries Service
NOAA/NMFS Restoration Center (F/HP5)
Office of Habitat Conservation
1315 East-West HIghway
Silver Spring, Maryland 20910

Dear Mr. Osborn:

Enclosed for your records is a signed original of the Memorandum of Agreement between the National Marine Fisheries Service, the Louisiana Department of Natural Resources, and the U.S. Army Corps of Engineers.

Sincerely,

Steve Mathies
Chief, CWPPRA Branch

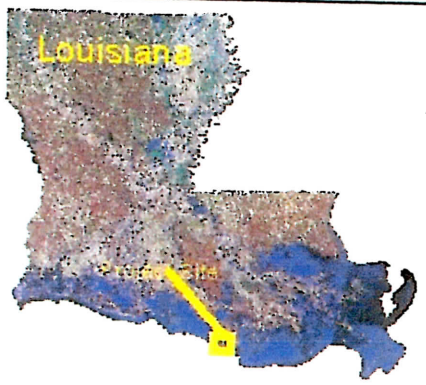
Encl

ATTACHMENT III

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

PROJECT FEATURES





N

Data Source:
Louisiana Dept. of Natural Resources
Coastal Restoration Division
Biological Monitoring Section
Thibodaux Field Office

1998 DOQQ's

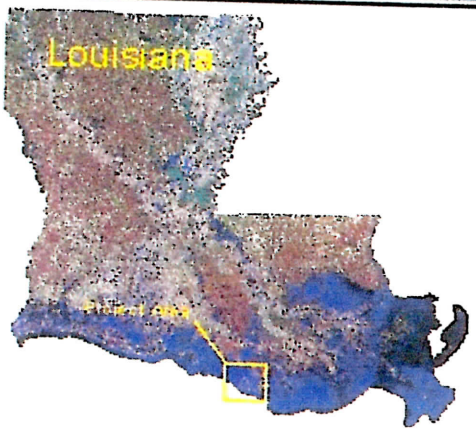
Date: May 24, 2001
Map ID: 2001-TFO-003

0.4 0 0.4 0.8 Miles

0.8 0 0.8 1.6 Kilometers

- Phase1 Boundary
- Creosote Timber Plug
- Shell plug
- Petraflex Mats





N

Data Source:
Louisiana Dept. of Natural Resources
Coastal Restoration Division
Biological Monitoring Section
Thibodaux Field Office

1998 DOQQ's

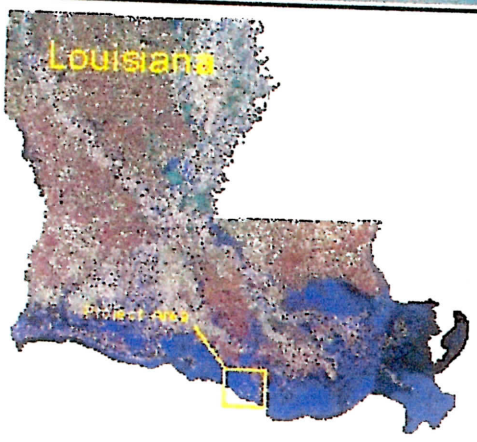
Date: May 24, 2001
Map ID: 2001-TFO-004

1 0 1 2 Miles

1 0 1 2 Kilometers

Ph. II and III Boundary
Rock wall
Reference Boundary





N

Data Source:
Louisiana Dept. of Natural Resources
Coastal Restoration Division
Biological Monitoring Section
Thibodaux Field Office

1998 DOQQ's

Date: May 24, 2001
Map ID: 2001-TFO-013

2 0 2 4 Miles

2 0 2 4 6 Kilometers

Project Boundary

Reference Boundary

ATTACHMENT IV

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

FINAL REPORT

FINAL REPORT

LAKE CHAPEAU SEDIMENT INPUT/HYDROLOGIC RESTORATION PROJECT AND POINT AU FER ISLAND/HYDROLOGIC RESTORATION PROJECT

DNR CONTRACT NUMBER: 2503-00-32

JUNE 2000

Prepared by:
Picciola & Associates, Inc.
103 Picciola Parkway
Cut Off, LA 70345

TABLE OF CONTENTS

1. Introduction 1
2. Overview 1
3. Verification of Project Completion 3
4. Total Quantities of Materials Installed 4
5. Conformance to Plans and Specifications 6
6. Project Deviations 7
7. Conclusion 9
8. Table 1 2
9. Table 2 5
10. Table 3 7
11. Table 4 8
12. Project Pictures

1. Introduction

The Lake Chapeau Sediment Input and Hydrologic Restoration Project, Breach Site No. 3 Repairs (TE-26) and Point Au Fer Island Hydrologic Restoration Project, Phase III – Mobile Canal Extension (TE-22) Projects are located in Terrebonne Parish, Louisiana. The Federal sponsor for this Project is the National Marine Fisheries Service (NMFS) and the State sponsor is the Louisiana Department of Natural Resources (DNR). The DNR contracted Picciola & Associates, Inc. to oversee the construction of the project with on site inspection. This Final Summary Report will provide an overview, verification of project completion, total quantity of materials installed, conformance to plans and specifications, and project deviations.

2. Overview

The base bid consisted of constructing a weir to repair a breached spoil bank in the Lake Chapeau area (TE-26) and the continuation of a breakwater Phase III – Mobile Canal Extension (TE-22) – Area No. 4. Both projects would comprise of the placement of 250-pound class stone underlain by geotextile woven fabric.

Alternate No. 1 consisted of the construction of a breakwater structure Phase III – Mobile Canal Extension (TE-22) – Area No. 5. This project would also comprise of the placement of 250-pound class stone underlain by geotextile woven fabric.

Alternate No. 2, Phase I – (TE-22) Shell Plug #4, consisted of reconstructing a shell plug and armoring the plug with prefabricated, articulated, concrete mats.

The contract was awarded to Johnny F. Smith Truck & Dragline Service, Inc., which subcontracted the whole project to Bertucci Constructing Co., Inc.; hereinafter referred to as the "Contractor" for $895,100.00 with a Notice To Proceed issued on March 6, 2000. The award consisted of the Base Bid and both Alternates (See Table 1). The Contractor started mobilizing equipment on April 17, 2000.

TABLE 1

BASE BID

Item	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
1	Mob/Demob	Lump	1	$30,000.00	$30,000.00
2	Lake Chapeau (TE-26) Installation of Woven Geotextile Fabric	SY	1,000	$5.00	$ 5,000.00
3	Lake Chapeau (TE-26) Installation of Stone	Ton	1,500	$47.50	$ 71,250.00
4	Phase III – Mobile Canal Extension (TE-22) – Area No. 4 Installation of Woven Geotextile Fabric	SY	8,350	$5.00	$ 41,750.00
5	Phase III – Mobile Canal Extension (TE-22) – Area No. 4 Installation of Stone	Ton	11,200	$47.50	$532,000.00
				TOTAL	**$680,000.00**

ALTERNATE NO. 1

Item	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
6	Phase III – Mobile Canal Extension (TE-22) – Area No. 5 Installation of Woven Geotextile Fabric	SY	1,400	$5.00	$ 7,000.00
7	Phase III – Mobile Canal Extension (TE-22) – Area No. 5 Installation of Stone	Ton	2,000	$47.50	$ 95,000.00
				TOTAL	**$102,000.00**

ALTERNATE NO. 2

Item	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
1	Phase I – TE-22 Maint. – Shell Plug #4	LUMP SUM	1	$5,000.00	$ 5,000.00
2	Phase I – Installation of Articulated, Closed Cell Concrete Mats	EA	94	$1,150.00	$ 108,100.00
				TOTAL	**$113,100.00**

3. Verification of Project Completion

Alternate #2 - Phase I (TE-22)
Shell Plug #4

The original design of this project consisted of rebuilding the damaged shell plug with dredged material then placing the concrete mats on the gulf side of the plug to armor it from over wash. Prior to the start of the project it was determined that Williams Field Services owned four pipelines located beneath the plug. Subsequently, Williams Field Services requested that tracking heavy equipment on the plug be prohibited. A change was made in the design of the plug to eliminate placing the mats over the pipelines. The plug would still be reconstructed with dredged material from the canal. Mats would be utilized on the beach to the East and West of the plug. The contractor claimed that the terrain on either side of the plug would not support the weight of the crane he planned to use. Therefore, he requested and received a change order for the increase cost of a crane mounted on a marsh buggy. A separate change order was initiated prior to construction to increase the quantity of concrete mats from 94 to 125.

The contractor started the concrete mat installation for alternate number two of Phase I (TE-22) for the shell plug No. 4 on April 19, 2000. The contractor installed 125 concrete mats with the crane mounted marsh buggy. A total of 67 mats were placed on the West Side of the plug and 58 mats were placed on the East Side. The reconstruction of the plug was completed and all the mats installed on 5/24/00. The clamping and anchoring operation of the concrete mats was not completed until the very end of the entire project.

Base Bid – Phase III (TE-22)
Mobile Canal Extension – Area No. 4

The original design of this project consisted of constructing a breakwater using 32-inch armament stone underlain by woven geotextile fabric. The design called for the breakwater to be constructed 3000 feet long by 25 feet wide containing approximately 11,200 tons of 250-pound class stone and 8,350 square yards of geotextile woven fabric. Prior to construction a change order was issued to increase the rock quantity by 1,200 tons to repair a breech located between Area No. 4 and Area No. 5.

The contractor started light loading barges on 5/8/00 in order to float them to the site. This process continued until 5/28/00 at which time all the rock was delivered to the two breakwater sites (Areas No. 4 & No. 5) and the Lake Chapeau Weir.

On 5/11/00 the contractor moved equipment to the breakwater site. The contractor started the breach repair on 5/11/00 and completed the repair on 5/12/00 with a total length of 388 feet.

Area No. 4 construction started on 5/13/00 and was complete on 6/1/00. The as-built breakwater contained 11,130 tons of stone and 9,285 square yards of fabric. The actual length completed was approximately 3037 feet.

Alternate #1 – Phase III (TE-22)
Mobile Canal Extension – Area No. 5

The original design of this project consisted of constructing a breakwater using 32-inch armament stone underlain by woven geotextile fabric. The design called for the breakwater to be constructed 600 feet long by 25 feet wide containing approximately 2,000 tons of 250-pound class stone and 1,400 square yards of fabric.

Area No. 5 construction started on 6/1/00 and was complete on 6/4/00. The as-built breakwater contained 2,448 tons of stone and 1,946 square yards of fabric. The actual length completed was approximately 625 feet.

Base Bid – Lake Chapeau (TE-26)
Weir

The original design of this project consisted of repairing a breached spoil bank by constructing a weir approximately 500 feet long. The weir was to be constructed using 1,500 tons of 250-pound class stone and 1,000 square yards of geotextile woven fabric. A change order added a line item prior to the start of construction to include flotation dredging to access the project. It consisted of 6-12 hour days of flotation dredging at $365.00 per hour totaling $26,280.00.

The dredging work started on 6/5/00 and only took 12 hours at a total cost of $4,380.00. The weir construction started on 6/6/00 and was complete on 6/7/00. The as-built weir consumed 1,703 tons of stone and 1284 square yards of fabric. The actual length completed was approximately 700 feet. Upon completion of the weir, DNR requested some additional dredging be done by the contractor to the West Side of the weir in the pipeline canal. It took approximately 4 hours of dredging to complete this task, at a cost of $1,460.00.

4. Total Quantities of Materials Installed

With the exception of the Lake Chapeau (TE-26) project, all projects experienced slight overruns. A balancing change order was issued to encompass these overruns. The total quantity of materials installed is reflected in Table 2.

TABLE 2

BASE BID (Lake Chapeau) – (Weir) Actual

Item	DESCRIPTION	UNIT	BID QTY	ACTUAL QTY
1	Mob/Demob	Lump	1	1
2	Installation of Woven Geotextile Fabric	SY	1,000	1,284
3	Installation of Stone	Ton	1,500	1,703

BASE BID (Point Au Fer) – (Mobile Canal Area No. 4) Actual

Item	DESCRIPTION	UNIT	BID QTY	ACTUAL QTY
1	Installation of Woven Geotextile Fabric	SY	8,350	9,285
2	Installation of Stone	Ton	11,200	11,130

ALTERNATE NO. 1 – (Phase III Area No. 5) Actual

Item	DESCRIPTION	UNIT	BID QTY	ACTUAL QTY
1	Mob/Demob	Lump	1	1
2	Installation of Woven Geotextile Fabric	SY	1,400	1,946
3	Installation of Stone	Ton	2,000	2,448

ALTERNATE NO. 2 – (Shell Plug #4) Actual

Item	DESCRIPTION	UNIT	BID QTY	ACTUAL QTY
1	Phase I – (TE-22) Maintenance	LUMP	1	1
2	Phase I – Install Concrete Mats	EA	94	94

5. Conformance to Plans and Specifications

The original design of Lake Chapeau (TE-26) project was to repair a breached spoil bank by constructing a weir approximately 500 feet long. The as-built weir is approximately 700 feet long. The stone and fabric experienced slight overruns but the dredging quantity came in low. Overall, this project experienced a savings of over $9,000.00. This project was constructed as per the contract plans and specifications and to the satisfaction of DNR.

The original design of the Phase III Mobile Canal Extension (TE-22) – Area No. 4 was to construct a breakwater using 32-inch armament stone underlain by woven geotextile fabric. The design called for the breakwater to be constructed 3000 feet long by 25 feet wide. The actual length constructed is approximately 3037 feet. Prior to construction, a change order increased the rock by 1,200 tons to repair a breech located between Area No. 4 and Area No. 5. The breach repair was approximately 388 feet. Overall, this project experienced an overrun. This project was constructed as per the contract plans and specifications and to the satisfaction of DNR.

The original design of Phase III Mobile Canal Extension (TE-22) – Area No. 5 project was to construct a breakwater using 32-inch armament stone underlain by woven geotextile fabric. The design called for the breakwater to be constructed 600 feet long by 25 feet wide containing approximately 2,000 tons of 250-pound class stone and 1,400 square yards of fabric. The as-built breakwater contained 2,448 tons of stone and 1,946 square yards of fabric. The actual length constructed was approximately 625 feet. Overall this project experienced an overrun. This project was constructed as per the contract plans and specifications and to the satisfaction of DNR.

The original design of the Phase I Shell Plug No. 4 (TE-22) project consisted of rebuilding the damaged shell plug with dredged material then placing the concrete mats on the gulf side of the plug to armor it from over wash. Prior to the start of the project it was determined that Williams Field Services owned four pipelines located beneath the plug. Subsequently, Williams Field Services requested that tracking heavy equipment on the plug be prohibited. A change was made in the design of the plug to eliminate placing the mats over the pipelines. The plug would still be reconstructed with dredged material from the canal. Mats would be utilized on the beach to the East and West of the plug. The contractor claimed that the terrain on either side of the plug would not support the weight of the crane he planned to use. Therefore, he requested and received a change order for the increase cost of a crane mounted on a marsh buggy. A separate change order was initiated prior to construction to increase the quantity of concrete mats from 94 to 125. The contractor anchored the mats as per the manufacturer's

recommendations. A total of 67 mats were placed on the West Side of the project and 58 mats were placed on the East Side. This project was constructed as per the revised contract plans and specifications and to the satisfaction of DNR.

The contractor was allowed 120 days to complete the Base Bid and Alternates 1 & 2. The contractor used 97 days to complete the entire project including all change orders. The contractor demobilized all of his equipment on 6/8/00. The anchoring of the mats took three additional days and the project was 100% complete on 6/10/00.

6. Project Deviations

With exception to the changes on the Shell Plug No. 4 project, the Lake Chapeau and Point Au Fer projects experienced only minor deviations. The cost overruns will be adjusted by one balancing change order. The original Base Bid, including alternates 1 & 2, was $895,100.00. The final price for the project totaled $1,078,546.04 (see Tables 3 & 4).

TABLE 3

Project Change Orders

Item	DESCRIPTION	UNIT	BID QTY	UNIT PRICE	TOTAL PRICE
1	Change Order #1	EA	1	$ 92,650.00	$ 92,650.00
2	Change Order #2-Dredging	EA	1	$ 26,280.00	$ 26,280.00
3	Change Order #3 – Marsh Buggy Mounted Crane	EA	1	$ 36,326.04	$ 36,326.04
4	Change Order #4 – (Balancing)	EA	1	$ 37,567.50	$ 37,567.50
5	Base Bid	EA	1	$680.000.00	$ 680.000.00
6	Alternate #1	EA	1	$102,000.00	$ 102,000.00
7	Alternate #2	EA	1	$113,100.00	$ 113,100.00
				TOTAL	**$1,087,923.54**

TABLE 4

BASE BID (Lake Chapeau) - (Weir) Actual

Item	DESCRIPTION	UNIT	BID QTY	UNIT PRICE	TOTAL PRICE
1	Mobe/Demobe	Lump	1	$15,000.00	$15,000.00
2	Installation of Woven Geotextile Fabric	SY	1,284	$5.00	$ 6,420.00
3	Installation of Stone	Ton	1,703	$47.50	$ 80,892.50
4	Change Order #2-Dredging	HR	16	$365.00	$ 5840.00
				TOTAL	**$108,152.50**

BASE BID (Point Au Fer) – (Phase III Area No. 4) Actual

Item	DESCRIPTION	UNIT	BID QTY	UNIT PRICE	TOTAL PRICE
1	Installation of Woven Geotextile Fabric	SY	8,350	$5.00	$ 41,750.00
2	Installation of Stone	Ton	11,200	$47.50	$532,000.00
	CHANGE ORDER #4 (Balancing)				
	Installation of Woven Geotextile Fabric	SY	935	$5.00	$ 4,675.00
	Installation of Stone	Ton	(70)	$47.50	($ 3,325.00)
				TOTAL	**$575,100.00**

ALTERNATE NO. 1 - (Phase III Area No. 5) Actual

Item	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
1	Mob/Demob	Lump	1	$15,000.00	$ 15,000.00
2	Installation of Woven Geotextile Fabric	SY	1,400	$5.00	$ 7,000.00
3	Installation of Stone	Ton	2,000	$47.50	$ 95,000.00
4	CHANGE ORDER #4 (Balancing)				
	Installation of Woven Geotextile Fabric	SY	546	$5.00	$ 2,730.00
	Installation of Stone	Ton	448	$47.50	$ 21,280.00
	Breach - Additional Stone	Ton	257	$47.50	$ 12,207.50
5	Change Order #1 Install Stone – Breach Repair	Ton	1,200	$47.50	$ 57,000.00
				TOTAL	**$210,217.50**

ALTERNATE NO. 2 - (Shell Plug #4) Actual

Item	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL PRICE
1	Maintenance	LUMP	1	$5,000.00	$ 5,000.00
2	Install Concrete Mats	EA	94	$1,150.00	$ 108,100.00
	Change Order #1 - Mats	EA	31	$1,150.00	$ 35,650.00
	Change Order #3 – Marsh Buggy mounted crane	EA	1	$39,613.24	$ 39,613.24
	Change Order #3 - Mat Credit	EA	1	($3,287.20)	($3,287.20)
	Change Order #4 Quarters	EA	1	$0.00	$ 0.00
				TOTAL	**$185,076.04**

7. Conclusion

The Point Au Fer – Lake Chapeau Restoration projects is another example of the NMFS and DNR's ongoing dedication and efforts to the restoration of the Louisiana coastline and marshlands. A tremendous amount of valuable information is learned from each and every project that can and will be used on future restoration projects. Picciola & Associates was pleased to be a part of this project. The knowledge and experience gained were immeasurable. The coastal restoration effort is much stronger due to this project's successes. We look forward to working with the NMFS and DNR on Restoration Projects in the near future.

PHASE I

TE-22

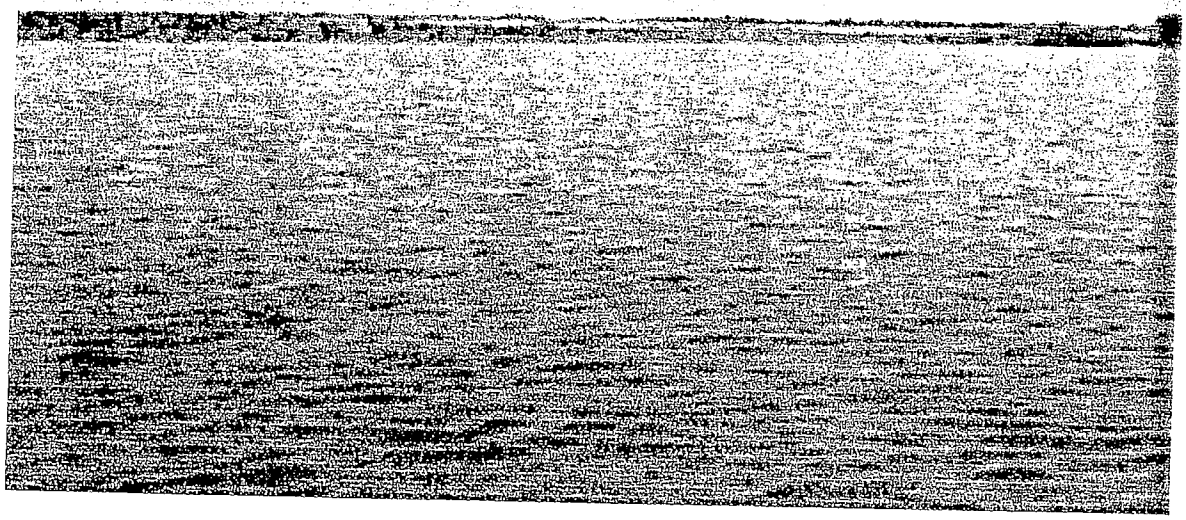
SHELL PLUG NO. 4

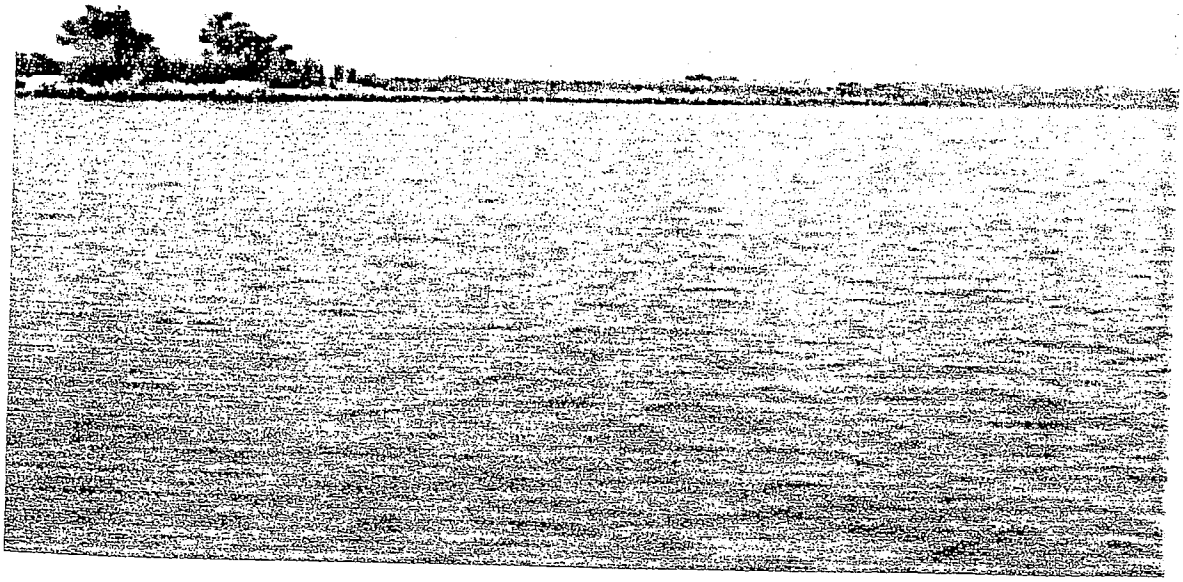


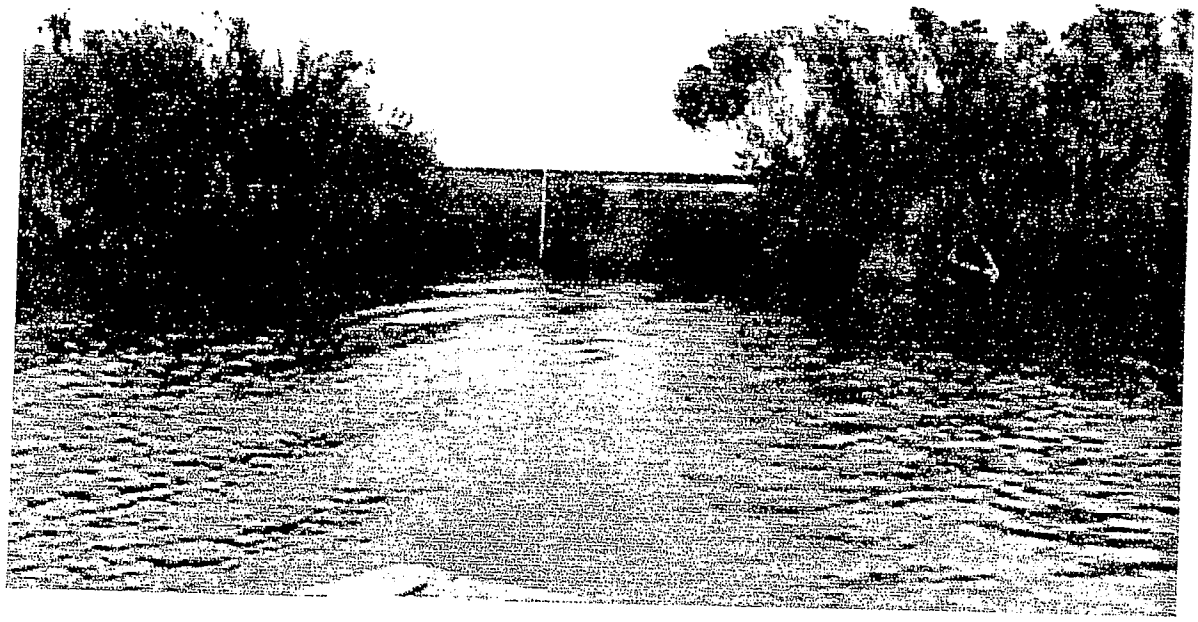
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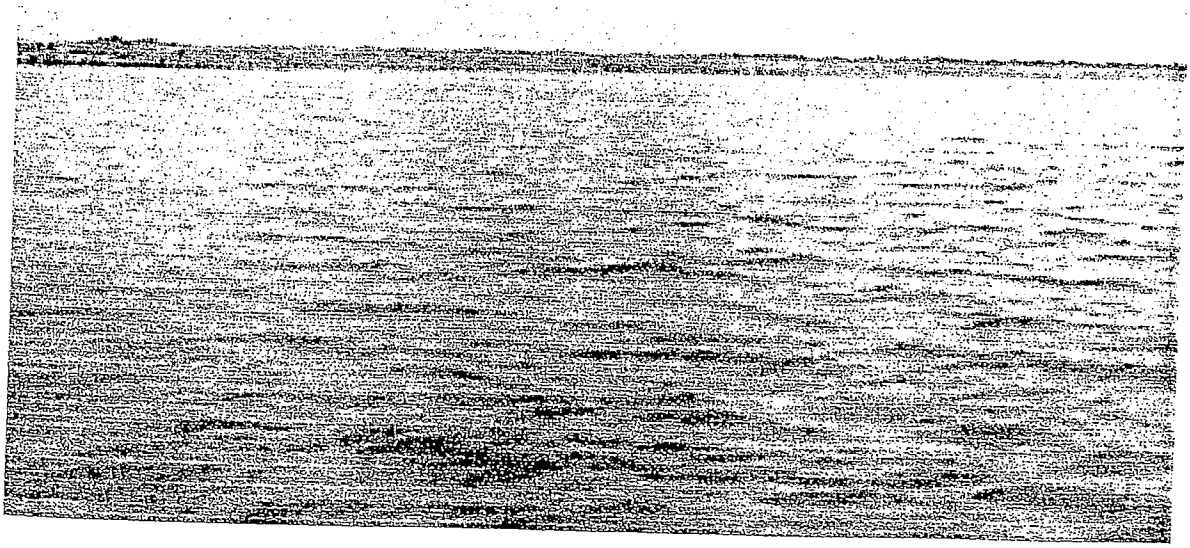
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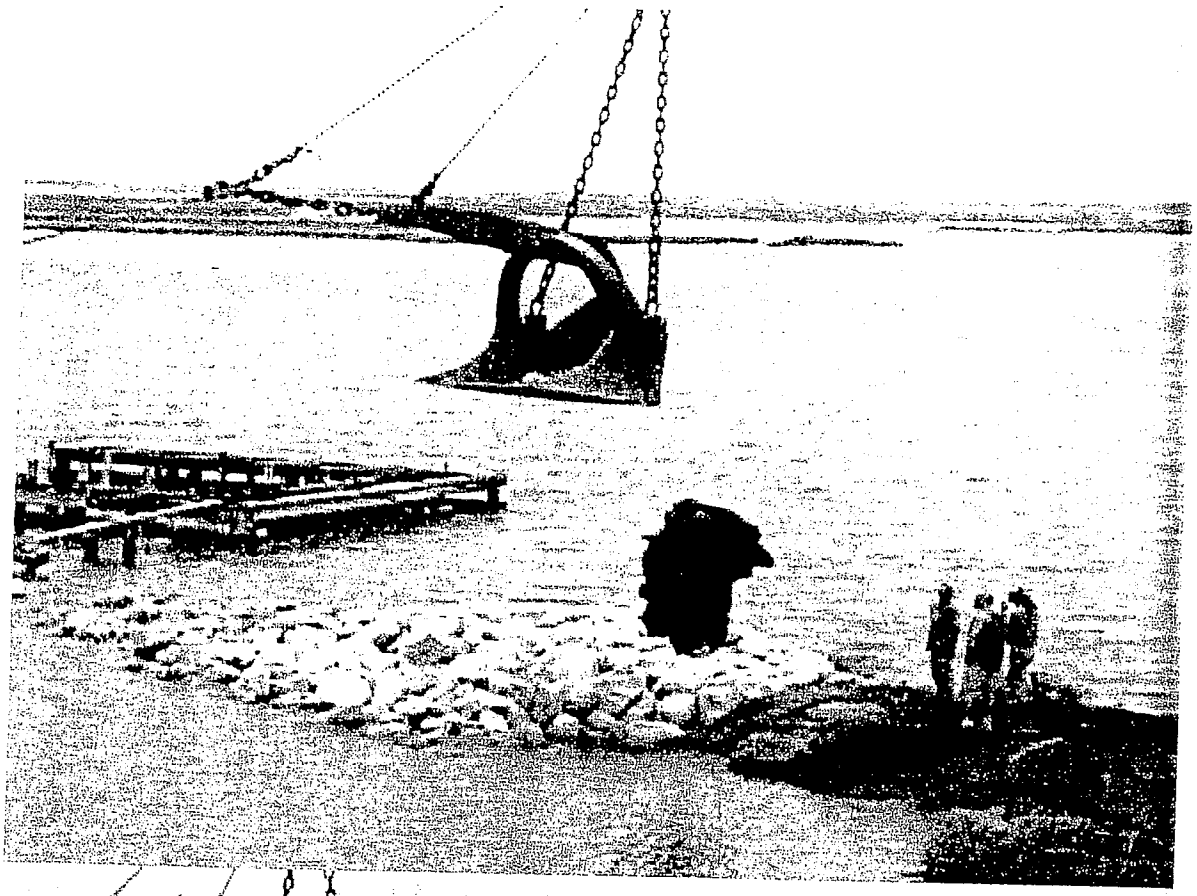
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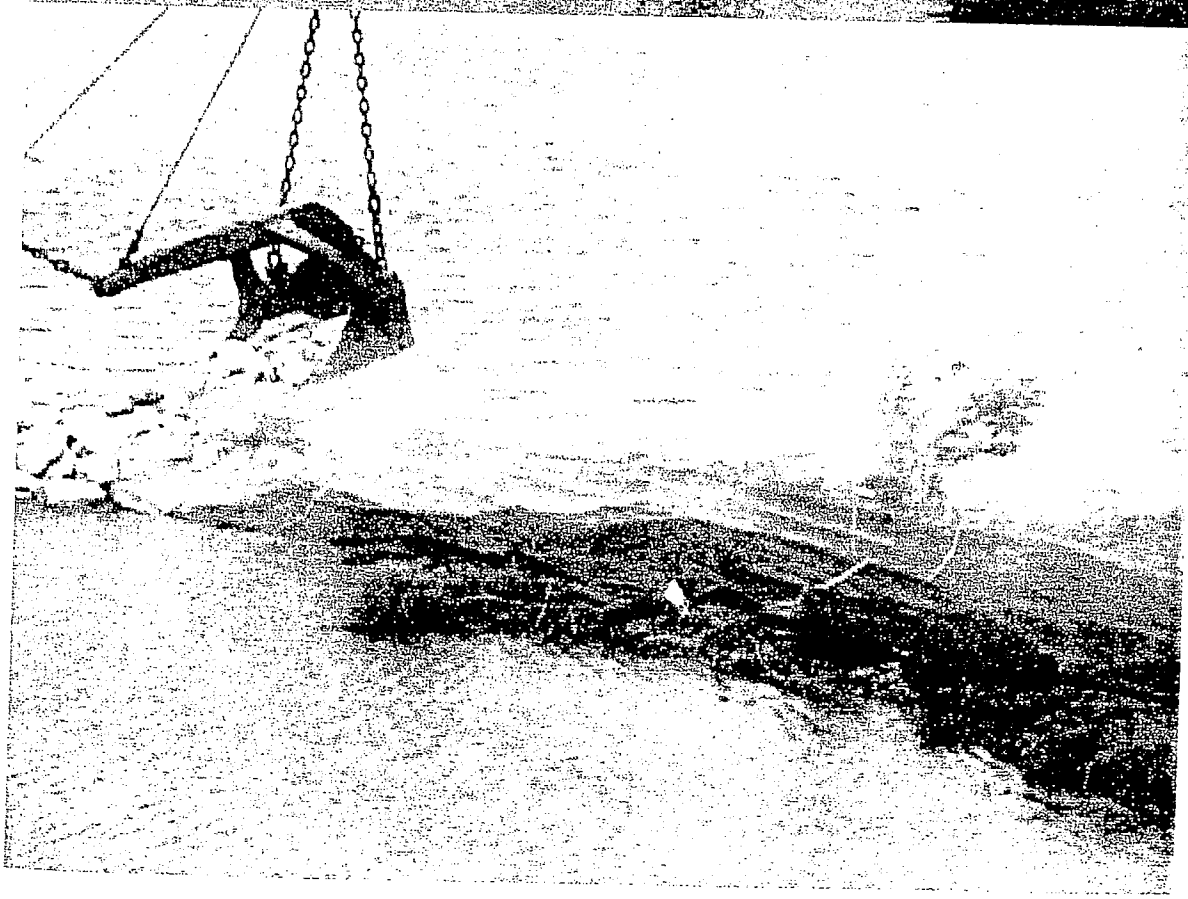


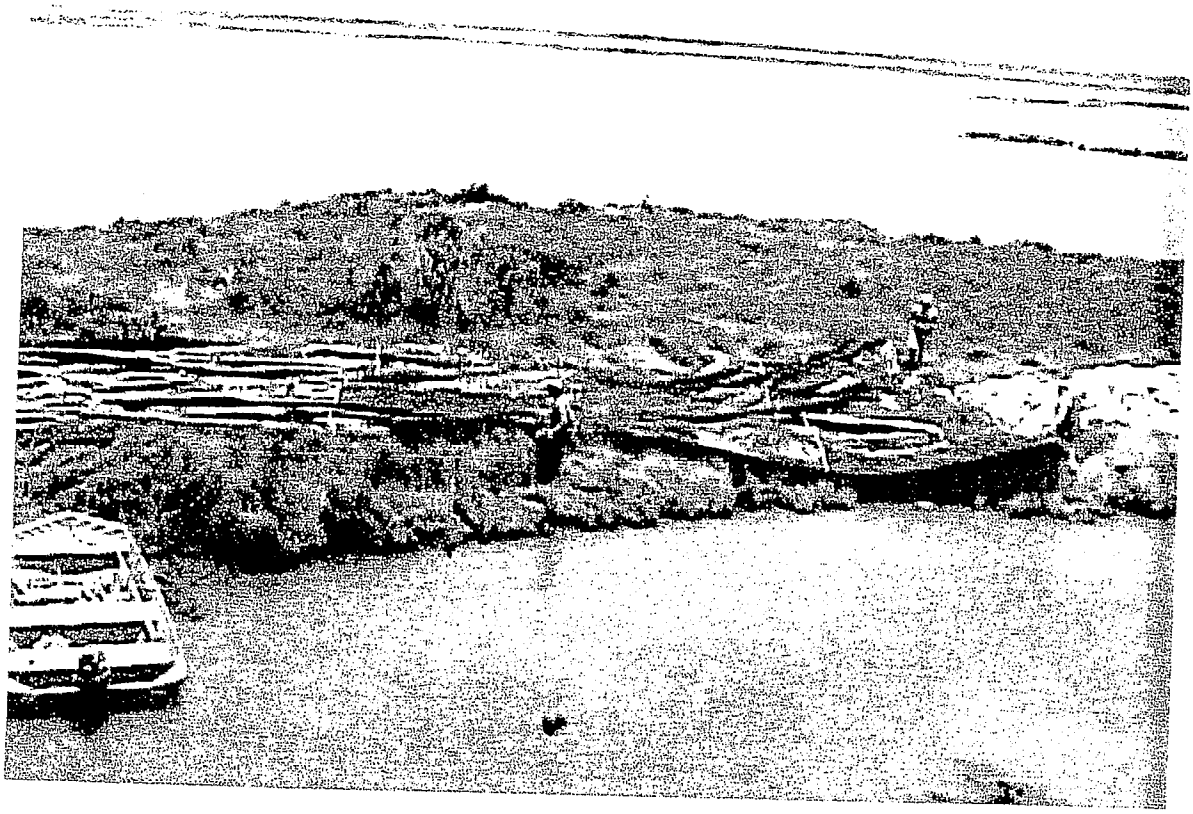


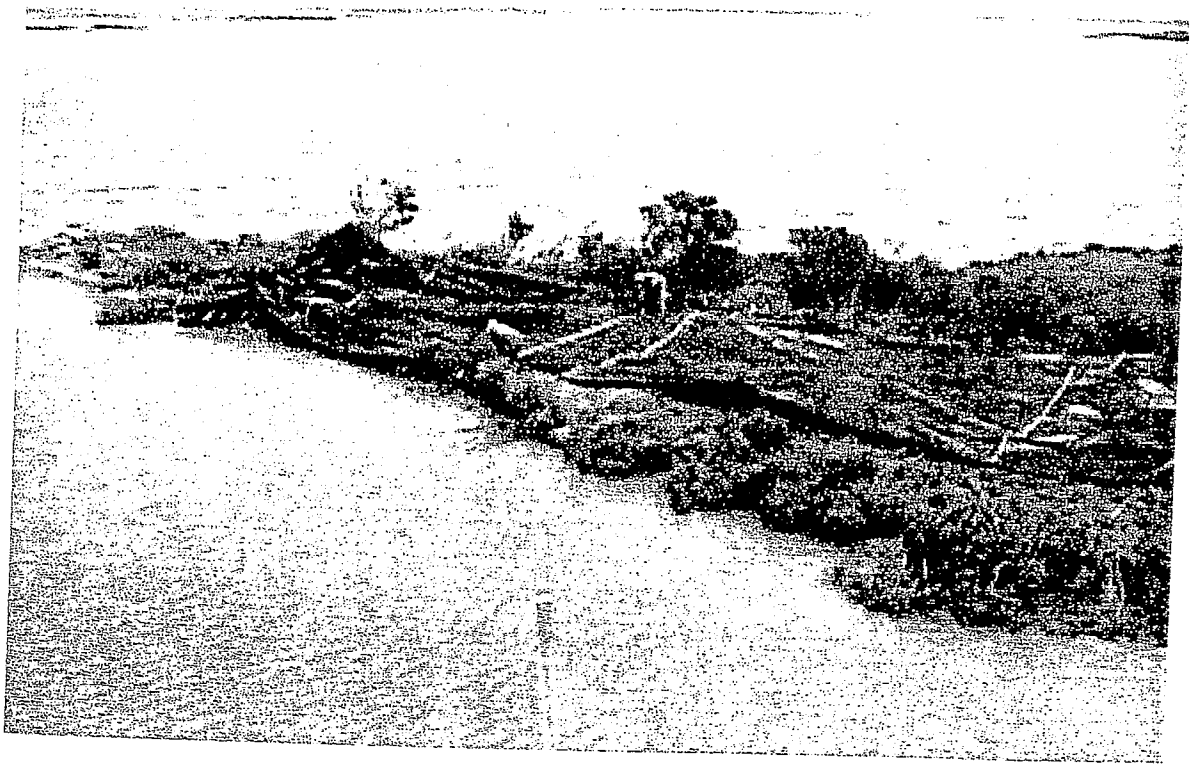


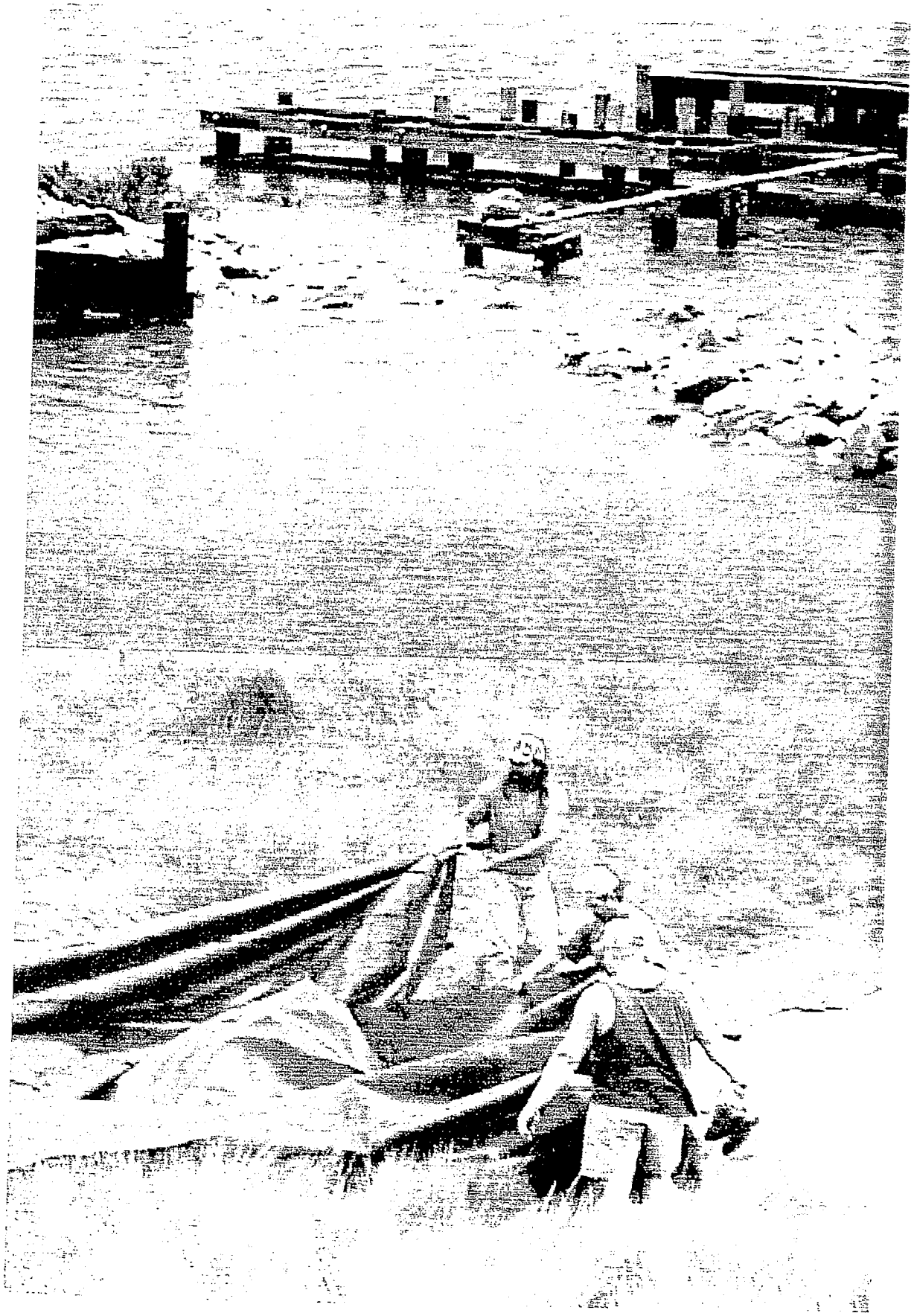


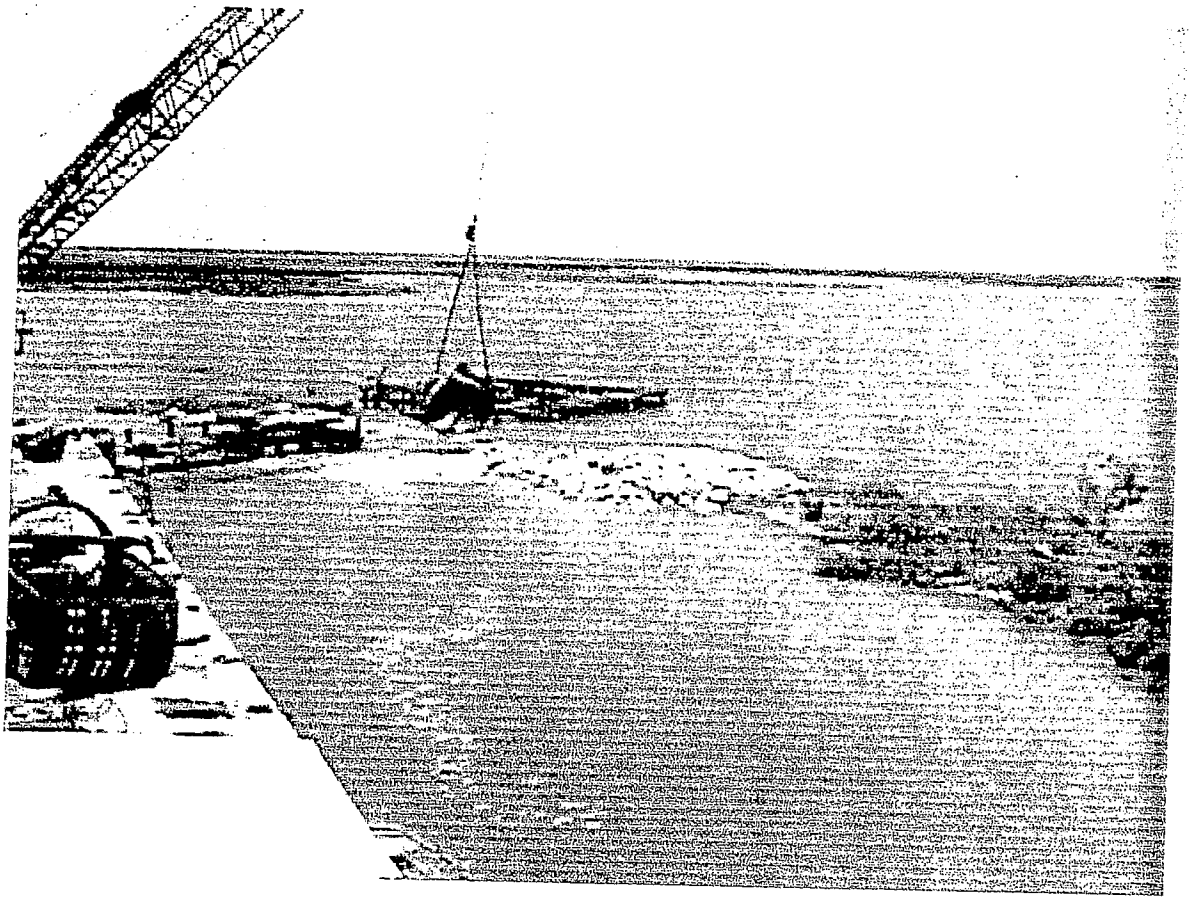


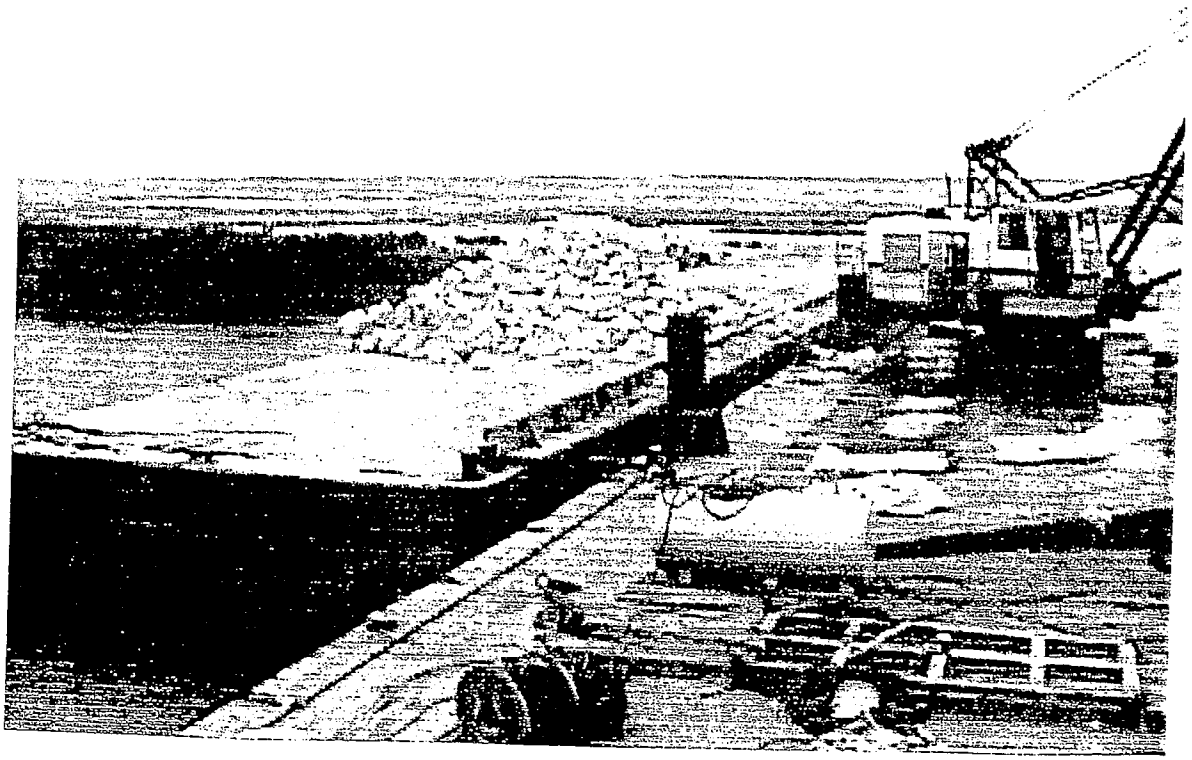


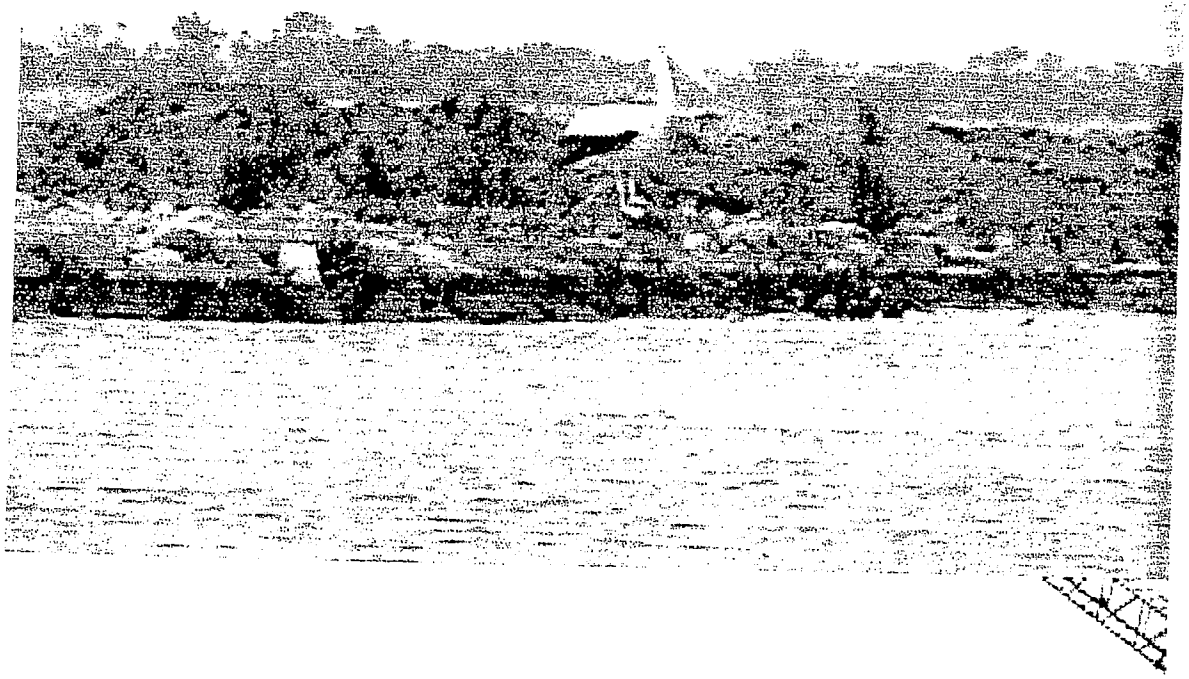


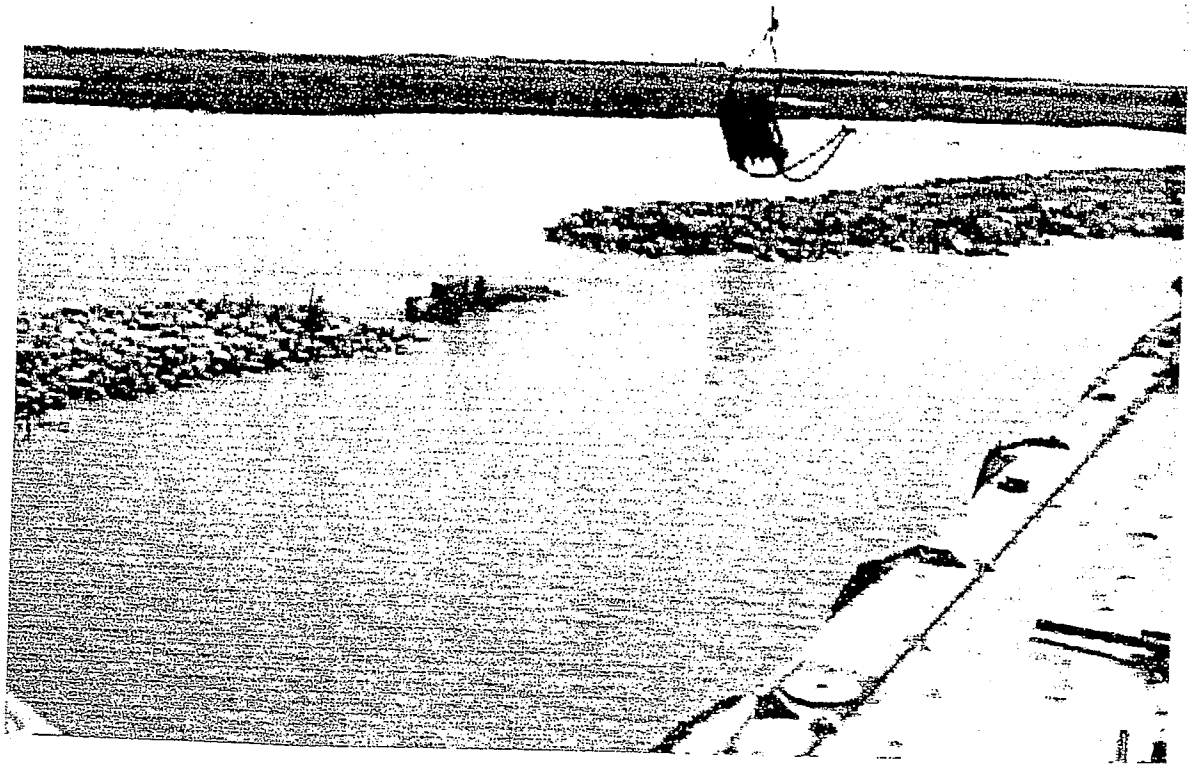


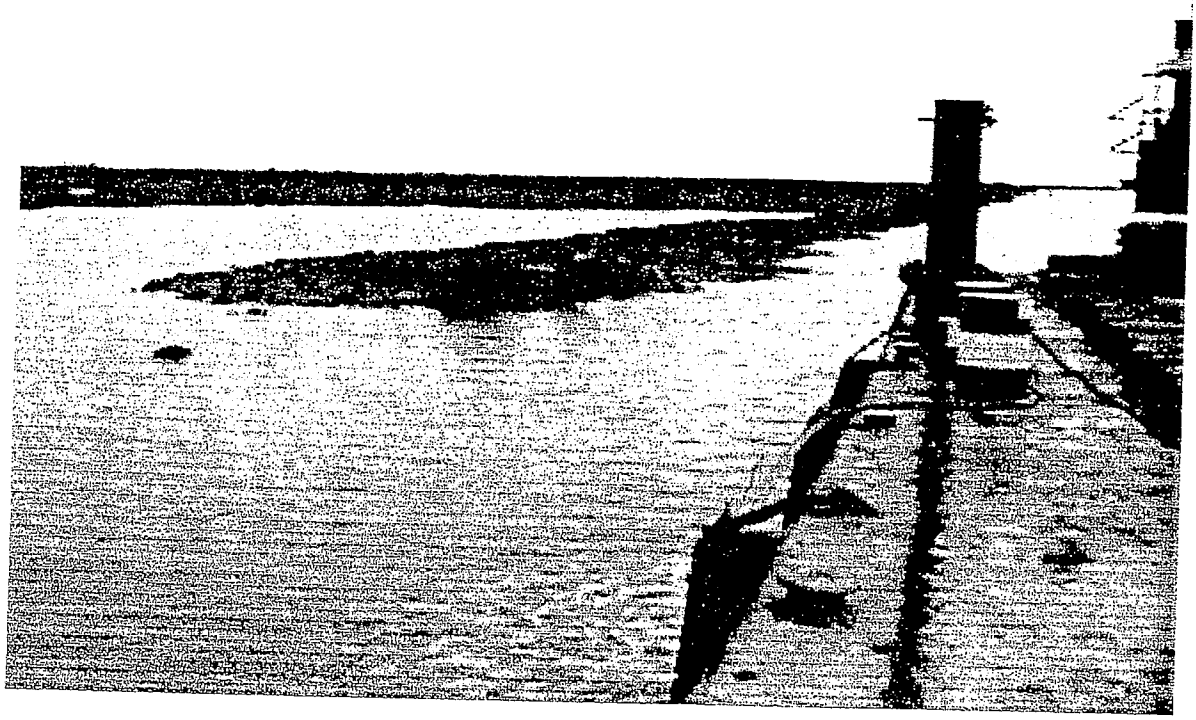


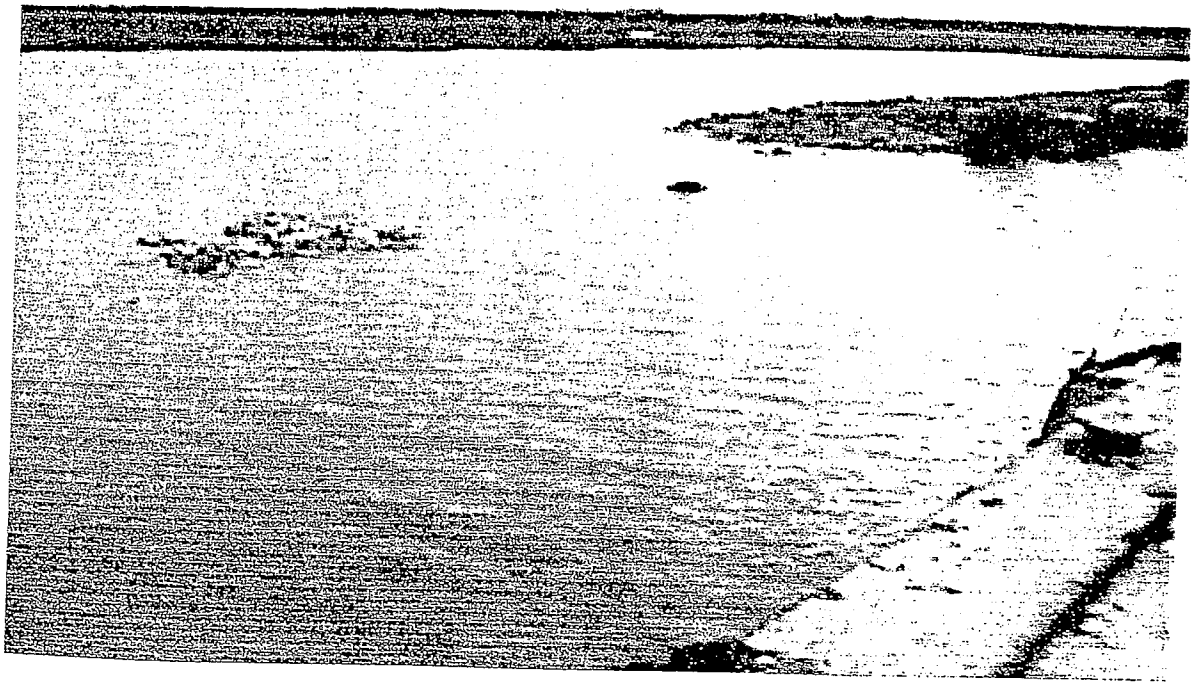


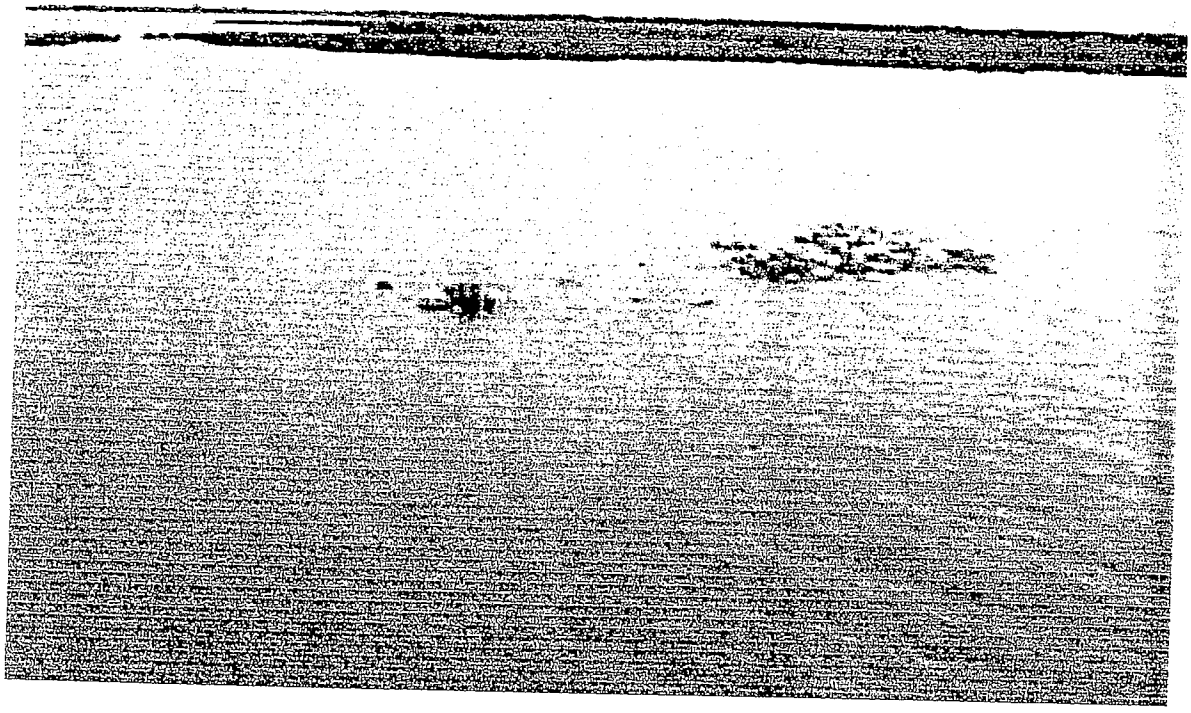


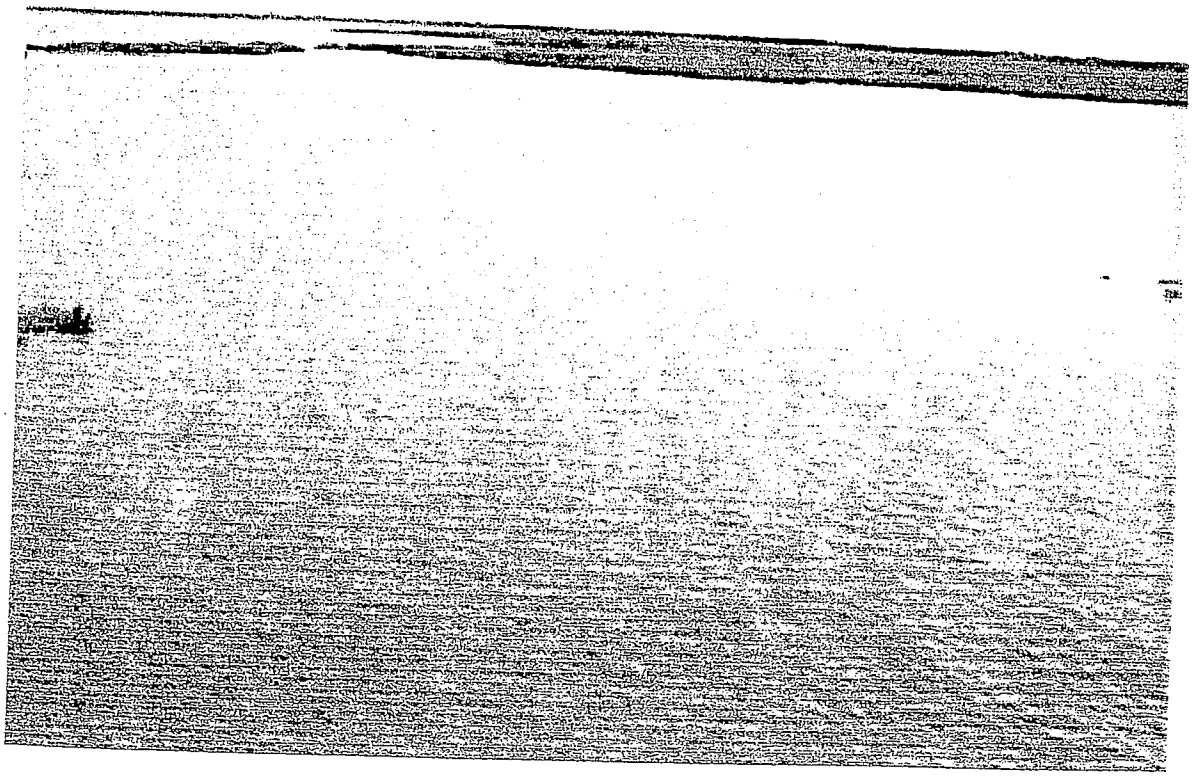


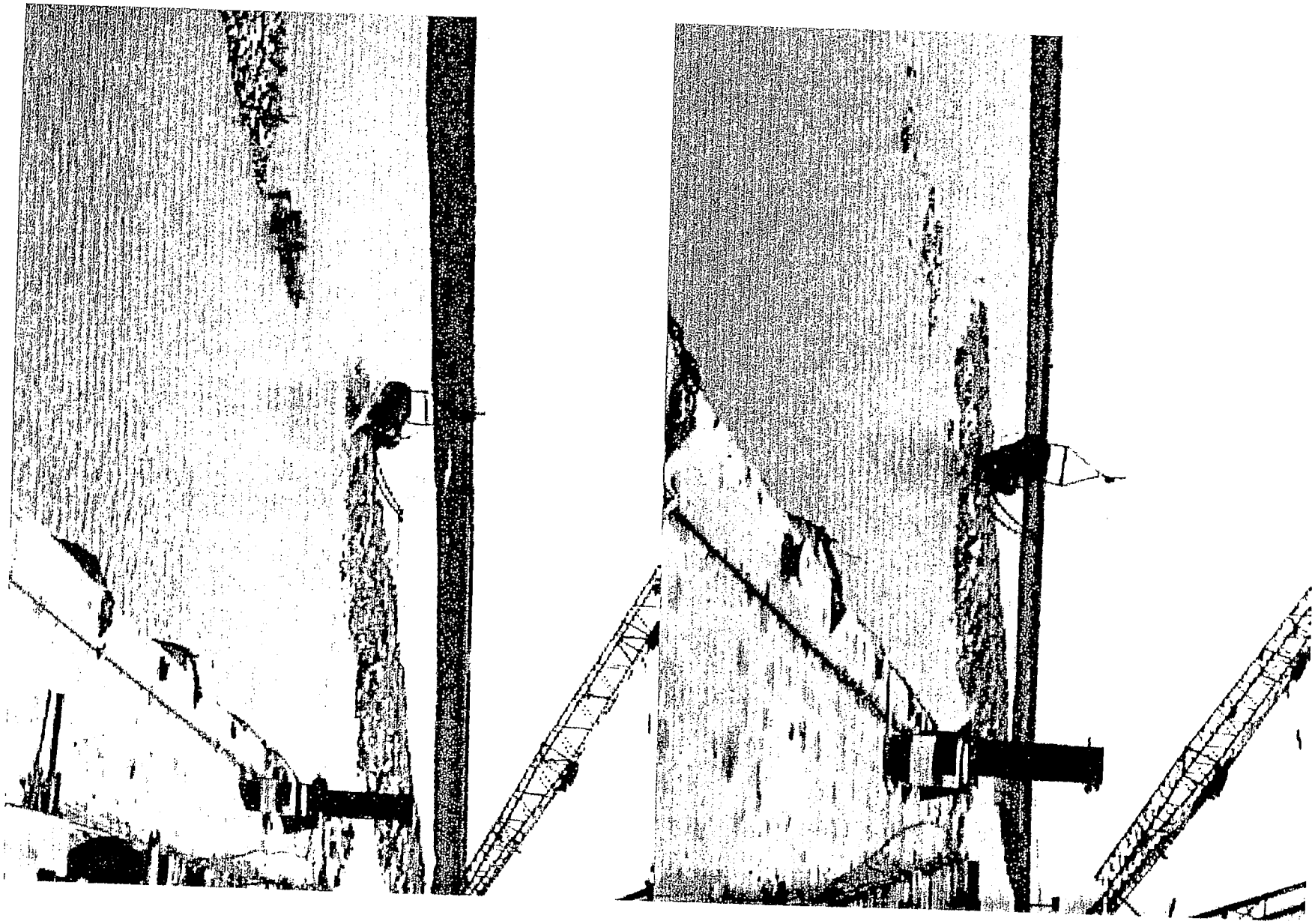


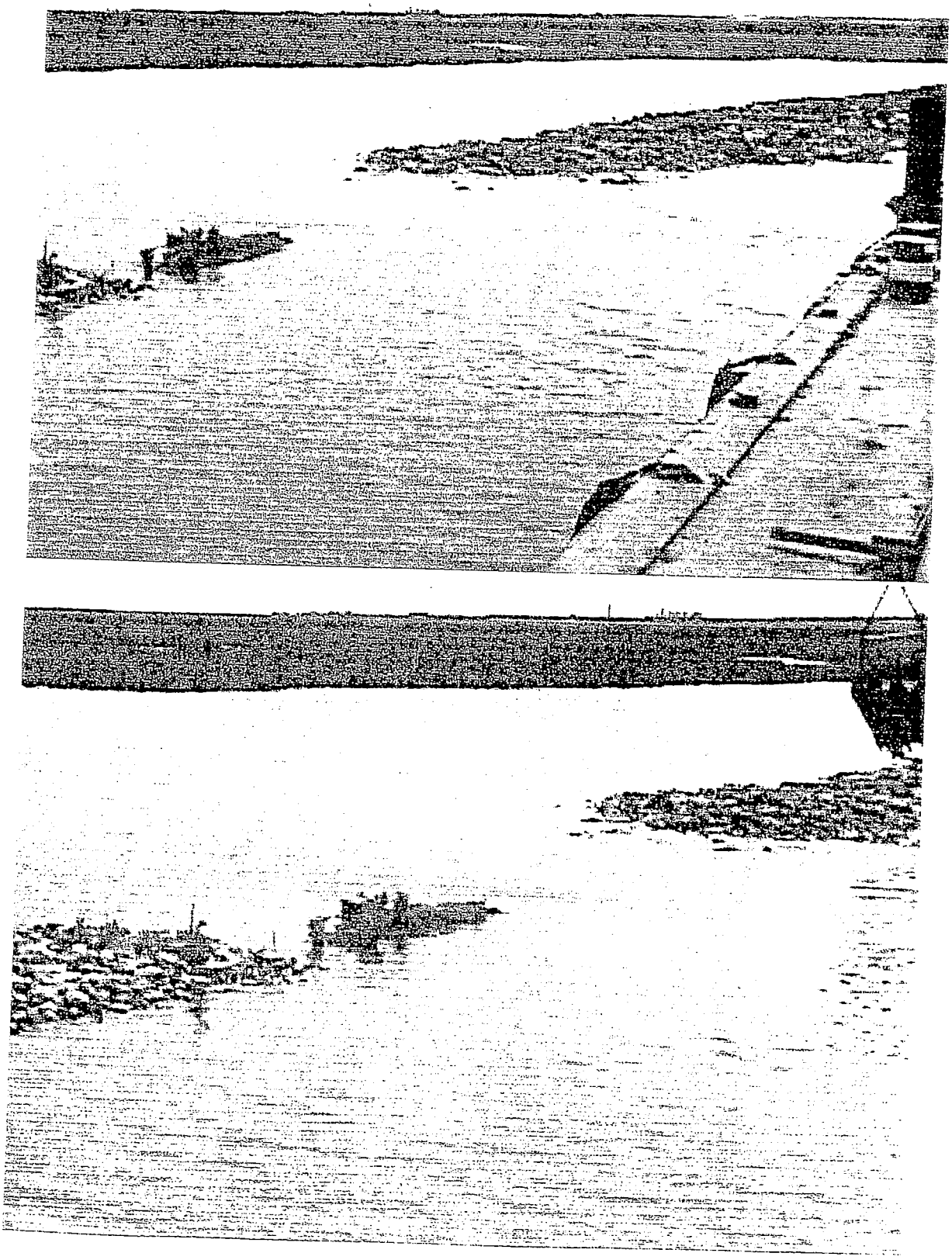


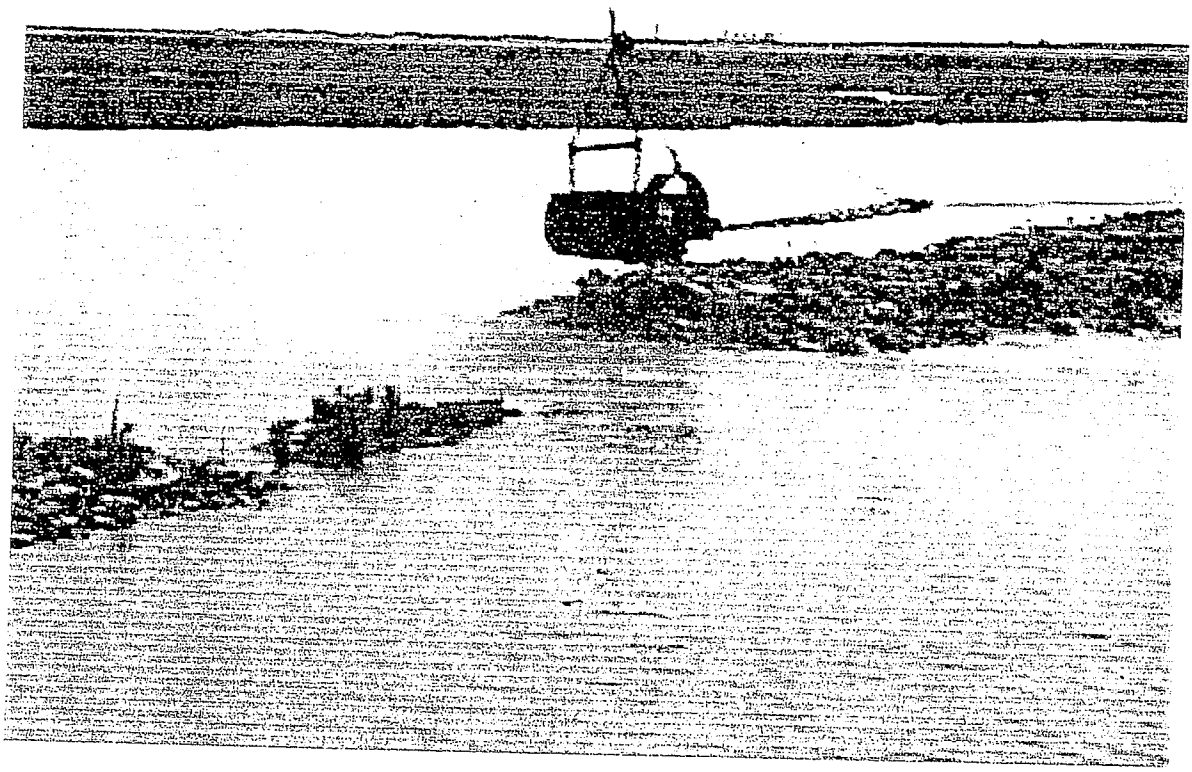


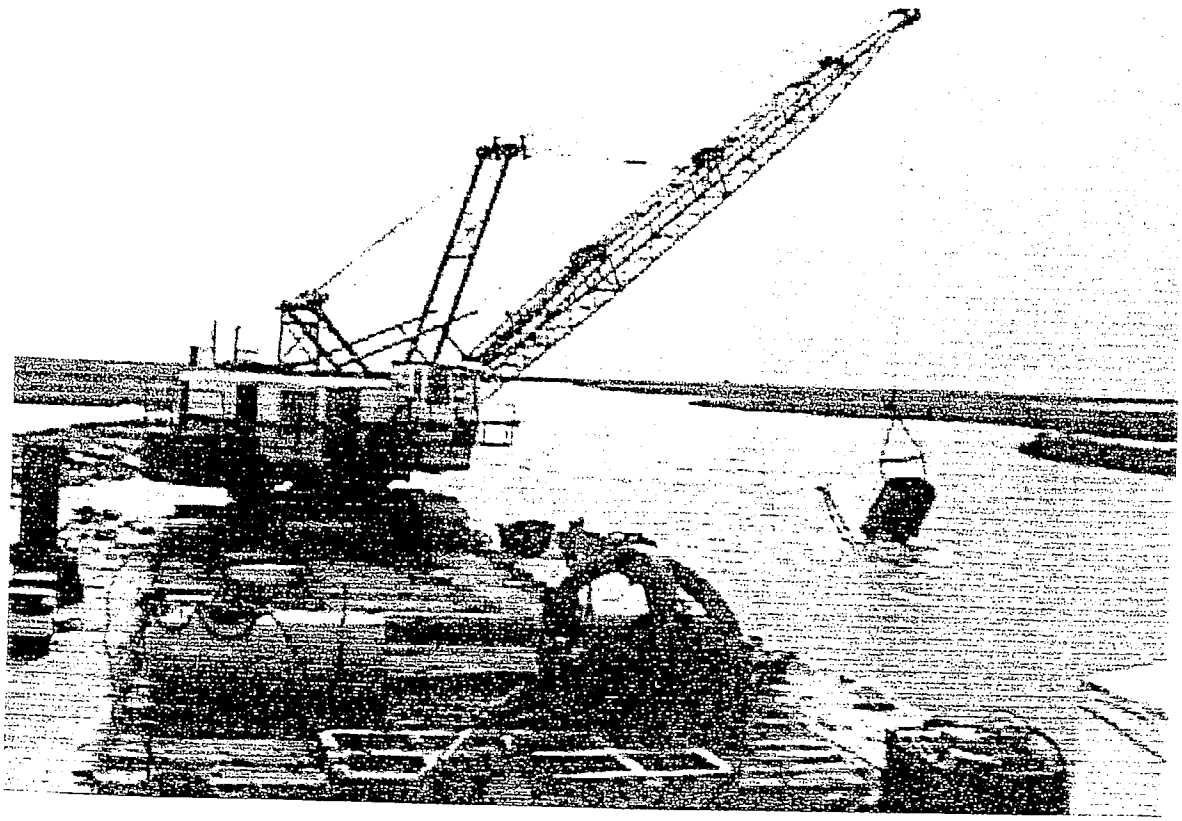




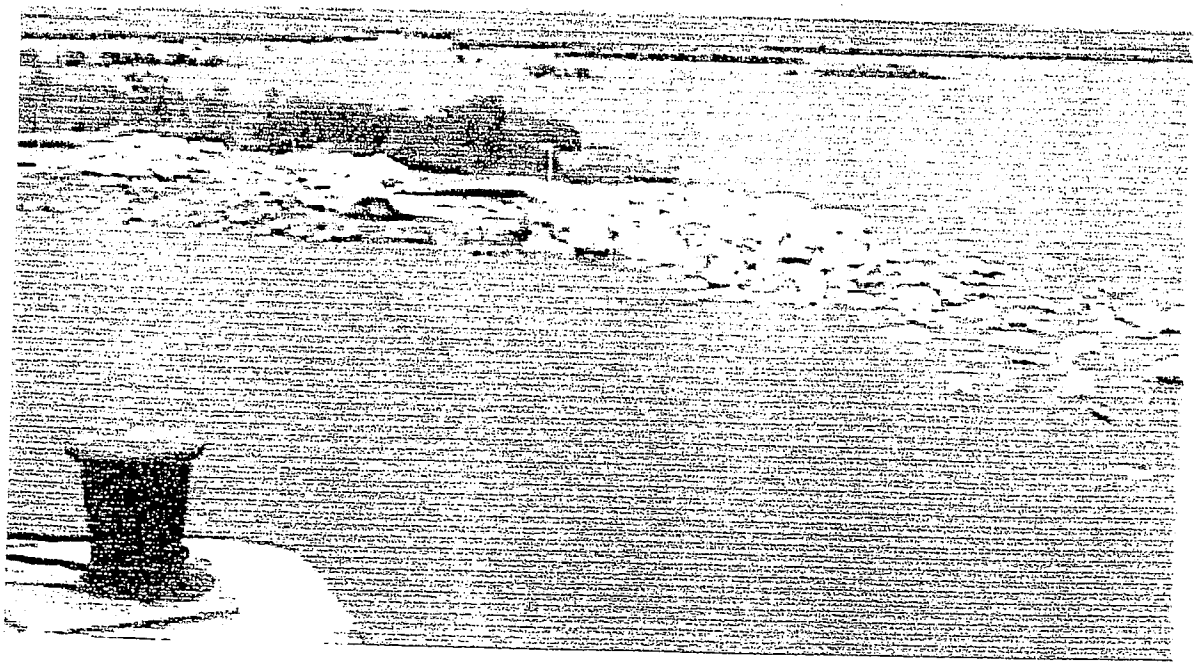


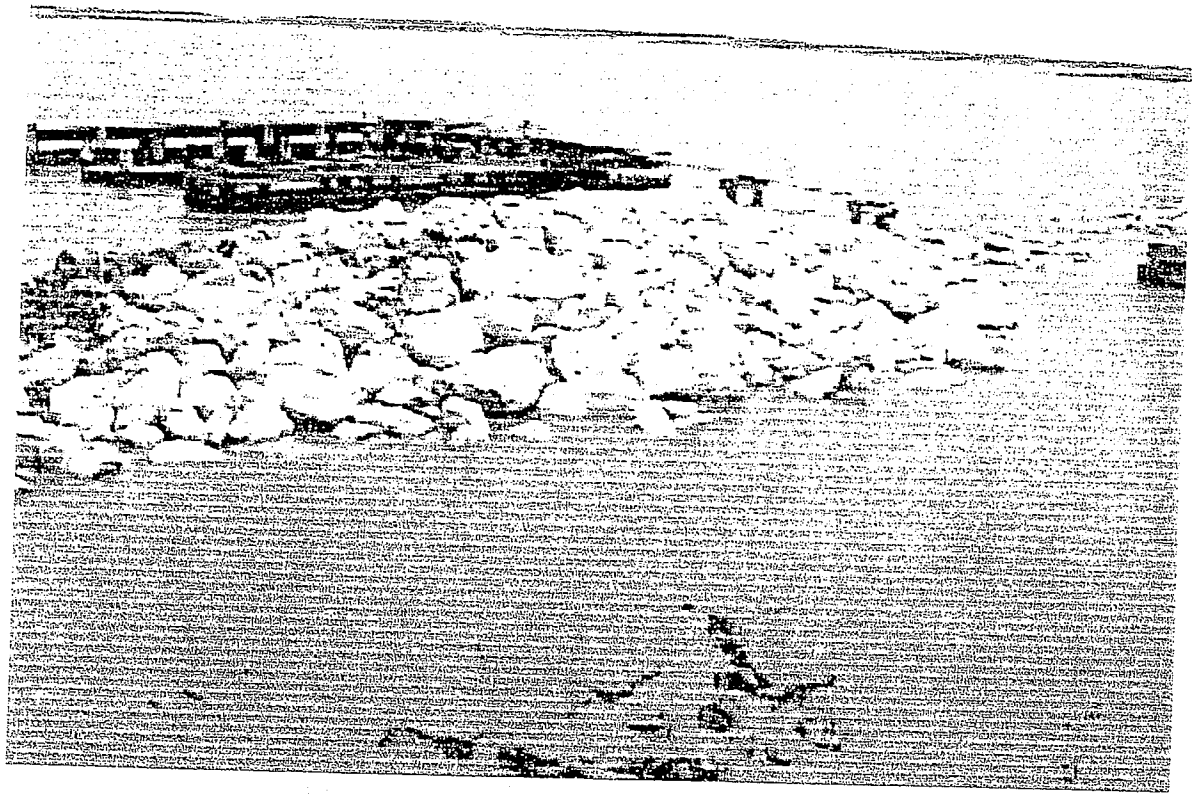


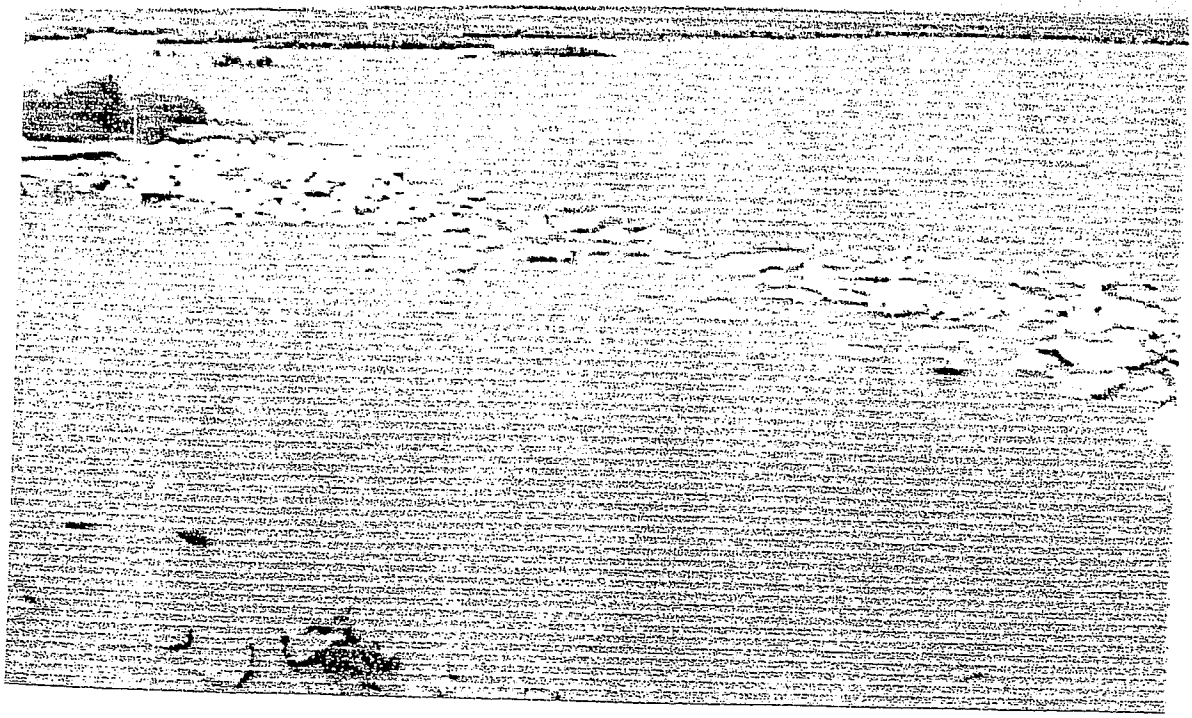


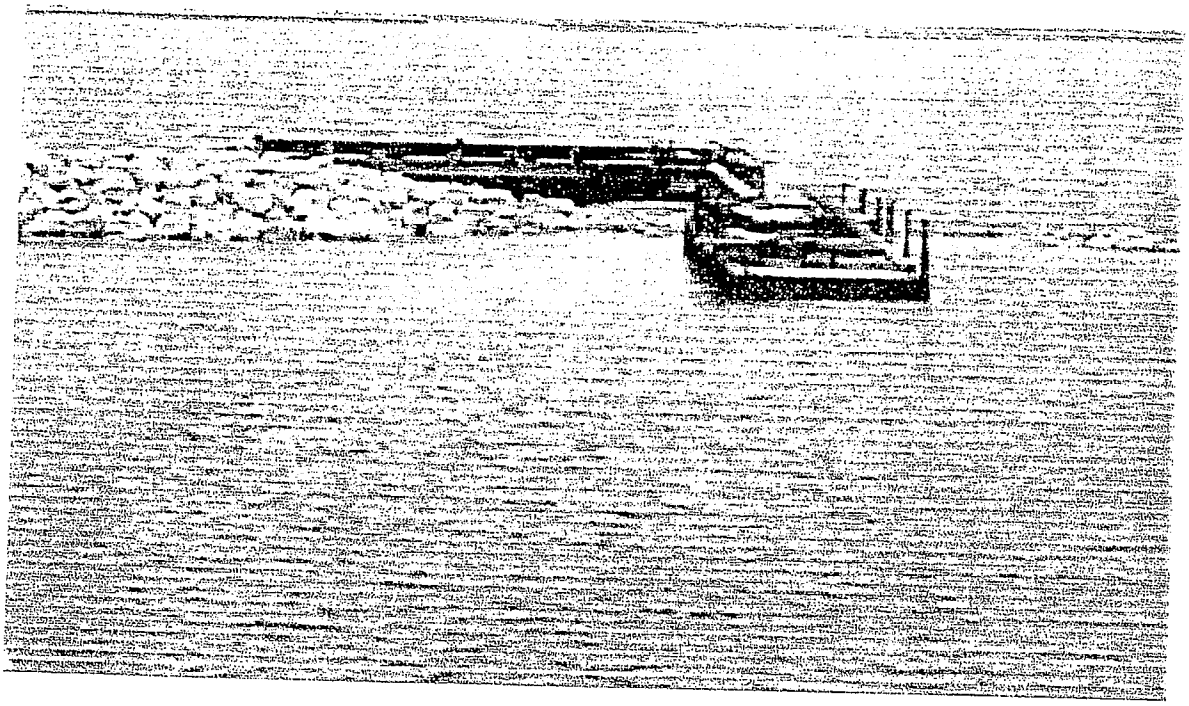


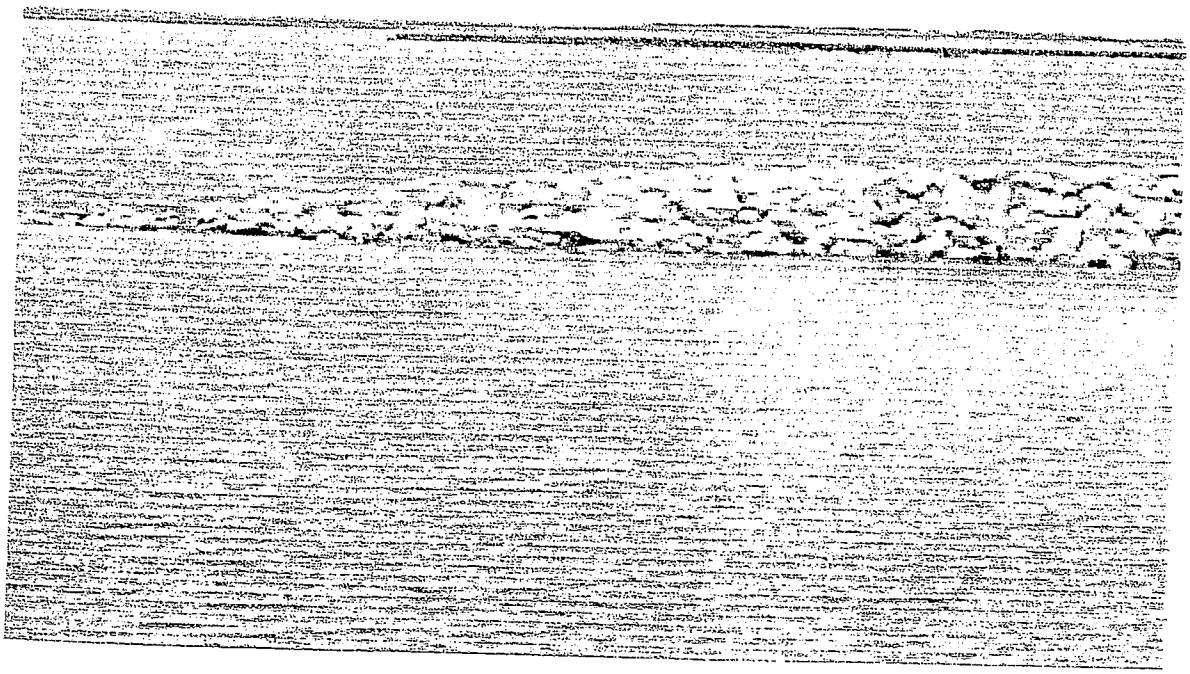


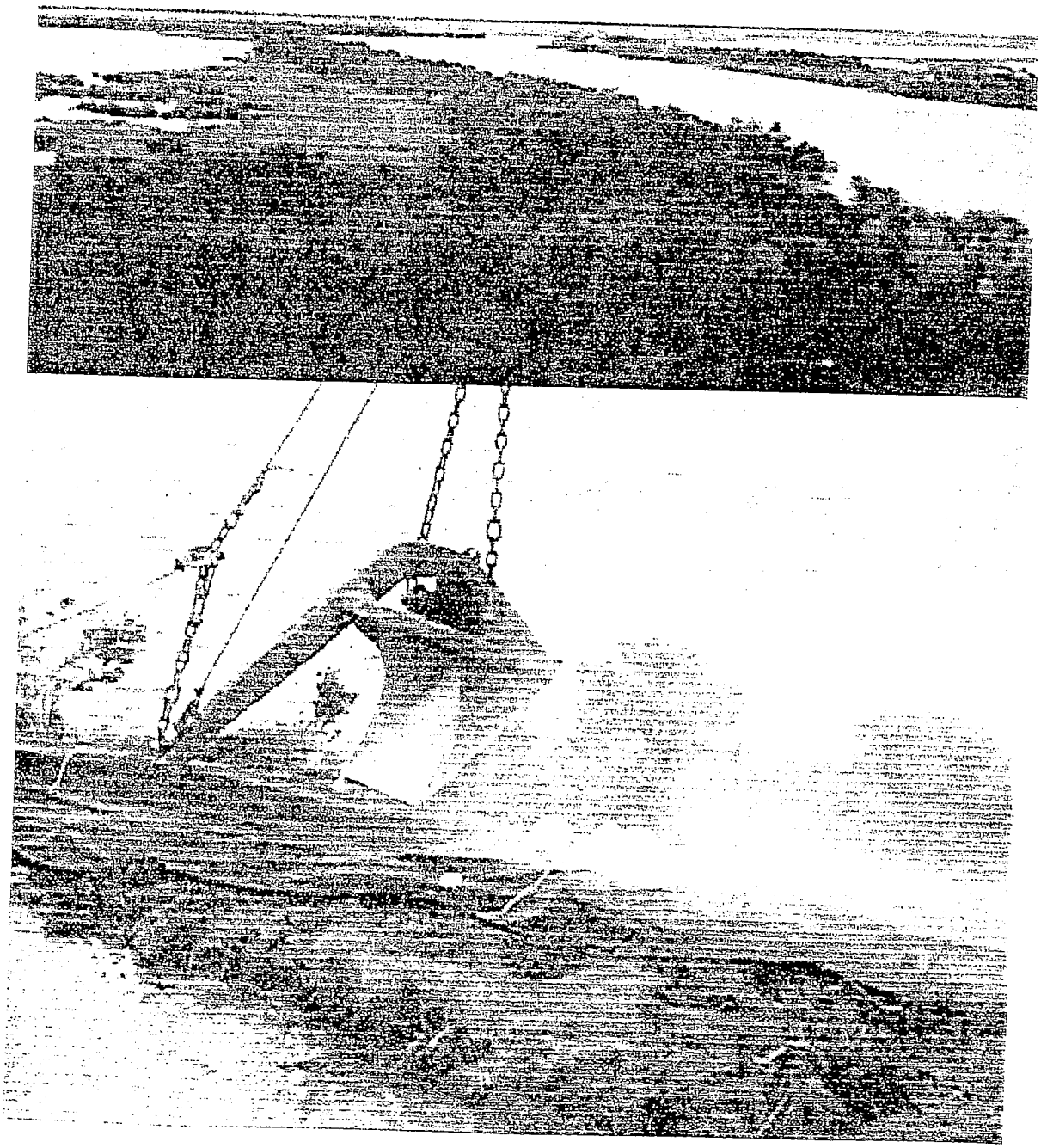


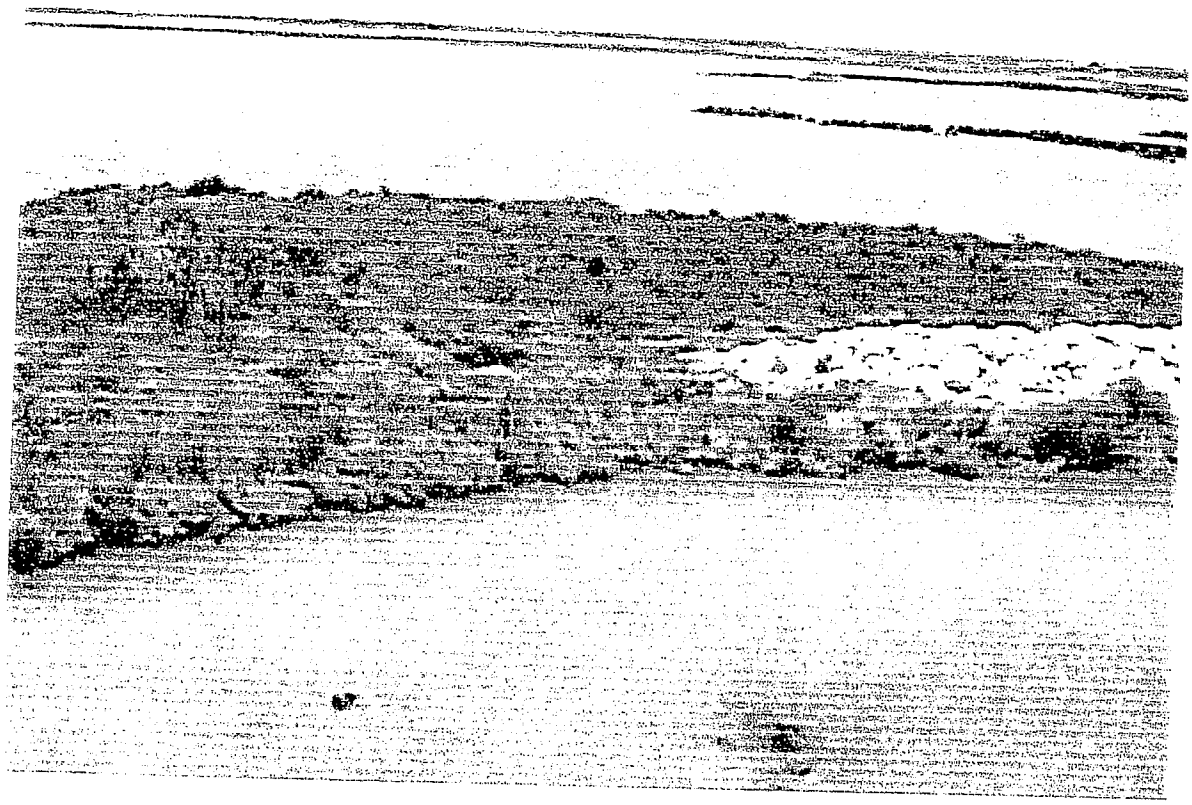


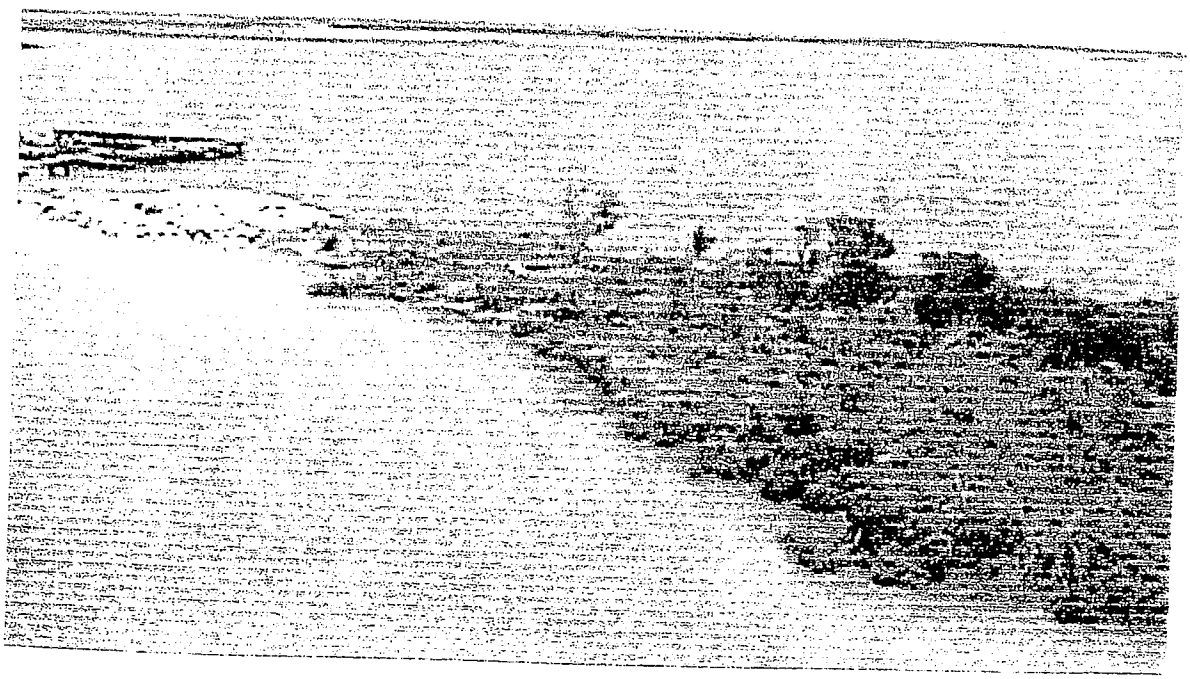










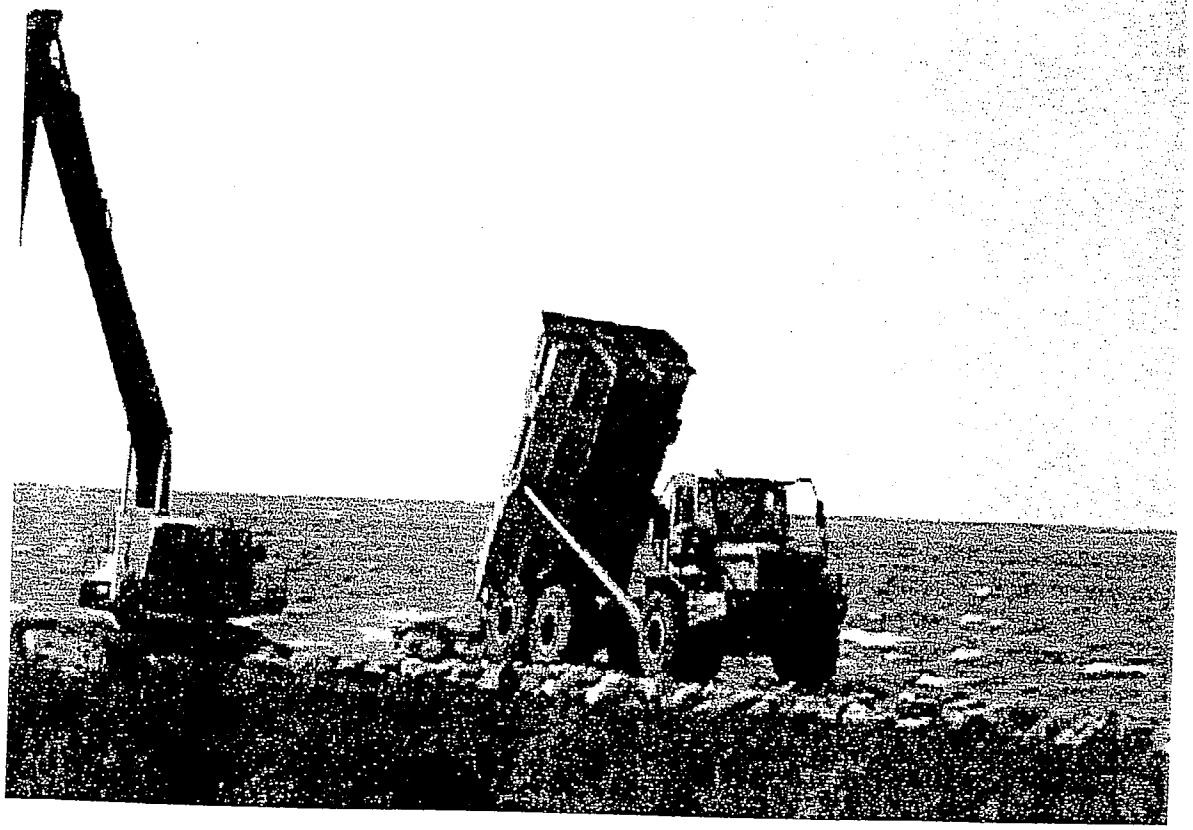


PHASE III MOBILE CANAL EXTENSION

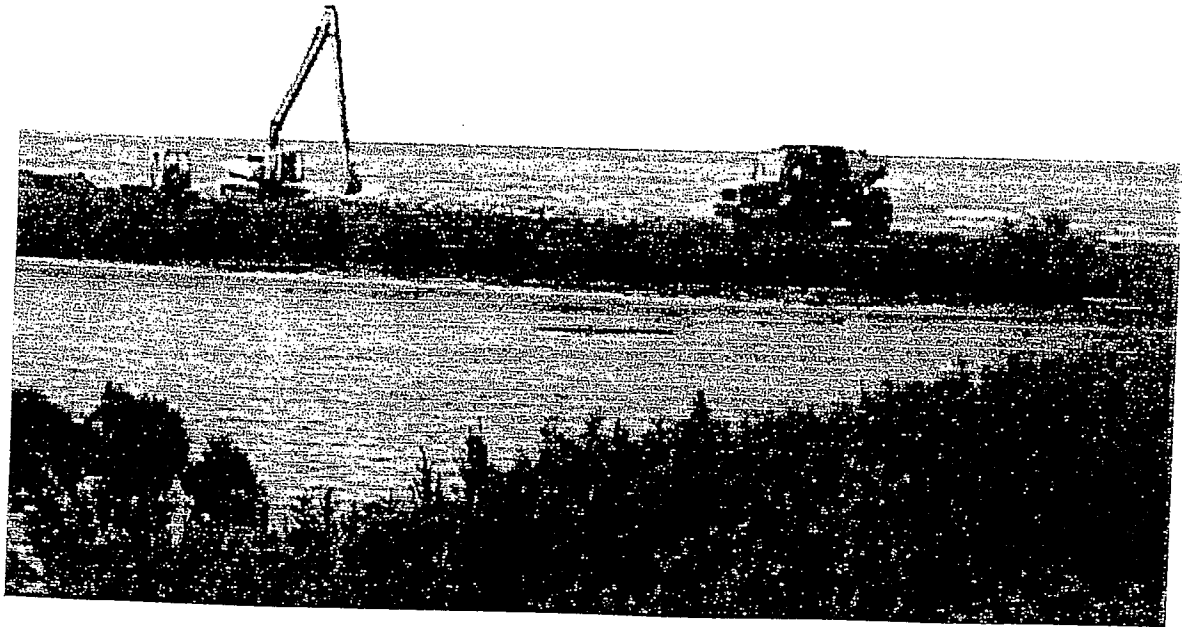
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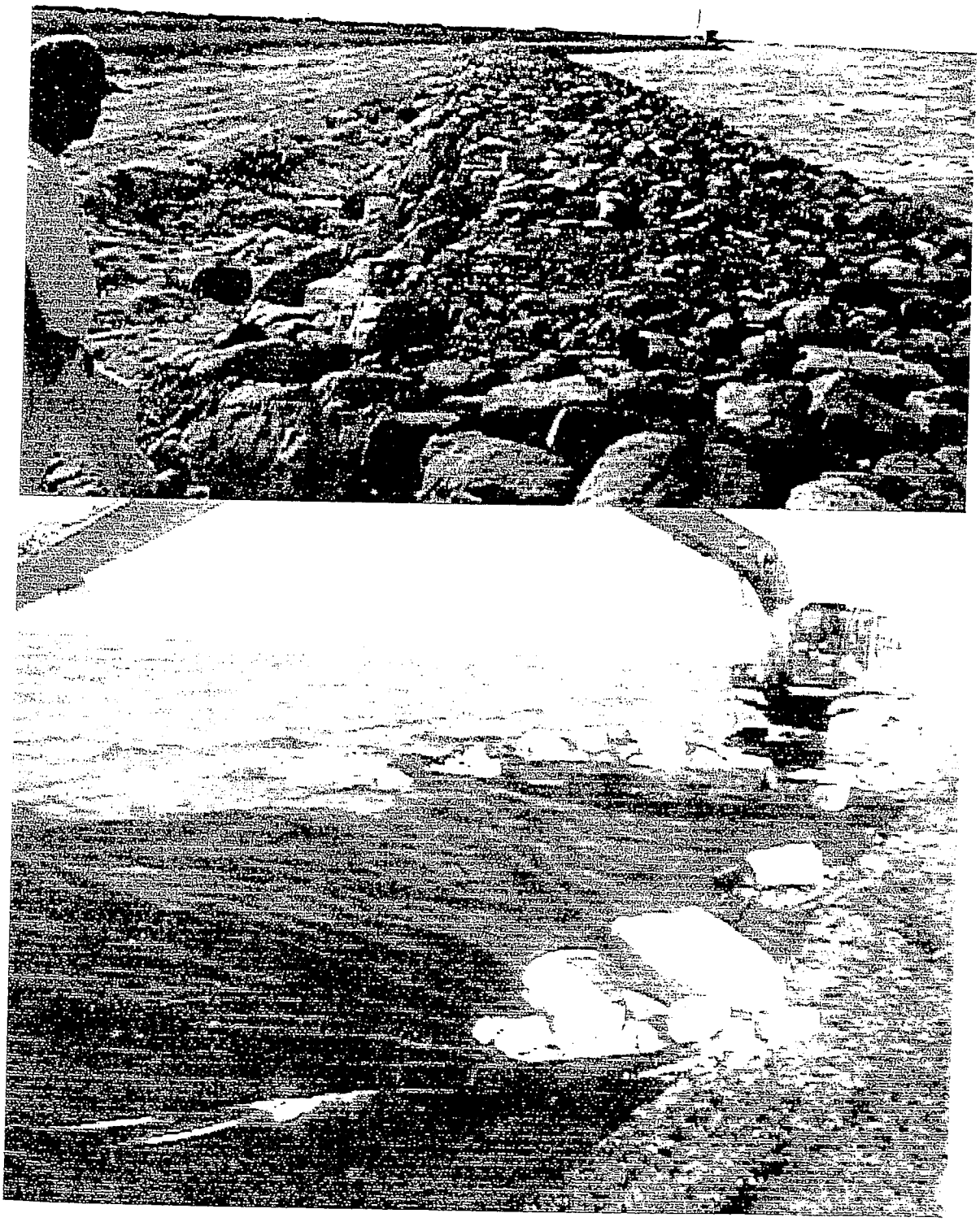
AREA 4 & 5

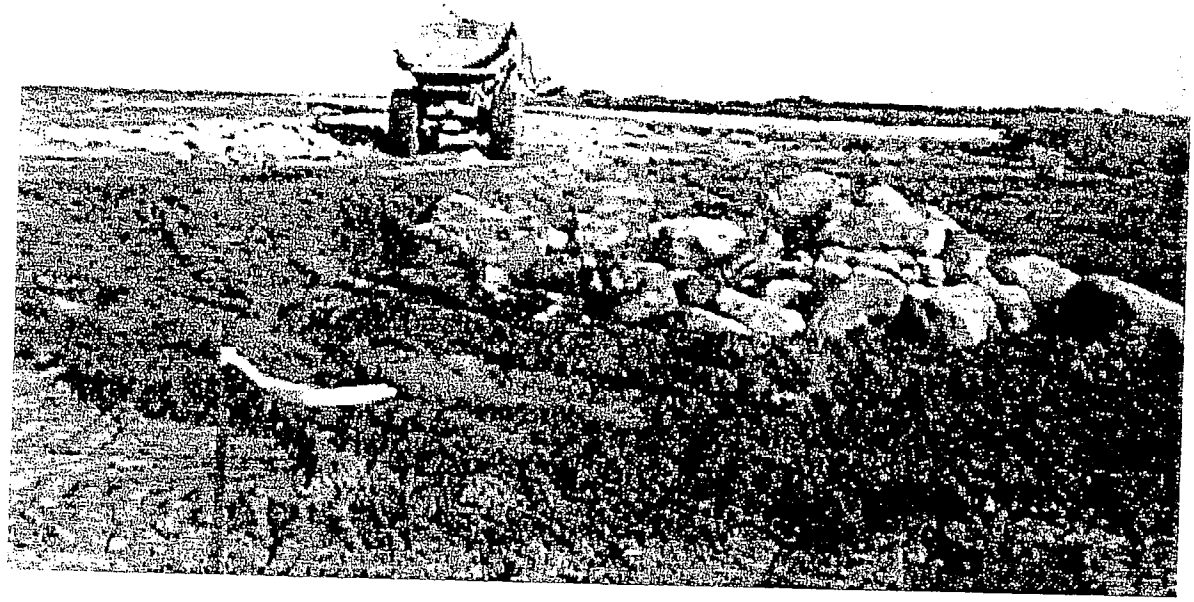


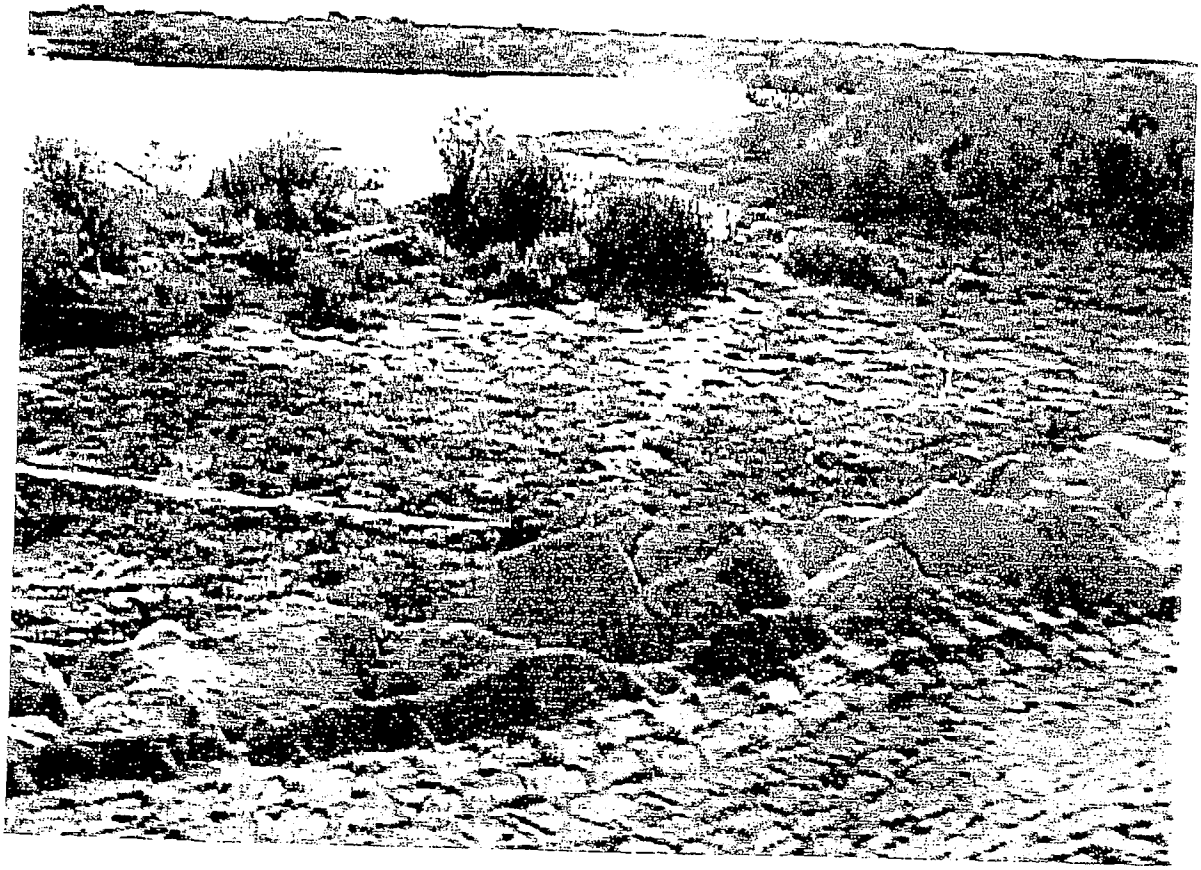








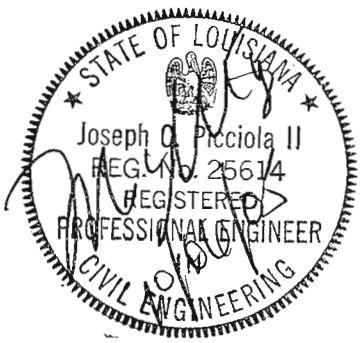




DNR Contract No. 2503-03-18
Surveying and Engineering Services

Point Au Fer Island – Breach Repairs, (TE – 22)
Terrebonne Parish, LA

FINAL REPORT



Picciola & Associates, Inc.
Consulting Engineers & Land Surveyors
P.O. Box 687
Cut Off, LA 70345

September 2005

1. Project Managers/Contracting Officers:

Federal Agency:	NMFS		
Project Manager:	Cheryl Brodnax	Phone:	(225) 578-7923
State Agency:	Louisiana Department of Natural Resources		
Construction Manager:	Daniel Dearmond	Phone:	(985) 449-5103
Project Representative:	Picciola & Associates, Inc.		
Project Manager:	Joe Picciola	Phone:	(985) 632-5786
Project Rep.:	Ray Leblanc	Phone:	(985) 632-5786
Land Owner:	Point Au Fer, L.L.C.		
Land Manager:	Allan Ensminger	Phone:	(337) 462-0762
Contractor:	Luhr Bros., Inc.		
Project Manager:	Lonnie Dunn	Phone:	(318) 489-9263

2. Location and description of projects as approved for construction:

The Pointe Au Fer Breach Repair Project is located on the Point Au Fer Island, in the vicinity of Lake Chapeau, approximately 30 miles south of Morgan City, Louisiana. The project is bounded by Four League bay to the north, Atchafalaya Bay to the West, Locust Bayou and a network of canals to the south, and Wildcat Bayou to the east. The principle project featured included the of two (2) rock plug structures across existing oil field canals at the Gulf of Mexico, one (1) rock weir structure and one (1) bulkhead plug.

This Project consists of adding 250# class rock rip rap to the existing rock dykes at Mobil Canal and Transco Canal. These dykes were originally placed to prevent beach erosion and subsequent breaches into the aforementioned canals from the Gulf of Mexico. Both rock dykes were extended laterally from the existing dykes over the beach area and into the marsh. Also, at

Hester Canal, the bulkhead at Plug #8 was breached on the south marsh side. This breach was closed by extending the bulkhead into the marsh area on the south side. Articulated Mats on Geotextile Fabric were placed on the south side of the bulkhead in the marsh to prevent future wash around. Added to the project was the closure of the breach at Weir #3. This was accomplished by adding approximately 50 linear foot of rock rip rap to the south side of the weir. Articulated Mats on Geotextile Fabric were also placed at this site on the south side of the bulkhead in the marsh to prevent future wash around.

3. Final, As-Built features.

The Final Project features followed exactly as planned.

The amount of 250# Class Rip-Rap quantity varied slightly from the planned quantity and is noted in the inspection reports and included in this report.

4. Key Project Cost Elements

	Work Order Estimate	Actual Cost
Construction	$240,765	$391,382
Engineering and Design	$29,947	$29,633
Bidding	$1,172	$2,040
Construction Administration	$10,898	$7,009.50
Construction Oversight	$24,550	$10,575
Project Totals:	$307,332	$439,559.50*

*Note: Amount does not include LDNR Administrative Costs.

5. Items of Work:

Item No.	Item of Work	Bid Quantity	Unit	Bid Unit Price	Bid Amount	Final Quantity	Final Amount
1	Mobilization & Demobilization	1	LS	$54,875.00	$54,875.00	1	$54,875.00
2	Rip Rap (250# Class)	3,450	Ton	$78.00	$269,100.00	3,336	$260,208.00
3	Rip Rap (55# Class)	0	Ton	$0.00	$0.00	0	$0.00
4	Geotextile Fabric	2,690	SY	$6.00	$16,140.00	2,690	$16,140.00
5	Timber Piles (2.5 CCA Treated - 40’ Long)	440	LF	$35.00	$15,400.00	440	$15,400.00
6	Piling Caps (Galvanized)	7	Each	$30.00	$210.00	7	$210.00
7	Vinyl Sheet Pile	61	LF	$250.00	$15,250.00	61	$15,250.00
8	2 x 8 Timber Waler (0.8 CCA Treated)	122	LF	$30.00	$3,660.00	122	$3,660.00

9	2 x 8 Timber Waler (2.5 CCA Treated)	122	LF	$32.00	$3,904.00	122	$3,904.00
10	2 x 12 Timber Cap (0.8 CCA Treated)	61	LF	$35.00	$2,135.00	61	$2,135.00
11	Galvanized Hardware For Vinyl Bulhead	1	LS	$1,400.00	$1,400.00	1	$1,400.00
12	Articulated Mat (Submar 20’ x 8’ x 4.5” Thick)	7	Each	$2,600.00	$18,200.00	7	$18,200.00
	Base Bid/Final Contract Totals (Items 1 thru 12)				**$400,274.00**		**$391,382.00**

6. Construction and construction oversight:

ITEM	
Prime Construction Contractor	Luhr Bros., Inc.
Subcontractor	Dupre Bros. Construction, Inc.
Original Construction Contract	$400,274.00
Change Orders	$0.00
Over/Under Runs	($8,892.00)
Damages	$0.00
Construction Admin./Oversight (Picciola & Associates, Inc.)	$17,584.50
Total Construction Contract Cost:	$408,966.50

7. Major Equipment:

Luhr Bros., Inc.

SL Barge – L1029
Spud Barge – L985
Office Barge – L1031
Rock Barge – L1080, BV1091, L1083
Material Barge – L1641
1 – Tug Boat – M/V Billy Gene
1 – Crew Boat – M/V Houston
1 – Tender Boat – M/V Mary B
1 – Excavator – 385 Catepillar
1 – Excavator – 330 Catepillar
1 – Excavator – 325 Catepillar
1 – Loader – 973 Track Loader

Dupre Brothers Construction, Inc.

Spud Barge – Little David with Crane LS 128
1 – Tug Boat – M/V Kent
Deck Barge – Paint Barge
20 ft. Aluminum Outboard

8. Discuss construction sequences and activities, problems encountered, solutions to problems, etc.

a) Luhr Bros., Inc. mobilized in first for this project with the rock rip rap.
b) They first mobilized into the Atachafalaya River and light loaded the rock barges. It was at this site that the barges were measured for quantity of rock tonnage.
c) Once mobilized to Weir #3, they established alignment for the extension of the rock weir.
d) They then placed geotextile fabric along the proposed alignment and pinned it down.
e) Rock rip rap was then placed over the geotextile fabric as depicted on the plans.

f) The contractor then mobilized to Mobil Canal.
g) The procedure for placing rock was the same as was conducted for Weir #3.
h) The contractor then mobilized to Transco Canal.
i) The procedure for placing rock was the same as was conducted for Weir #3 and Mobile Canal.
j) Luhr Bros., Inc. subcontracted Dupre Brothers Construction, Inc. to construct the vinyl sheet pile bulkhead extension at Plug #8 and place the Articulated Mats at Plug #8 and Weir #3.
k) Dupre Brothers Construction, Inc. first mobilized to Plug #8 for construction of the vinyl bulkhead.
l) The Timber Vertical Piles were driven to grade.
m) Then the Timber Batter Piles were driven to grade and bolted to the Vertical Piles.
n) The timber walers nearest the piles were placed for bulkhead alignment.
o) Then the Vinyl Bulkhead was driven.
p) Then the exterior board of the top and bottom timber walers were placed and then bolted together.
q) Then the timber cap was installed and nailed to the top walers.
r) The contractor then placed geotextile fabric along the proposed alignment of the Articulated Mats and pinned it down.
s) The contractor then placed the Articulated Mats over the geotextile fabric.
t) Dupre Brothers Construction, Inc. then mobilized to Weir #3 for placement of Articulated Mats.
u) The procedure for placing the Articulated Mats was the same as was conducted for Plug #8.

9. Construction Change Orders and Field Changes:

Not Applicable.

10. Pipeline and other utility crossings.

Not Applicable.

11. Safety and Accidents:

    Excellent Safety Record with no Accidents Reported.

12. Additional Comments pertaining to construction, completed project, etc.

    All aspects of the project went as planned. The Contractor should be commended for his diligence and quality of work.

    Aspects of the project that should be noted concern the shallow water accessibility the project. This caused a lot of extra handling of the rock rip rap and made the unit cost of the rock rip rap high.

    One other aspect of the project to be noted is the proximity of the work to oyster leases. This made the contractor take extra care when transiting to and from the different sites. Also, the oyster leasee's required payment of some type just for transiting the equipment in and around the oyster leases. This added a significant amount of cost to the project.

13. Significant Construction Dates:

Construction Contract Award	07/12/05
Pre-construction Conference	07/27/05
Notice to Proceed	07/27/05
Mobilization	08/01/05
Construction Start	08/02/05
Construction Completion	08/25/05
Final Acceptance	09/09/05

ATTACHMENT V

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

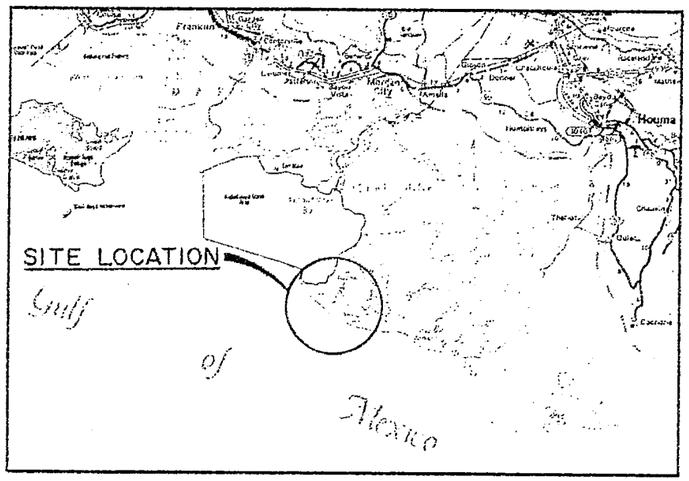
CONSTRUCTION DRAWINGS

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT - PHASE II

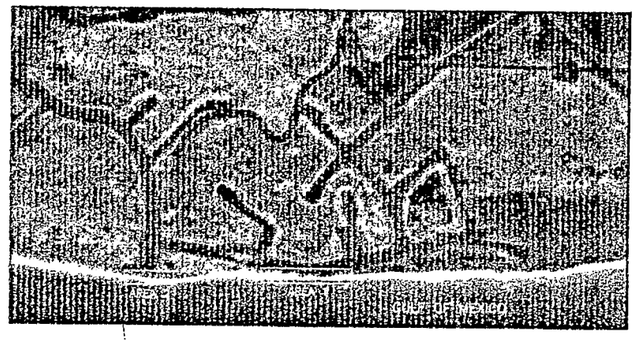
September, 1996

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	AERIAL BASE MAP - AREA 1
3	AERIAL BASE MAP - AREA 2
4	TYPICAL SECTIONS AND DETAILS
5	SURVEY VICINITY MAP
6	SURVEY SITE PLAN
7	SURVEY CROSS SECTIONS
8	SURVEY CROSS SECTIONS
9	SURVEY CROSS SECTIONS
10	SURVEY CROSS SECTIONS



Vicinity Map
N.T.S.



Location Map
N.T.S.

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
and the
State of Louisiana Department of Natural Resources
Coastal Restoration Division

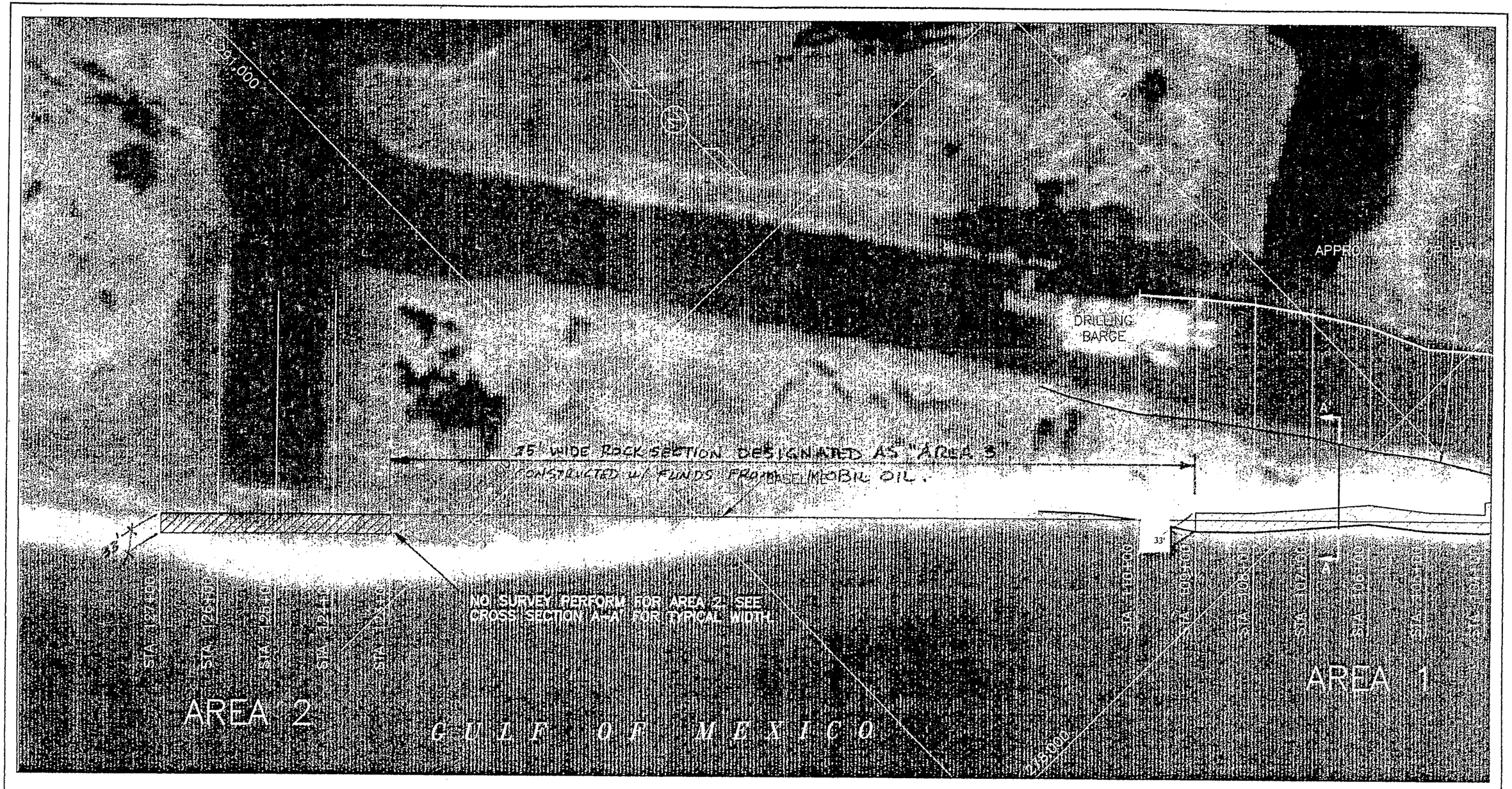
D. BRIAN VENERI
REG. NO. 24617
REGISTERED
PROFESSIONAL ENGINEER
CIVIL ENGINEERING

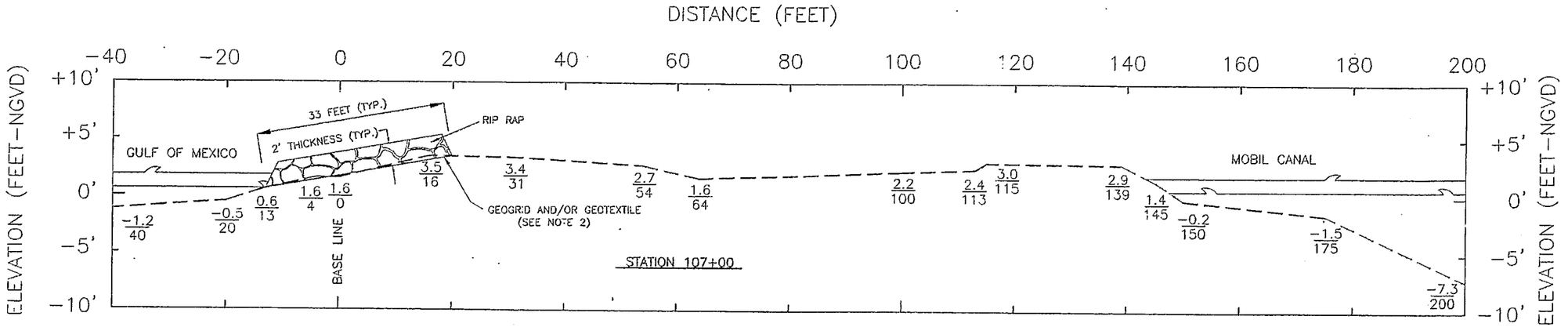
DNR/CRD ENGINEERING MANAGER

9/19/96
DATE

"AS-BUILT"

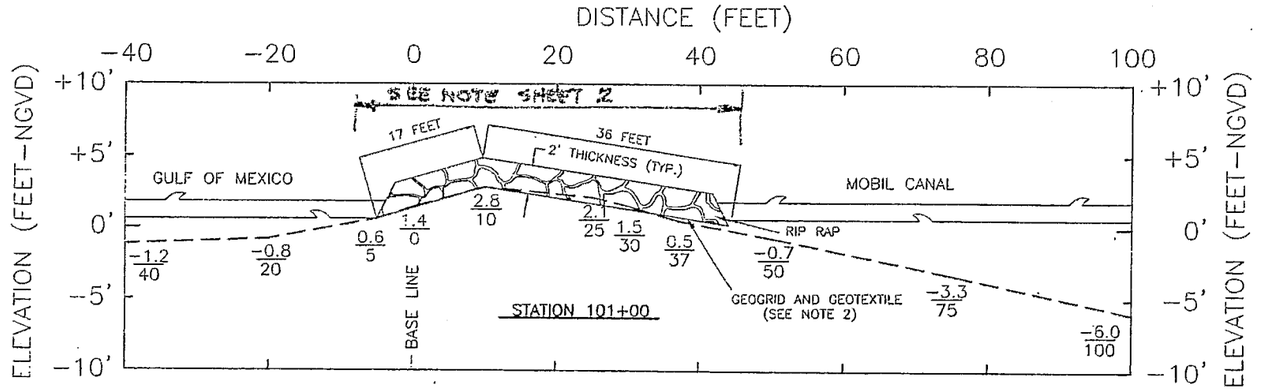



STA. 91+00
STA. 97+00
STA. 103+00
STA. 109+00
STA. 115+00
STA. 121+00
STA. 127+00
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STA. 205+00
STA.



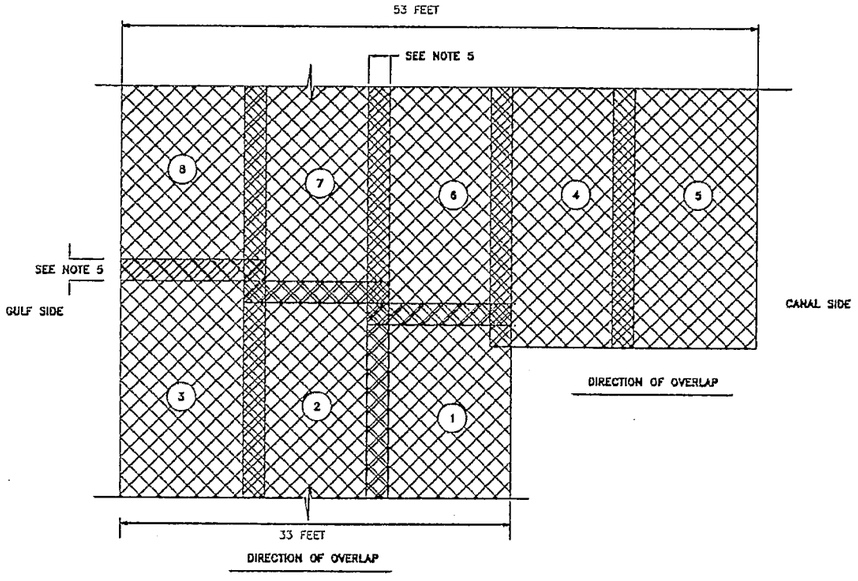
CROSS SECTION A – A'

SCALE: 1" = 10' H
1" = 5' V



CROSS SECTION B – B'

SCALE: 1" = 10' H
1" = 5' V



GEOGRID/GEOTEXTILE LAYOUT

N.T.S.

GENERAL NOTES:

1. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CALL DOTTIE AT 1-800-272-3020 TO LOCATE ANY UTILITY LINES IN THE AREA. FURTHERMORE, CONTRACTOR SHALL NOTIFY MOBIL EXPLORATION AND PRODUCING U.S. INC. A MINIMUM OF 14 DAYS PRIOR TO ACCESSING THE SITE ATTENTION MESSRS. CHUCK GOWER AT (504) 774-7420 AND JOSEPH U. FLORES AT (713) 775-2157.

2. THE CONSTRUCTION OF THE BREAKWATER WITHIN AREA 1 CONSISTS OF NONWOVEN GEOTEXTILE FILTER FABRIC OVERLAIN BY GEOGRID AND 2 FEET OF RIP-RAP. THE CONSTRUCTION OF THE BREAKWATER WITHIN AREA 2 CONSISTS OF A WOVEN GEOTEXTILE OVERLAIN BY 2 FEET OF RIP-RAP. GEOTEXTILES SHALL BE AS PER THE TECHNICAL SPECIFICATIONS. CONTRACTOR SHALL PLACE GEOTEXTILES IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND AS SHOWN ON THE CONSTRUCTION DRAWINGS.

3. ARMOR STONE RIP-RAP SHALL MEET LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT CLASS 250 POUND STONE, OR OWNER APPROVED EQUIVALENT. GRADATION TESTS OF REPRESENTATIVE STONE (15-TON MIN. SAMPLE SIZE) SHALL BE MADE AT THE QUARRY. CERTIFIED TEST RESULTS MUST BE SUBMITTED AND APPROVED PRIOR TO PLACEMENT ON THE PROJECT. THE STONE PLACEMENT METHOD SHALL PRODUCE A REASONABLY WELL GRADED ROCK MASS WITH VOIDS MINIMIZED AND A TOLERANCE OF +6 TO -0 INCHES OF FINAL GRADE. STONE SHALL BE PLACED TO FULL THICKNESS (2.0 FEET) IN ONE LIFT WITH A MAXIMUM DROP OF 1 FOOT TO AVOID DAMAGING THE GEOTEXTILE FABRIC.

4. ACTUAL ALIGNMENT MAY BE ADJUSTED BY PROJECT ENGINEER TO MEET CHANGING FIELD CONDITIONS. IF ADDITIONAL QUANTITIES FOR GEOTEXTILES AND ARMOR STONE ARE NECESSARY, THEY WILL BE PAID FOR AT THE UNIT PRICE BID FOR THE ITEM.

5. MINIMUM OVERLAP AT SIDES AND ENDS SHALL BE: THREE FEET FOR GEOGRID AND WOVEN GEOTEXTILES; AND TWO FEET FOR NONWOVEN GEOTEXTILE FILTER FABRIC.

STATE OF LOUISIANA
D. BRIAN KENDRICK
REG. No. 24672
REGISTERED
PROFESSIONAL ENGINEER
9/18/96
CIVIL ENGINEERING

TYPICAL SECTIONS AND DETAILS

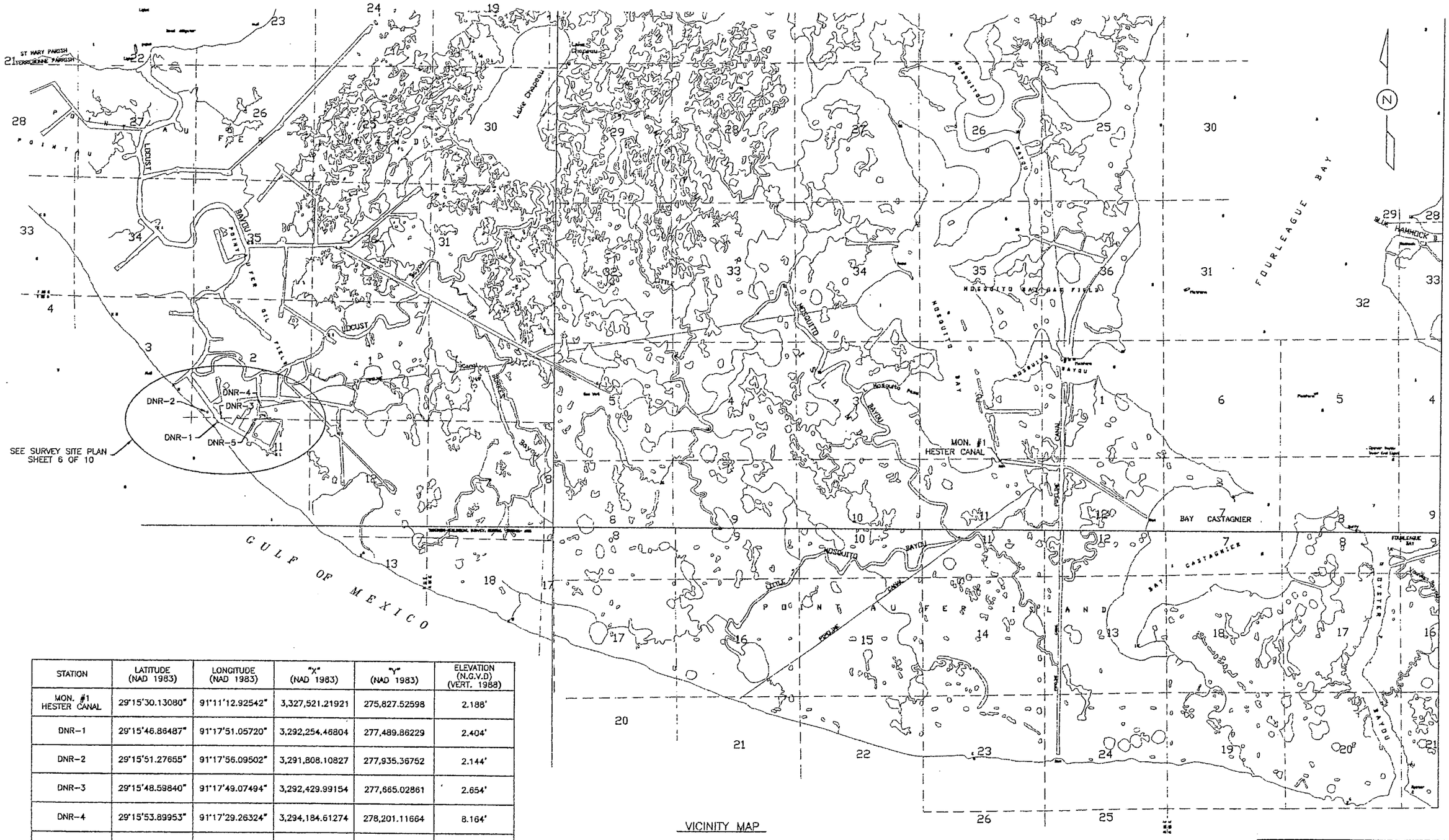
POINT AU FER ISLAND HYDROLOGIC RESTORATION
PROJECT – PHASE II (TE-22)
TERREBONNE PARISH, LOUISIANA

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
625 NORTH 4TH STREET
BATON ROUGE, LOUISIANA 70804

SCALE: AS SHOWN	APPROVED BY: GEORGE BODDIE, P.E.	DRAWN BY: D.B.K.
DATE: AUGUST 29, 1996		

DRAWING NO. 4 OF 10

"AS-BUILT"



STATION	LATITUDE (NAD 1983)	LONGITUDE (NAD 1983)	"X" (NAD 1983)	"Y" (NAD 1983)	ELEVATION (N.G.V.D) (VERT. 1988)
MON. #1 HESTER CANAL	29°15'30.13080"	91°11'12.92542"	3,327,521.21921	275,827.52598	2.188'
DNR-1	29°15'46.86487"	91°17'51.05720"	3,292,254.46804	277,489.86229	2.404'
DNR-2	29°15'51.27655"	91°17'56.09502"	3,291,808.10827	277,935.36752	2.144'
DNR-3	29°15'48.59840"	91°17'49.07494"	3,292,429.99154	277,665.02861	2.654'
DNR-4	29°15'53.89953"	91°17'29.26324"	3,294,184.61274	278,201.11664	8.164'
DNR-5	29°15'47.85744"	91°17'32.21430"	3,293,923.44575	277,590.68569	9.064'

NOTE:

DRAWING REPRODUCED FROM 7.5 MINUTE SERIES QUADRANGLES
"POINT AU FER, LA." – 1980
"FOURLEAGUE BAY, LA." – 1974
"OYSTER BAYOU, LA." – 1974
THE ABOVE LISTED QUAD MAPS ARE LOCATED IN ST. MARY PARISH AND TERREBONNE PARISH

VICINITY MAP

2000 0 2000 4000 6000

SCALE: 1" = 2000'

REFERENCE: PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.

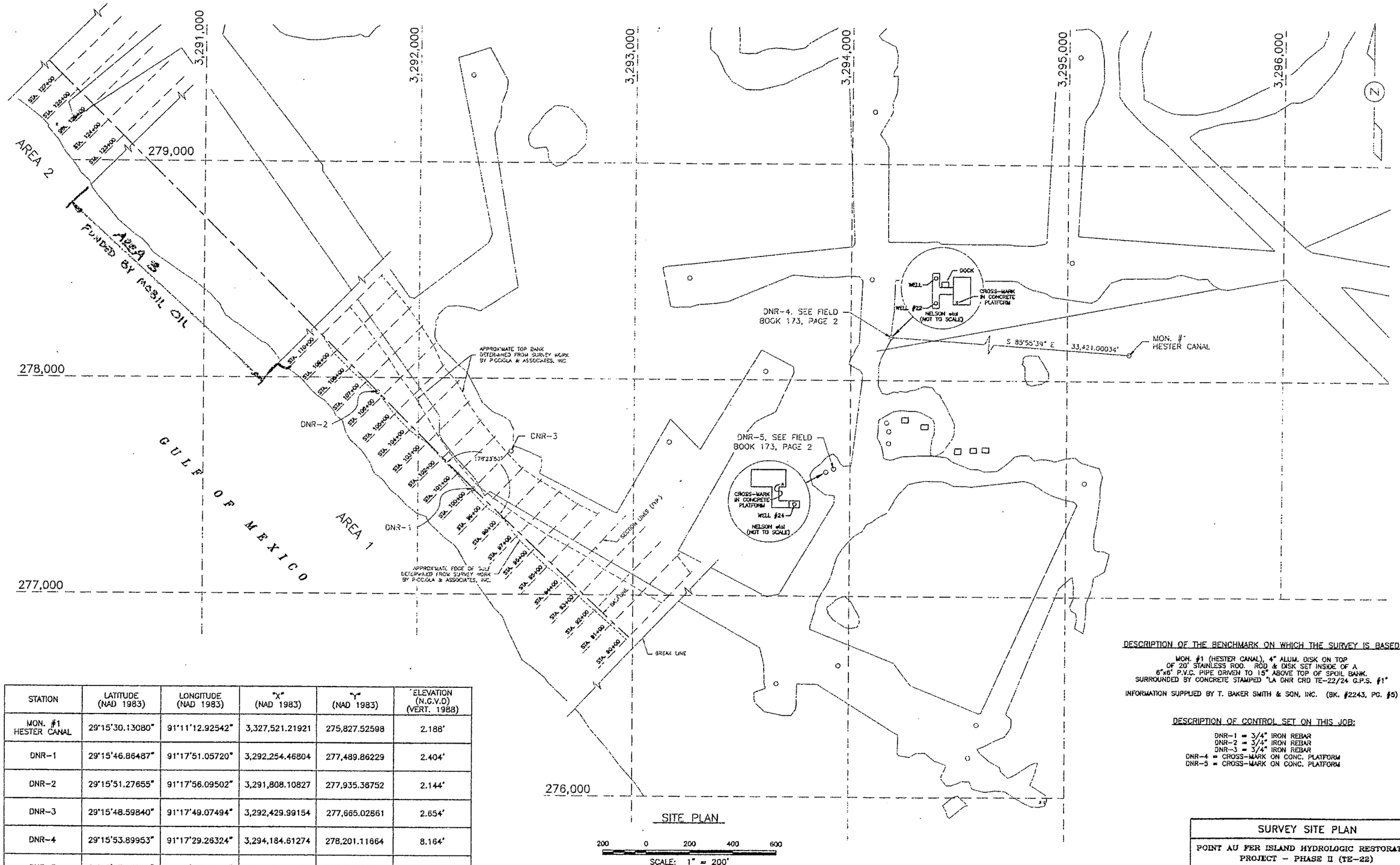
SURVEY VICINITY MAP

POINT AU FER ISLAND HYDROLOGIC RESTORATION
PROJECT – PHASE II (TE-22)
TERREBONNE PARISH, LOUISIANA

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
625 NORTH 4TH STREET
BATON ROUGE, LOUISIANA 70804

SCALE: AS SHOWN | APPROVED BY: GEORGE RODRIGUE, P.E. | DRAWN BY: B.B.K.
DATE: AUGUST 26, 1996

DRAWING NO.
5 OF 10



SITE PLAN

200 0 200 400 600

SCALE: 1" = 200'

STATION	LATITUDE (NAD 1983)	LONGITUDE (NAD 1983)	"X" (NAD 1983)	"Y" (NAD 1983)	ELEVATION (N.G.V.D) (VERT. 1988)
MON. #1 HESTER CANAL	29°15'30.13080"	91°11'12.92542"	3,327,521.21921	275,827.52598	2.188'
DNR-1	29°15'46.86487"	91°17'51.05720"	3,292,254.46804	277,489.86229	2.404'
DNR-2	29°15'51.27655"	91°17'56.09502"	3,291,808.10827	277,935.36752	2.144'
DNR-3	29°15'48.59840"	91°17'49.07494"	3,292,429.99154	277,665.02861	2.654'
DNR-4	29°15'53.89953"	91°17'29.26324"	3,294,184.61274	278,201.11664	8.164'
DNR-5	29°15'47.85744"	91°17'32.21430"	3,293,923.44575	277,590.68569	9.064'

NOTE:

DRAWING REPRODUCED FROM 7.5 MINUTE SERIES QUADRANGLES "POINT AU FER, LA." - 1980
THE ABOVE LISTED QUAD MAP IS LOCATED IN ST. MARY PARISH AND TERREBONNE PARISH

REFERENCE: PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.

DESCRIPTION OF THE BENCHMARK ON WHICH THE SURVEY IS BASED:

MON. #1 (HESTER CANAL), 4" ALUM. DISK ON TOP OF 20' STAINLESS ROD. ROD & DISK SET INSIDE OF A 6"x6' P.V.C. PIPE DRIVEN TO 15" ABOVE TOP OF SPOIL BANK. SURROUNDED BY CONCRETE STAMPED "LA DNR CRD TE-22/24 G.P.S. #1"

INFORMATION SUPPLIED BY T. BAKER SMITH & SON, INC. (BK. #2243, PG. #5)

DESCRIPTION OF CONTROL SET ON THIS JOB:

DNR-1 = 3/4" IRON REBAR
DNR-2 = 3/4" IRON REBAR
DNR-3 = 3/4" IRON REBAR
DNR-4 = CROSS-MARK ON CONC. PLATFORM
DNR-5 = CROSS-MARK ON CONC. PLATFORM

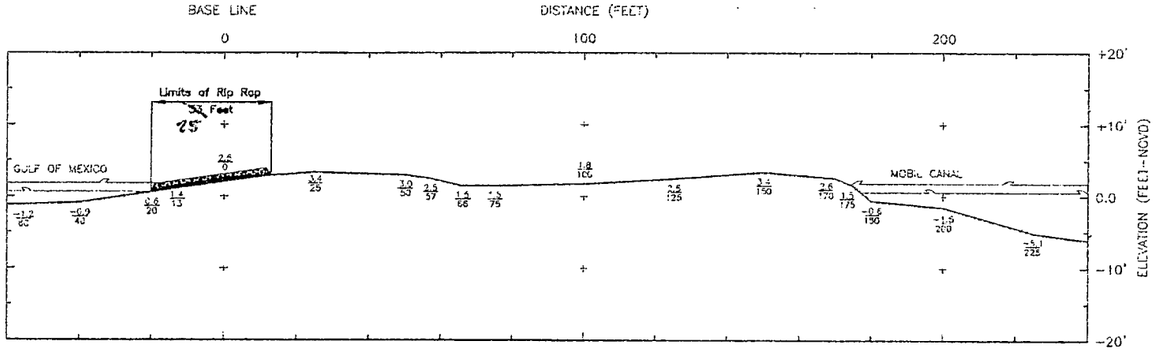
SURVEY SITE PLAN

POINT AU FER ISLAND HYDROLOGIC RESTORATION
PROJECT - PHASE II (TE-22)
TERREBONNE PARISH, LOUISIANA

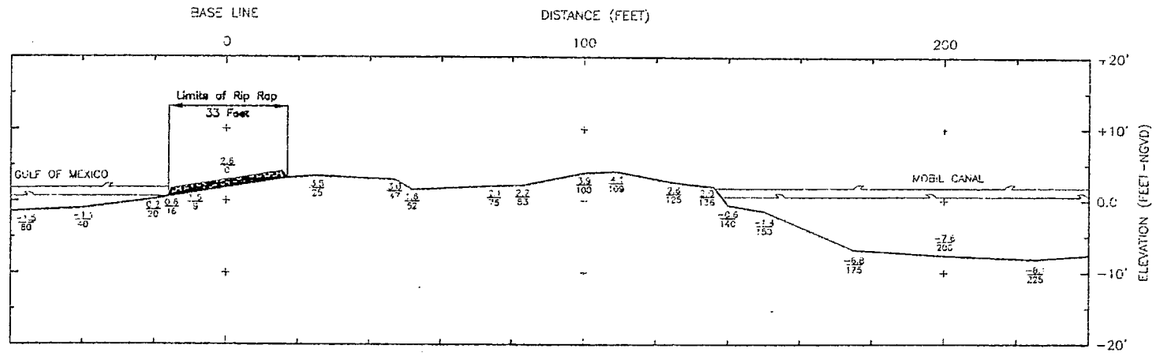
LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
625 NORTH 4TH STREET
BATON ROUGE, LOUISIANA 70804

SCALE: AS SHOWN | APPROVED BY: GEORGE BODDIE, P.E. | DRAWN BY: D.B.K.
DATED: AUGUST 28, 1996

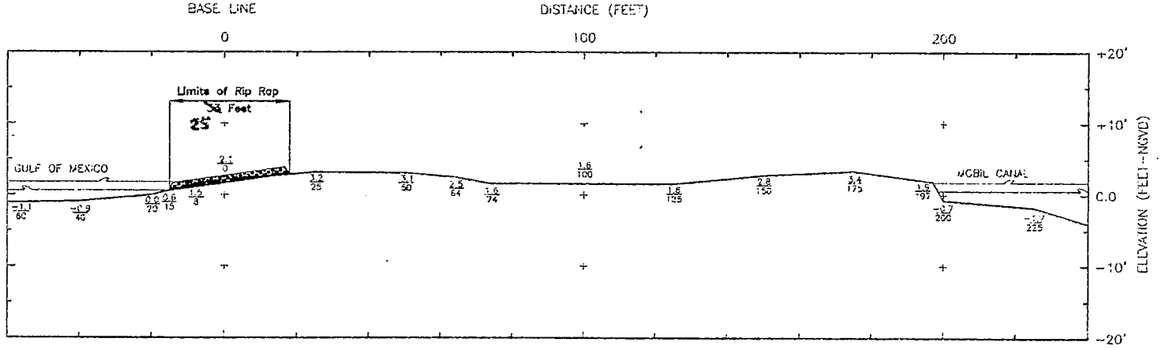
DRAWING NO. 6 OF 10



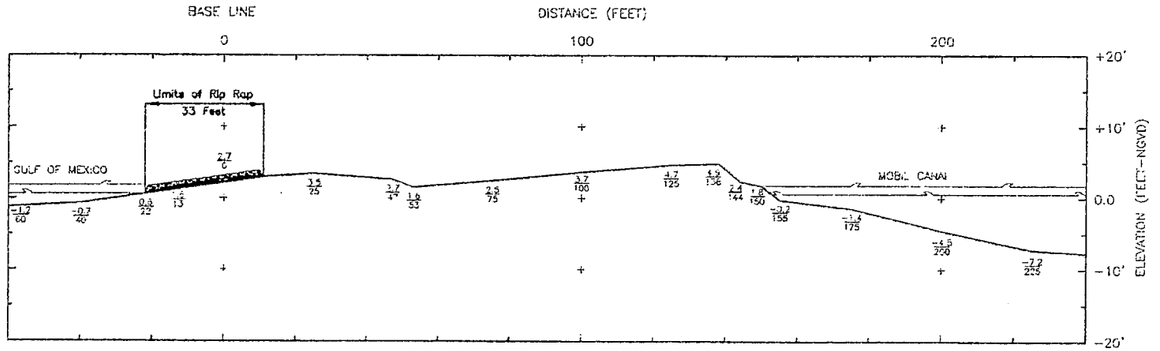
STATION 92+00



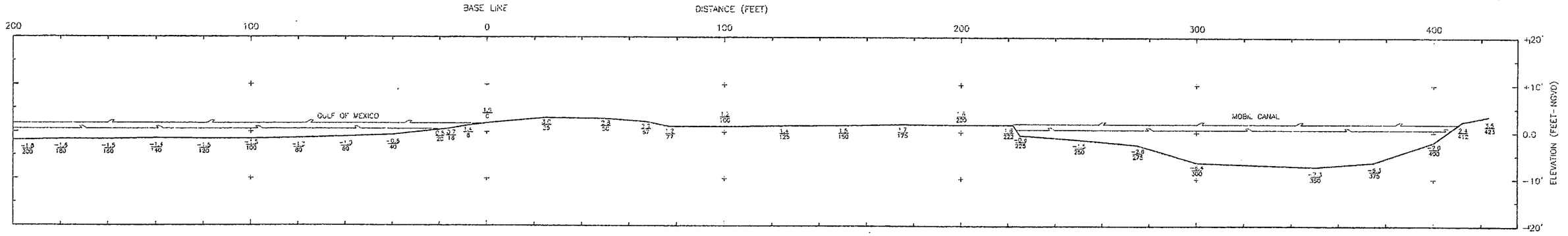
STATION 94+00



STATION 91+00



STATION 93+00



STATION 90+00

EXISTING GRADE

MEAN HIGH WATER (+1.6' N.G.V.D.)

MEAN LOW WATER (+0.6' N.G.V.D.)

LEGEND

REFERENCE: PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.

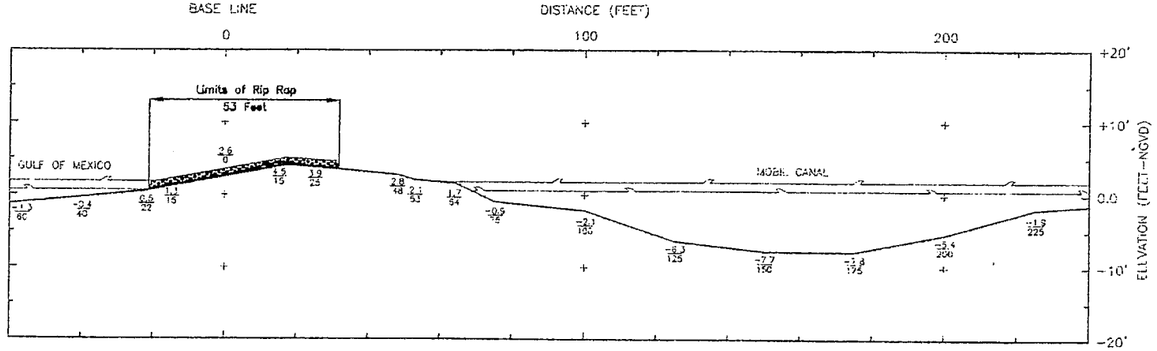
SURVEY CROSS SECTIONS

POINT AU FER ISLAND HYDROLOGIC RESTORATION
PROJECT - PHASE II (TE-22)
TERREBONNE PARISH, LOUISIANA

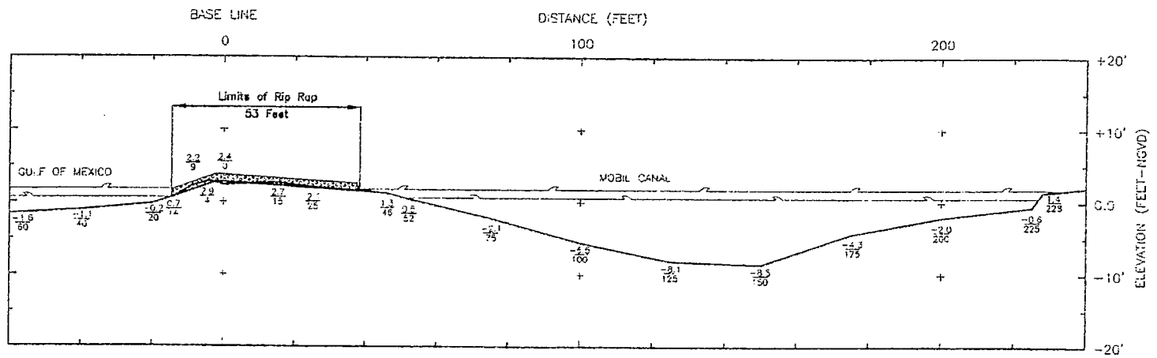
LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
625 NORTH 4TH STREET
BATON ROUGE, LOUISIANA 70804

SCALE: AS SHOWN | APPROVED BY: YOUNES BOUDIB, P.E. | DRAWN BY: S.S.K.
DATE: AUGUST 29, 1996

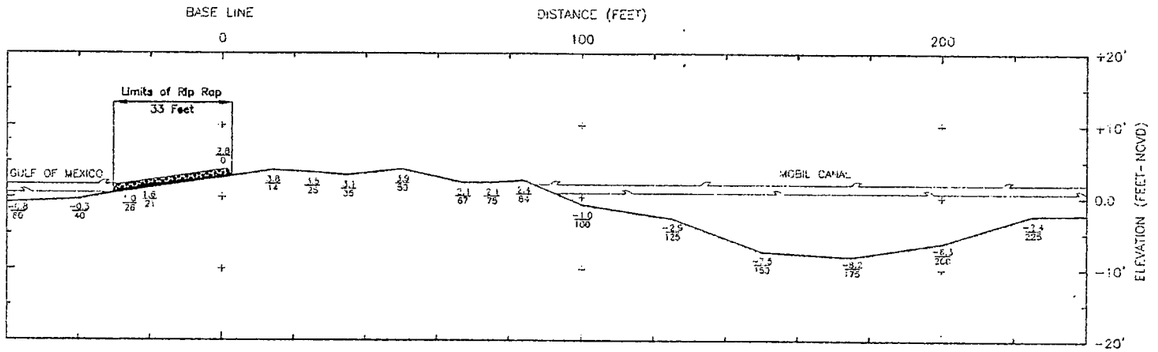
DRAWING NO. 7 OF 10



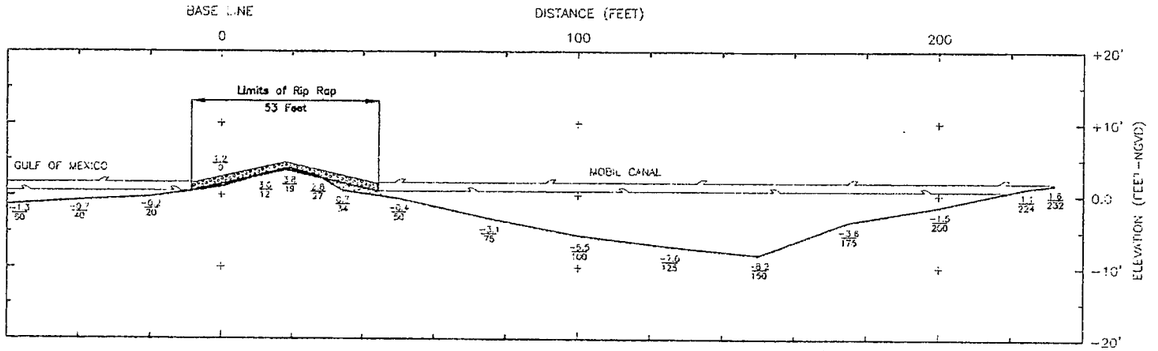
STATION 97+00



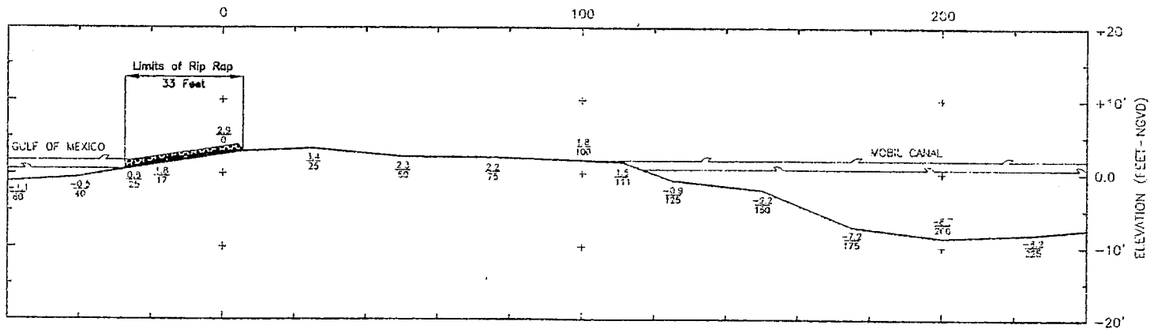
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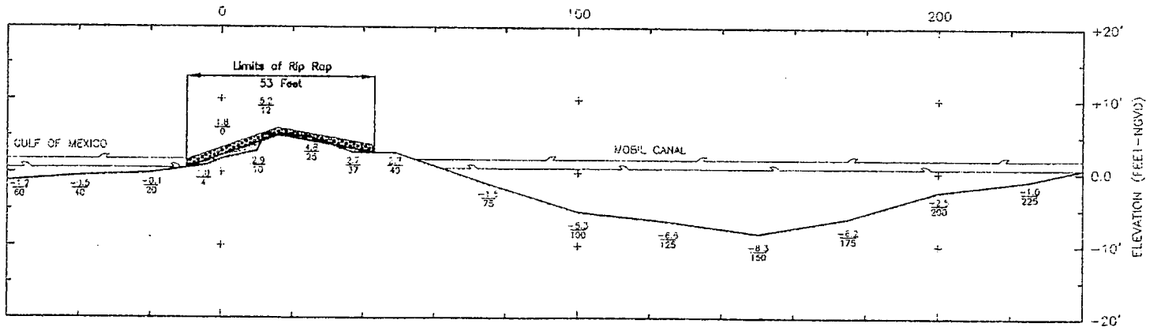
STATION 96+00



STATION 99+00



STATION 95+00



STATION 98+00

EXISTING GRADE
MEAN HIGH WATER (+1.8' N.G.V.D.)
MEAN LOW WATER (+0.8' N.G.V.D.)

LEGEND

REFERENCE: PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.

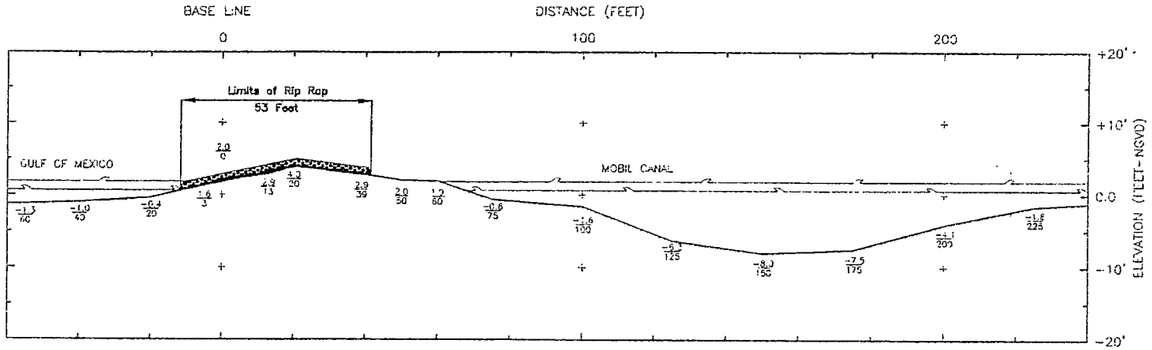
SURVEY CROSS SECTIONS

POINT AU FER ISLAND HYDROLOGIC RESTORATION
PROJECT - PHASE II (TE-22)
TERREBONNE PARISH, LOUISIANA

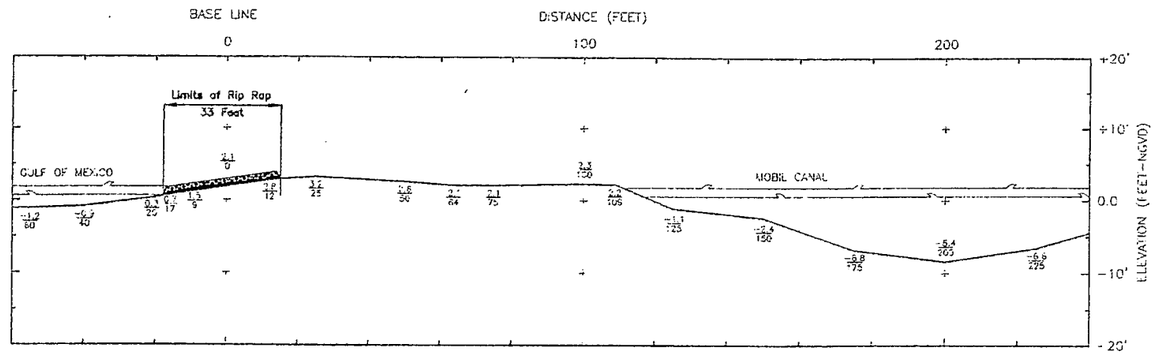
LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
625 NORTH 4TH STREET
BATON ROUGE, LOUISIANA 70804

SCALE: AS SHOWN	APPROVED BY: GEORGE ROBERIE, P.E.	DRAWN BY: B.B.C.
DATE: AUGUST 29, 1996		

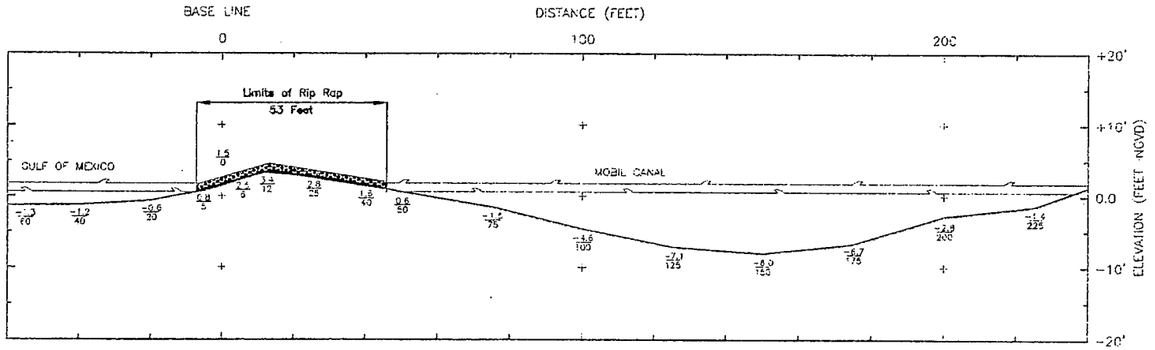
DRAWING NO.
8 of 10



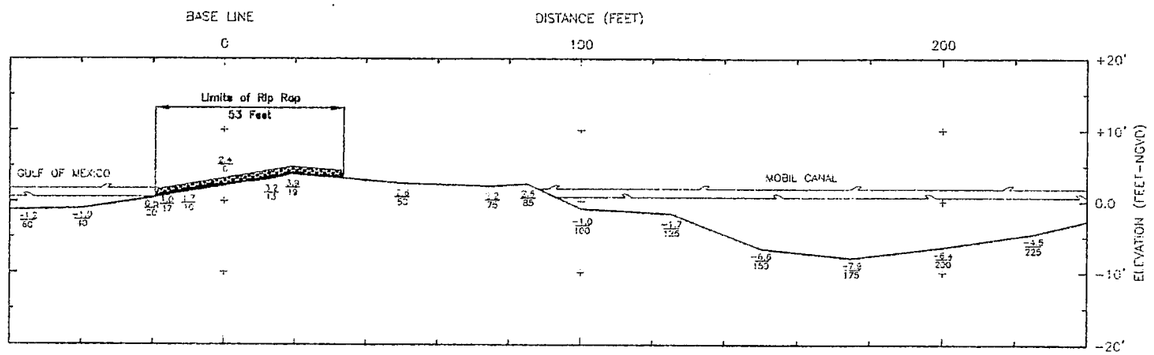
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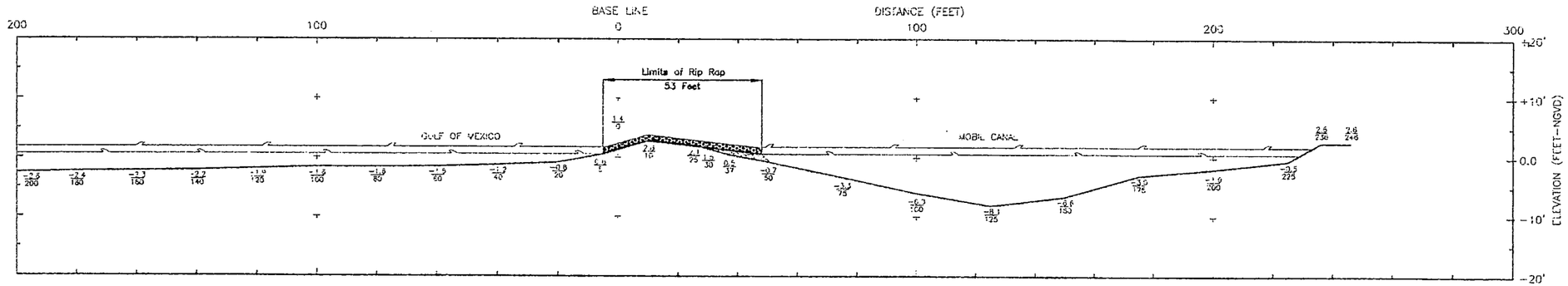
STATION 105+00



STATION 102+00



STATION 104+00



STATION 101+00

EXISTING GRADE
MEAN HIGH WATER (+1.8' N.G.V.D.)
MEAN LOW WATER (+0.6' N.G.V.D.)

LEGEND

REFERENCE: PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.

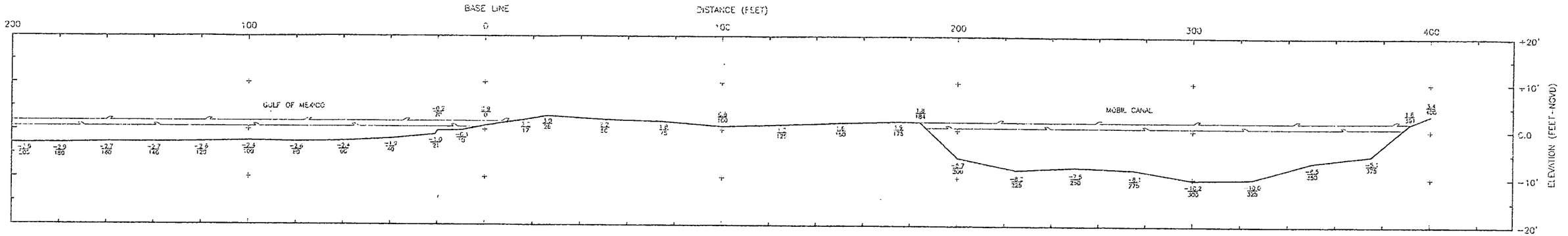
SURVEY CROSS SECTIONS

POINT AU FER ISLAND HYDROLOGIC RESTORATION
PROJECT – PHASE II (TE-22)
TERREBONNE PARISH, LOUISIANA

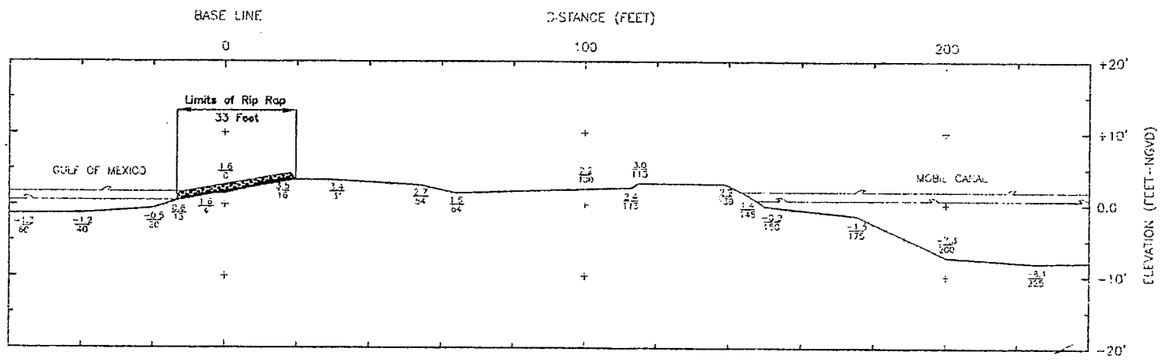
LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
625 NORTH 4TH STREET
BATON ROUGE, LOUISIANA 70804

SCALE: AS SHOWN	APPROVED BY: REGINE BOSKIE, P.E.	DRAWN BY: D.B.C.
DATE: AUGUST 28, 1996		

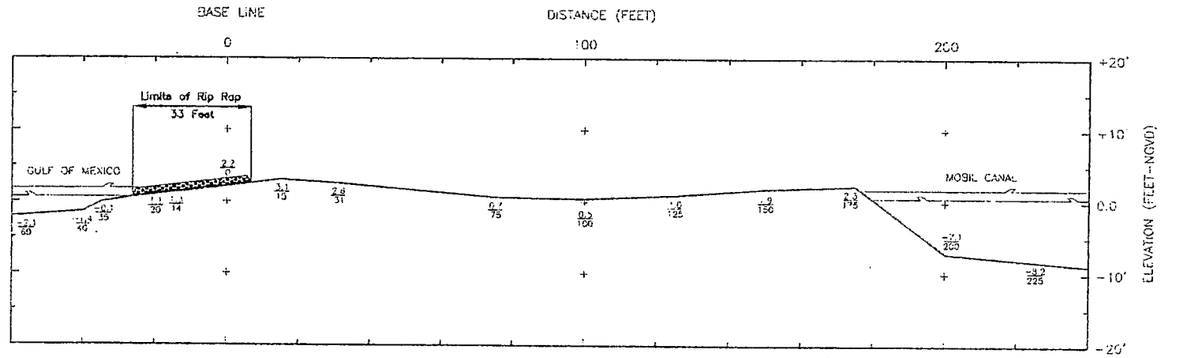
DRAWING NO.
9 OF 10



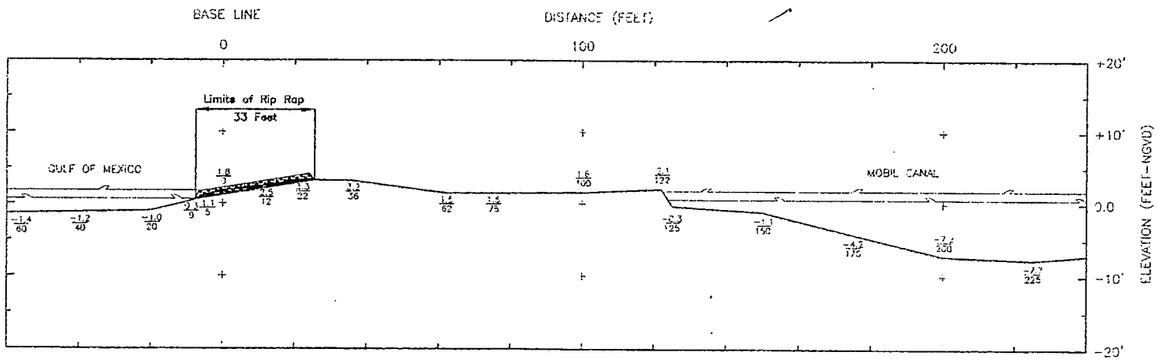
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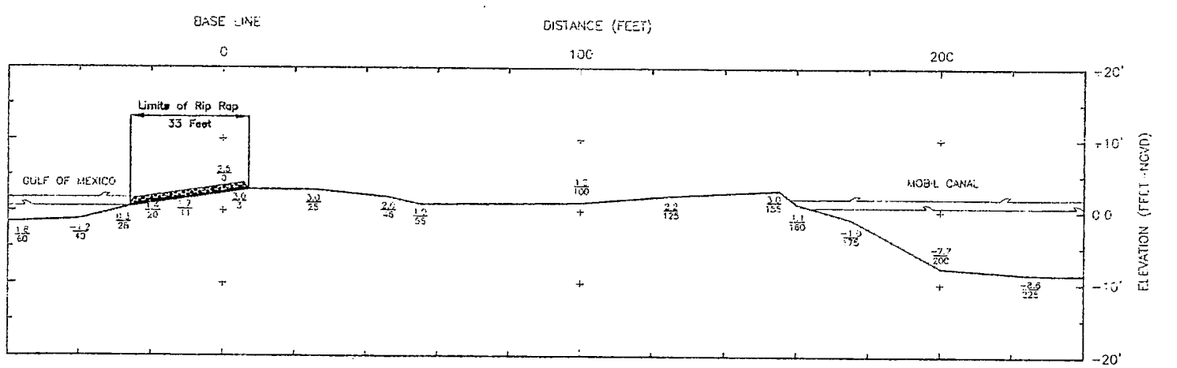
STATION 107+00



STATION 109+00



STATION 106+00



STATION 108+00

EXISTING GRADE
MEAN HIGH WATER (+1.8' N.G.V.D.)
MEAN LOW WATER (+0.6' N.G.V.D.)

LEGEND

REFERENCE: PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.

SURVEY CROSS SECTIONS

POINT AU FER ISLAND HYDROLOGIC RESTORATION
PROJECT - PHASE II (TE-22)
TERREBONNE PARISH, LOUISIANA

LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
625 NORTH 4TH STREET
BATON ROUGE, LOUISIANA 70804

SCALE: AS SHOWN	APPROVED BY: GEORGE RODRIE, P.E.	DRAWN BY: D.B.K.
DATE: AUGUST 28, 1996		

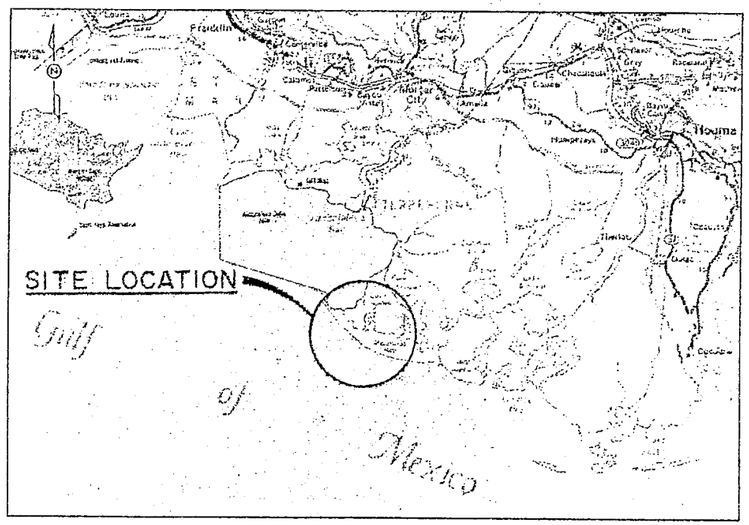
DRAWING NO.
10 OF 10

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
and the
State of Louisiana Department of Natural Resources
Coastal Restoration Division

Plans of Purposed

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT PHASE III EXTENSION (TE-22)

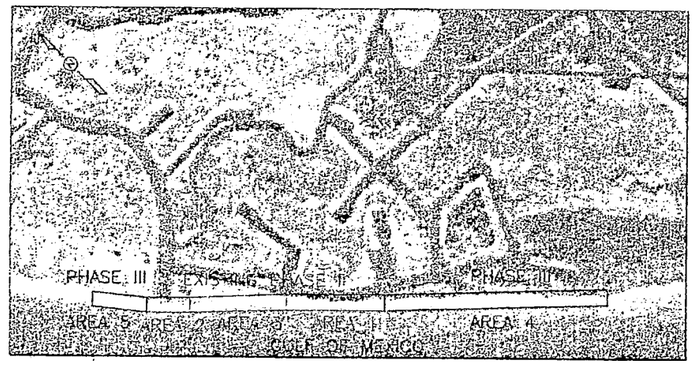
June, 1999



Vicinity Map
N.T.S.

INDEX TO SHEETS

FIGURE NO.	DESCRIPTION
1	TITLE SHEET
2	AERIAL BASE MAP
3	AERIAL BASE MAP – AREA 4
4	AERIAL BASE MAP – AREA 5
5–7	TYPICAL SECTION AND DETAILS

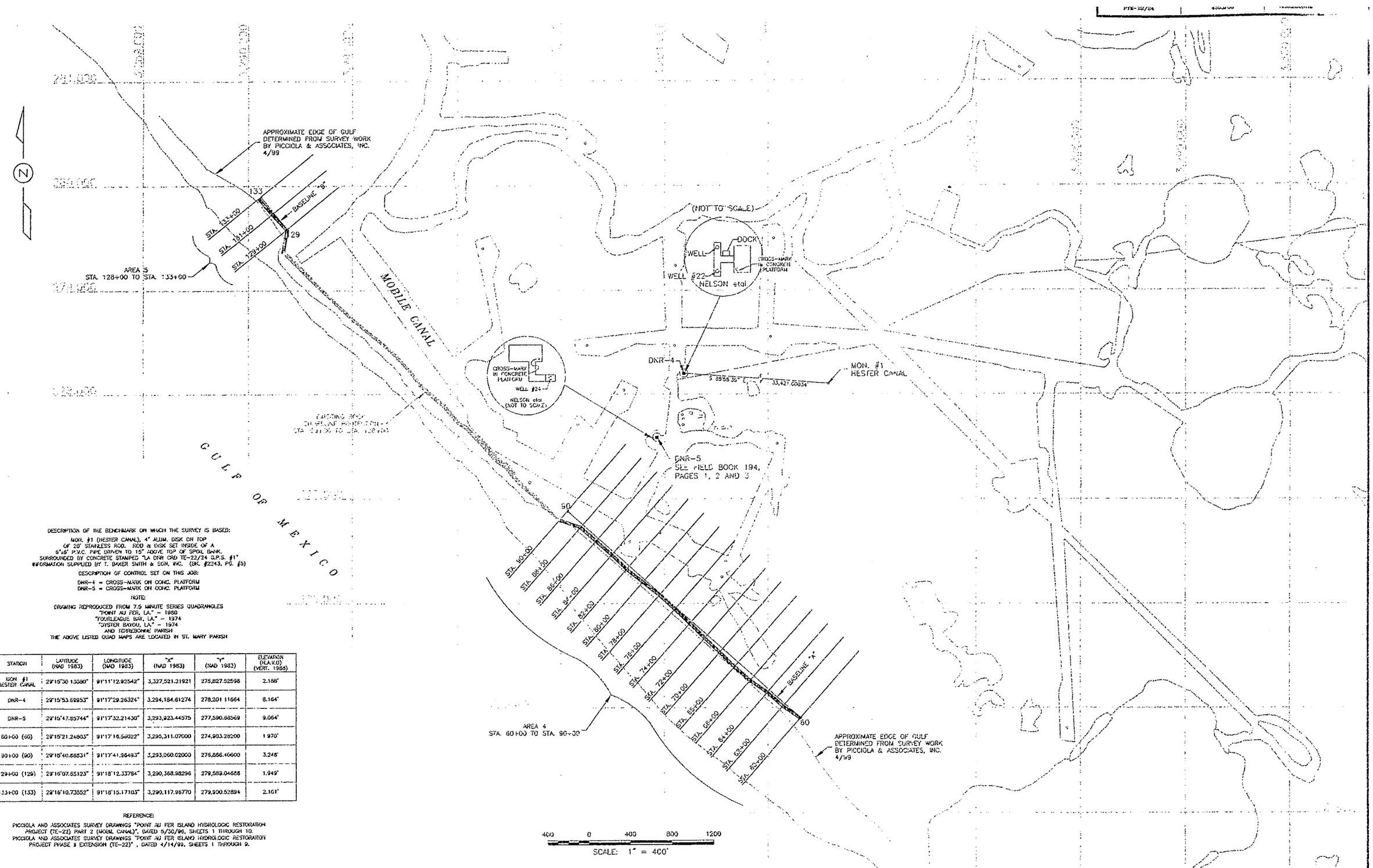


Location Map
N.T.S.









DESCRIPTION OF THE BENCHMARK ON WHICH THE SURVEY IS BASED:

MON. #1 (HESTER CANAL), 4" ALUM. DISK ON TOP OF 20' STAINLESS ROD. ROD & DISK SET INSIDE OF A 6"x6" P.V.C. PIPE DRIVEN TO 15' ABOVE TOP OF SPOIL BANK. SURROUNDED BY CONCRETE STAMPED "LA DNR CRD TE-22/24 G.P.S. #1" INFORMATION SUPPLIED BY T. BAKER SMITH & SON, INC. (BK. #2243, PG. #9)

DESCRIPTION OF CONTROL SET ON THIS JOB:

DNR-4 = CROSS-MARK ON CONC. PLATFORM
DNR-5 = CROSS-MARK ON CONC. PLATFORM

NOTE:

DRAWING REPRODUCED FROM 7.5 MINUTE SERIES QUADRANGLES
"POINT AU FER, LA." - 1980
"FOURLEAGUE BAY, LA." - 1974
"OYSTER BAYOU, LA." - 1974
AND TERREBONNE PARISH
THE ABOVE LISTED QUAD MAPS ARE LOCATED IN ST. MARY PARISH

STATION	LATITUDE (NAD 1983)	LONGITUDE (NAD 1983)	X (NAD 1983)	Y (NAD 1983)	ELEVATION (N.A.V.D. (VERT. 1988)
MON #1 HESTER CANAL	29°15'30.13080"	91°11'12.92542"	3,327,521.21921	275,827.52598	2.188'
DNR-4	29°15'53.68953"	91°17'29.26324"	3,294,184.61274	278,201.11664	8.164'
DNR-5	29°15'47.85744"	91°17'32.21430"	3,293,923.44575	277,590.68569	9.064'
60+00 (60)	29°15'21.24803"	91°17'16.56022"	3,295,311.07000	274,903.28200	1.970'
90+00 (90)	29°15'40.68831"	91°17'41.96493"	3,293,060.02000	276,866.40600	3.248'
129+00 (129)	29°16'07.65123"	91°18'12.33784"	3,290,368.98296	279,589.04685	1.949'
133+00 (133)	29°16'10.73552"	91°18'15.17103"	3,290,117.95770	279,900.52894	2.161'

REFERENCE:

PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.
PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT PHASE 3 EXTENSION (TE-22)" , DATED 4/14/99, SHEETS 1 THROUGH 9.

DATE	REVISIONS	APPROVED

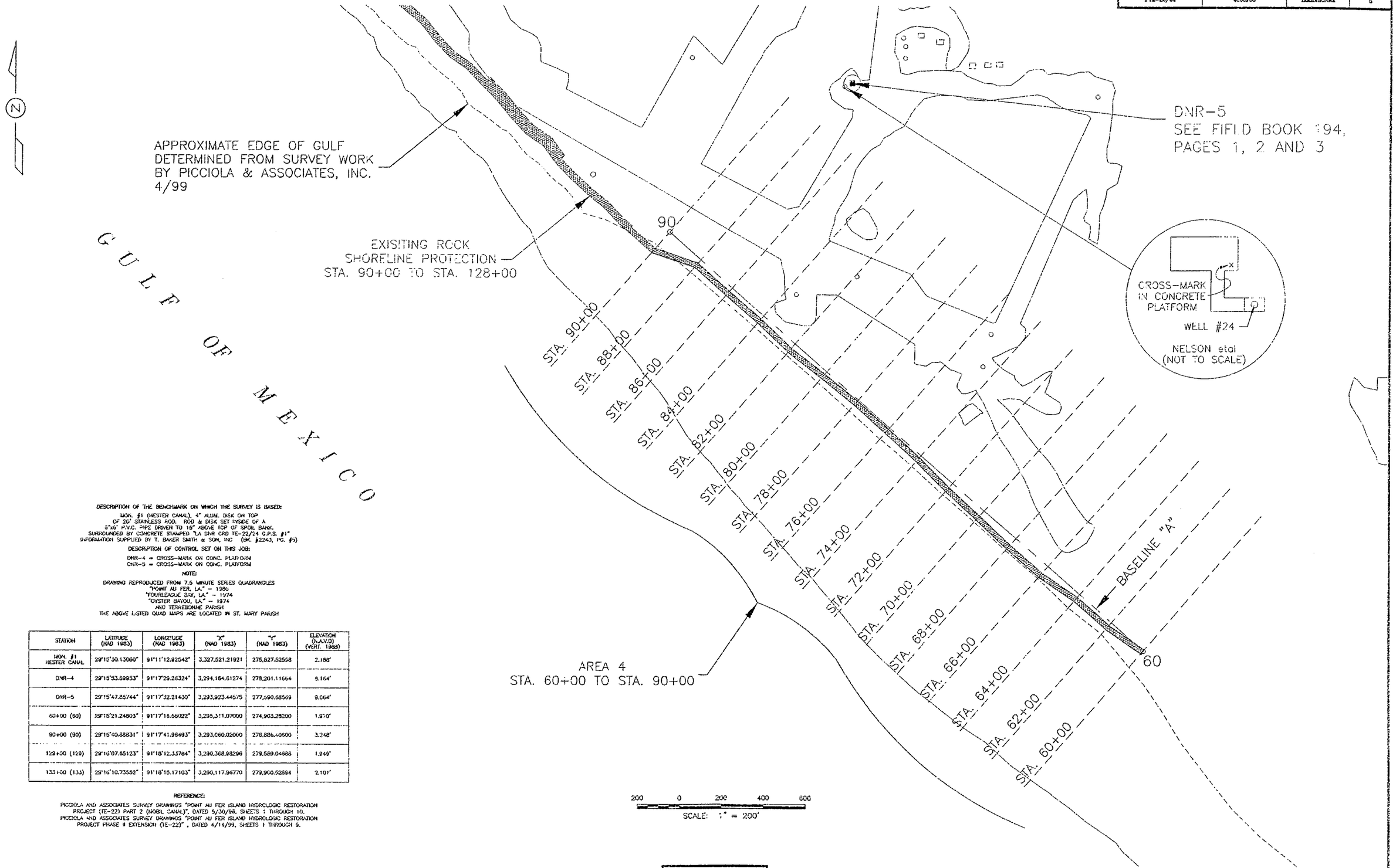
DRAWN BY: BJT
APPROVED BY: DBE
DATE : 06/24/99
SCALE : 1" = 400'

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

SITE PLAN

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PHASE III - EXTENSION

PTE-22/24	4853706	TERREBONNE	5



DESCRIPTION OF THE BENCHMARK ON WHICH THE SURVEY IS BASED:
MON. #1 (HESTER CANAL), 4" ALUM. DISK ON TOP OF 20' STAINLESS ROD. ROD & DISK SET INSIDE OF A 8"x6' P.V.C. PIPE DRIVEN TO 15' ABOVE TOP OF SPOIL BANK. SURROUNDED BY CONCRETE STAMPED "LA DNR CRD TE-22/24 C.P.S. #1" INFORMATION SUPPLIED BY T. BAKER SMITH & SON, INC (BK. #2243, PG. #5)

DESCRIPTION OF CONTROL SET ON THIS JOB:
DNR-4 = CROSS-MARK ON CONC. PLATFORM
DNR-5 = CROSS-MARK ON CONC. PLATFORM

NOTE:
DRAWING REPRODUCED FROM 7.5 MINUTE SERIES QUADRANGLES "POINT AU FER, LA." - 1950 "TOURLEAQUE BAY, LA." - 1974 "OYSTER BAYOU, LA." - 1974 AND TERREBONNE PARISH THE ABOVE LISTED QUAD MAPS ARE LOCATED IN ST. MARY PARISH

STATION	LATITUDE (NAD 1983)	LONGITUDE (NAD 1983)	"X" (NAD 1983)	"Y" (NAD 1983)	ELEVATION (N.A.V.D) (VERT. 1988)
MON. #1 HESTER CANAL	29°15'50.13060"	91°11'12.92542"	3,327,521.21921	275,827.52558	2.186'
DNR-4	29°15'53.89953"	91°17'29.26324"	3,294,164.61274	278,201.11664	9.164'
DNR-5	29°15'47.85744"	91°17'32.21430"	3,293,923.44575	277,990.68569	9.064'
60+00 (60)	29°15'21.24803"	91°17'16.58922"	3,295,311.07000	274,963.28200	1.970'
90+00 (90)	29°15'40.88831"	91°17'41.96493"	3,293,060.02000	276,886.40600	3.248'
129+00 (129)	29°16'07.65123"	91°18'12.33764"	3,290,368.98296	279,589.04688	1.949'
133+00 (133)	29°16'10.73552"	91°18'15.17103"	3,290,117.96770	279,900.52894	2.101'

REFERENCE:
PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/98, SHEETS 1 THROUGH 10. PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT PHASE II EXTENSION (TE-22)", DATED 4/14/99, SHEETS 1 THROUGH 9.

DATE	REVISIONS	APPROVED

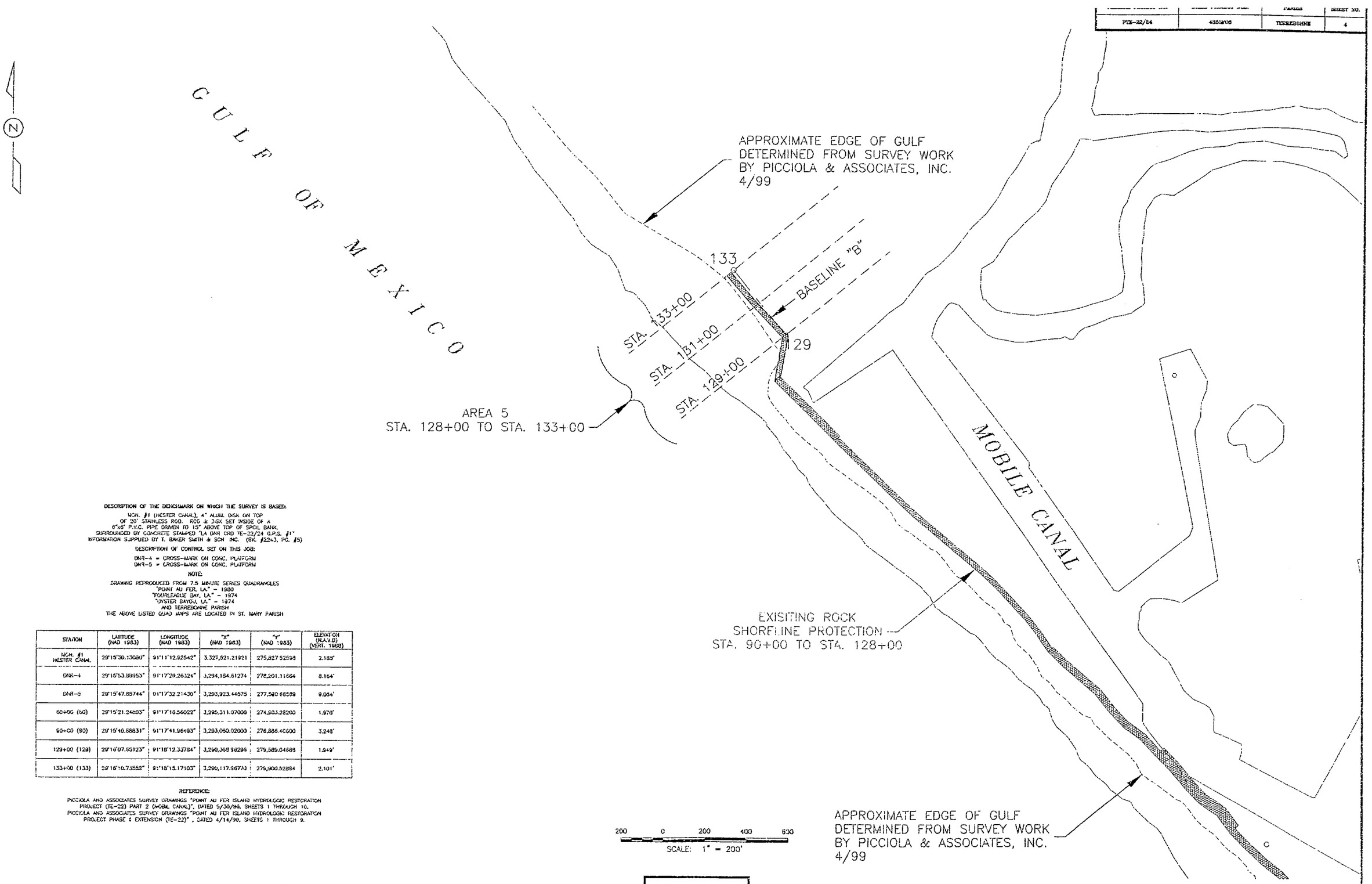
DRAWN BY: SIT
APPROVED BY: DBK
DATE: 05/24/99
SCALE: 1" = 200'

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

SITE PLAN AREA 4

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22)
PHASE III - EXTENSION

PROJECT NO.	PARISH	SHEET NO.
PTE-22/24	TERREBONNE	4



DESCRIPTION OF THE BENCHMARK ON WHICH THE SURVEY IS BASED:

MON. #1 (HESTER CANAL), 4" ALUM. DISK ON TOP OF 20' STAINLESS ROD. ROD & DISK SET INSIDE OF A 6"x6" P.V.C. PIPE DRIVEN TO 15' ABOVE TOP OF SPOIL BANK. SURROUNDED BY CONCRETE STAMPED "LA DNR CRD TE-22/24 G.P.S. #1" INFORMATION SUPPLIED BY T. BAKER SMITH & SON INC. (GK. #2243, PG. #5)

DESCRIPTION OF CONTROL SET ON THIS JOB:

DNR-4 = CROSS-MARK ON CONC. PLATFORM
DNR-5 = CROSS-MARK ON CONC. PLATFORM

NOTE:

DRAWING REPRODUCED FROM 7.5 MINUTE SERIES QUADRANGLES
"POINT AU FER, LA." - 1980
"FOURLEAGUE BAY, LA." - 1974
"OYSTER BAYOU, LA." - 1974
AND TERREBONNE PARISH
THE ABOVE LISTED QUAD MAPS ARE LOCATED IN ST. MARY PARISH

STATION	LATITUDE (NAD 1983)	LONGITUDE (NAD 1983)	"X" (NAD 1983)	"Y" (NAD 1983)	ELEVATION (N.A.V.D) (VERT. 1988)
MON. #1 HESTER CANAL	29°15'30.13080"	91°17'12.92542"	3,327,521.21921	275,827.52598	2.185'
DNR-4	29°15'53.89953"	91°17'29.26324"	3,294,184.61274	278,201.11664	8.164'
DNR-5	29°15'47.85744"	91°17'32.21430"	3,293,923.44575	277,540.66589	9.064'
60+00 (60)	29°15'21.34803"	91°17'16.56022"	3,295,311.07000	274,503.28200	1.970'
90+00 (90)	29°15'40.88831"	91°17'41.96493"	3,293,060.02000	276,886.40600	3.248'
129+00 (129)	29°16'07.65123"	91°18'12.33784"	3,290,368.98296	279,589.04689	1.949'
133+00 (133)	29°16'10.73552"	91°18'15.17103"	3,290,117.96770	279,900.52884	2.101'

REFERENCE:

PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (HOBAL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10, PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT PHASE 3 EXTENSION (TE-22)", DATED 4/14/99, SHEETS 1 THROUGH 9.

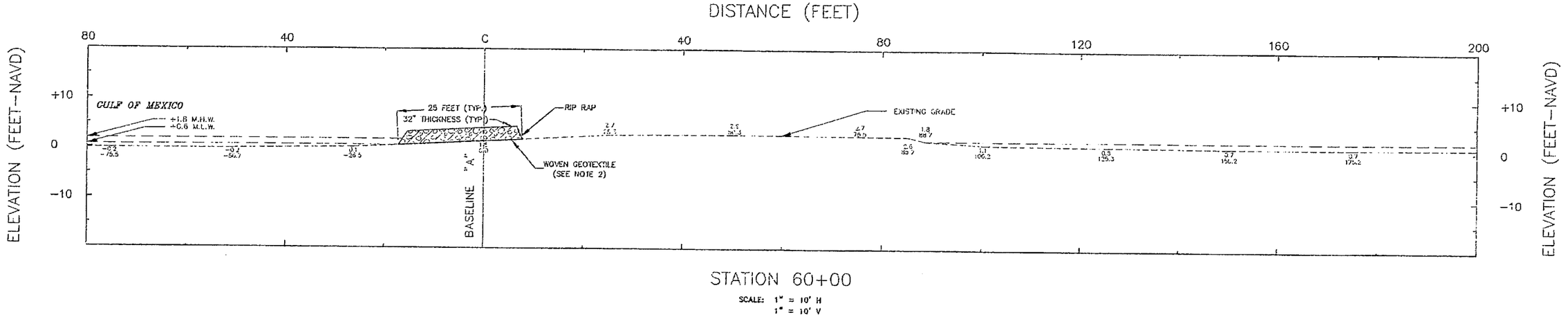
DATE	REVISIONS	APPROVED

DRAWN BY: EDT
APPROVED BY: DBK
DATE: 06/24/99
SCALE: 1" = 200'

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

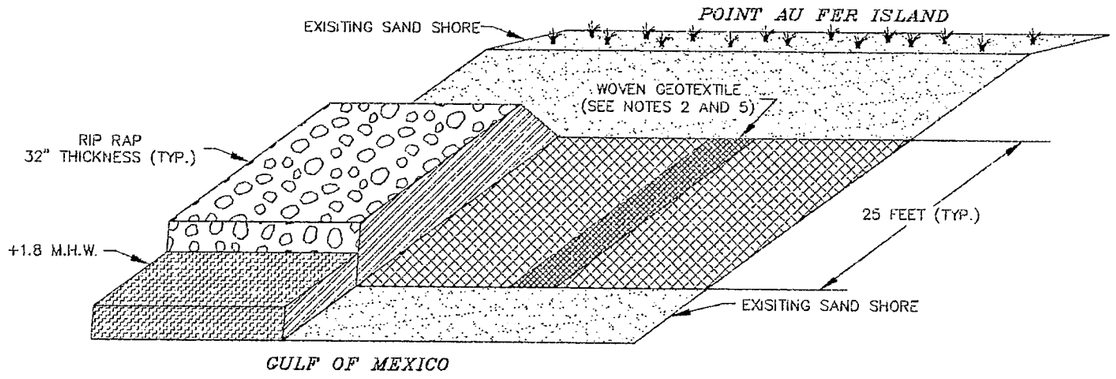
SITE PLAN AREA 5
POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22)
PHASE III - EXTENSION

FEDERAL PROJECT NO.	STATE PROJECT NO.	PARISH	SHEET NO.
PTE-22/24	4563(10)	TERREBONNE	6

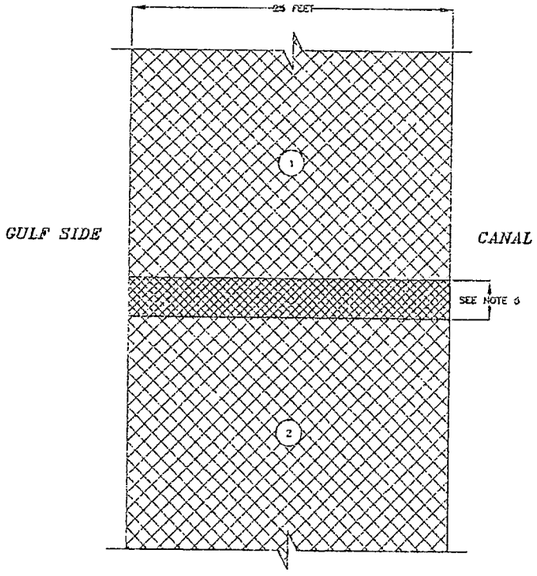


STATION 60+00

SCALE: 1" = 10' H
1" = 10' V



CONSTRUCTION LAYOUT
N.T.S.



GEOTEXTILE LAYOUT
N.T.S.

GENERAL NOTES:

1. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CALL DOTTIE AT 1-800-272-3020 TO LOCATE ANY UTILITY LINES IN THE AREA. FURTHERMORE, CONTRACTOR SHALL NOTIFY TEXAS PETROLEUM INVESTMENT CORPORATION A MINIMUM OF 14 DAYS PRIOR TO ACCESSING THE SITE ATTENTION MESSRS. FOREST BUGGE AT (504) 769-9225

2. THE CONSTRUCTION OF THE BREAKWATER WITHIN AREA 4 CONSISTS OF NONWOVEN GEOTEXTILE FILTER FABRIC OVERLAIN BY GEOGRID AND 32 INCHES OF RIP-RAP. THE CONSTRUCTION OF THE BREAKWATER WITHIN AREA 5 CONSISTS OF A WOVEN GEOTEXTILE OVERLAIN BY 32 INCHES OF RIP-RAP. GEOTEXTILES SHALL BE AS PER THE TECHNICAL SPECIFICATIONS. CONTRACTOR SHALL PLACE GEOTEXTILES IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND AS SHOWN ON THE CONSTRUCTION DRAWINGS.

3. ARMOR STONE RIP-RAP SHALL MEET LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT CLASS 250 POUND STONE, OR OWNER APPROVED EQUIVALENT. GRADATION TESTS OF REPRESENTATIVE STONE (15-TON MIN. SAMPLE SIZE) SHALL BE MADE AT THE QUARRY. CERTIFIED TEST RESULTS MUST BE SUBMITTED AND APPROVED PRIOR TO PLACEMENT ON THE PROJECT. THE STONE PLACEMENT METHOD SHALL PRODUCE A REASONABLY WELL GRADED ROCK MASS WITH VOIDS MINIMIZED AND A TOLERANCE OF +6 TO -0 INCHES OF FINAL GRADE. STONE SHALL BE PLACED TO FULL THICKNESS (32 INCHES) IN ONE LIFT WITH A MAXIMUM DROP OF 1 FOOT TO AVOID DAMAGING THE GEOTEXTILE FABRIC.

4. ACTUAL ALIGNMENT MAY BE ADJUSTED BY PROJECT ENGINEER TO MEET CHANGING FIELD CONDITIONS. IF ADDITIONAL QUANTITIES FOR GEOTEXTILES AND ARMOR STONE ARE NECESSARY, THEY WILL BE PAID FOR AT THE UNIT PRICE BID FOR THE ITEM.

5. MINIMUM OVERLAP AT SIDES AND ENDS SHALL BE: THREE FEET FOR GEOGRID AND WOVEN GEOTEXTILES; AND TWO FEET FOR NONWOVEN GEOTEXTILE FILTER FABRIC.

REFERENCE:

PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.

PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT PHASE II EXTENSION (TE-22)" , DATED 4/14/99, SHEETS 1 THROUGH 9.

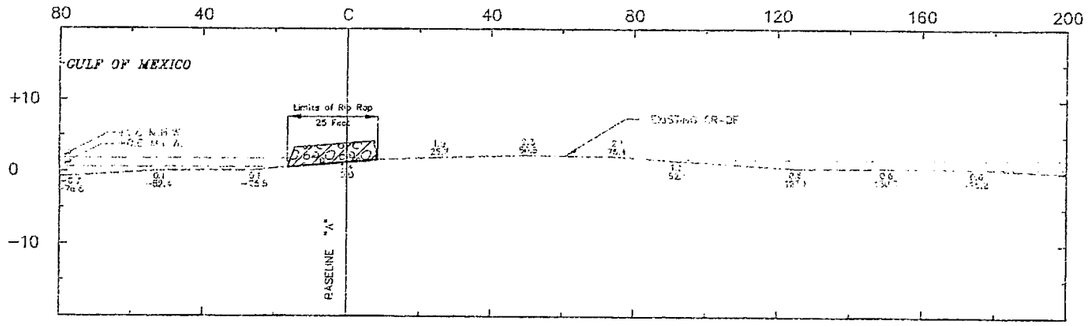
DATE	REVISIONS	APPROVED

DRAWN BY:	LJT
APPROVED BY:	DBE
DATE :	06/24/99
SCALE :	N/A

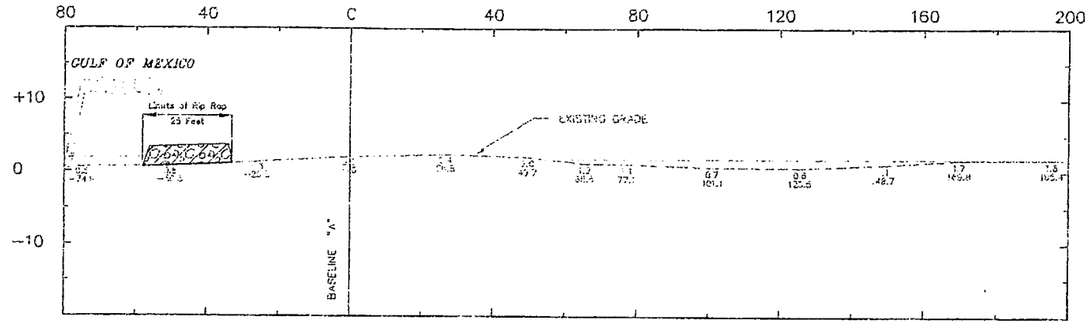
STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

TYPICAL SECTION & DETAILS
POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22)
PHASE III - EXTENSION

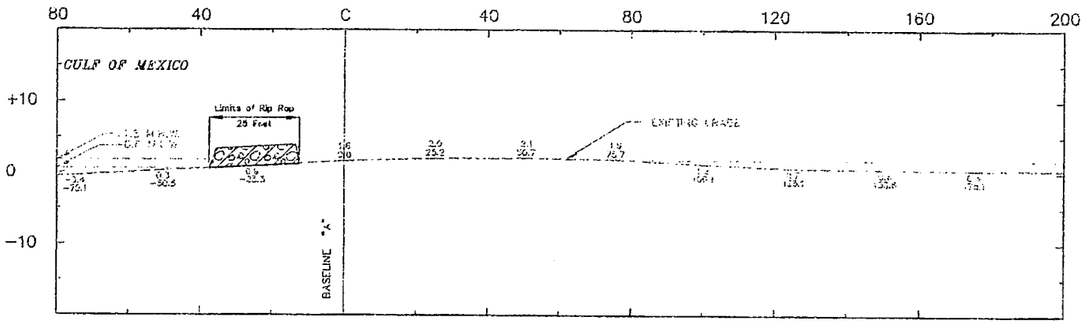
FEDERAL PROJECT NO.	STATE PROJECT NOS.	PARISH	SHEET NO.
PTE-22/24	4063705	TERREBONNE	7



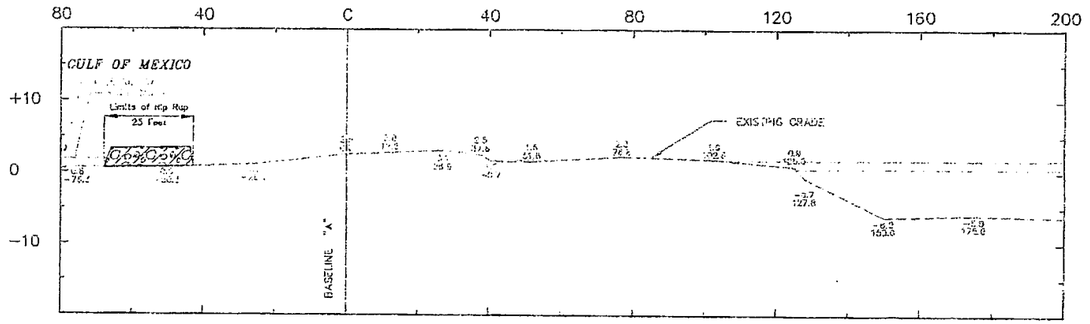
STATION 76+00



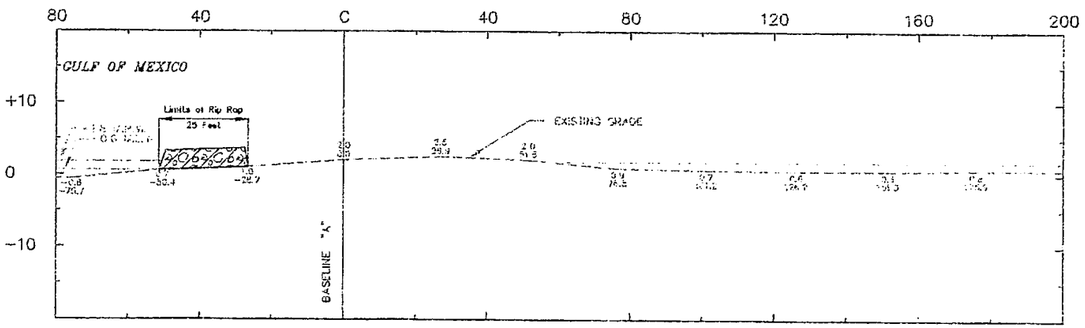
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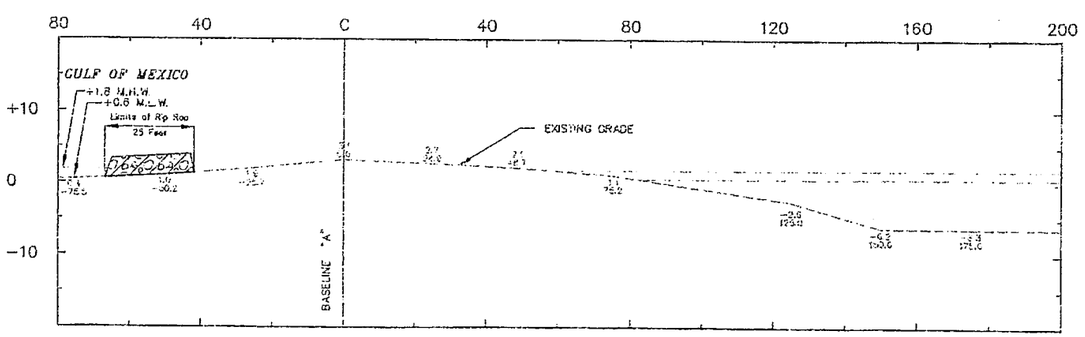
STATION 74+00



STATION 68+00



STATION 72+00



STATION 66+00

REFERENCE:

PICCOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MOBIL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.

PICCOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT PHASE II EXTENSION (TE-22)" , DATED 4/16/99, SHEETS 1 THROUGH 9.

DATE	REVISIONS	APPROVED

DRAWN BY: BJH

APPROVED BY: DBK

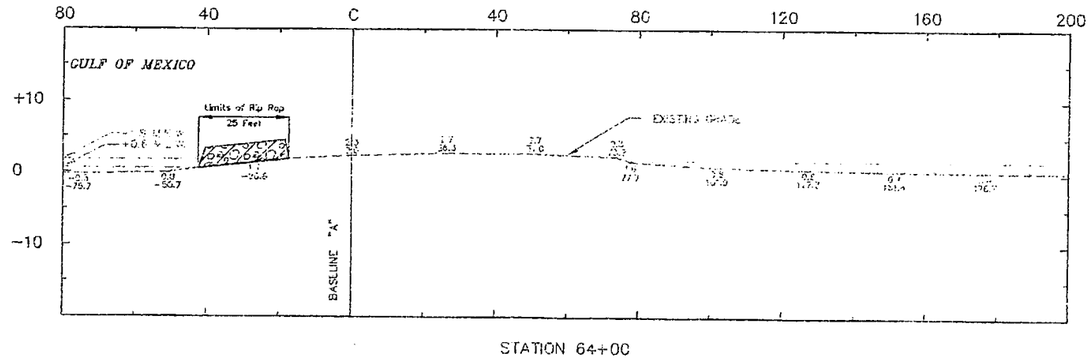
DATE : 06/24/99

SCALE : 1" = 30' H

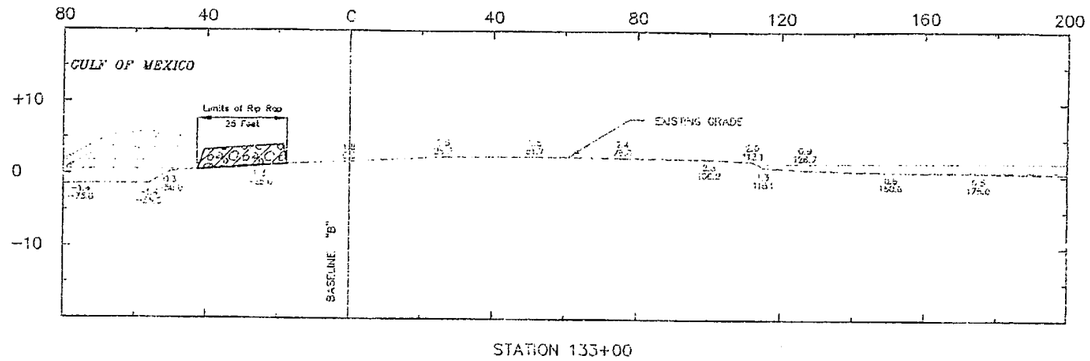
STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

SURVEY CROSS SECTIONS
POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22)
PHASE III - EXTENSION

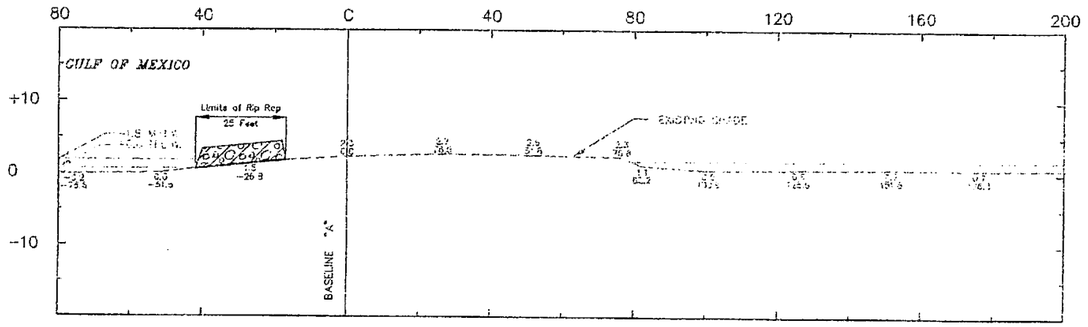
FEDERAL PROJECT NO.	STATE PROJECT NOS.	PARISH	SHEET NO.
PTE-22/24	4363706	TERREBONNE	6



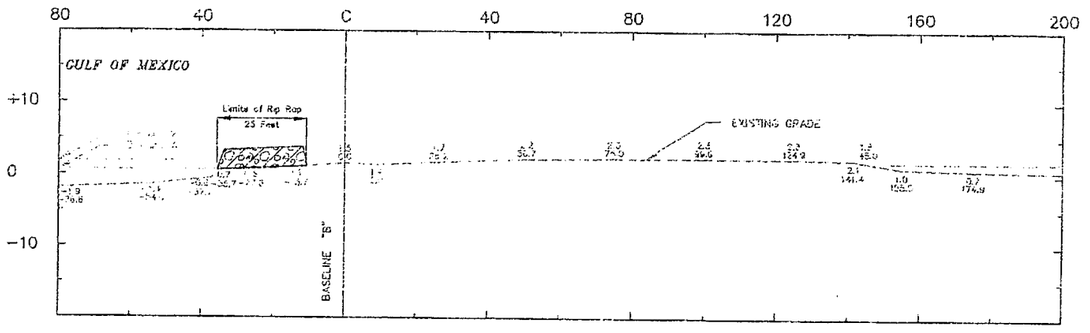
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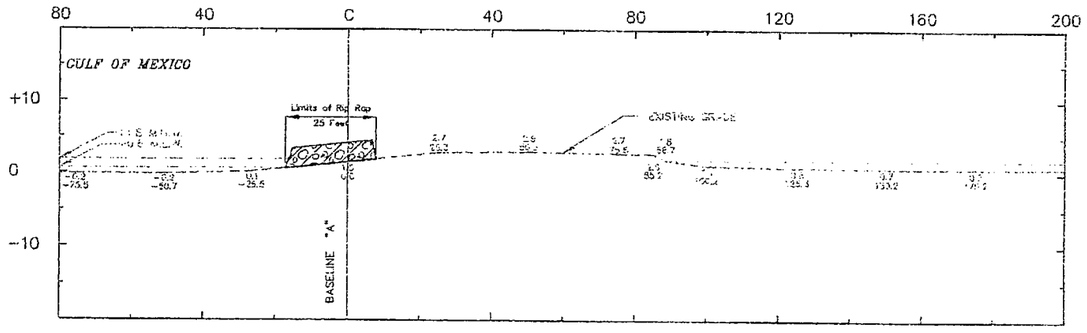
STATION 133+00



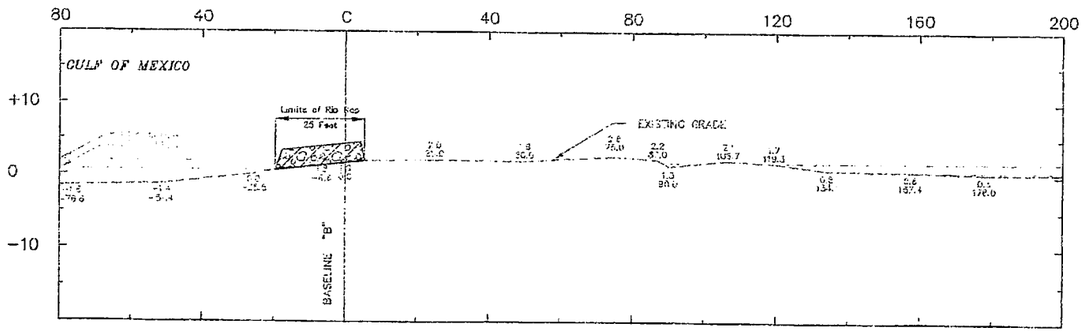
STATION 62+00



STATION 131+00



STATION 60+00



STATION 129+00

REFERENCE:

PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22) PART 2 (MODEL CANAL)", DATED 5/30/96, SHEETS 1 THROUGH 10.

PICCIOLA AND ASSOCIATES SURVEY DRAWINGS "POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT PHASE 3 EXTENSION (TE-22)", DATED 4/14/99, SHEETS 1 THROUGH 9.

DATE	REVISIONS	APPROVED

DRAWN BY:	MTC
APPROVED BY:	DBK
DATE:	06/24/99
SCALE:	1" = 30' H 1" = 10' V

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

SURVEY CROSS SECTIONS
POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT (TE-22)
PHASE III - EXTENSION

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

POINT AU FER ISLAND
HYDROLOGIC RESTORATION PROJECT
PHASE III EXTENSION (TE-22)
AREA NO. 4 AND AREA NO. 5

REVISIONS:	
DATE:	REMARKS
9-26-00	AS BUILT

AS BUILT

REGISTERED LAND SURVEYOR

PICCIOLA & ASSOCIATES, INC.

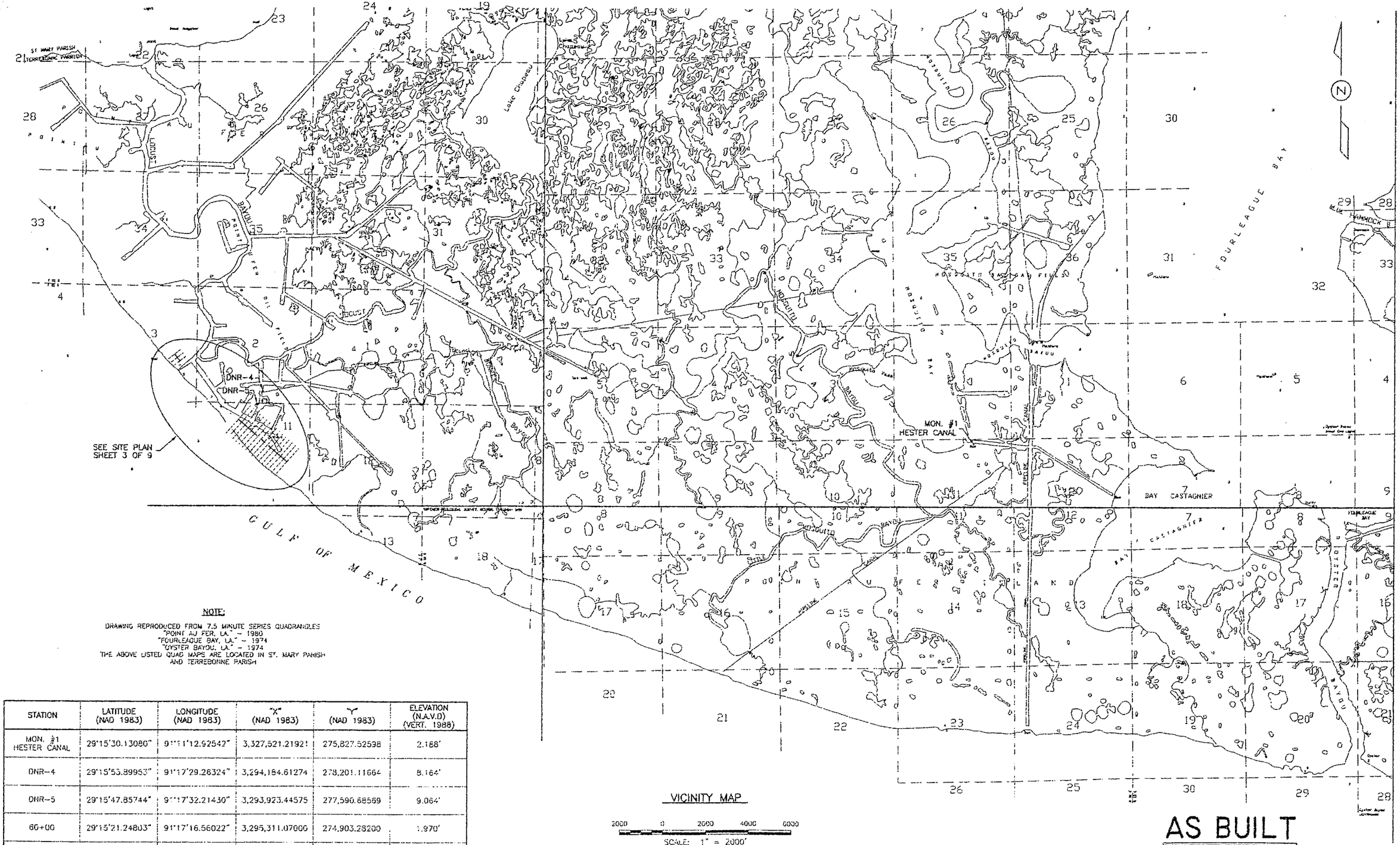
CIVIL ENGINEERS — NAVAL ARCHITECTS
LAND SURVEYORS — MARINE ENGINEERS

P.O. BOX. 687
CUT OFF, LOUISIANA 70345
(504) 632-5786

INDEX TO SHEETS:

SHEET NO.	DESCRIPTION:	
1	TITLE SHEET	
2	VICINITY MAP	
3	SITE PLAN	
4	CROSS-SECTIONS STA.	60+00 - 64+00
5	CROSS-SECTIONS STA.	66+00 - 70+00
6	CROSS-SECTIONS STA.	72+00 - 76+00
7	CROSS-SECTIONS STA.	78+00 - 82+00
8	CROSS-SECTIONS STA.	84+00 - 88+00
9	CROSS-SECTIONS STA.	129+00 - 133+00

TOTAL NO. OF SHEETS 9



NOTE:

DRAWING REPRODUCED FROM 7.5 MINUTE SERIES QUADRANGLES
"POINT AU FER, LA." - 1980
"FOURLEAGUE BAY, LA." - 1974
"OYSTER BAYOU, LA." - 1974
THE ABOVE LISTED QUAD MAPS ARE LOCATED IN ST. MARY PARISH AND TERREBONNE PARISH

STATION	LATITUDE (NAD 1983)	LONGITUDE (NAD 1983)	"X" (NAD 1983)	"Y" (NAD 1983)	ELEVATION (N.A.V.D) (VERT. 1988)
MON. #1 HESTER CANAL	29°15'30.13080"	91°11'12.92542"	3,327,521.21921	275,827.52598	2.188'
DNR-4	29°15'53.89953"	91°17'29.26324"	3,294,184.61274	278,201.11664	8.164'
DNR-5	29°15'47.85744"	91°17'32.21430"	3,293,923.44575	277,590.68569	9.064'
60+00	29°15'21.24803"	91°17'16.56022"	3,295,311.07000	274,903.28200	1.970'
90+00	29°15'40.88831"	91°17'41.96493"	3,293,060.02000	276,886.40600	3.248'
129+00	29°16'07.65123"	91°18'12.33784"	3,290,368.98296	279,589.04688	1.949'
133+00	29°16'10.73552"	91°18'15.17103"	3,290,117.96770	279,900.52894	2.101'

VICINITY MAP

2000 0 2000 4000 6000

SCALE: 1" = 2000'

AS BUILT

REVISIONS:	
DATE:	REMARKS:
6-20-00	AS BUILT

STAMP: STATE OF LOUISIANA, MICHAEL J. PICCIOLA, JR., REG. NO. 5035, REGISTERED LAND SURVEYOR

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS LAND SURVEYORS
NAVAL ARCHITECTS MARINE ENGINEERS
P.O. BOX 687
CUT OFF, LOUISIANA 70345
(504) 632-5786

DESIGNED BY: M.J.P. | DRAWN BY: L.M.C. & T.P.C. | CHECKED BY: M.J.P

DATE: 4-14-99

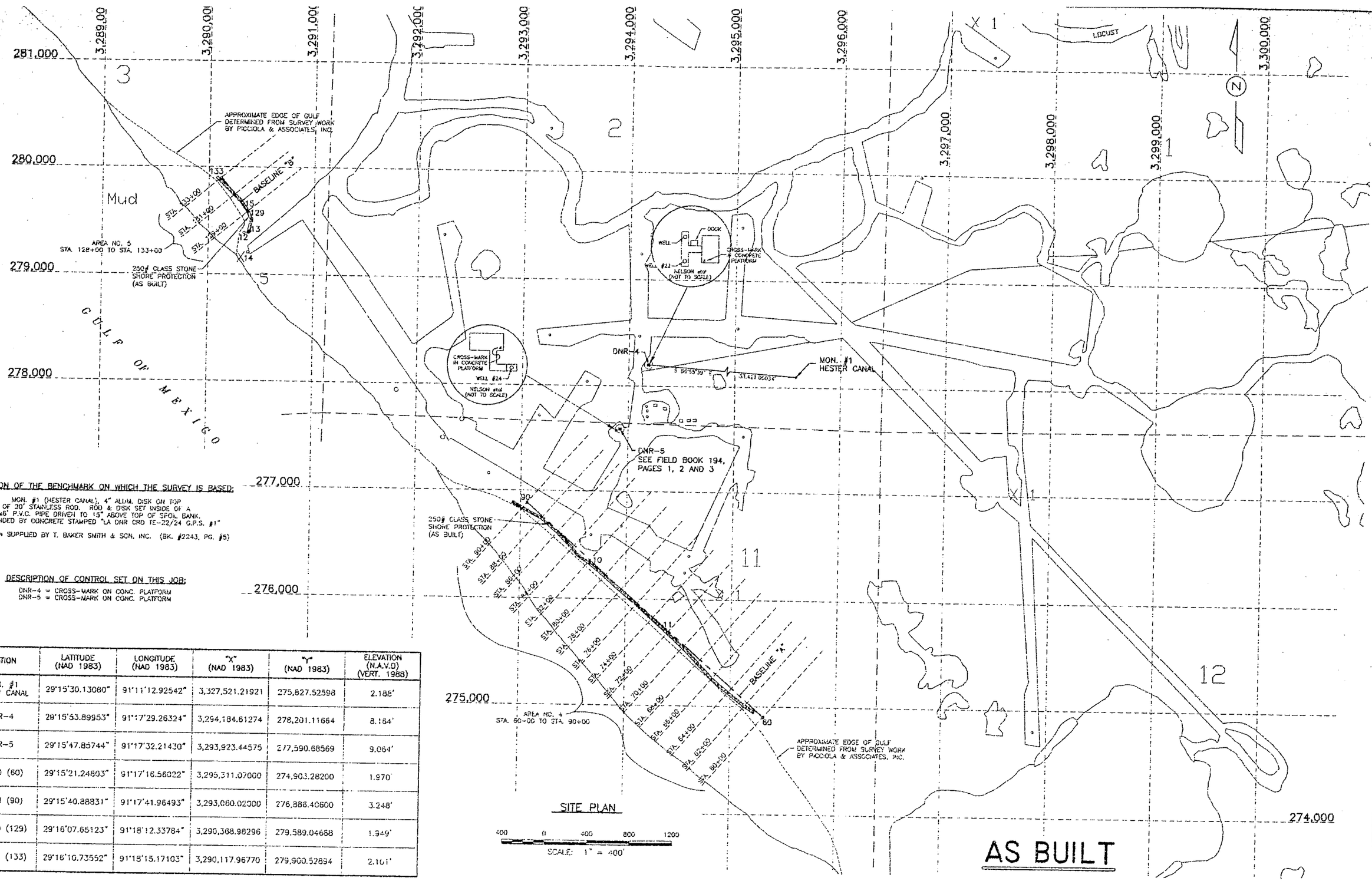
SCALE: AS SHOWN

DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

POINT AU FER ISLAND
HYDROLOGIC RESTORATION PROJECT
PHASE II EXTENSION (TE-22)

VICINITY MAP

SHEET NO. 2 OF 9



SITE PLAN

400 0 400 800 1200

SCALE: 1" = 400'

AS BUILT

DESCRIPTION OF THE BENCHMARK ON WHICH THE SURVEY IS BASED:

MON. #1 (HESTER CANAL), 4" ALUM. DISK ON TOP OF 20' STAINLESS ROD. ROD & DISK SET INSIDE OF A 6"x6' P.V.C. PIPE DRIVEN TO 15" ABOVE TOP OF SPOIL BANK. SURROUNDED BY CONCRETE STAMPED "LA DNR CRD TE-22/24 G.P.S. #1"

INFORMATION SUPPLIED BY T. BAKER SMITH & SON, INC. (BK. #2243, PG. #5)

DESCRIPTION OF CONTROL SET ON THIS JOB:

DNR-4 = CROSS-MARK ON CONC. PLATFORM
DNR-5 = CROSS-MARK ON CONC. PLATFORM

STATION	LATITUDE (NAD 1983)	LONGITUDE (NAD 1983)	"X" (NAD 1983)	"Y" (NAD 1983)	ELEVATION (N.A.V.D) (VERT. 1988)
MON. #1 HESTER CANAL	29°15'30.13080"	91°11'12.92542"	3,327,521.21921	275,827.52598	2.188'
DNR-4	29°15'53.89953"	91°17'29.26324"	3,294,184.61274	278,201.11664	8.164'
DNR-5	29°15'47.85744"	91°17'32.21430"	3,293,923.44575	277,590.68569	9.064'
60+00 (60)	29°15'21.24803"	91°17'16.56022"	3,295,311.07000	274,903.28200	1.970'
90+00 (90)	29°15'40.88831"	91°17'41.96493"	3,293,060.02000	276,886.40600	3.248'
129+00 (129)	29°16'07.65123"	91°18'12.33784"	3,290,368.98296	279,589.04688	1.949'
133+00 (133)	29°16'10.73552"	91°18'15.17103"	3,290,117.96770	279,900.52834	2.101'

NOTE:

DRAWING REPRODUCED FROM 7.5 MINUTE SERIES QUADRANGLES
"POINT AU FER, LA." - 1950
"FOURLEAGUE BAY, LA." - 1974
"OYSTER BAYOU, LA." - 1974
THE ABOVE LISTED QUAD MAPS ARE LOCATED IN ST. MARY PARISH AND TERREBONNE PARISH

REVISIONS:

DATE:	REMARKS:
6-20-00	AS BUILT

STAMP: STATE OF LOUISIANA — MARK J. PICCIOLA — No. 3025 — REGISTERED LAND SURVEYOR

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS — NAVAL ARCHITECTS
LAND SURVEYORS — MARINE ENGINEERS
P.O. BOX 587
CUT OFF, LOUISIANA 70345
(504) 632-5788

DESIGNED BY: M.J.P. | DRAWN BY: L.M.C. | CHECKED BY: J.C.P

DATE: 4-14-99

SCALE: 1" = 400'

DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

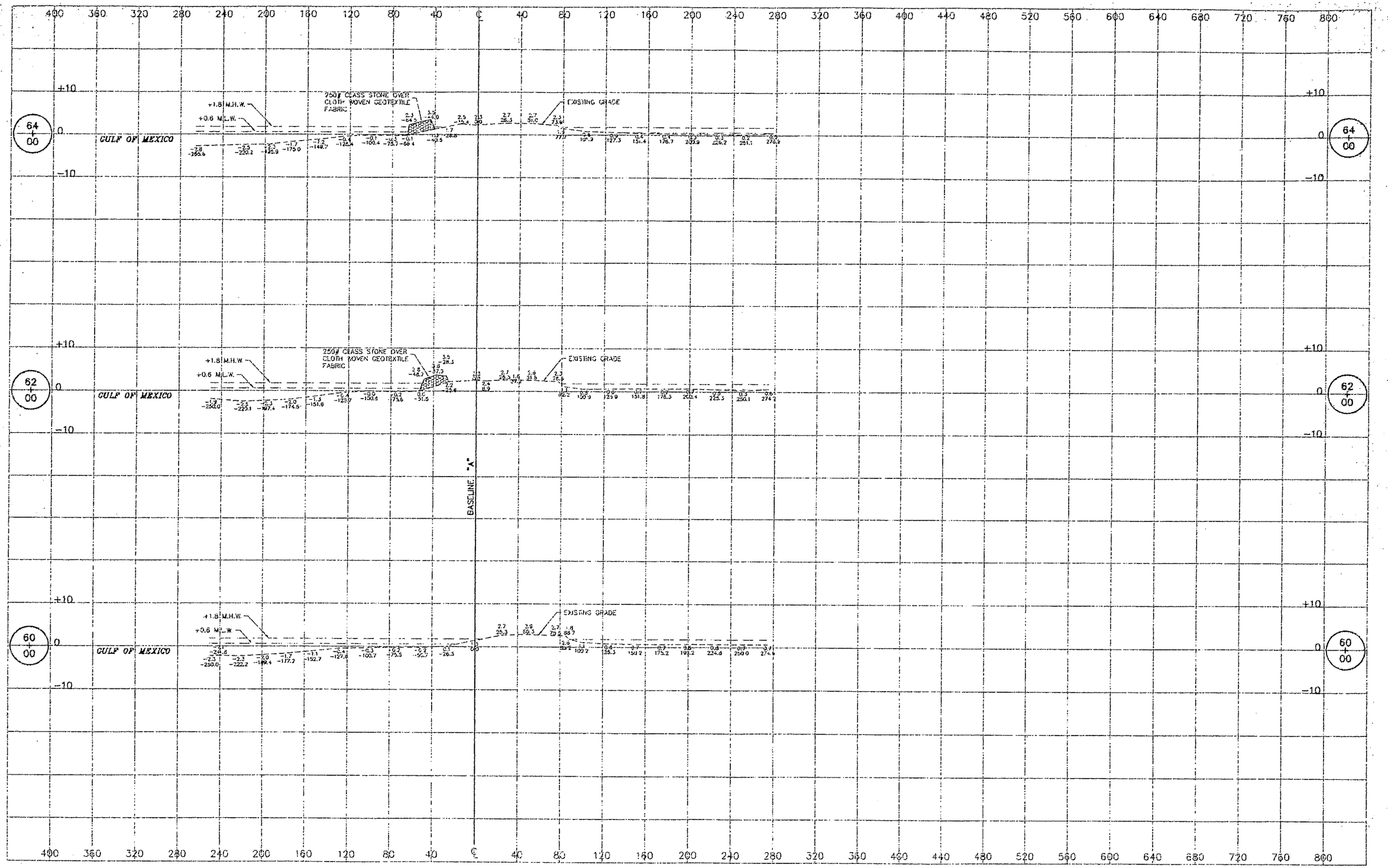
POINT AU FER ISLAND
HYDROLOGIC RESTORATION PROJECT
PHASE 2 EXTENSION (TE-22)

SITE PLAN

SHEET NO. 3 OF 9

H:\MAPPING\2000\00059\DGN\00059S1-PLAN1S1+400.dwg Thu Jun 29 08:22:17 2000

pw\\28200000\\28200000-MAP1
Thu Jun 29 08:25:13 2000



AS BUILT

REVISIONS:	
DATE:	REMARKS:
6-29-00	AS BUILT

STATE OF LOUISIANA — JOSEPH C. PICCIOLA, II — REG. NO. 3029 — REGISTERED LAND SURVEYOR

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS — NAVAL ARCHITECTS
LAND SURVEYORS — MARINE ENGINEERS
P.O. BOX 537
CUT OFF, LOUISIANA 70345
(504) 632-5786

DESIGNED BY: M.J.P. | DRAWN BY: L.M.C. | CHECKED BY: J.C.P.

DATE: 4-14-99

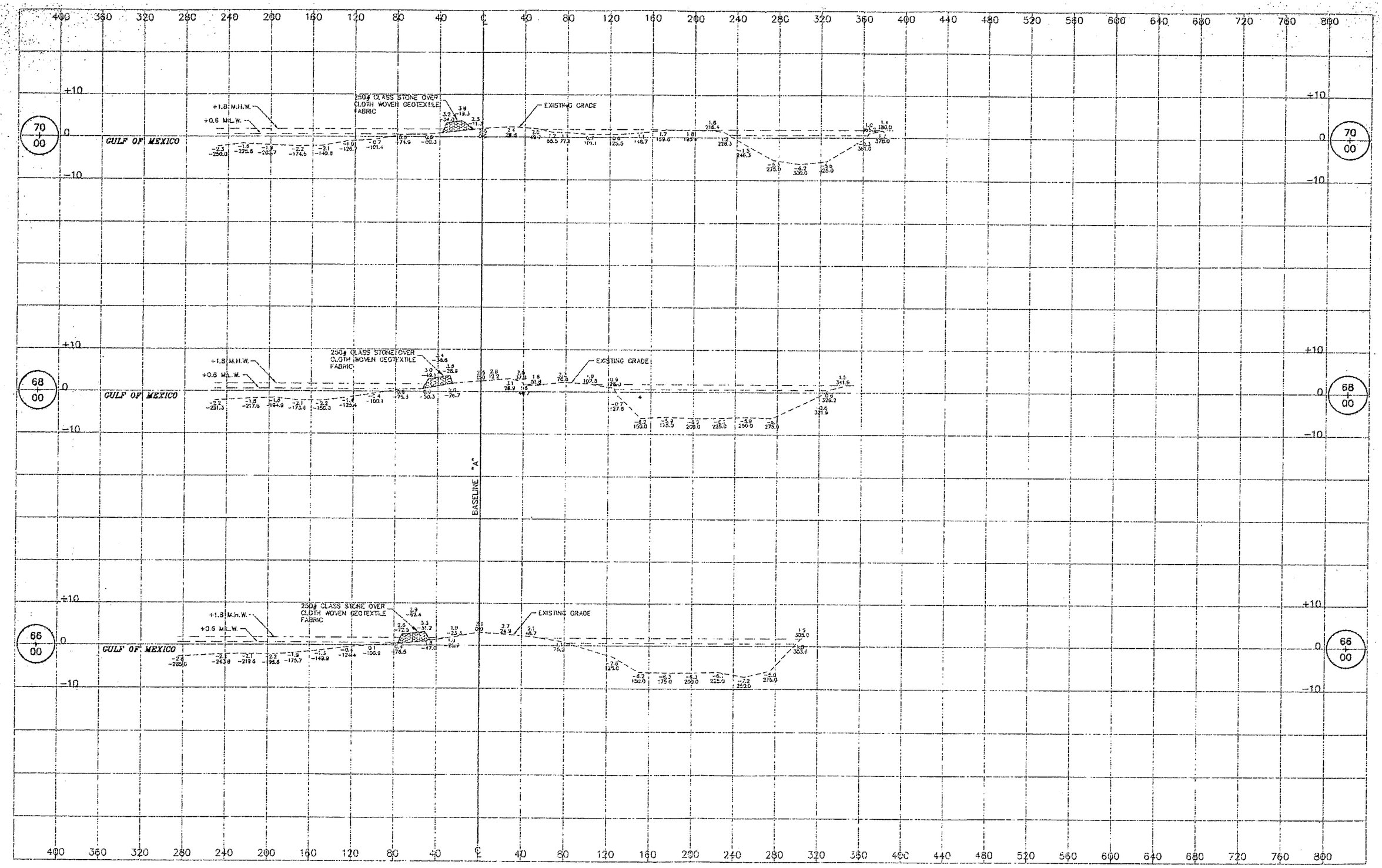
SCALE: 1" = 40' HORIZ. 1" = 10' VERT.

DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

POINT AU FER ISLAND
HYDROLOGIC RESTORATION PROJECT
PHASE II EXTENSION (TE-22)

CROSS-SECTIONS STA. 50+00 - 64+00 BASELINE "A"

SHEET NO. 4 OF 9



AS BUILT

REVISIONS:	
DATE:	REMARKS:
9-20-00	AS BUILT

STAMP: STATE OF LOUISIANA — REGISTERED — LAND SURVEYOR

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS — NAVAL ARCHITECTS
LAND SURVEYORS — MARINE ENGINEERS
P.O. BOX 887
CUT OFF, LOUISIANA 70345
(504) 632-5795

DESIGNED BY:	DRAWN BY:	CHECKED BY:
M.J.P.	L.M.C.	J.C.P

DATE: 4-14-99

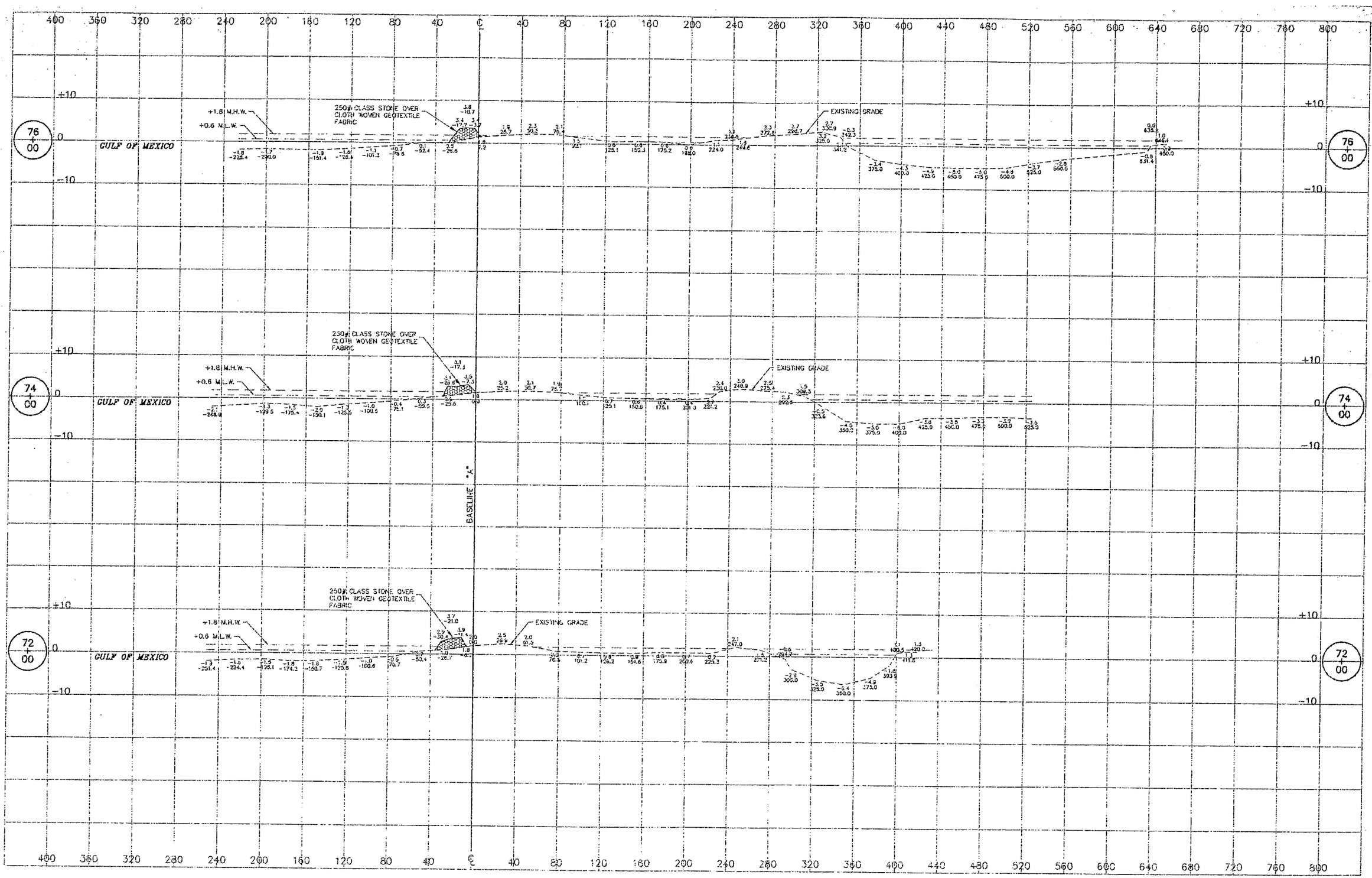
SCALE: 1" = 40' HORIZ. 1" = 10' VERT.

DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

POINT AU FER ISLAND
HYDROLOGIC RESTORATION PROJECT
PHASE II EXTENSION (TE-22)

CROSS-SECTIONS STA. 66+00 - 70+00 BASELINE "A"

SHEET NO. 5 OF 9



AS BUILT

REVISIONS:	
DATE:	REMARKS:
6-20-00	AS BUILT

STAMP:

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS — NAVAL ARCHITECTS
LAND SURVEYORS — MARINE ENGINEERS
P.O. BOX 687
CUT OFF, LOUISIANA 70345
(504) 632-5786

DESIGNED BY:	DRAWN BY:	CHECKED BY:
M.J.P.	L.M.C.	J.C.P.

DATE: 4-14-99

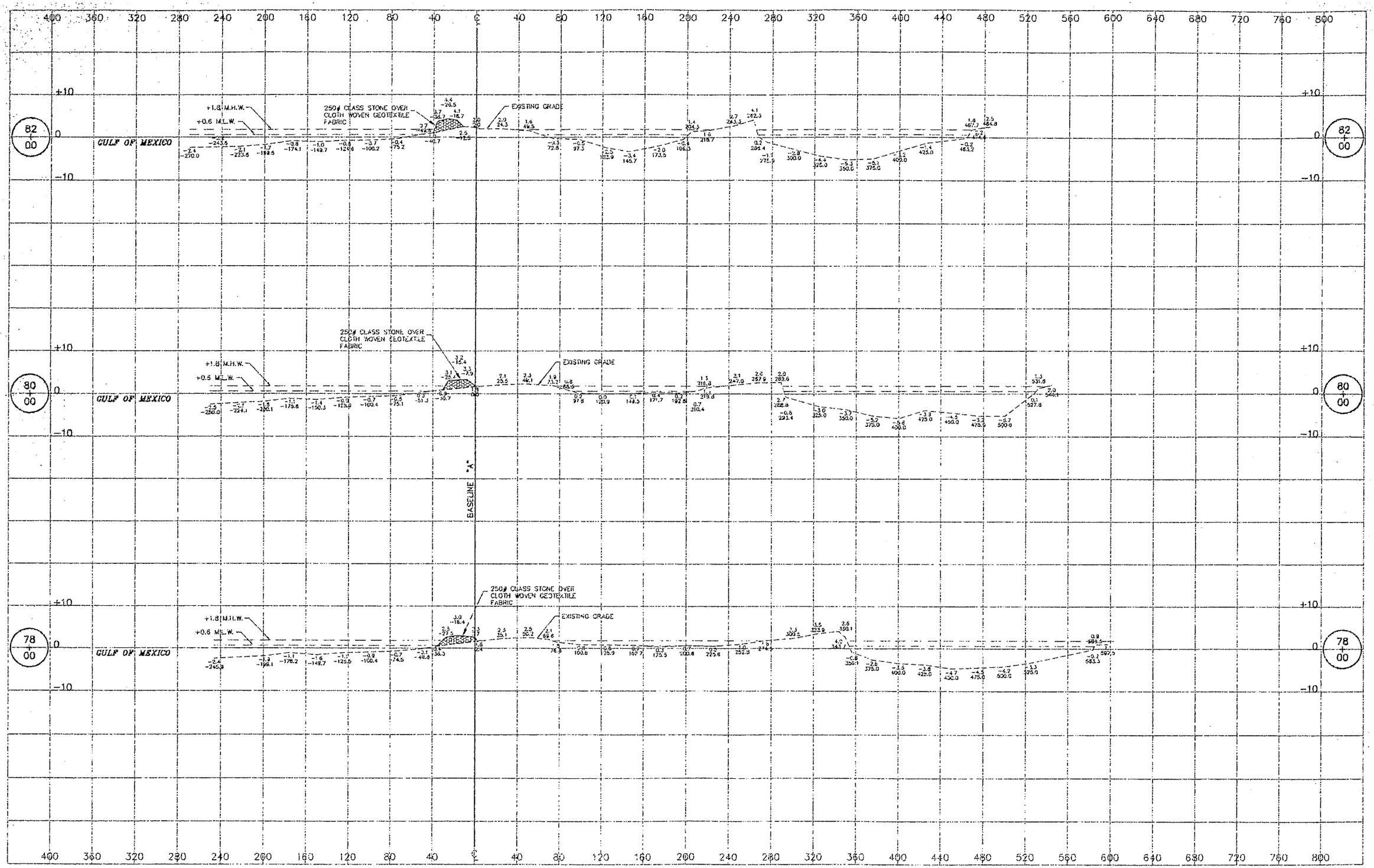
SCALE: 1" = 40' HORIZ. 1" = 10' VERT.

DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

POINT AU FER ISLAND
HYDROLOGIC RESTORATION PROJECT
PHASE II EXTENSION (TE-22)

CROSS-SECTIONS STA. 72+00 – 76+00 BASELINE "A"

SHEET NO. 6 OF 9



AS BUILT

REVISIONS.	
DATE:	REMARKS:
8-20-00	AS BUILT

STAMP: STATE OF LOUISIANA — MARK J. PICCIOLA, JR. — REG. NO. 4629 — REGISTERED LAND SURVEYOR

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS — NAVAL ARCHITECTS
LAND SURVEYORS — MARINE ENGINEERS
P.O. BOX 687
CUT OFF, LOUISIANA 70345
(504) 632-5766

DESIGNED BY: M.J.P. | DRAWN BY: L.M.C. | CHECKED BY: J.C.P.

DATE: 4-14-99

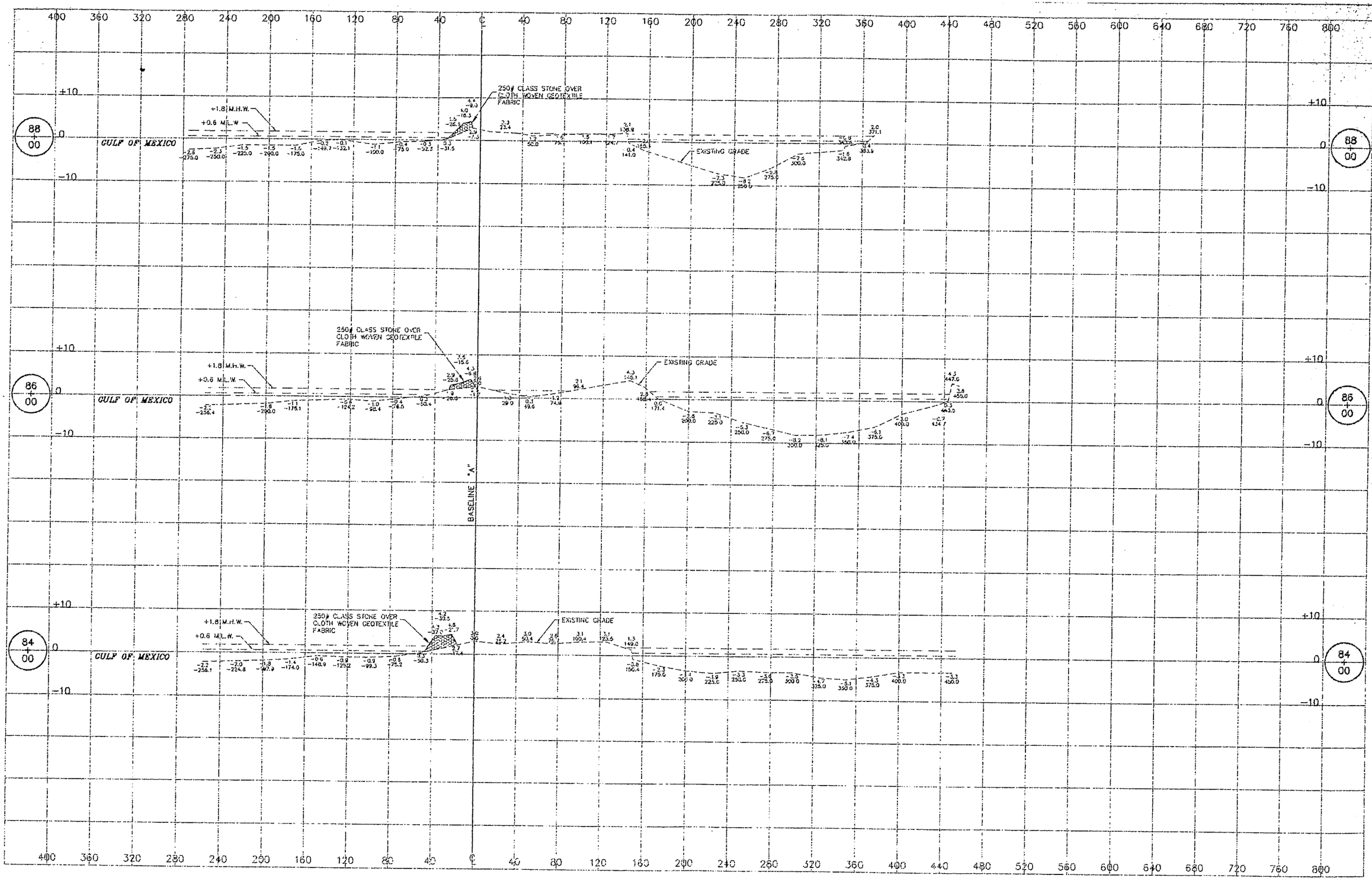
SCALE: 1" = 40' HORIZ. 1" = 10' VERT.

DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

POINT AU FER ISLAND
HYDROLOGIC RESTORATION PROJECT
PHASE II EXTENSION (TE-22)

CROSS-SECTIONS STA. 78+00 – 82+00 BASELINE "A"

SHEET NO. 7 OF 9



AS BUILT

REVISIONS:	
DATE:	REMARKS:
6-26-00	AS BUILT

STAMP: REGISTERED LAND SURVEYOR

PICCIOLA & ASSOCIATES, INC
CIVIL ENGINEERS — NAVAL ARCHITECTS
LAND SURVEYORS — MARINE ENGINEERS
P.O. BOX 687
CUT OFF, LOUISIANA 70345
(504) 632-5786

DESIGNED BY: M.J.P. | DRAWN BY: L.M.C. | CHECKED BY: J.C.P.

DATE: 4-14-99

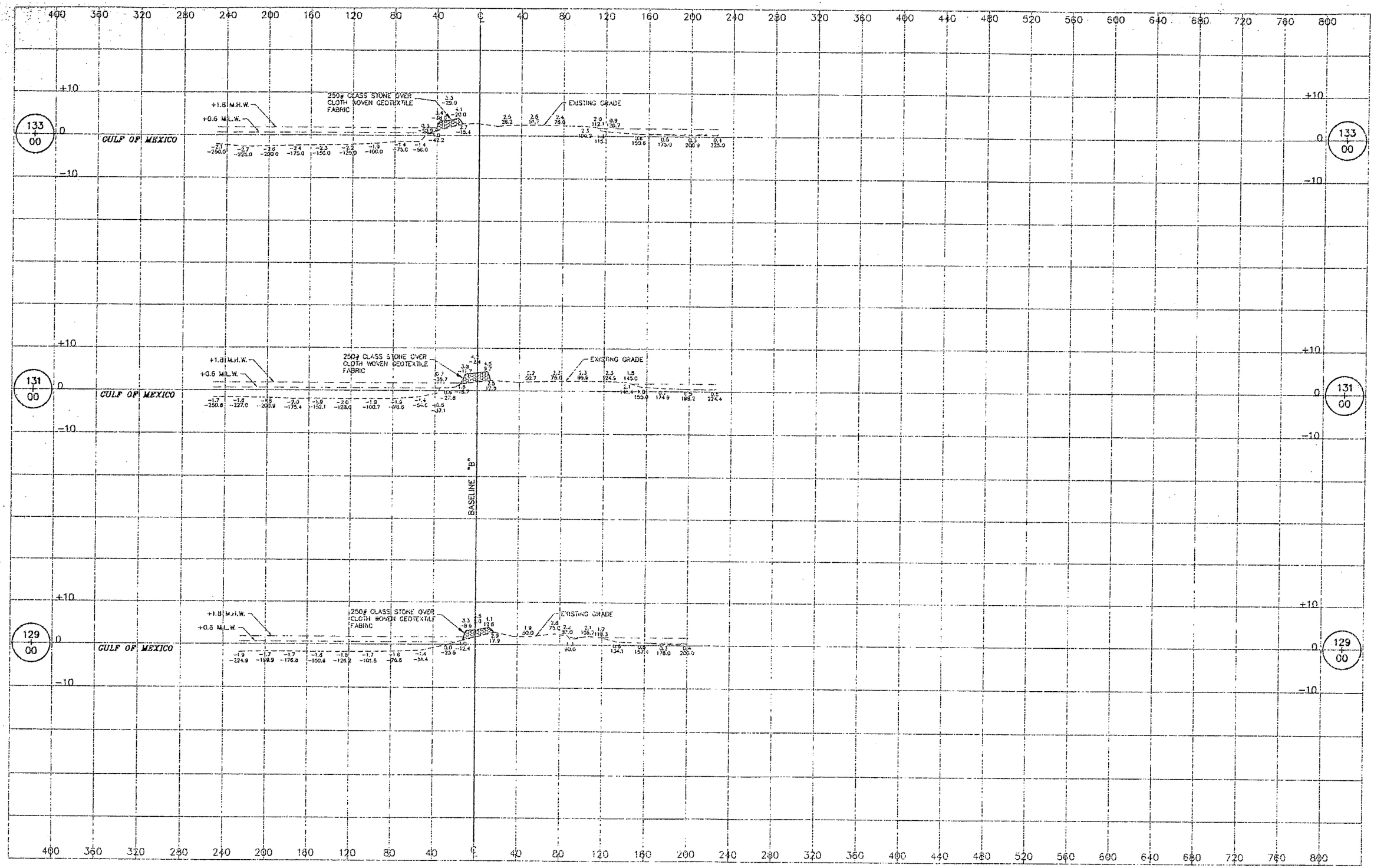
SCALE: 1" = 40' HORIZ. 1" = 10' VERT.

DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

POINT AU FER ISLAND
HYDROLOGIC RESTORATION PROJECT
PHASE II EXTENSION (TE-22)

CROSS-SECTIONS STA. 84+00 - 88+00 BASELINE "A"

SHEET NO. 8 OF 9



AS BUILT

REVISIONS.	
DATE:	REMARKS:
6-26-00	AS BUILT

STAMP: STATE OF LOUISIANA — REGISTERED LAND SURVEYOR

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS — NAVAL ARCHITECTS
LAND SURVEYORS — MARINE ENGINEERS
P.O. BOX 587
CUT OFF, LOUISIANA 70345
(504) 632-5786

DESIGNED BY: M.J.P. | DRAWN BY: L.M.C. | CHECKED BY: J.C.P.

DATE: 4-14-99

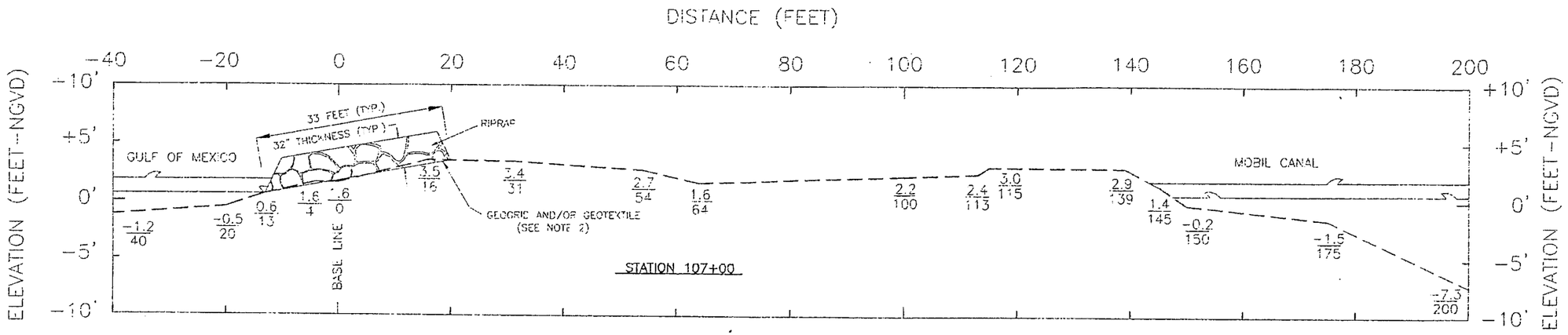
SCALE: 1" = 40' HORIZ. 1" = 10' VERT.

DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION

POINT AU FER ISLAND
HYDROLOGIC RESTORATION PROJECT
PHASE II EXTENSION (TE-22)

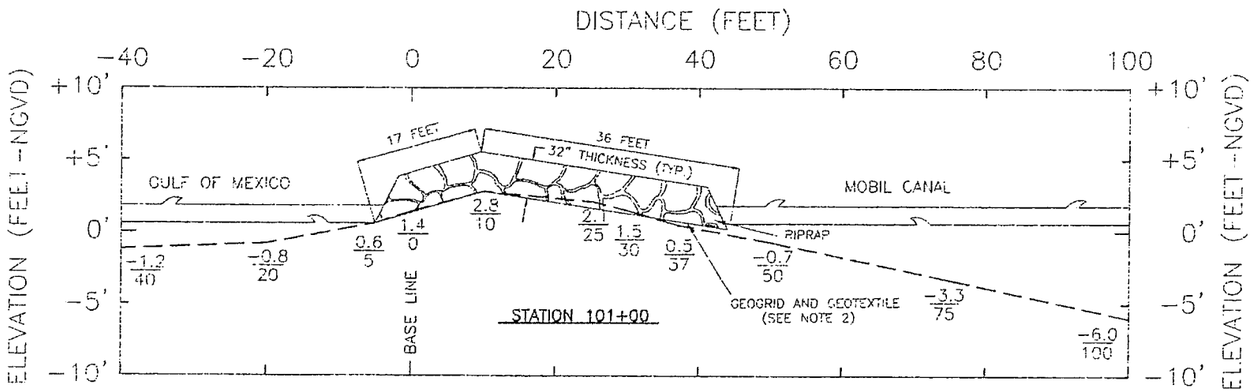
CROSS-SECTIONS STA. 129+00 -- 133+00 BASELINE "B"

SHEET NO. 9 OF 9



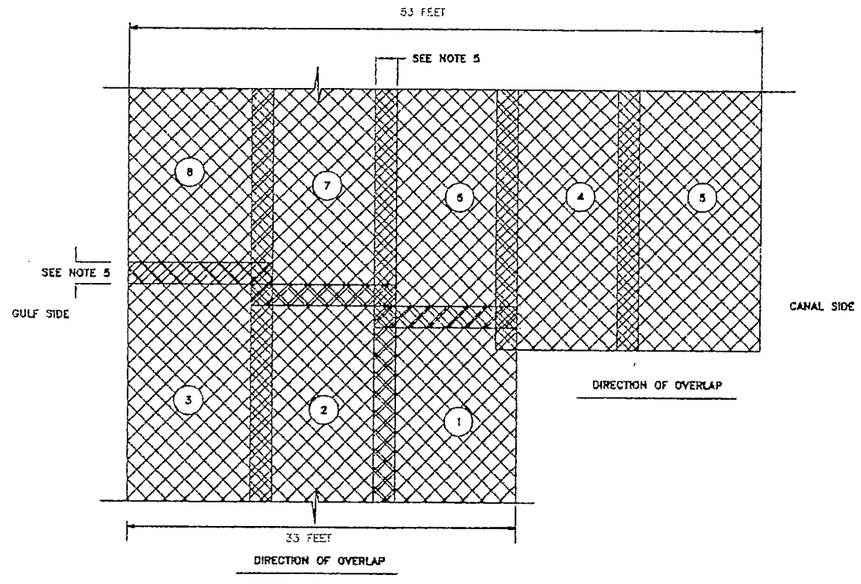
CROSS SECTION A – A'

SCALE: 1" = 10' H
1" = 5' V



CROSS SECTION B – B'

SCALE: 1" = 10' H
1" = 5' V



GEOGRID/GEOTEXTILE LAYOUT

N.T.S.

GENERAL NOTES:

1. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CALL DOTTIE AT 1-800-272-3020 TO LOCATE ANY UTILITY LINES IN THE AREA. FURTHERMORE, CONTRACTOR SHALL NOTIFY MOBIL EXPLORATION AND PRODUCING U.S. INC. A MINIMUM OF 14 DAYS PRIOR TO ACCESSING THE SITE ATTENTION MESSRS. CHUCK GOWER AT (504) 774-7420 AND JOSEPH U. FLORES AT (713) 775-2157.

2. THE CONSTRUCTION OF THE BREAKWATER WITHIN AREA 1 CONSISTS OF NONWOVEN GEOTEXTILE FILTER FABRIC OVERLAIN BY GEOGRID AND 32 INCHES OF RIPRAP. THE CONSTRUCTION OF THE BREAKWATER WITHIN AREA 2 CONSISTS OF A WOVEN GEOTEXTILE OVERLAIN BY 32 INCHES OF RIPRAP. GEOTEXTILES SHALL BE AS PER THE TECHNICAL SPECIFICATIONS. CONTRACTOR SHALL PLACE GEOTEXTILES IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND AS SHOWN ON THE CONSTRUCTION DRAWINGS.

3. ARMOR STONE RIPRAP SHALL MEET LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT CLASS 250 POUND STONE, OR OWNER APPROVED EQUIVALENT. GRADATION TESTS OF REPRESENTATIVE STONE (15-TON MIN. SAMPLE SIZE) SHALL BE MADE AT THE QUARRY. CERTIFIED TEST RESULTS MUST BE SUBMITTED AND APPROVED PRIOR TO PLACEMENT ON THE PROJECT. THE STONE PLACEMENT METHOD SHALL PRODUCE A REASONABLY WELL GRADED ROCK MASS WITH VOIDS MINIMIZED AND A TOLERANCE OF +6 TO -0 INCHES OF FINAL GRADE. STONE SHALL BE PLACED TO FULL THICKNESS (32 INCHES) IN ONE LIFT WITH A MAXIMUM DROP OF 1 FOOT TO AVOID DAMAGING THE GEOTEXTILE FABRIC.

4. ACTUAL ALIGNMENT MAY BE ADJUSTED BY PROJECT ENGINEER TO MEET CHANGING FIELD CONDITIONS. IF ADDITIONAL QUANTITIES FOR GEOTEXTILES AND ARMOR STONE ARE NECESSARY, THEY WILL BE PAID FOR AT THE UNIT PRICE BID FOR THE ITEM.

5. MINIMUM OVERLAP AT SIDES AND ENDS SHALL BE: THREE FEET FOR GEOGRID AND WOVEN GEOTEXTILES; AND TWO FEET FOR NONWOVEN GEOTEXTILE FILTER FABRIC.

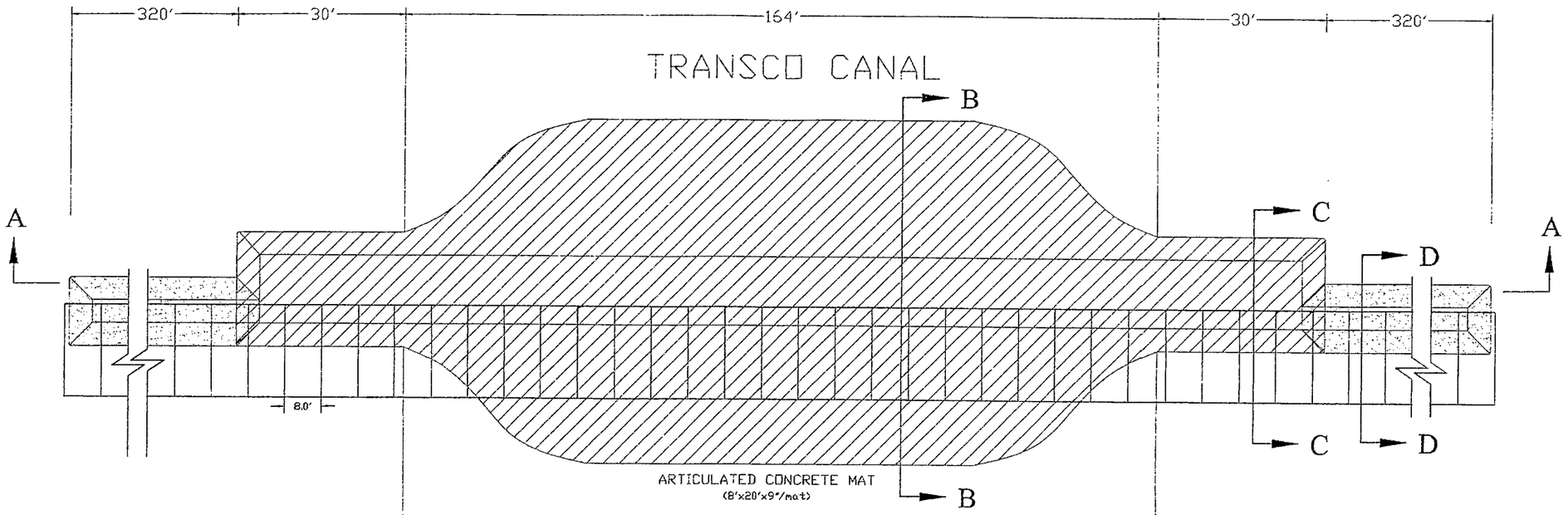
TYPICAL SECTIONS AND DETAILS

POINT AU FER ISLAND HYDROLOGIC RESTORATION
PROJECT – PHASE II (TE-32)
TERREBONNE PARISH, LOUISIANA

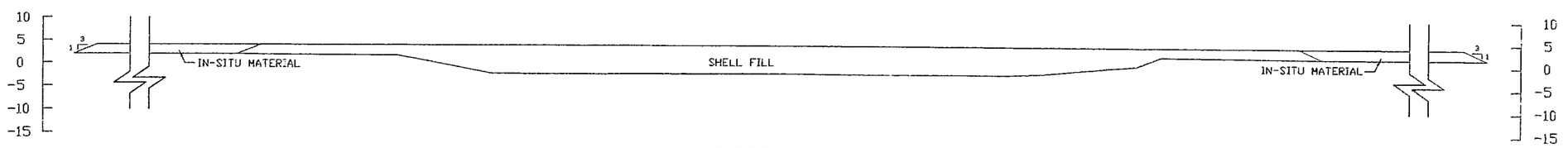
LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
625 NORTH 4TH STREET
BATON ROUGE, LOUISIANA 70804

SCALE: AS SHOWN	APPROVED BY: GEORGE BOOCK, P.E.	DRAWN BY: D.B.K.
DATE: AUGUST 29, 1996		

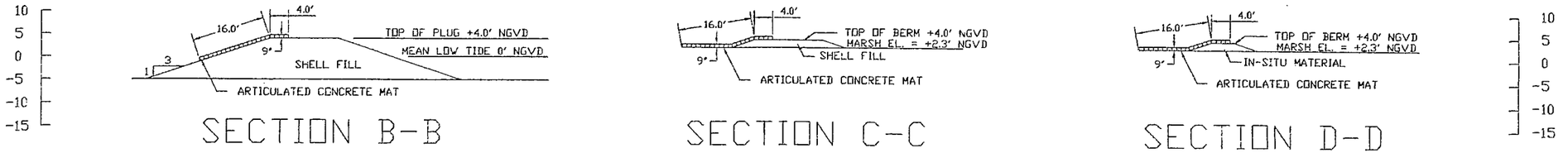
DRAWING NO.
4 OF 10



PLUG NO. 4
PLAN VIEW



SECTION A-A



SECTION B-B

SECTION C-C

SECTION D-D

ADDENUM NO. 1

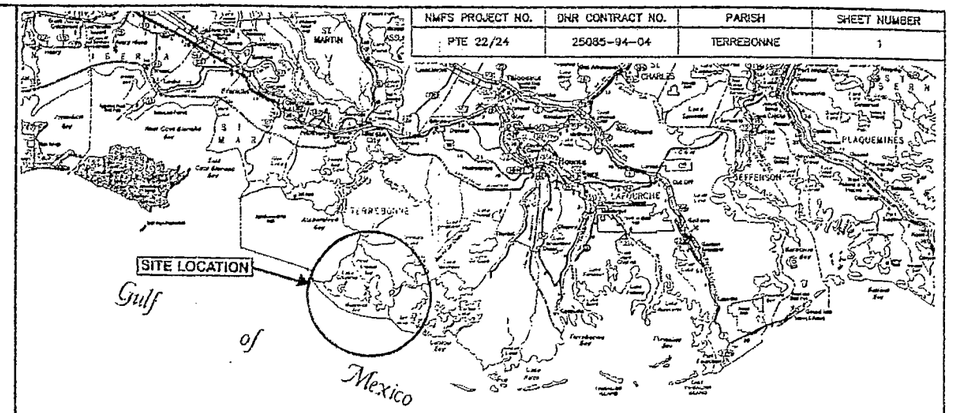
LOUISIANA DEPARTMENT OF NATURAL RESOURCES
COASTAL RESTORATION DIVISION
TE-22 POINT AU FER
HYDROLOGIC RESTORATION
TRANSCO CANAL
PLUG NO. 4
PLANS & SPECIFICATIONS
SHEET 9
OCTOBER 18, 1999

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

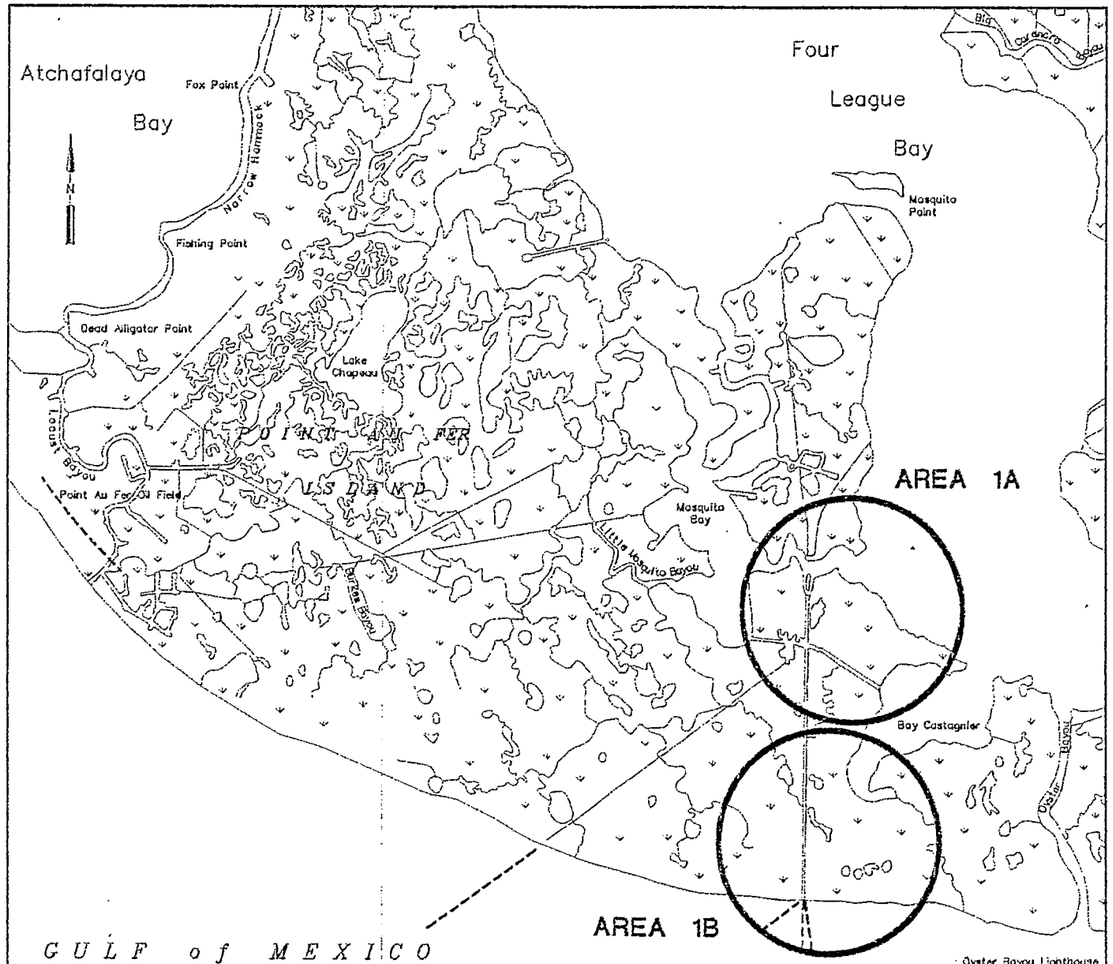
POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

C-K ASSOCIATES, INC.
BATON ROUGE, LOUISIANA

NMFS PROJECT NO.	DNR CONTRACT NO.	PARISH	SHEET NUMBER
PTE 22/24	25085-94-04	TERREBONNE	1



VICINITY MAP
10 MILES 0 10 MILES 20 MILES



Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

LOCATION MAP

4000 0 4000 8000
GRAPHIC SCALE – FEET

INDEX TO SHEETS

SHEET NO.	DRAWING NO.	DESCRIPTION
1	C24-800-23	PROJECT SITE LOCATION MAP
2	C24-800-17	PROJECT SITE PLAN, AREA 1A
3	C24-800-18	PROJECT SITE PLAN, AREA 1B
4	C24-800-37	WARNING SIGN DETAILS
5	C24-800-19	TYPICAL TIMBER BULKHEAD PLUG DESIGN
6	C24-800-27	PLUG No. 1 AND PLUG No. 2 TIMBER BULKHEAD ELEVATIONS
7	C24-800-31	PLUG No. 3A PLAN AND SECTIONS
8	C24-800-29	PLUG No. 4 PLAN AND SECTIONS
9	C24-800-30	PLUG No. 6, PLUG No. 7, AND PLUG No. 8 TIMBER BULKHEAD ELEVATIONS

APPROVED BY: _____

DATE: _____

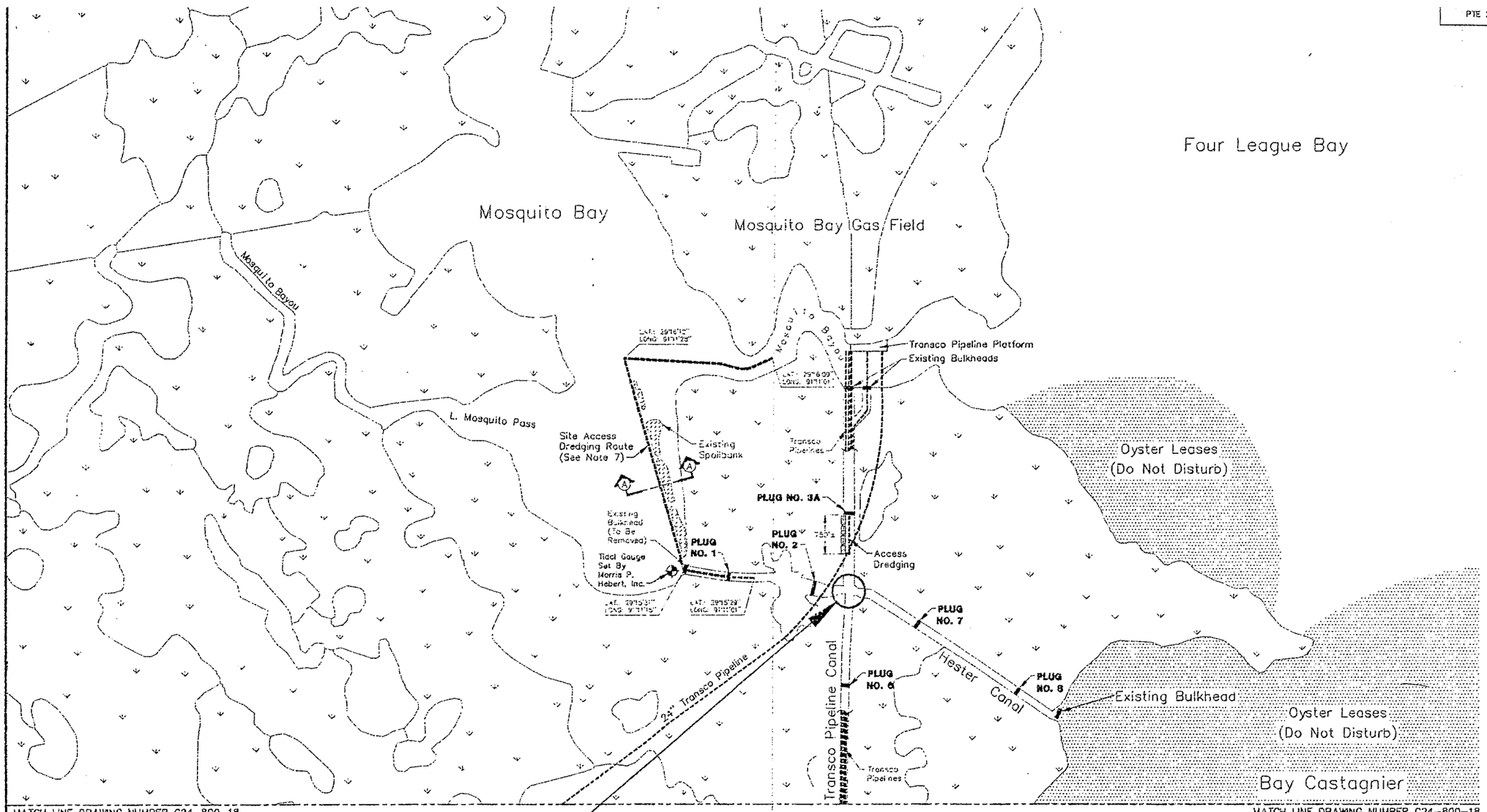
JONATHAN HEBERT
REG. No. 25170
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
4-4-15

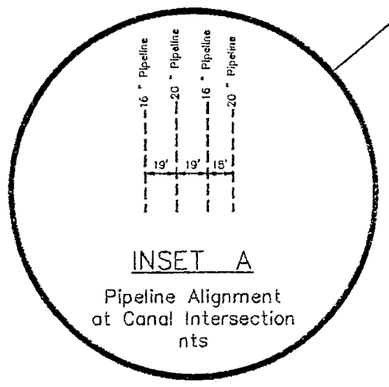
SET NO. _____ OF _____

SHEET: 1 OF 9
C-K DRAWING C24-800-23

"AS-BUILT"

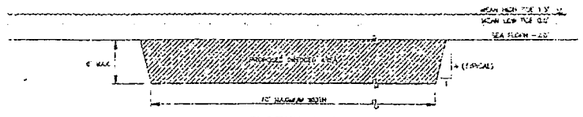
PTE 22/24	25085-94-04	TERREBONNE	2





INSET A

Pipeline Alignment at Canal Intersection nts



SECTION A-A

N

APPROXIMATE GEOGRAPHIC LOCATION		
PLUG No.	LATITUDE	LONGITUDE
1	29°15'30"	91°11'08"
2	29°15'27"	91°10'51"
3A	29°15'43"	91°10'41"
6	29°15'10"	91°10'41"
7	29°15'21"	91°10'29"
8	29°15'09"	91°10'11"

NOTES:

1. Pipeline Locations Are Approximate. Transco Will Locate Each Pipeline Prior To Construction. The Contractor Shall Notify Transco Within 2 Weeks Prior To Any Construction Activities.
2. Plug No. 3A To Be Constructed Using Reef Shell. See Drawing No. C24-800-31 For Details.
3. Plug Nos. 1, 2, 6, 7, And 8 To Be Constructed Using Treated Timber. See Drawing Nos. C24-800-19, C24-800-27 And C24-800-30 For Details.
4. Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.
5. Existing Bulkhead At The West End Of The Hester Canal Requires Demolition For Construction Equipment Access.
6. Latitudes and Longitudes Given For Plugs In The Hester Canal Are For Ends Of Plugs On The South Bank. Latitudes and Longitudes Given For Plugs In The Transco Canal Are For Ends of Plugs On The East Bank. Latitudes and Longitudes Are Given Using a Handheld GPS. Actual Plug Ends Are Staked In The Field.
7. Current Depths Along Access Route Are 2' or Less.

SCALE
FEET
1000 0 1000 2000
1" = 1000'

4-1-95

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

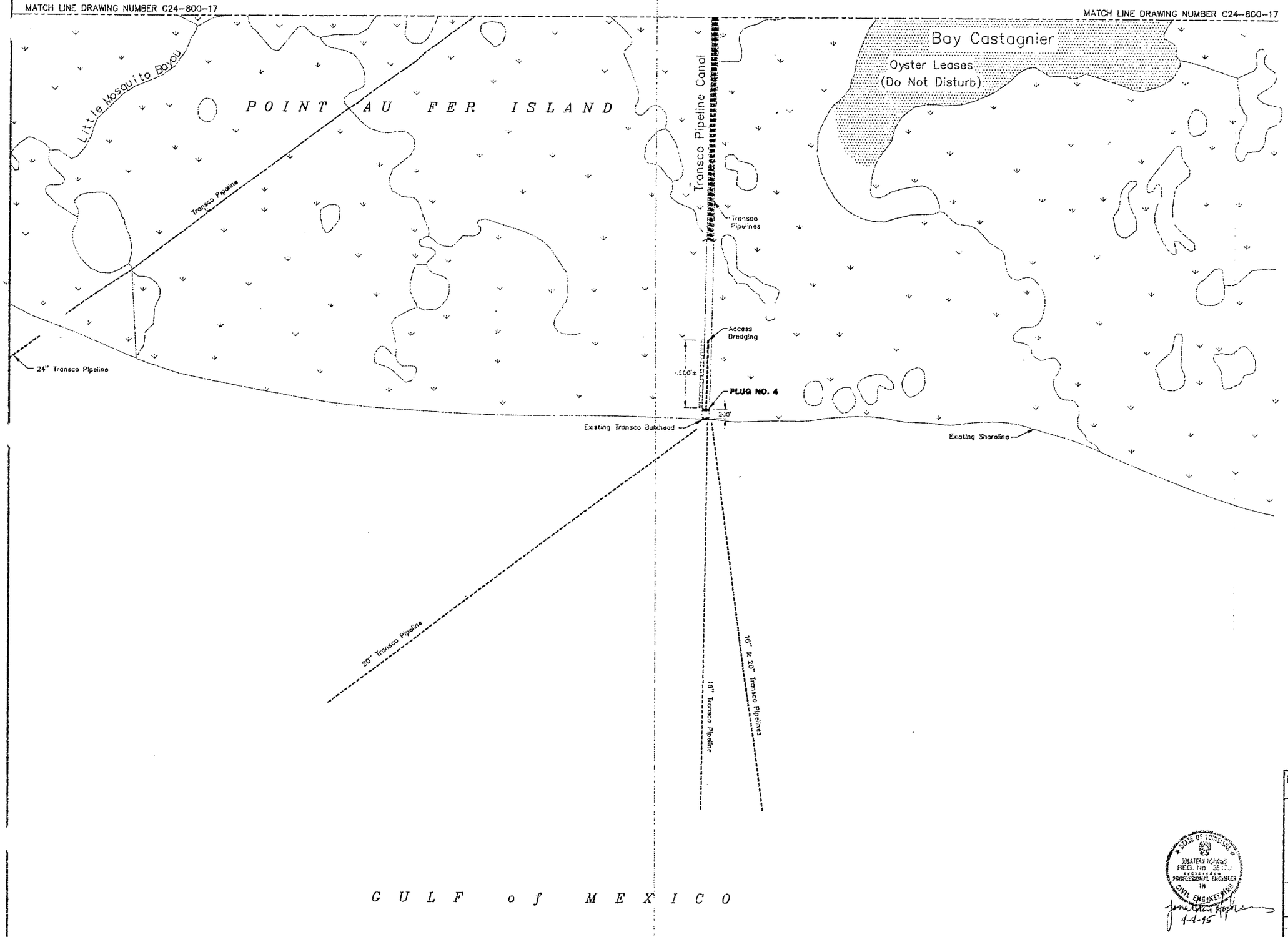
PROJECT SITE PLAN AREA 1A

TERREBONNE PARISH

C-K ASSOCIATES, INC.
BATON ROUGE, LOUISIANA

DRAWN	LMP/ACAD	APPROVED	ARM
CHECKED	JFL	DATE	MARCH 15, 1995
SHEET	2 OF 9	DWG NO	C24-800-17

MAP'S PROJECT NO.	DNR CONTRACT NO.	PARISH	SHEET NUMBER
PTE 22/24	25085-94-04	TERREBONNE	3



APPROXIMATE GEOGRAPHIC LOCATION		
PLUG No.	LATITUDE	LONGITUDE
4	29°13'22"	91°10'43"

NOTES:

1. Pipeline Locations Are Approximate. Transco Will Locate Each Pipeline Prior To Construction. The Contractor Shall Notify Transco Within 2 Weeks Prior To Any Construction Activities.
2. Plug No. 4 To Be Constructed Using Reef Shell. See Drawing No. C24-800-29 For Details.
3. Base Information Taken From Digitized Quadrangle Maps On Diskette in Autocad Format Provided By American Digital Cartography.
4. Latitudes and Longitudes Given For Plugs In The Transco Canal Are For Ends Of Plugs On The East Bank. Latitudes and Longitudes Are Given Using a Handheld GPS. Actual Plug Ends Are Staked In The Field.

SCALE
FEET
1000 0 1000 2000
1" = 1000'

STATE OF LOUISIANA
JONATHAN HOGAN
REG. NO. 28170
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
4-4-95

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

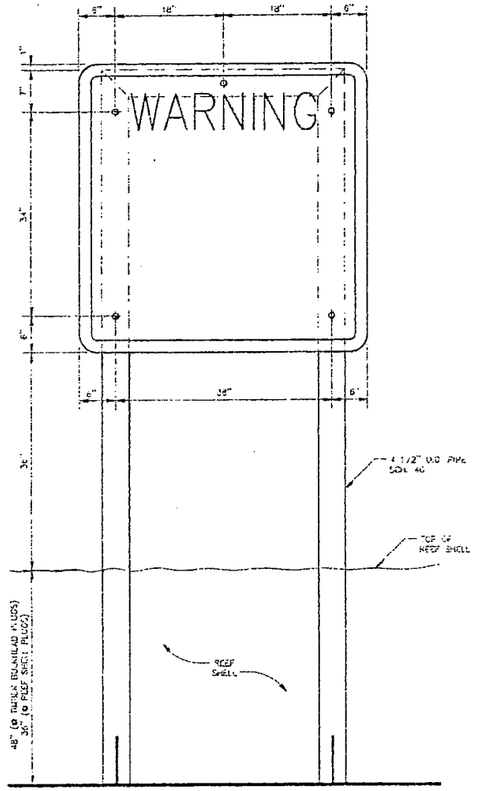
PROJECT SITE PLAN
AREA 1B

TERREBONNE PARISH

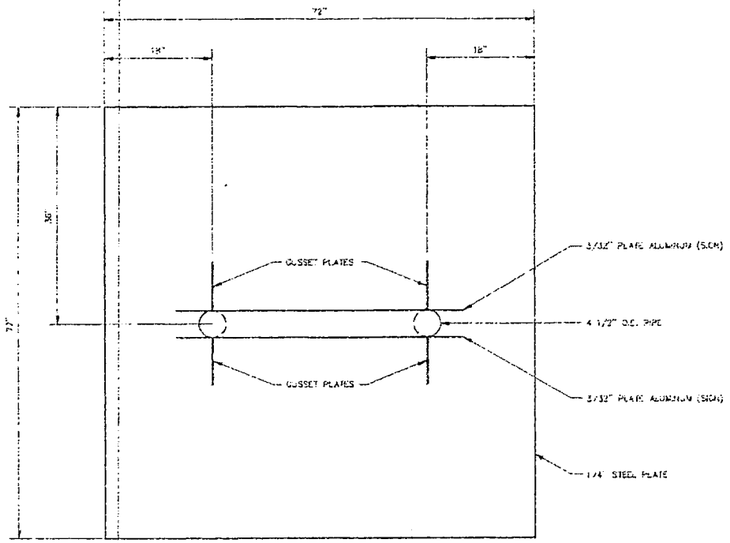
C-K ASSOCIATES, INC.
BATON ROUGE, LOUISIANA

DRAWN	MPJ/ACAD	APPROVED	ARM
CHECKED	JRH	DATE	MARCH 15, 1995
SHEET	3 OF 9	DWG NO.	C24-800-18

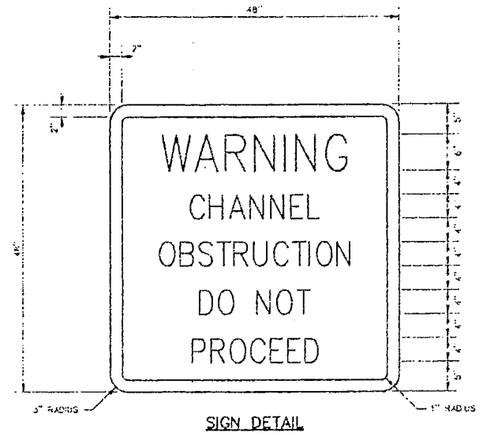
PTE 22/24	25085-94-04	TERREBONNE	4



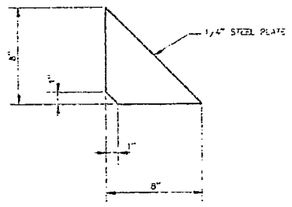
WARNING SIGN SUPPORT DETAIL
SCALE: 1" = 1'



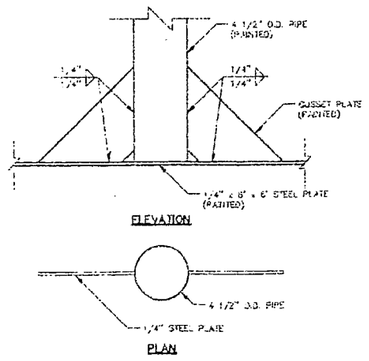
WARNING SIGN PLAN
SCALE: 1" = 1'



SIGN DETAIL
SCALE: 1" = 1'



TYPICAL GUSSET PLATE
SCALE: 1" = 1/2"



GUSSET PLATE DETAIL
SCALE: 1" = 1/2"

NOTES:

1. The 2" Border on the Warning Sign Will Be a Retro-reilective Material of Orange Color. The Lettering Fiela Will Be a Retroreflective Materiai of White Color. Tne Lettering For the Warning Sign Will Be Black. Warning Signs Will Be Placed On the Upstream And Downstream Side Of All Structures. All Signs Must Meet U.S. Coast Guard Standards; In Accordance With 33 CFR 330.4 (a) (1).
2. Neoprene Washers Shall Be Placed Between The Sign And Steel Pipe, At All Points Of Contact.
3. For Sign Placement Plan Locations See Drawing Nos. C24-800-19 and C24-800-31.

STATE OF LOUISIANA
JONATHAN REINS
REG. NO. 25172
EXPIRES
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
4-1-95

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

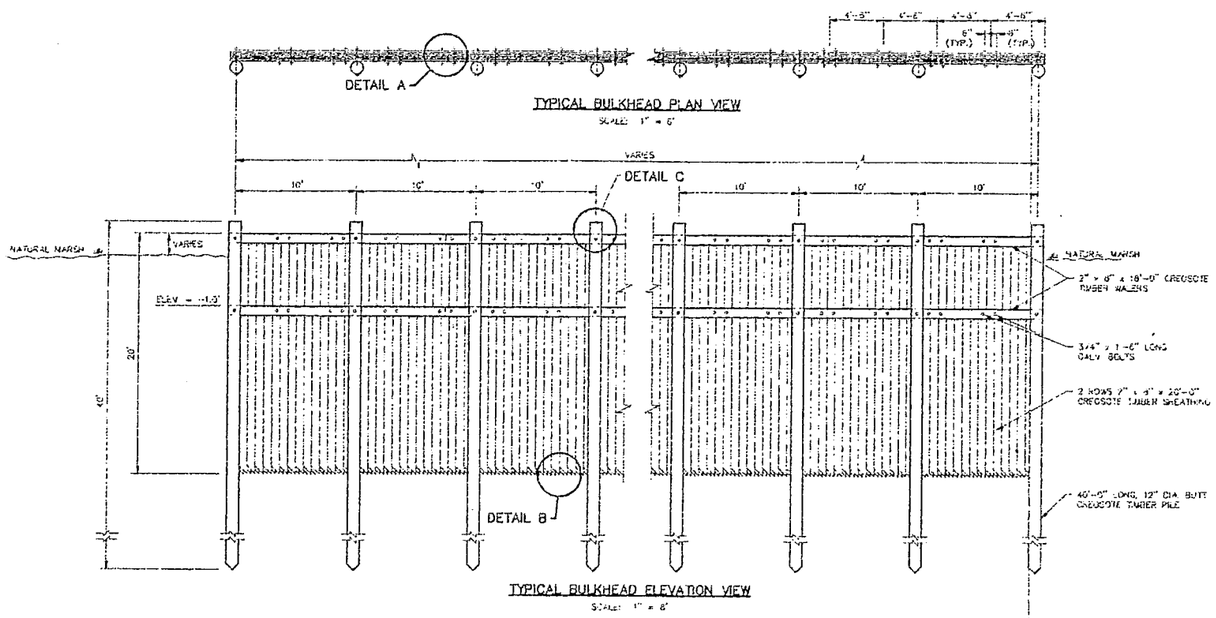
WARNING SIGN DETAILS

TERREBONNE PARISH

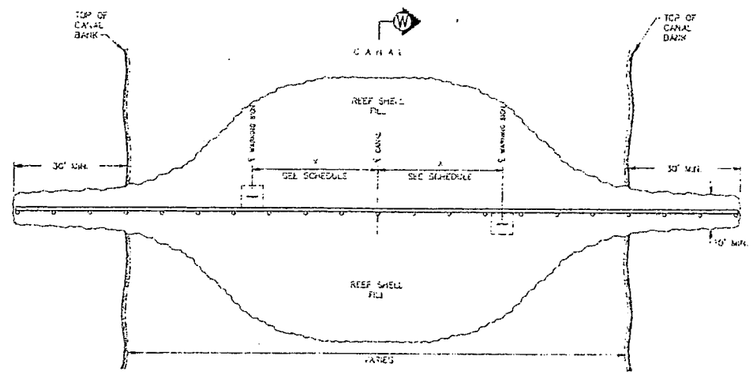
C-K ASSOCIATES, INC.
BATON ROUGE, LOUISIANA

DRAWN	LMP/ACAD	APPROVED	ARM
CHECKED	JRH	DATE	MARCH 15, 1995
SHEET	4 OF 9	DWG. NO.	C24-800-37

PTE 22/24	25085-94-04	TERREBONNE	5

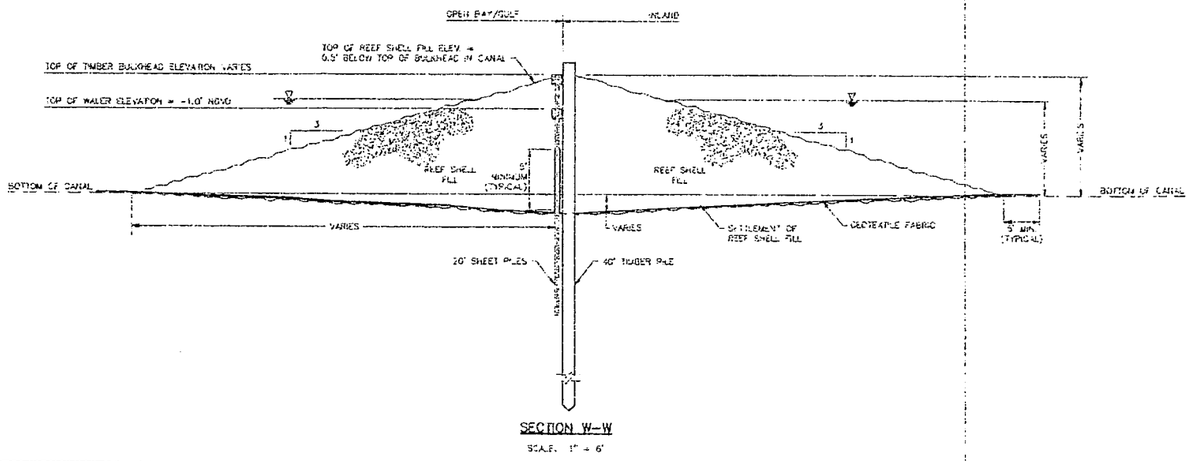


WARNING SIGN LOCATION SCHEDULE	
LUG NO.	DISTANCE "X"
1	35'
2	50'
6	40'
7	35'
8	25'



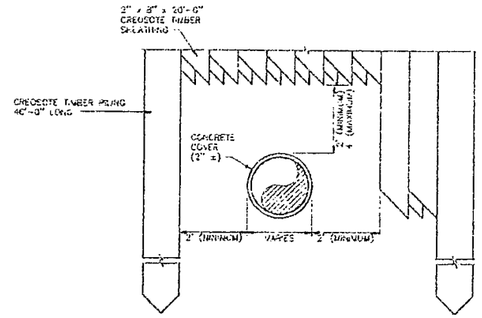
TYPICAL PLUG PLAN VIEW

SCALE: 1" = 20'



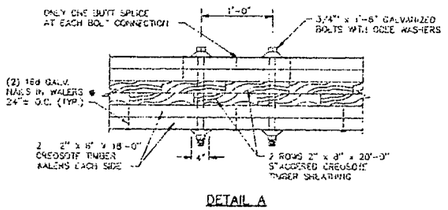
SECTION W-W

SCALE: 1" = 6'



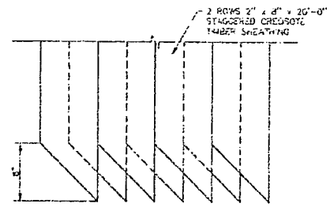
PIPELINE CLEARANCE @ PLUG NO. 6

SCALE: 1" = 4'
SEE NOTE 5



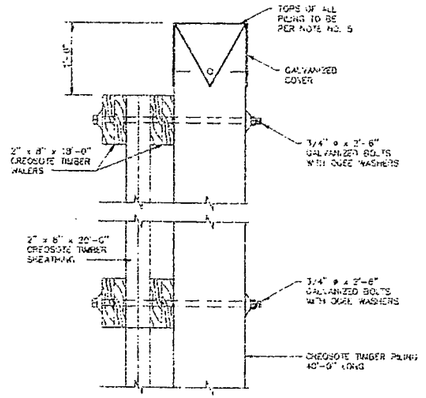
DETAIL A

SCALE: 1" = 1'



DETAIL B

SCALE: 1" = 1'



DETAIL C

SCALE: 1" = 1'

NOTES:

1. All Timber Sizes Specified Are Nominal Sizes For Rough Timber.
2. All Steel Hardware (Nails, Bolts, Nuts, Washers, etc.) For Timber Construction Shall Be Hot Dip Galvanized.
3. Dimensions For Nailing And Drilling Are For Bid Purposes Only. Actual Field Measurements And Dimensions May Require Field Modifications.
4. All Timber Shall Be Pressure Treated As Specified In Technical Specification Section 2.2.
5. All Timber Piles Shall Be Capped In Accordance With Technical Specification Section 2.3.7.
6. Excavation Shall Be Only Enough As Required To Perform The Work.
7. The Contractor Is Responsible For Correct Hardware Sizes.
8. Field Adjustments Of Pile Spacing May Be Required For Plug No. 6 To Avoid Damage To Pipelines. Timber Pile Spacing Shall Not Exceed 10 Feet.
9. Minimum Pile Distance From Any Pipeline Is 2 Feet.
10. Geotextile Fabric Shall Be Installed Below The Reef Shell Fill As Shown And In Accordance With Technical Specification Section 2.3.8.
11. See Detail C For Connection Between Pile And Walers.
12. Settlement Of Reef Shell Fill Is Expected Due To Low Shear Strength Of Soil. Actual Settlement Will Vary With The Maximum Settlement Experienced At The Center Of The Plug And The Minimum Near The Outside Of The Plug. Elevations Have Been Designed To Allow For Settlement.
13. Warning Signs Shall Be Installed On Plug Nos. 1, 2, 6, 7 and 8 As Shown. The Warning Signs Shall Be Constructed As Shown On Drawing No. C24-800-37 And In Accordance With Technical Specification Section 2.4.



NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

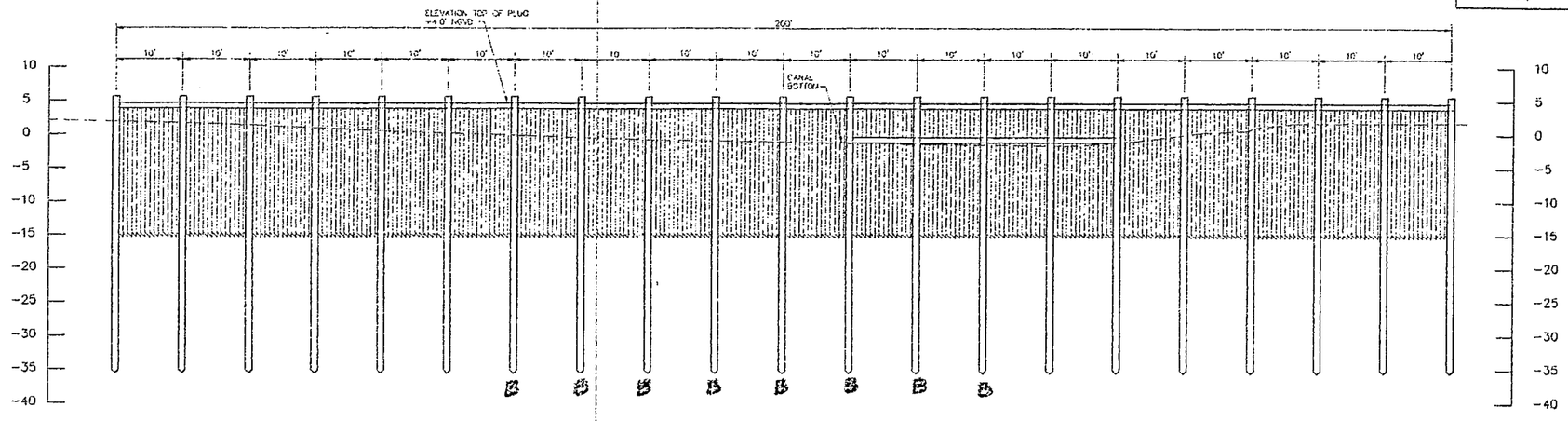
TYPICAL TIMBER BULKHEAD PLUG DESIGN

TERREBONNE PARISH

C-K ASSOCIATES, INC.
BATON ROUGE, LOUISIANA

DRAWN	JMP/ACAD	APPROVED	ARM
CHECKED	JPH	DATE	MARCH 15, 1995
SHEET	5 OF 9	DWG. NO.	C24-800-19

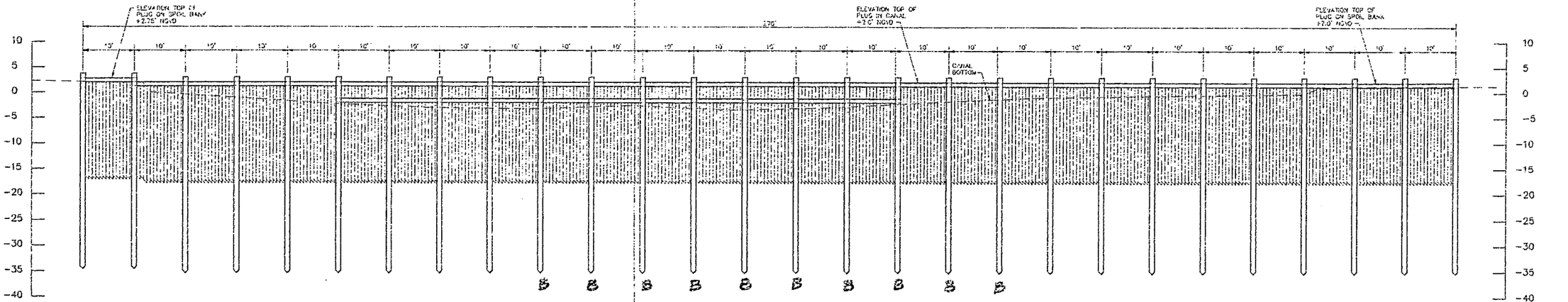
PTE 22/24	25085-04-04	TERREBONNE	6



PLUG NO. 1 – HESTER CANAL

LOOKING WESTERLY

B– BATTER PILE LOCATION



PLUG NO. 2 – HESTER CANAL

LOOKING WESTERLY

NOTES:

1. Mean High Tide = 1.5' NGVD
2. Mean Low Tide = 0.0' NGVD
3. Distance From Water's Edge To End Of Canal Plug Is Approximately 30 Feet, Varying With Tide Level.
4. Elevation At Top Of Plug No. 1 To Be +4.0 Feet At NGVD. Elevation At Top of Plug No. 2 To Be As Shown.
5. See Drawing No. C24-800-19 For Typical Plug Cross Section And Connection Details.
6. Warning Sign As Shown On Drawing No. C24-800-37 Shall Be Installed at Locations Shown On Drawing No. C24-800-19.
7. For Plug Locations See Drawing No. C24-800-17.

REFERENCES:

1. Canal Cross Section Information Provided By Department of Natural Resources, Coastal Restoration Division On Diskette In Autocad Format.
2. C-K Associates, Inc. Field Book No. 94-01 Pages 29 – 39.

HORIZONTAL AND VERTICAL SCALE

FEET

10 0 10 20

1" = 10'

STATE OF LOUISIANA
REG. No. 25770
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
1-4-95

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

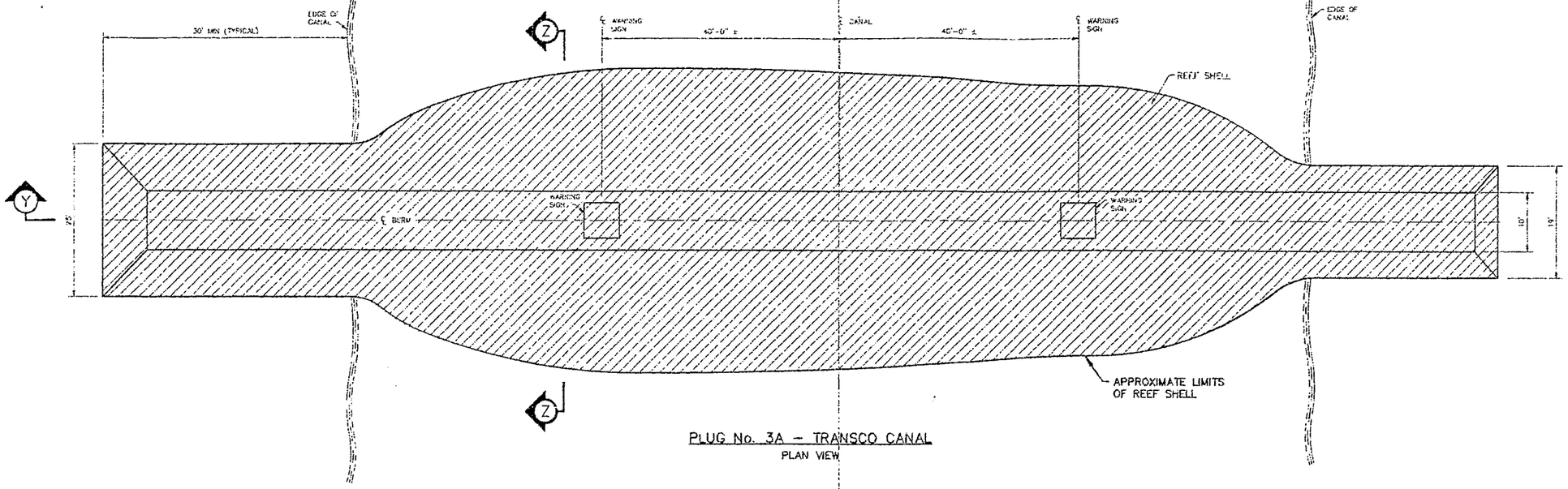
PLUG NO. 1 AND PLUG NO. 2 TIMBER BULKHEAD ELEVATIONS

TERREBONNE PARISH

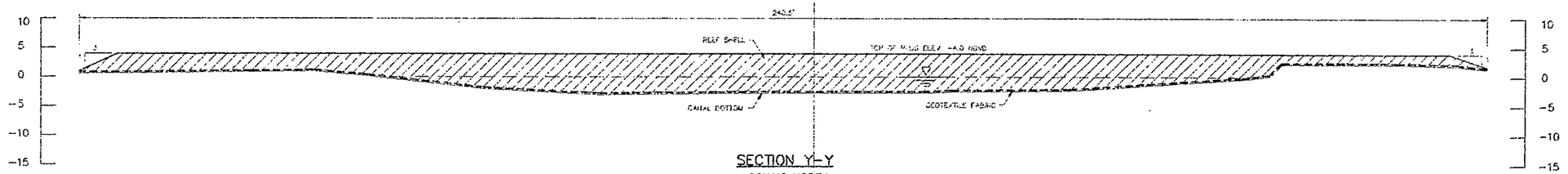
C-K ASSOCIATES, INC.
BATON ROUGE, LOUISIANA

DRAWN	MP/ACAD	APPROVED	ARM
CHECKED	JRH	DATE	MARCH 15, 1995
SHEET	6 OF 9	DWG. NO.	C24-800-27

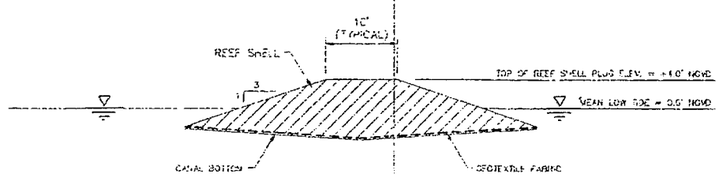
PTE 22/24	25085-94-04	TERREBONNE	7



PLUG No. 3A – TRANSCO CANAL
PLAN VIEW



SECTION Y–Y
LOOKING NORTH



SECTION Z–Z
LOOKING WESTERLY

N

NOTES:

1. Plug No. 3A Shall Be Constructed Using Reef Shell As Specified In Technical Specification No. 3.0.
2. Prior To Placement Of Reef Shell, Geotextile Fabric Shall Be Placed As Shown And As Specified By Technical Specification No. 3.2.
3. All Side Slopes For Reef Shell Shall Be 3 Horizontal To 1 Vertical (3:1).
4. Mean High Tide = 1.5' NGVD
5. Mean Low Tide = 0.0' NGVD
6. Distance From Water's Edge To End Of Canal Plug Is Approximately 30 Feet, Varying With Tide Level.
7. Elevation At Top Of Plug To Be +4.0' NGVD.
8. Estimated Volume Of Reef Shell Is Approximately 1,200 Cubic Yards.
9. Settlement Of Reef Shell is Expected Due To Low Shear Strength Of Soil. Actual Settlement Will Vary With The Maximum Settlement Experienced At The Center Of The Plug And The Minimum Near Outside Of The Plug. Elevations Have Been Designed To Allow For Settlement.
10. For Plug Location See Drawing No. C24-800-17.
11. For Warning Sign Details See Drawing No. C24-800-37.

REFERENCES:

1. Canal Cross Section Information Provided By Department of Natural Resources, Coastal Restoration Division On Diskette In Autocad Format.
2. C-K Associates, Inc. Field Book No. 94-01 Pages 29 – 39.

HORIZONTAL AND VERTICAL SCALE

FEET
10 0 10 20
1" = 10'

STATE OF LOUISIANA
JONATHAN HOPKINS
REG. NO. 25120
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
4-1-95

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

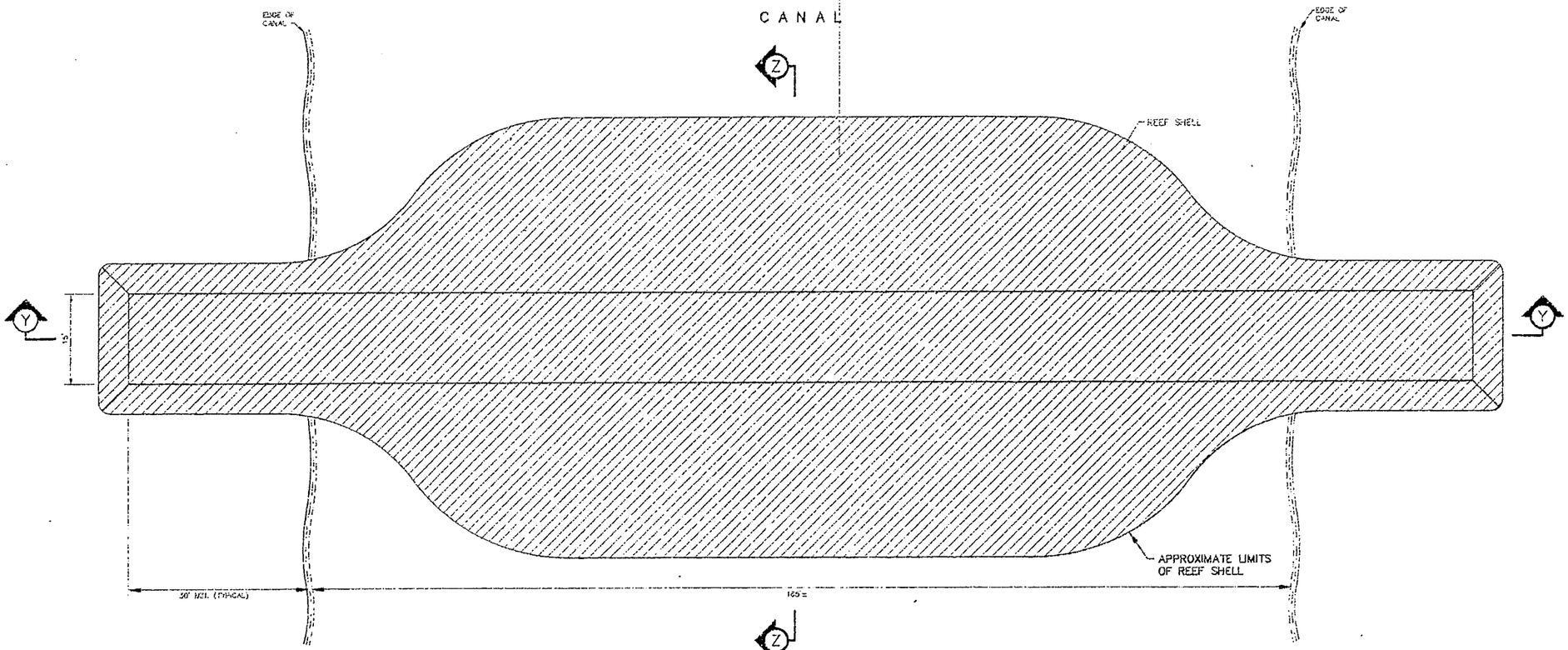
PLUG NO. 3A PLAN AND SECTIONS

TERREBONNE PARISH

C-K ASSOCIATES, INC.
BATON ROUGE, LOUISIANA

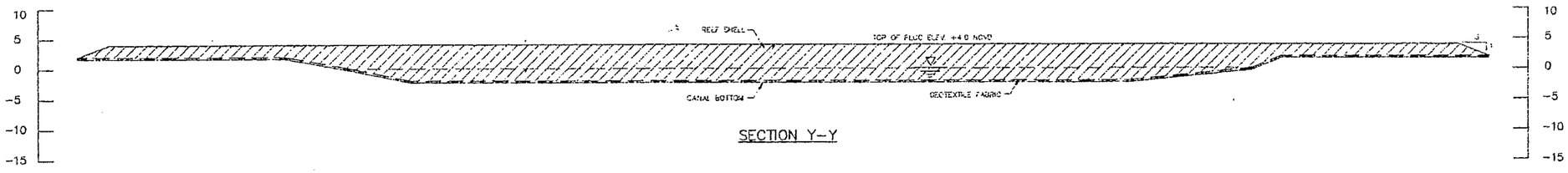
DRAWN	LMP/ACAD	APPROVED	ABT
CHECKED	JPH	DATE	MARCH 15, 1995
SHEET	7 OF 9	DWG. NO.	C24-800-31

PTE 22/24	25085-94-04	TERREBONNE	8

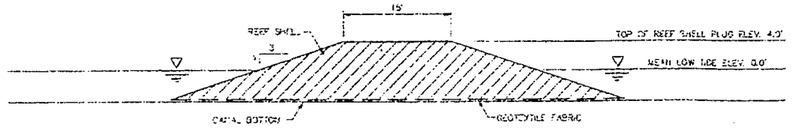


PLUG NO. 4 – TRANSCO CANAL

PLAN VIEW



SECTION Y–Y



SECTION Z–Z

NOTES:

1. Plug No. 4 Shall Be Constructed Using Reef Shell As Specified In Technical Specification No. 3.0.
2. Prior To Placement Of Reef Shell, Geotextile Fabric Shall Be Placed As Shown And As Specified By Technical Specification No. 3.2.
3. All Side Slopes For Reef Shell Shall Be 3 Horizontal To 1 Vertical (3:1).
4. Mean High Tide = 1.5' NGVD
5. Mean Low Tide = 0.0' NGVD
6. Distance From Water's Edge To End Of Canal Plug Is Approximately 30 Feet, Varying With Tide Level.
7. Elevation At Top Of Plug To Be +4.0' NGVD.
8. Estimated Volume Of Reef Shell Is Approximately 1,300 Cubic Yards.
9. Settlement Of Reef Shell Is Expected Due To Low Shear Strength Of Soil. Actual Settlement Will Vary With The Maximum Settlement Experienced At The Center OF The Plug And The Minimum Near Outside Of The Plug. Elevations Have Been Designed To Allow For Settlement.
10. For Plug Location See Drawing No. C24-800-18.

REFERENCES:

1. Canal Cross Section Information Provided By Department of Natural Resources, Coastal Restoration Division On Diskette In Autocad Format.
2. C-K Associates, Inc. Field Book No. 94-01 Pages 29 - 39.

HORIZONTAL AND VERTICAL SCALE

FEET

10 0 10 20

1" = 10'

STATE OF LOUISIANA
STEPHAN HERRING
REG. No. 25170
REGISTERED PROFESSIONAL ENGINEER IN
CIVIL ENGINEERING
4-4-95

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

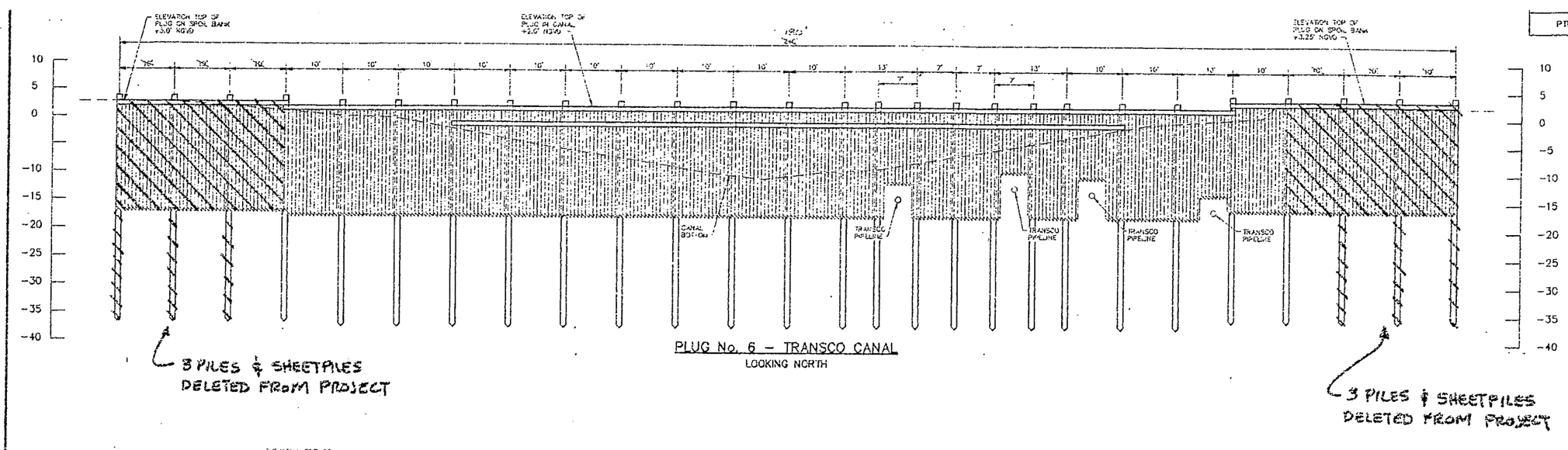
PLUG NO. 4
PLAN AND SECTIONS

TERREBONNE PARISH

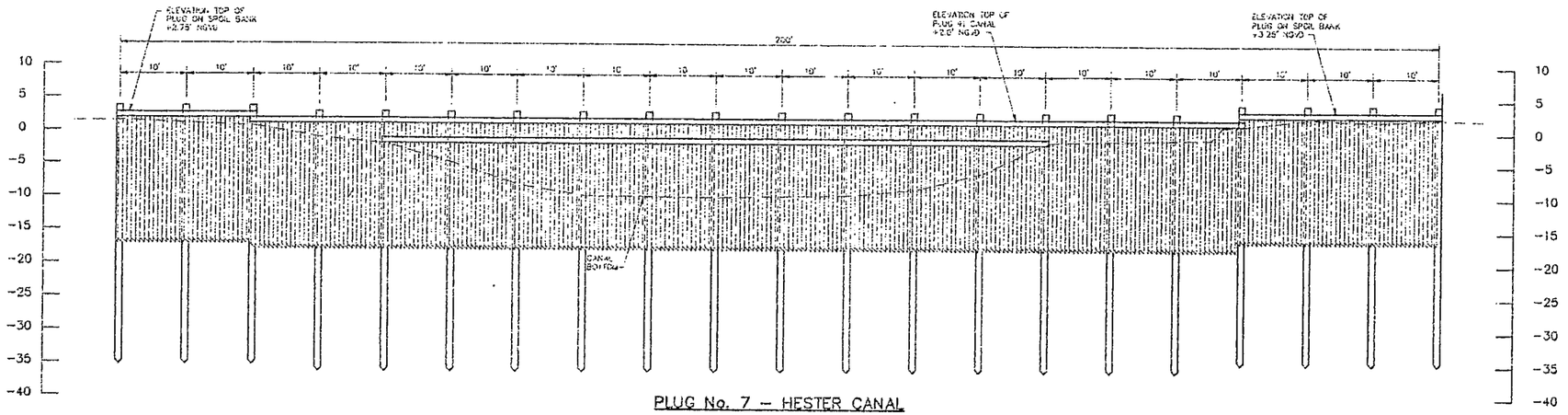
C-K ASSOCIATES, INC.
BATON ROUGE, LOUISIANA

DRAWN	LMP/ACAD	APPROVED	ARM
CHECKED	JFH	DATE	MARCH 15 1995
SHEET	8 OF 9	DWG NO.	C24-800-29

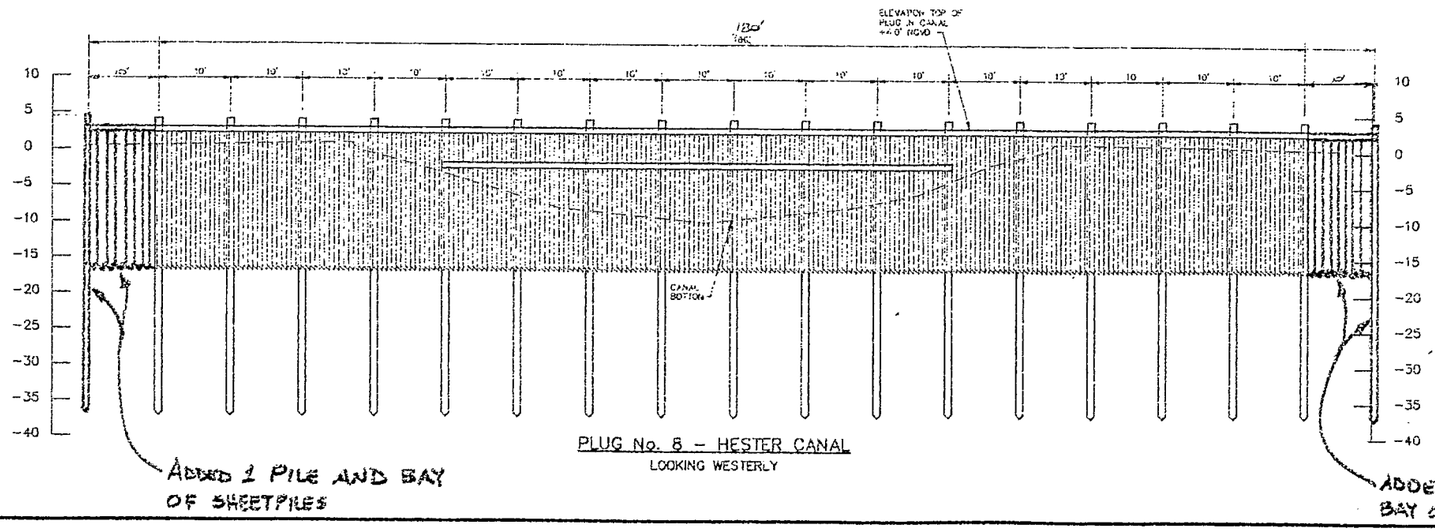
PTE 22/24	25085-94-04	TERREBONNE	9



PLUG No. 6 – TRANSCO CANAL
LOOKING NORTH



PLUG No. 7 – HESTER CANAL
LOCKING WESTERLY



PLUG No. 8 – HESTER CANAL
LOOKING WESTERLY

NOTES:

1. Mean High Tide = 1.5' NGVD
2. Mean Low Tide = 0.0' NGVD
3. Distance From Water's Edge To End Of Canal Plug Is Approximately 30 Feet, Varying With Tide Level.
4. Elevation At Top Of Plug No. 8 To Be +4.0' NGVD. Elevation At Top Of Plug Nos. 6 and 7 To Be As Shown.
5. See Drawing No. C24-800-19 For Typical Plug Cross Section And Connection Details.
6. Pipelines Shall Be Located Prior To Construction Of Plug No. 6. Locations Shown Are Approximate.
7. Field Adjustments Of Actual Pile Spacing For Plug No. 6 May Be Required. In Any Case, Pile Spacing Shall Not Exceed 10 Feet On Center.
8. All Piles Shall Be Driven Minimum Of 2 Feet From Any Pipeline. See Pipeline Clearance Detail, Drawing No. C24-800-19.
9. Warning Sign As Shown On Drawing No. C24-800-37 Shall Be Installed At Locations Shown On Drawing No. C24-800-19.
10. For Plug Locations See Drawing No. C24-800-17.

REFERENCES:

1. Canal Cross Section Information Provided By Department of Natural Resources, Coastal Restoration Division On Diskette In Autocad Format.
2. C-K Associates, Inc. Field Book No. 94-01 Pages 29 – 39.

HORIZONTAL AND VERTICAL SCALE
FEET
10 0 10 20
1" = 10'

STATE OF LOUISIANA
JAMES HOPKINS
REG. NO. 25178
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
4-4-95

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

PLUG NO. 6, PLUG NO. 7, AND PLUG NO. 8 TIMBER BULKHEAD ELEVATIONS

TERREBONNE PARISH

C-K ASSOCIATES, INC.
BATON ROUGE, LOUISIANA

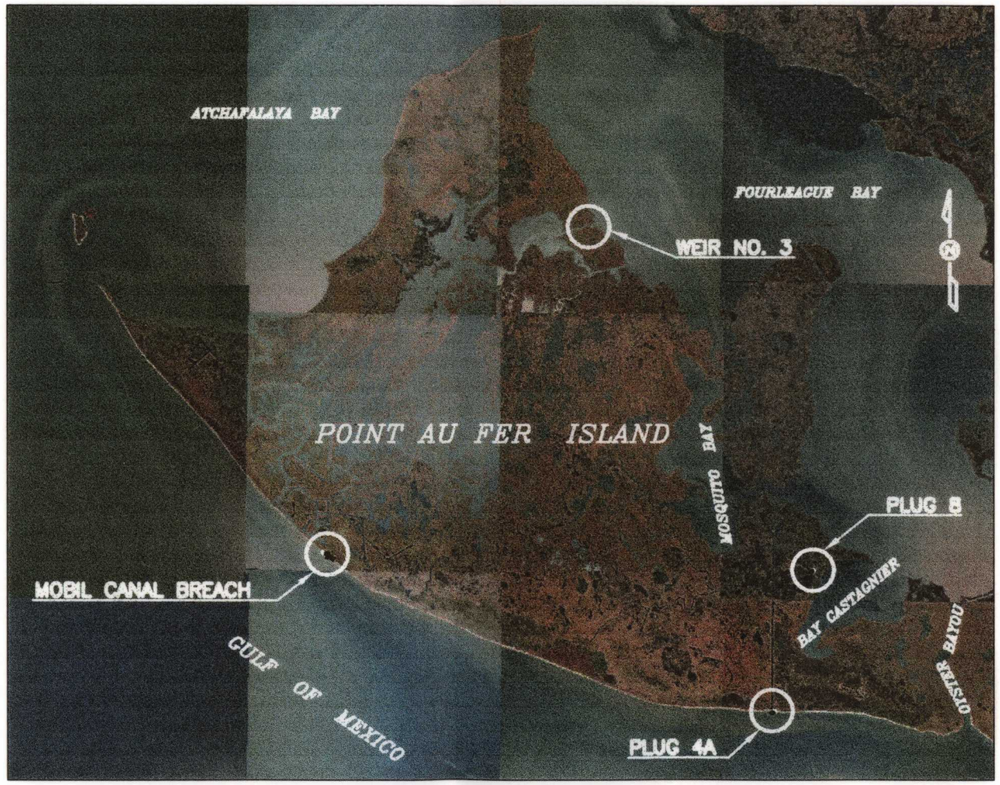
DRAWN	LMP/ACAD	APPROVED	JRH
CHECKED	JRH	DATE	MARCH 15, 1995
SHEET	9 OF 9	DWG. NO.	C24-800-30

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL MARINE FISHERIES SERVICE

and

STATE OF LOUISIANA
DEPARTMENT OF NATURAL RESOURCES, COASTAL ENGINEERING DIVISION

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



LOCATION MAP
SCALE: 1" = 6,000'



STATE VICINITY MAP
N.T.S.

AS BUILT

INDEX TO SHEETS:

SHEET NO.	DESCRIPTION:
1	TITLE SHEET, STATE AND LOCAL VICINITY MAPS
2	SUMMARY OF ESTIMATED QUANTITIES, GENERAL AND TECHNICAL NOTES
3	OVERALL SITE PLAN
4	SITE PLAN – MOBIL CANAL BREACH
5	SITE PLAN – PLUG 4A
6	SITE PLAN – PLUG 8
7	VINYL BULKHEAD DETAILS – PLUG 8
8	SITE PLAN – WEIR NO. 3

TOTAL NO. OF SHEETS 8

RECOMMENDED FOR APPROVAL

DNR/CED PROJECT ENGINEER — DATE

DNR/CED ENGINEER MANAGER — DATE

DNR/CED DIRECTOR — DATE

PREPARED BY:
PICCIOLA & ASSOCIATES, INC.

JOSEPH C. PICCIOLA, II — DATE 10/04/05

STATE OF LOUISIANA
Joseph C. Picciola II
REG. No. 25614
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/04/05

REVISIONS:	
DATE:	REMARKS:
04–28–05	ADDED SITE AND SHEET, PLAN CHANGES
10–03–05	AS BUILT

J.N. 0204–0401

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS — NAVAL ARCHITECTS
LAND SURVEYORS — MARINE ENGINEERS
P.O. BOX. 687
CUT OFF, LOUISIANA 70345
(985) 632–5786

DRAWING PLOTTED AT HALF–SCALE

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

SUMMARY OF ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	
1	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	LUMP SUM	
2	STONE RIPRAP (250 lb. CLASS)	TONS	3,450	3,336 TONS (AS BUILT)
3	STONE RIPRAP (55 lb. CLASS)	TONS	NONE	
4	GEOTEXTILE FABRIC	SQ. YD.	2,890	
5	TIMBER PILINGS (2.5 CCA TREATED) 40' LONG	LIN. FT.	440	
6	PILING CAPS (GALVANIZED)	EACH	7	
7	VINYL SHEET PILING BULKHEAD (NORTHSTAR 3100 OR APPROVED EQUAL)	LIN. FT.	61	
8	2"x8" TIMBER WHALER (0.8 CCA TREATED)	LIN. FT.	122	
9	2"x8" TIMBER WHALER (2.5 CCA TREATED)	LIN. FT.	122	
10	2"x12" TIMBER CAP (0.8 CCA TREATED)	LIN. FT.	61	
11	GALVANIZED HARDWARE FOR VINYL BULKHEAD	LUMP SUM	LUMP SUM	
12	ARTICULATED MAT (SUBMAR 20'x8'x4.5" THICK) OR EQUAL	EACH	7	

GENERAL NOTES:

1. BASIC HORIZONTAL AND VERTICAL CONTROL POINTS HAVE BEEN ESTABLISHED OR DESIGNATED BY THE ENGINEER AND ARE SHOWN ON THE PLANS. CONTRACTOR SHALL MAINTAIN AND PROTECT FROM DAMAGING OR DISLOCATING THESE CONTROLS AND SHALL PERFORM ALL ADDITIONAL SURVEY, LAYOUT, AND MEASUREMENT WORK USING THESE CONTROLS.

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

3. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, RULES AND REGULATIONS OF THE LOUISIANA STATE POLICE, THE TERREBONNE AND ST. MARY PARISH SHERIFF'S OFFICES, DNR, USCG, FEDERAL AUTHORITIES, STATE AND PARISH HEALTH DEPARTMENTS AND OTHER STATE OR PARISH AUTHORITIES HAVING REGULATIONS AND JURISDICTIONAL RIGHTS APPLICABLE TO THE WORK OR JOB SITES.

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

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

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

7. THE SAFETY HAZARDS PROMULGATED BY AND THE PRECAUTIONS DEFINED WITHIN SAME OF THE OSHA, THE USCG AND ALL OTHER REGULATING AUTHORITY HAVING JURISDICTION AND THAT ARE APPLICABLE TO THE WORK SHALL BE ADHERED TO AND ENFORCED BY THE CONTRACTOR.

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

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

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

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

12. CONTRACTOR SHALL NOT BE ALLOWED TO IMPEDE DRAINAGE DURING RAINSTORMS OR WHEN A RAINSTORM IS IMMINENT.

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

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

TECHNICAL NOTES:

1. THE CONTRACTOR IS NOTIFIED THAT THE WORK SITE IS ACCESSED THROUGH THE ATCHAFALAYA DELTA WILDLIFE MANAGEMENT AREA UNDER THE JURISDICTION OF THE LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES. ALL PERSONNEL SHALL ABIDE BY THE MANAGEMENT AREA RULES AND REGULATIONS.

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

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

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

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

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

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING PIPELINE OPERATORS 48 HOURS IN ADVANCE OF THE WORK. IF NECESSARY ALL PIPELINES SHALL BE MARKED WITH BUOYS BY THE CONTRACTOR USING THE COORDINATES GIVEN. THE CONTRACTOR SHALL MAINTAIN BUOYS DURING CONSTRUCTION OR HAVE ADEQUATE NAVIGATIONAL EQUIPMENT ON THE PILE DRIVER TO AVOID DRIVING PILINGS IN RESTRICTED AREAS.

LAND MANAGER:

ALLAN ENSMINGER (337) 462-0762

STATE OF LOUISIANA
Joseph C. Picciola II
REG. No. 25014
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10-04-05

AS BUILT

REVISIONS:

DATE:	REMARKS:
04-28-05	ADJUSTED QUANTITIES, PLAN CHANGES
10-03-05	AS BUILT

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

LA. DEPT. OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION

SUMMARY OF ESTIMATED QUANTITIES
GENERAL AND TECHNICAL NOTES

DESIGNED BY: J.C.P.
DRAWN BY: L.M.C.
CHECKED BY: J.C.P.
DATE: 1-25-05
SCALE: SHOWN
SHEET NO. 2 OF 8

J.N. 0204-0401

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NOTE:

HORIZONTAL CONTROL IS BASED ON NAD 83 – LOUISIANA SOUTH ZONE (1702) FEET

VERTICAL CONTROL IS BASED ON NAVD 88 IN FEET

2000 0 2000 4000 6000

SCALE: 1" = 2000'

DESCRIPTION OF THE BENCHMARKS ON WHICH THE SURVEY IS BASED:

NGS STYLE FLOATING SLEEVE MONUMENT: STAINLESS STEEL SECTIONAL RODS DRIVEN TO REFUSAL WITHIN A GREASED SLEEVE AND SAND FILLED 6" PVC PIPE WITH PROTECTIVE COVER AND IS SET FLUSH WITH THE GROUND.

AS BUILT

NAME/STAMPING	LATITUDE (NAD 1983)	LONGITUDE (NAD 1983)	"X" (NAD 1983)	"Y" (NAD 1983)	ELEVATION (N.A.V.D) (VERT. 198
AT04-SM-03	29°19'36.257014"N	91°16'41.100726"W	3,298,439.70	300,664.12	3.54 FEET
TE26-SM-01	29°17'06.548688"N	91°16'54.716855"W	3,297,241.21	285,540.95	1.09 FEET
TE22-SM-01	29°15'31.488404"N	91°11'06.170200"W	3,328,119.41	275,965.43	1.98 FEET

STATE OF LOUISIANA
Joseph P. Picciola II
REG. NO. 21105
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING
10-03-05

DRAWING PLOTTED AT HALF-SCALE

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

SHEET NO.	SCALE:	DATE:	CHECKED BY:	DRAWN BY:	DESIGNED BY:
3 OF 8	SHOWN	1-25-05	J.C.P.	L.M.C.	J.C.P.

LA. DEPT. OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION

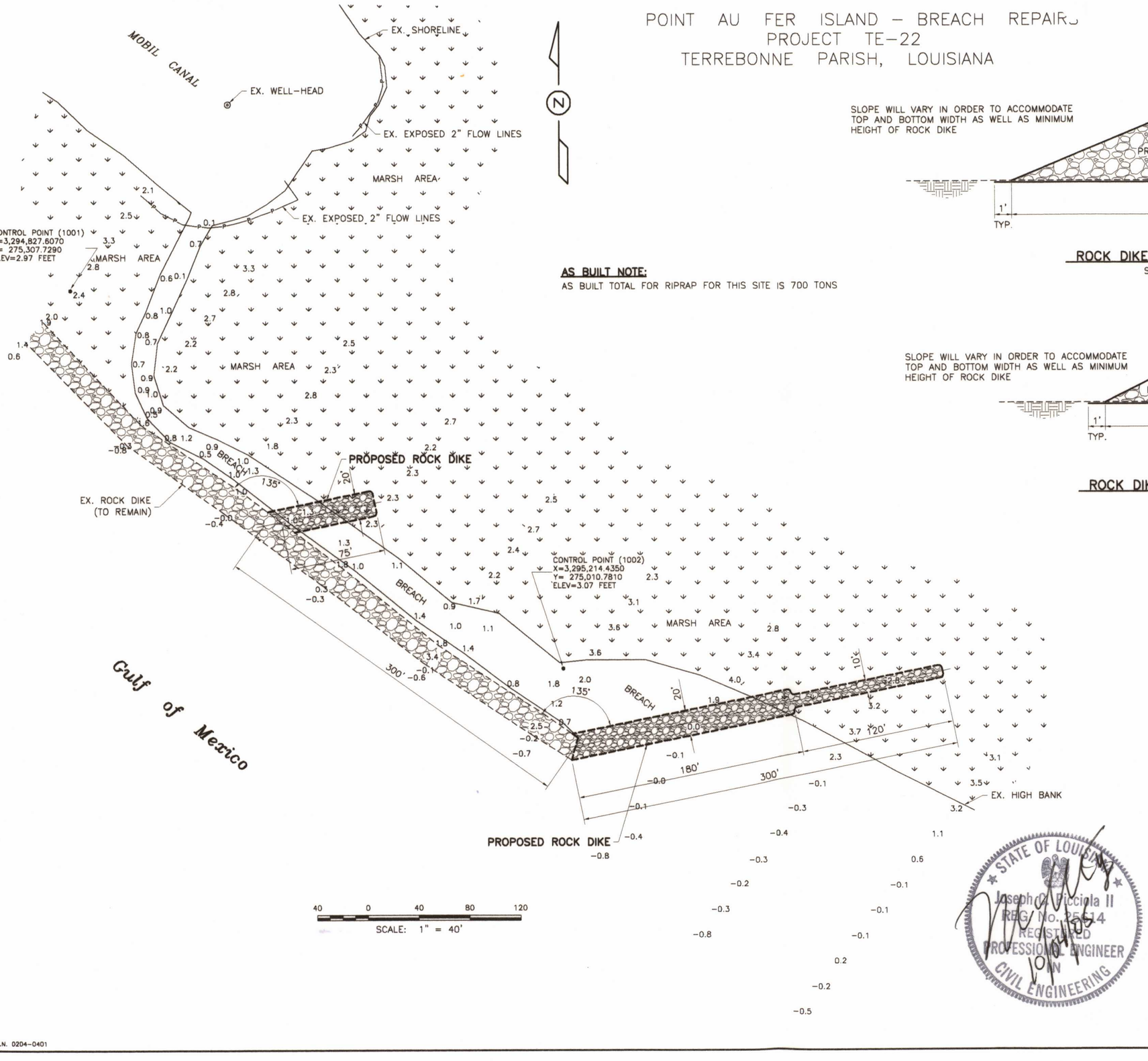
OVERALL SITE PLAN

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

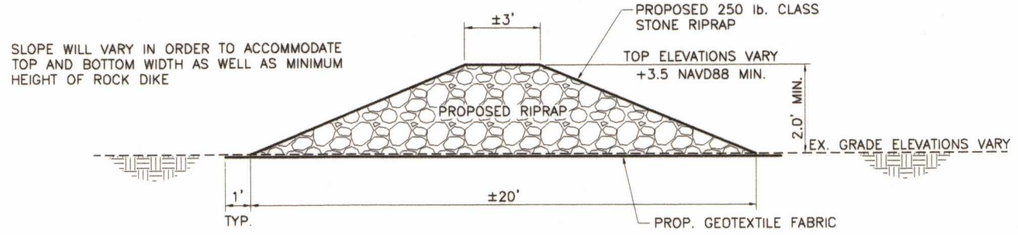
REVISIONS:

DATE:	REMARKS:
04-28-05	ADDED SITE, PLAN CHANGES
10-03-05	AS BUILT

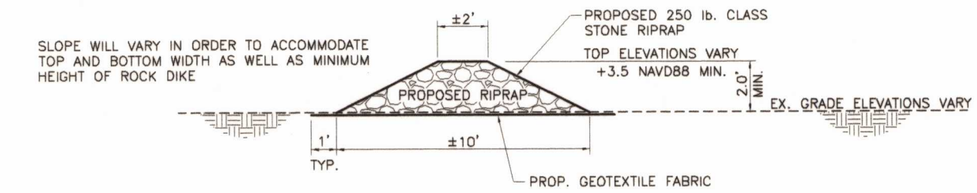
POINT AU FER ISLAND – BREACH REPAIRS
PROJECT TE-22
TERREBONNE PARISH, LOUISIANA



AS BUILT NOTE:
AS BUILT TOTAL FOR RIPRAP FOR THIS SITE IS 700 TONS



ROCK DIKE – BREACH SECTION
SCALE: 1" = 3'



ROCK DIKE – MARSH SECTION
SCALE: 1" = 3'

CONSTRUCTION NOTES:

1. GEOTEXTILE FABRIC SHALL HAVE A MINIMUM 5' OVERLAP AT THE ANY INTERSECTIONS.

2. CONTRACTOR MAY HAVE TO REMOVE AND REPLACE SOME EXISTING RIPRAP IN ORDER TO MAKE A SMOOTH TRANSITION INTO THE EXISTING RIPRAP.

3. SIZE AND TYPE OF RIPRAP SHALL BE 250 lb. CLASS STONE.

4. CONTRACTOR SHALL FOLLOW THE CONTOUR OF EXISTING GRADE. NO EXISTING MATERIAL SHALL BE CUT OR REMOVED.

5. ACCESS TO THIS SITE SHALL BE LIMITED TO GULF SIDE ONLY.

CONTROL NOTES:

1. HORIZONTAL CONTROL IS BASED ON NAD 83 – LOUISIANA SOUTH ZONE (1702) FEET
VERTICAL CONTROL IS BASED ON NAVD 88 IN FEET

2. CONTROL POINTS SET BY OUR SURVEYOR AT EACH SITE CONSIST OF 1"x4' LONG GALVANIZED IRON PIPES DRIVEN TO WITHIN 1" FROM BEING FLUSH WITH GROUND.

GENERAL NOTES:

1. PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY SUB-SURFACE PIPELINES OR STRUCTURES THAT MAY BE AT OR NEAR EACH SITE. CONTRACTOR SHALL WORK CLOSELY WITH ANY COMPANY THAT MAY HAVE SUCH PIPELINES OR STRUCTURES IN THE AREA. CONTRACTOR SHALL CONTACT LOUISIANA ONE CALL 72 HOURS PRIOR TO CONSTRUCTION AT 1-800-272-3020.

2. SEE SHEET 2 FOR ADDITIONAL GENERAL AND TECHNICAL NOTES.

STATE OF LOUISIANA
Joseph C. Picciola II
REG. No. 25514
REGISTERED
PROFESSIONAL ENGINEER
IN
CIVIL ENGINEERING
10/4/05

AS BUILT

DRAWING PLOTTED AT HALF-SCALE

REVISIONS:

DATE:	REMARKS:
04-28-05	PLAN CHANGES
10-03-05	AS BUILT

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS
LAND SURVEYORS
NAVAL ARCHITECTS
MARINE ENGINEERS
P.O. BOX 587
HOUMA, LOUISIANA 70345
OFF. (985) 532-5786

LA. DEPT. OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION

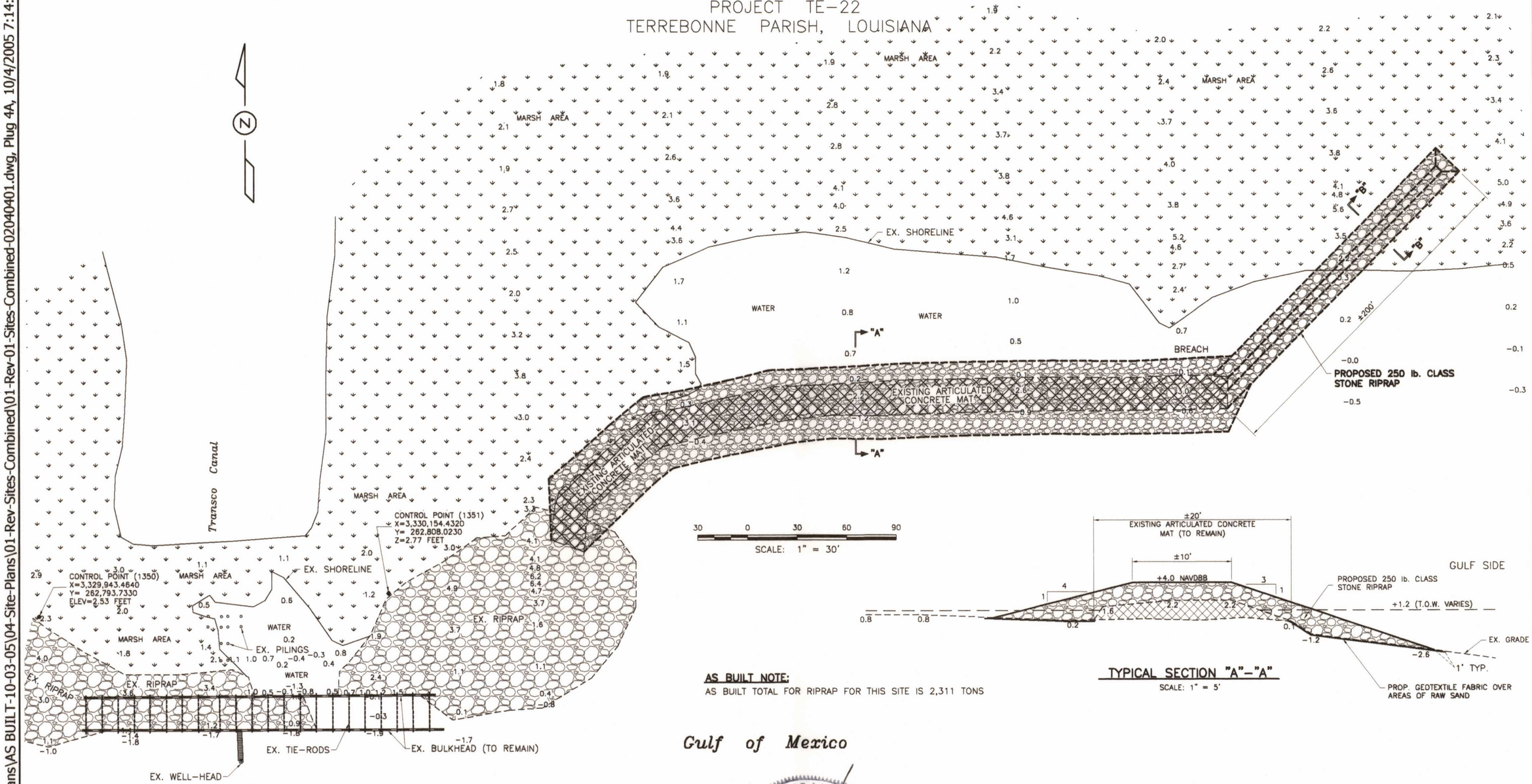
SITE PLAN – MOBIL CANAL BREACH

DESIGNED BY: J.C.P.
DRAWN BY: L.M.C.
CHECKED BY: J.C.P.
DATE: 1-25-05
SCALE: SHOWN
SHEET NO. 4 OF 8

J.N. 0204-0401

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



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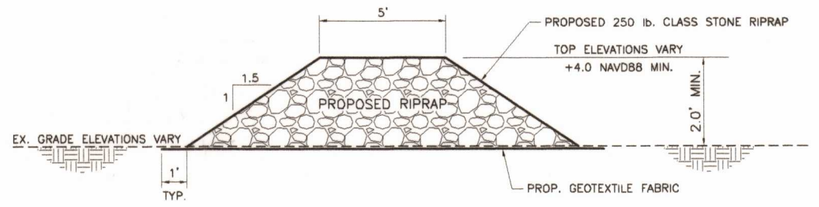
SCALE: 1" = 30'

TYPICAL SECTION "A"–"A"

SCALE: 1" = 5'

AS BUILT NOTE:

AS BUILT TOTAL FOR RIPRAP FOR THIS SITE IS 2,311 TONS



TYPICAL SECTION "B"–"B"

SCALE: 1" = 3'

GENERAL NOTES:

1. PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY SUB-SURFACE PIPELINES OR STRUCTURES THAT MAY BE AT OR NEAR EACH SITE. CONTRACTOR SHALL WORK CLOSELY WITH ANY COMPANY THAT MAY HAVE SUCH PIPELINES OR STRUCTURES IN THE AREA. CONTRACTOR SHALL CONTACT LOUISIANA ONE CALL 72 HOURS PRIOR TO CONSTRUCTION AT 1-800-272-3020.

2. SEE SHEET 2 FOR ADDITIONAL GENERAL AND TECHNICAL NOTES.

CONTROL NOTES:

1. HORIZONTAL CONTROL IS BASED ON NAD 83 – LOUISIANA SOUTH ZONE (1702) FEET
VERTICAL CONTROL IS BASED ON NAVD 88 IN FEET

2. CONTROL POINTS SET BY OUR SURVEYOR AT EACH SITE CONSIST OF 1"x4' LONG GALVANIZED IRON PIPES DRIVEN TO WITHIN 1" FROM BEING FLUSH WITH GROUND.

CONSTRUCTION NOTES:

1. GEOTEXTILE FABRIC SHALL HAVE A MINIMUM 5' OVERLAP AT THE ANY INTERSECTIONS.

2. GEOTEXTILE FABRIC SHALL BE INSTALLED OVER ANY AREAS OF EXPOSED SAND MATERIAL PRIOR TO INSTALLING NEW RIPRAP.

3. CONTRACTOR SHALL MAKE EVERY EFFORT TO LEAVE EXISTING RIPRAP IN PLACE. IN SOME CASES CONTRACTOR MAY HAVE TO REMOVE AND REPLACE SOME EXISTING RIPRAP IN ORDER TO MAKE A SMOOTH TRANSITION INTO THE EXISTING RIPRAP.

4. RIPRAP SHALL BE STONE. SEE DETAILS FOR SIZES.

5. THE EXISTING SHEET METAL BULKHEAD AND TIE-ROD SYSTEM IS IN POOR CONDITION. THE ENTIRE STRUCTURE SHALL REMAIN IN PLACE.

6. ACCESS TO THIS SITE SHALL BE LIMITED TO GULF SIDE ONLY.

STATE OF LOUISIANA
Joseph C. Picciola II
REG. No. 25614
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

AS BUILT

DRAWING PLOTTED AT HALF-SCALE

J.N. 0204-0401

REVISIONS:

DATE:	REMARKS:
04-28-05	PLAN CHANGES
10-03-05	AS BUILT

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

LA. DEPT. OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION

SITE PLAN – PLUG 4A

DESIGNED BY: J.C.P.

DRAWN BY: L.M.C.

CHECKED BY: J.C.P.

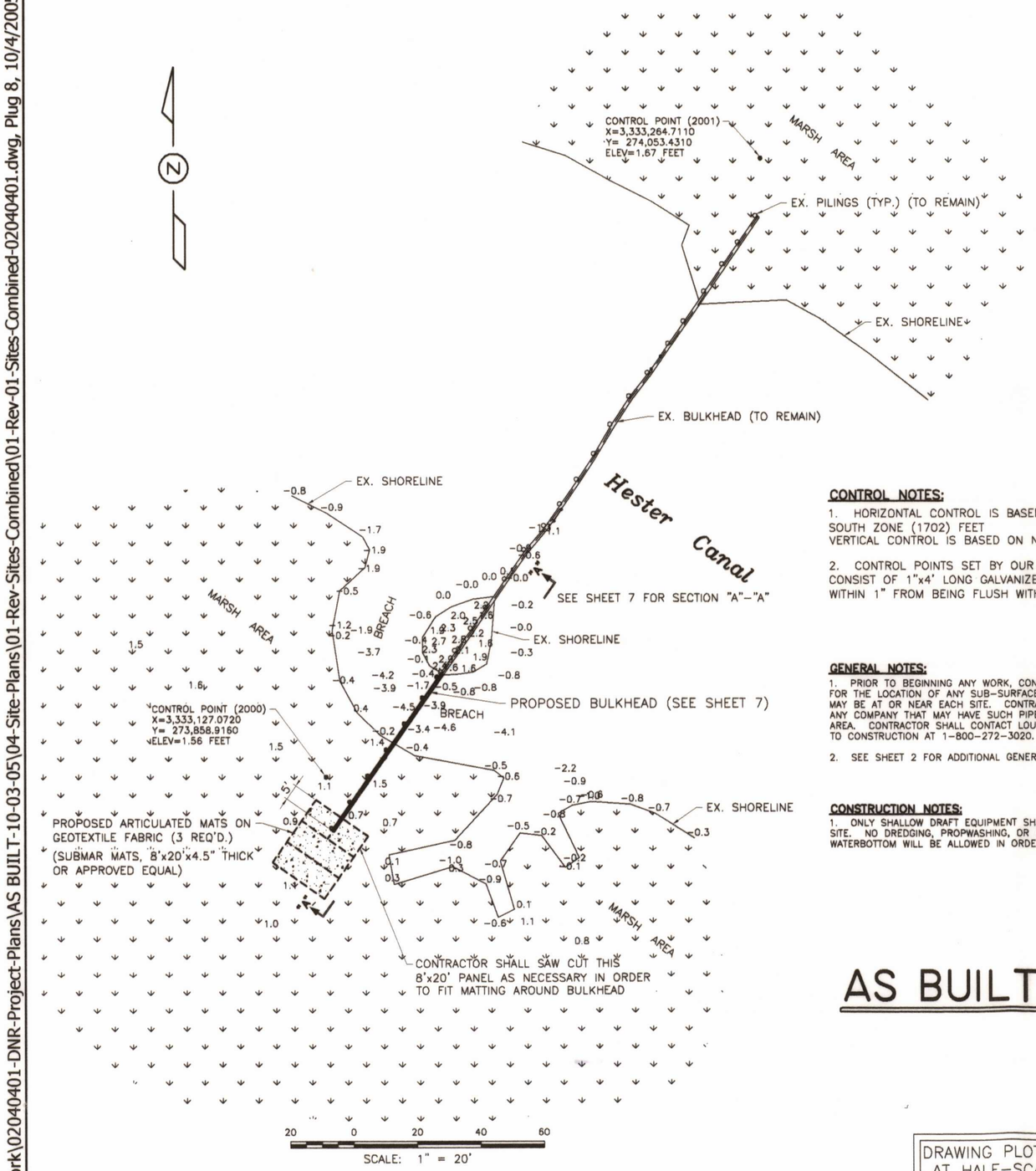
DATE: 1-25-05

SCALE: SHOWN

SHEET NO. 5 OF 8

C:\work\0204040 1-DNR-Project-Plans\AS BUILT-10-03-05\04-Site-Plans\01-Rev-Sites-Combined-02040401.dwg, Plug 4A, 10/4/2005 7:14:58 AM,

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



CONTROL NOTES:

1. HORIZONTAL CONTROL IS BASED ON NAD 83 – LOUISIANA SOUTH ZONE (1702) FEET
VERTICAL CONTROL IS BASED ON NAVD 88 IN FEET

2. CONTROL POINTS SET BY OUR SURVEYOR AT EACH SITE CONSIST OF 1"x4' LONG GALVANIZED IRON PIPES DRIVEN TO WITHIN 1" FROM BEING FLUSH WITH GROUND.

GENERAL NOTES:

1. PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY SUB–SURFACE PIPELINES OR STRUCTURES THAT MAY BE AT OR NEAR EACH SITE. CONTRACTOR SHALL WORK CLOSELY WITH ANY COMPANY THAT MAY HAVE SUCH PIPELINES OR STRUCTURES IN THE AREA. CONTRACTOR SHALL CONTACT LOUISIANA ONE CALL 72 HOURS PRIOR TO CONSTRUCTION AT 1–800–272–3020.

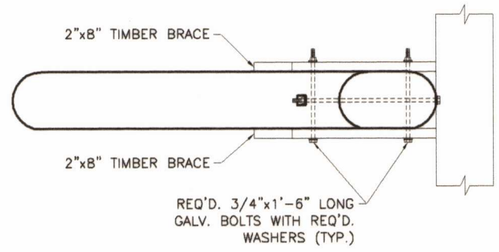
2. SEE SHEET 2 FOR ADDITIONAL GENERAL AND TECHNICAL NOTES.

CONSTRUCTION NOTES:

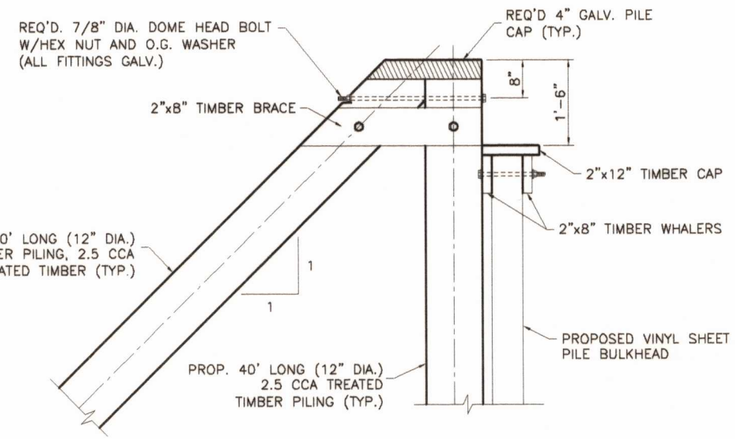
1. ONLY SHALLOW DRAFT EQUIPMENT SHALL BE USED TO ACCESS THIS SITE. NO DREDGING, PROPWASHING, OR DISTURBANCE OF THE WATERBOTTOM WILL BE ALLOWED IN ORDER TO ACCESS HESTER CANAL.

AS BUILT

DRAWING PLOTTED AT HALF–SCALE

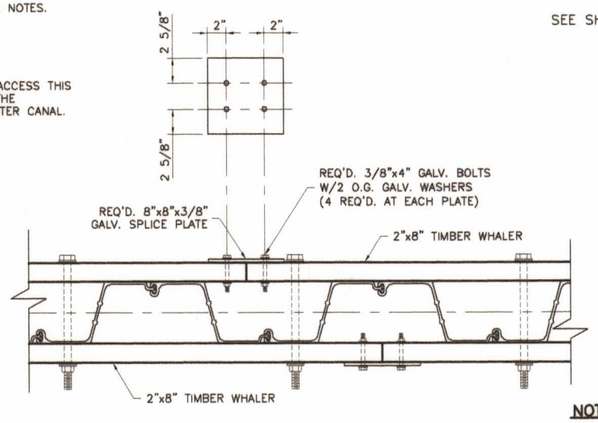


PLAN VIEW
SCALE: 3/4" = 1'–0"



TYPICAL BATTER PILE DETAIL
SCALE: 3/4" = 1'–0"

SEE SHEET 7



TYPICAL BUTT SPLICE DETAIL
SCALE: 1 1/2" = 1'–0"

NOTES:

1. BUTT SPLICES SHALL BE INSTALLED ON BOTH TOP AND BOTTOM WHALERS AT EVERY END TO END CONNECTION.

2. FOR ILLUSTRATION PURPOSES, THE 2"x12" TIMBER CAP WAS NOT SHOWN.

STATE OF LOUISIANA
Joseph C. Picciola II
REG. No. 25614
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

REVISIONS:

DATE:	REMARKS:
04–28–05	ADJUSTED PAD, PLAN CHANGES
10–03–05	AS BUILT

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS
LAND SURVEYORS
NAVAL ARCHITECTS
MARINE ENGINEERS
P.O. BOX 687
CUT OFF, LOUISIANA 70345
(985) 632–5788

LA. DEPT. OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION

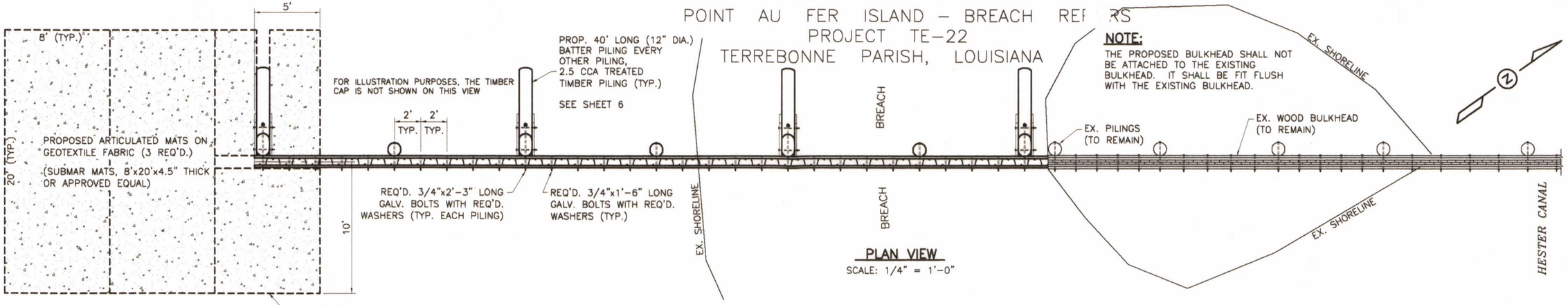
SITE PLAN – PLUG 8

DESIGNED BY: J.C.P.
DRAWN BY: L.M.C.
CHECKED BY: J.C.P.
DATE: 1–25–05
SCALE: SHOWN
SHEET NO. 6 OF 8

J.N. 0204–0401

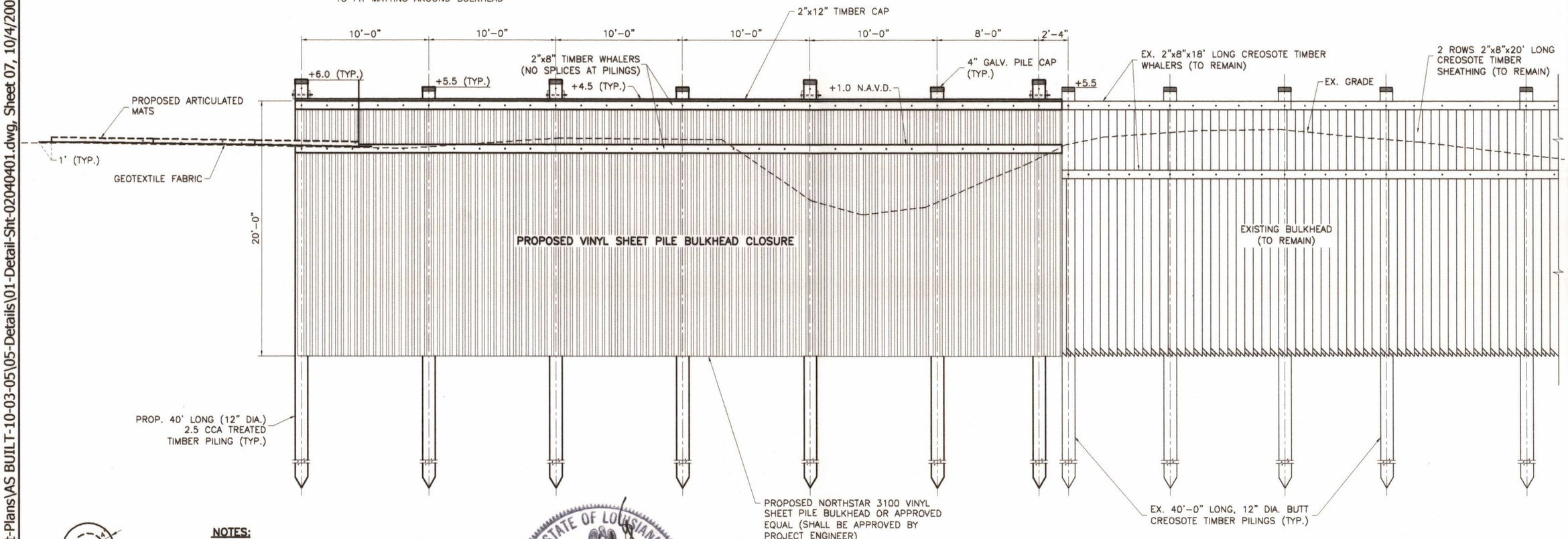
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POINT AU FER ISLAND – BREACH REPAIRS
PROJECT TE-22
TERREBONNE PARISH, LOUISIANA

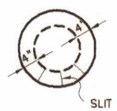


NOTE:
THE PROPOSED BULKHEAD SHALL NOT BE ATTACHED TO THE EXISTING BULKHEAD. IT SHALL BE FIT FLUSH WITH THE EXISTING BULKHEAD.

PLAN VIEW
SCALE: 1/4" = 1'-0"



SECTION "A"–"A"
SCALE: 1/4" = 1'-0"
SEE SHEET 6



NOTES:
PLACE TWO LAYERS OF HEAVY CANVAS SIZE 20"x20" SATURATED WITH KARNAK #83 OVER TOP OF ALL PILES. THEN 24"x24" GALVANIZED SHEET METAL NO. 26 GA. PLACED OVER TOP OF ALL PILES AND BENT AS SHOWN BY DOTTED LINES AND NAILED TO THE PILES WITH 2" GALVANIZED ROOFING NAILS.

MARK OUTLINE OF INDIVIDUAL PILE TOP AND CUT GALV. SHEET METAL 4" OUTSIDE PILE LINE, SLIT METAL DIAGONALLY @ 4" SPACES AS SHOWN.

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

STATE OF LOUISIANA
Joseph C. Picciola II
REG. NO. 25614
REGISTERED PROFESSIONAL ENGINEER
CIVIL ENGINEERING

AS BUILT

GENERAL NOTES:

1. TIMBER CAP AND TOP WHALER SHALL BE 0.8 CCA TREATED TIMBER.
2. THE BOTTOM WHALER SHALL BE 2.5 CCA TREATED TIMBER.
3. THE TIMBER CAP SHALL BE NAILED TO THE TOP WHALERS USING 60d GALVANIZED NAILS SPACED AT 12" O.C. WOOD GRAIN FOR TIMBER CAP SHALL BE CUPPED FACING DOWNWARD.
4. ALL HARDWARE SHALL BE GALVANIZED.
5. CONTRACTOR SHALL CONSTRUCT THE NEW BULKHEAD CLOSURE USING THE SAME ELEVATIONS OF THE EXISTING STRUCTURE AS SHOWN.

DRAWING PLOTTED AT HALF-SCALE

REVISIONS:

DATE:	REMARKS:
04-28-05	SCOUR PAD, PLAN CHANGES
10-03-05	AS BUILT

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

LA. DEPT. OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION

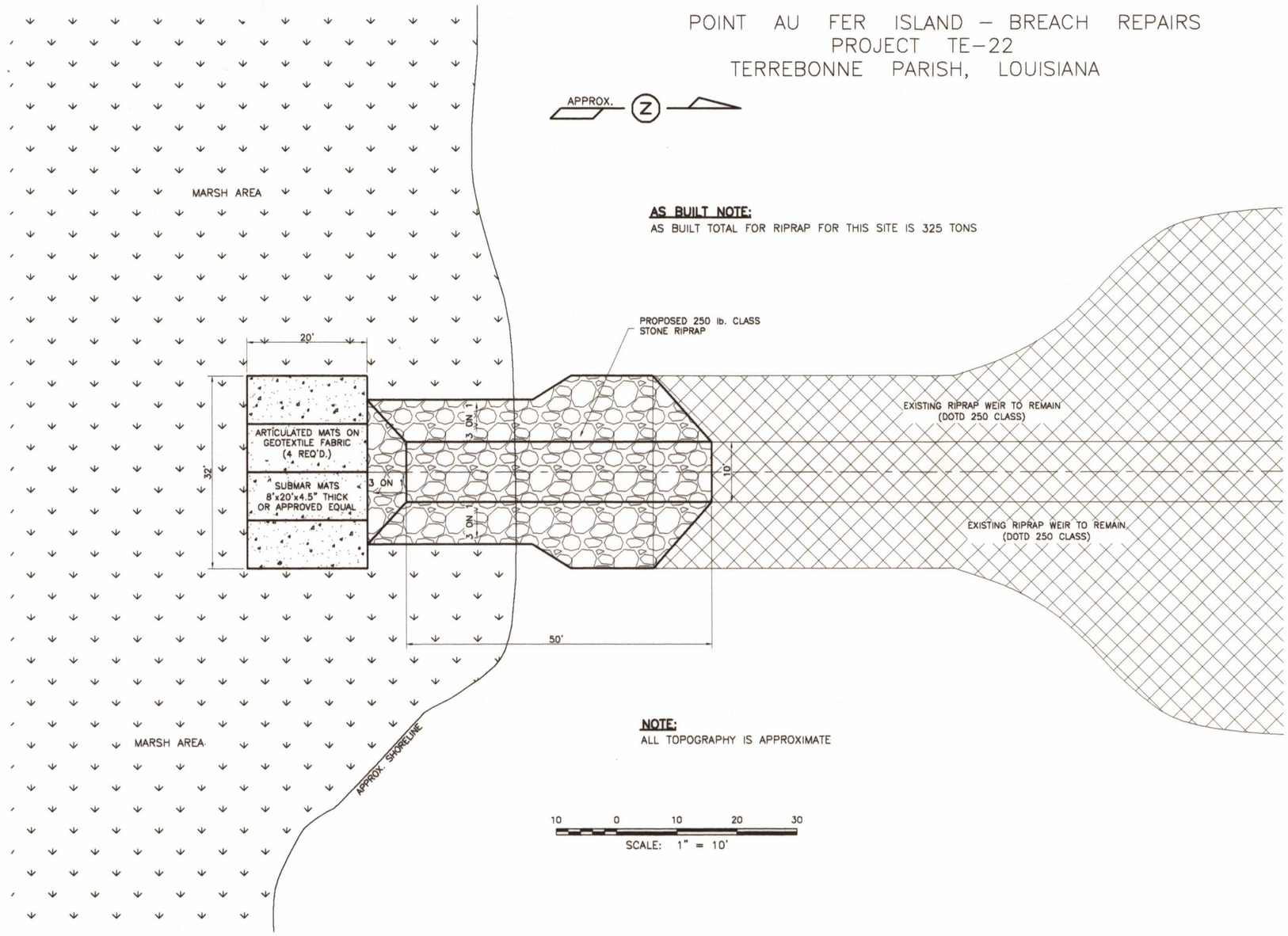
VINYL BULKHEAD DETAILS – PLUG 8

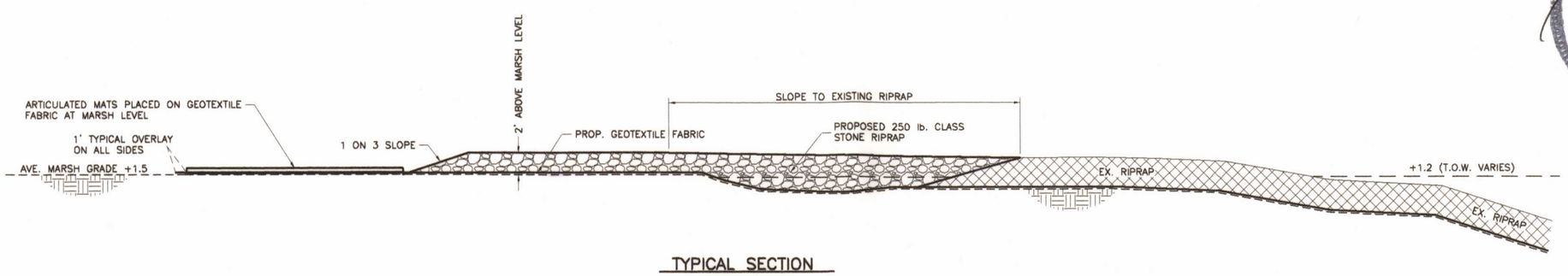
DESIGNED BY: J.C.P.
DRAWN BY: L.M.C.
CHECKED BY: J.C.P.
DATE: 1-25-05
SCALE: SHOWN
SHEET NO. 7 OF 8

J.N. 0204-0401

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POINT AU FER ISLAND – BREACH REPAIRS
PROJECT TE–22
TERREBONNE PARISH, LOUISIANA





TYPICAL SECTION
SCALE: 1" = 6'

CONTROL NOTES:

1. HORIZONTAL CONTROL IS BASED ON NAD 83 – LOUISIANA SOUTH ZONE (1702) FEET
VERTICAL CONTROL IS BASED ON NAVD 88 IN FEET

GENERAL NOTES:

1. PRIOR TO BEGINNING ANY WORK, CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ANY SUB–SURFACE PIPELINES OR STRUCTURES THAT MAY BE AT OR NEAR EACH SITE. CONTRACTOR SHALL WORK CLOSELY WITH ANY COMPANY THAT MAY HAVE SUCH PIPELINES OR STRUCTURES IN THE AREA. CONTRACTOR SHALL CONTACT LOUISIANA ONE CALL 72 HOURS PRIOR TO CONSTRUCTION AT 1–800–272–3020.

2. SEE SHEET 2 FOR ADDITIONAL GENERAL AND TECHNICAL NOTES.

STATE OF LOUISIANA
Joseph C. Picciola II
REG. No. 23014
REGISTERED PROFESSIONAL ENGINEER IN CIVIL ENGINEERING

AS BUILT

DRAWING PLOTTED AT HALF–SCALE

REVISIONS:

DATE:	REMARKS:
04–28–05	PLAN CHANGES, ADDED THIS SHEET
10–03–05	AS BUILT

PICCIOLA & ASSOCIATES, INC.
CIVIL ENGINEERS
LAND SURVEYORS
NAVAL ARCHITECTS
MARINE ENGINEERS
P.O. BOX 487
CUT OFF, LOUISIANA 70345
(985) 632–5786

LA. DEPT. OF NATURAL RESOURCES
COASTAL ENGINEERING DIVISION

SITE PLAN – WIER NO. 3

DESIGNED BY: J.C.P.

DRAWN BY: L.M.C.

CHECKED BY: J.C.P.

DATE: 1–25–05

SCALE: SHOWN

SHEET NO. 8 OF 8

J.N. 0204–0401

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ATTACHMENT VI

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

PROJECT PERMITS
&
PERMIT AMENDMENTS

From: Van Cook
To: Chris Davis
Date: 2/20/01 3:20PM
Subject: Fwd: RE: P20010067, Coastal Use Permit Application

No adverse effect on the Pt au Fer (TE-22) project.

CC: Patricia Tate-Harris

From: Hilary Thibodeaux
To: Paul Gremillion; Van Cook
Date: 2/20/01 7:31AM
Subject: RE: P20010067, Coastal Use Permit Application

P20010067, Coastal Use Permit Application
Williams Energy Services
CMD Permit Analyst - Chris Davis

I have reviewed the referenced permit application which is located near the Point au Fer Project (TE-22). It does not appear that the proposed repair/maintenance of bulkheads in existing pipeline corridors will adversely effect any restoration project components of Point au Fer project (TE-22).

State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

February 9 , 2001

MEMORANDUM

To: Hilary Thibodeaux, Engineer Intern 2

Through: Van Cook, Engineer Manager

From: Bill Good, Administrator

RE: **P20010067 Coastal Use Permit Application**
Williams Energy Services
CRD Project: TE-22 Point au Fer Canal Plugs

Please review the attached applications for Coastal Use Permits. Via Section Manager, e-mail comments and response to CMD Permit Analyst by **February 16, 2001.**

BG:pth

Attachment

Coastal Restoration Division
P.O. Box 94396 . Baton Rouge, Louisiana 70804-9396 . Telephone (225) 342-7308 . Fax (225) 342-9417

An Equal Opportunity Employer

State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

February 6, 2001

MEMORANDUM

To: Bill Good, Administrator, CRD Administrator

Through: Terry Howey, CMD Administrator

Through: Rocky Hinds, CMD Permits/Mitigation Program Manager

Through: Bill Pittman, CMD Permits Coordinator

From: Chris Davis, CMD Permit Analyst

RE: **P20010067, Coastal Use Permit Application**
Williams Energy Services
Proposed repair of several, deteriorating bulkheads in various locations. Rip-rap, shell material, or grout mats will be used where erosion is either exposing segments of pipeline, or where material is eroding away from existing timber bulkheads, along several of their existing pipeline corridors. A combined total of 343 cubic yards of material will be used as fill. All fill material will be placed in the water or on existing spoil banks. Site location: site 1- Sec. 36, T20S-R12E, Lat. 29°17'16.89"N, Long. 91°10'05.26"W; site 2a - Sec. 1, T21S-R12E, Lat. 29°16'04.86"N, Long. 91°10'37.41"W; site 2b - Sec. 1, T21S-R12E, Lat. 29°16'05.36"N, Long. 91°10'39.76"W; Site 3 - Sec. 1, T21A-R12E, Lat. 29°16'05.83"N, Long.91°10'42.68"W; Site 4 - Sec. 11, T21S-R12E, Lat. 29°14'59.22"N, Long. 91°11'25.64"W; Site 5 - Sec. 11, T21S-R12E, Lat. 29°14'55.98"N, Long. 91°11'32.46"W; Site 6a - Sec. 2, T21A-R11E, Lat. 29°16'06.69"N, Long. 91°17'32.96"W; Site 6b - Sec. 2, T21S-R11E, Lat. 29°16'05.60"N, Long. 91°17'32.96"W; Site 7 - Sec. 6, T21S-R12E, Lat. 29°16'13.11"N, Long. 91°15'25.12"W; Site 8 - Sec. 33, T20S-R12E, Lat. 29°16'26.94"N, Long. 91°13'51.39"W; Site 9 - Sec. 33, T20S-R12E, Lat. 29°16'31.13"N, Long. 91°13'23.67"W; Site 10 - Sec. 2, T21S-R11E, Lat. 29°16'21.58"N, Long. 91°17'22.15"W; Site 11- Sec. 6, T20S-R12E, Lat. 29°16'15.94"N, Long. 91°15'05.96"W; Site 12 - Sec. 15, T21S-R12E, Lat. 29°14'28.63"N, Long. 91°12'15.72"W (East Bank) and Lat. 29°14'28.53"N, Long. 91°12'15.97"W (West Bank); Oyster Bayou, Point Au Fer, and Four League Bay Areas; **Terrebonne Parish, LA**

The above referenced activity will occur on or near the Point au Fer Canal Plugs (TE-22), Lake Chapeaus Sediment Input (TE-26)and Hydrologic Restoration au Fer Canal Plugs(TE-22),. Please review the attached application and provide comment within a 15 day period.

CD

Enclosure

COASTAL MANAGEMENT DIVISION P.O. BOX 44487 BATON ROUGE, LOUISIANA 70804-4487
TELEPHONE (225) 342-7591 FAX (225) 342-9439
AN EQUAL OPPORTUNITY EMPLOYER

TE-2

From: George Boddie
To: Chris Davis
Date: 2/19/01 2:28PM
Subject: Fwd: P20010067, Coastal Use Permit Application

see attached

CC: Patricia Tate-Harris

From:	David Burkholder
To:	Boddie, George
Date:	2/19/01 2:26PM
Subject:	P20010067, Coastal Use Permit Application

P20010067, Coastal Use Permit Application
Williams Energy Services
CMD Permit Analyst - Chris Davis

I have reviewed the referenced permit application which is located within or near the boundaries of the Lake Chapeau Sediment Input (TE-26) CWPPRA project. It does not appear that the proposed repair/maintenance of bulkheads in existing pipeline corridors will interfere with any restoration project components; therefore, the activity for which the permits are being requested should not negatively impact the Lake Chapeau project.

My review was limited to those proposed repairs which are located within or near the Lake Chapeau project boundaries (Sites 6, 7, 10 & 11). The remaining sites shown on this permit application are located on or near the Pt au Fer (TE-22) project.

CC: Cook, Van; Gremillion, Paul; Thibodeaux, Hilary

State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

February 9, 2001

MEMORANDUM

To: David Burkholder, Design Engineer Supervisor 2

Through: George Boddie, Engineer Manager

From: Bill Good, Administrator

RE: **P20010067 Coastal Use Permit Application**
William Energy Services
CRD Project: TE-26 Lake Chapeaus Sediment Input

Please review the attached applications for Coastal Use Permits. Provide comments and response in memorandum by **February 16, 2001.**

BG:pth

Attachment

Coastal Restoration Division
P.O. Box 94396 . Baton Rouge, Louisiana 70804-9396 . Telephone (225) 342-7308 . Fax (225) 342-9417

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State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

February 6, 2001

MEMORANDUM

To: Bill Good, Administrator, CRD Administrator

Through: Terry Howey, CMD Administrator

Through: Rocky Hinds, CMD Permits/Mitigation Program Manager

Through: Bill Pittman, CMD Permits Coordinator

From: Chris Davis, CMD Permit Analyst

RE: **P20010067, Coastal Use Permit Application**
Williams Energy Services
Proposed repair of several, deteriorating bulkheads in various locations. Rip-rap, shell material, or grout mats will be used where erosion is either exposing segments of pipeline, or where material is eroding away from existing timber bulkheads, along several of their existing pipeline corridors. A combined total of 343 cubic yards of material will be used as fill. All fill material will be placed in the water or on existing spoil banks. Site location: site 1- Sec. 36, T20S-R12E, Lat. 29°17'16.89"N, Long. 91°10'05.26"W; site 2a - Sec. 1, T21S-R12E, Lat. 29°16'04.86"N, Long. 91°10'37.41"W; site 2b - Sec. 1, T21S-R12E, Lat. 29°16'05.36"N, Long. 91°10'39.76"W; Site 3 - Sec. 1, T21A-R12E, Lat. 29°16'05.83"N, Long.91°10'42.68"W; Site 4 - Sec. 11, T21S-R12E, Lat. 29°14'59.22"N, Long. 91°11'25.64"W; Site 5 - Sec. 11, T21S-R12E, Lat. 29°14'55.98"N, Long. 91°11'32.46"W; Site 6a - Sec. 2, T21A-R11E, Lat. 29°16'06.69"N, Long. 91°17'32.96"W; Site 6b - Sec. 2, T21S-R11E, Lat. 29°16'05.60"N, Long. 91°17'32.96"W; Site 7 - Sec. 6, T21S-R12E, Lat. 29°16'13.11"N, Long. 91°15'25.12"W; Site 8 - Sec. 33, T20S-R12E, Lat. 29°16'26.94"N, Long. 91°13'51.39"W; Site 9 - Sec. 33, T20S-R12E, Lat. 29°16'31.13"N, Long. 91°13'23.67"W; Site 10 - Sec. 2, T21S-R11E, Lat. 29°16'21.58"N, Long. 91°17'22.15"W; Site 11- Sec. 6, T20S-R12E, Lat. 29°16'15.94"N, Long. 91°15'05.96"W; Site 12 - Sec. 15, T21S-R12E, Lat. 29°14'28.63"N, Long. 91°12'15.72"W (East Bank) and Lat. 29°14'28.53"N, Long. 91°12'15.97"W (West Bank); Oyster Bayou, Point Au Fer, and Four League Bay Areas; **Terrebonne Parish, LA**

The above referenced activity will occur on or near the Point au Fer Canal Plugs (TE-22), Lake Chapeaus Sediment Input (TE-26)and Hydrologic Restoration au Fer Canal Plugs(TE-22),. Please review the attached application and provide comment within a 15 day period.

CD

Enclosure

COASTAL MANAGEMENT DIVISION P.O. BOX 44487 BATON ROUGE, LOUISIANA 70804-4487
TELEPHONE (225) 342-7591 FAX (225) 342-9439
AN EQUAL OPPORTUNITY EMPLOYER

State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

September 13, 2000

MEMORANDUM

To: Jeff Thibodaux, CMD Permits Analyst

Through: Bill Pittman, CMD Permits Coordinator

Through: Rocky Hinds, CMD Permits/Mitigation Program Manager
Terry Howey, CMD Administrator

Through: Bill Good, CRD Administrator BGD

Through: Van Cook, Engineer Manager VRC

From: VRC for H.T.
Hilary Thibodeaux, Engineer In Training

RE: P001203 Coastal Use Permit Application
Cabot Oil & Gas Corp.
CRD Project: Point Au Fer Island Hydrologic Restoration Project

I have reviewed the above referenced permit application and found the proposed activity - replace an existing 2 7/8-inch saltwater disposal pipeline with proposed 2 7/8-inch line - to have no adverse effects on the Point Au Fer Island Hydrologic Restoration Project (TE-22).

If additional information is needed, please advise.

cc: TE-22 Project File

Coastal Restoration Division
P.O. Box 94396 . Baton Rouge, Louisiana 70804-9396 . Telephone (225) 342-7308 . Fax (225) 342-9417

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State of Louisiana

M.J. "MIKE" FOSTER, JR.
GOVERNOR

JACK C. CALDWELL
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

September 1, 2000

MEMORANDUM

To: Hilary Thibodaux, Engineer-in-Training 2

Through: Van Cook, Engineer Manager

From: Bill Good, Administrator BG

RE: **P001203 Coast Use Permit Application**
Cabot Oil & Gas Corporation
CRD Project: Point Au Fer CWPPRA Project

Please review the attached application for Coastal Use Permit. Provide comments and response in memorandum by **September 11, 2000.**

BG:pth

Attachment

COASTAL RESTORATION DIVISION
P.O. Box 94396 · Baton Rouge, Louisiana 70804-9396 · Telephone (504) 342-7308 · Fax (504) 342-9417

An Equal Opportunity Employer

TE-22

This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers

September 16, 19 99

A permit to deposit and maintain rip-rap to close a breach in a canal bank on Point au Fer Island pursuant to the Lake Chapeau Sediment Input and Hydrologic Restoration Project, on Point au Fer Island, at a location at central to a point about 30 miles southwesterly from Morgan City, La, in Terrebonne Parish.

has been issued to National Marine Fisheries Service on Sept 16, 1999

Address of Permittee Baton Rouge, Louisiana 70803-0508

Permit Number

WH-19-970-4707

Ronald J. Ventola

for the *District Commander*

ENG FORM 4336 , Jul 81 (33 CFR 320-330) EDITION OF JUL 70 MAY BE USED (Proponent CECW-O)

This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers

August 3, 19 99

A permit to install and maintain approximately 3,700 linear feet of rip-rap to construct a breakwater in Areas 4 and 5 of Phase II of the Point au Fer Island Hydrologic Restoration Project, on Point au Fer Island, at a at location central to a point about 30 miles southwesterly from Morgan City, Louisiana, in Terrebonne Parish.

has been issued to NMFS c/o LSU on Aug 3, 1999

Address of Permittee Baton Rouge, Louisiana 70803-0508

Permit Number

WH-19-970-0171

Ronald J. Ventola

for the *District Commander*

ENG FORM 4336 , Jul 81 (33 CFR 320-330) EDITION OF JUL 70 MAY BE USED (Proponent CECW-O)

DEPARTMENT OF NATURAL RESOURCES/COASTAL RESTORATION DIVISION
POST OFFICE BOX 94396/625 NORTH FOURTH STREET- 7TH FLOOR
BATON ROUGE, LA 70804-9396

FACSIMILE TRANSMISSION COVER SHEET

DATE: 10/01/97 TIME: 7:25 AM

TO: Vincent C

LOCATION: Thibodeaux

FAX NUMBER: (504) 447-0997

MESSAGE/COMMENTS: COE Permit

FROM: Mary J. White

TELEPHONE: 342-7310 FAX: (504) 342-9417

NUMBER OF PAGES TO FOLLOW COVER SHEET: 26

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Habitat Conservation Division
Louisiana State University
Baton Rouge, Louisiana 70803-7535

June 10, 1997 F/SEO24/RR:jk
504/389-0508

Mr. Ronald J. Ventola, Chief
Regulatory Functions Branch, New Orleans District
Department of the Army, Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160

Dear Mr. Ventola:

This letter is in reference to permit **SW (Terrebonne Parish Wetlands) 1044** and **WH-19-970-0171** issued to the National Marine Fisheries Service for wetland restoration on Point au Fer island in Terrebonne Parish, Louisiana. Pursuant to the permit special conditions, this is to advise you that Phase 2 of the project has been completed.

Thank you for your assistance and that of your staff in contributing to the completion of this Breaux Act project.

Sincerely,

Rickey N. Ruebsamen
Branch Chief

FAX TRANSMITTAL

To E. Zabrist - NMFS	# of pages ▶ 1		
Brian Kendricks - LDNR	From R Rehsamen		
Dept./Agency	Phone #		
Please look this over and give me			
Fax #	Fax #		
a call w/ comments.			

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

'AL HEADER SHEET

	OFFICE TELEPHONE NO. (AUTOVON/Comm.)	FAX NO. (AUTOVON/Comm.)
New Orleans District CELMN-OD-SW	(504) 862-2276	(504) 862-2574
TO: NMFS Habitat Conservation — Rick Rehsamen	(504) 389-0508	(504) 389-0526

CLASSIFICATION	PRECEDENCE	NO. PAGES (Including this Header)	DATE-TIME	MONTH	YEAR	RELEASER'S SIGNATURE
	P	1	11	21	96	Martin L. Mayer

REMARKS Draft Permit Conditions for Revised permit SWL (Terrebonne Plw) 10044. Please review & comment, if necessary.

Martin

Space Below For Communications Center Use Only

DA FORM 3918-R, JUL 90 DA FORM 3918-R, AUG 72 IS OBSOLETE V2.00

15. The permittee shall ensure that the project monitoring plan be amended as necessary to measure and evaluate changes in beach configuration in the areas immediately updrift and downdrift of the structures authorized herein. Any revisions to the approved monitoring plan resulting from this modification shall be furnished to the NOD ~~prior to initiation of construction.~~ delete

delete

16. In the event that the structures are determined to be inducing apparent shoreline retreat along the peripheral beachfront, the permittee shall, in consultation with state and federal resource and permitting agencies, develop a plan of remedial action to address project-related erosion. The permittee shall implement the appropriate plan upon approval by the District Engineer.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Habitat Conservation Division
c/o Louisiana State University
Baton Rouge, Louisiana 70803-7535

September 17, 1996 F/SE024/RR:jk
504/389-0508

Louisiana Department of Natural Resources
Coastal Management Division, Consistency Coordinator
Attn: Mr. Jon Truxillo
Post Office Box 94396
Baton Rouge, Louisiana 70804-9396

Dear Mr. Truxillo:

The Point au Fer Hydrologic Restoration Project, sponsored by your department and the National Marine Fisheries Service was issued Consistency Determination No. C940289. As a result of engineering considerations, it has become necessary to revise the design for the portion of the project located between Mobil Canal and the Gulf of Mexico. I understand that the revised engineering drawings have been provided for your review and evaluation by Mr. Brian Kendricks of the Coastal Restoration Division.

We support the proposed project changes and find them necessary to achieve the overall wetland restoration objectives of the Point au Fer project. In addition, we believe that the project, as revised, remains consistent with the Louisiana Coastal Resources Program and request your concurrence in that finding.

Thank you for your consideration of this issue.

Sincerely,

Rickey N. Ruebsamen

Rickey N. Ruebsamen
Branch Chief

OPTIONAL FORM 99 (7-90)

FAX TRANSMITTAL # of pages ▸ 1

To Brian Kendricks	From Ruebsamen
Dept./Agency CRD	Phone # NMFS
Fax #	Fax #

NSN 7540-01-317-7368 5099-101 GENERAL SERVICES ADMINISTRATION

Printed on Recycled Paper

To

Brian Kendrick
Project Manager
Louisiana DNR
Phone: (504) 342-6871
Fax: (504) 342-~~9417~~ 6901

From

Erik Zobrist
NOAA Restoration Center
Phone: 301-713-0174
Fax: 301-713-0184

Date: March 4, 1997
Number of pages including cover sheet: 10

Message

Brian,

Here are the permits.

~~Erik~~
ERIK

P.S. I left out the permit drawings.

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

REPLY TO
ATTENTION OF:

AUG 9 1995

Operations Division
Western Evaluation Section

AUG 11 1995

SUBJECT: SW(Terrebonne Parish Wetlands)1044

National Marine Fisheries Service
Habitat Conservation Division
c/o LSU Center for Coastal Energy
and Environmental Resources
Baton Rouge, Louisiana 70803-7535

Gentlemen:

Enclosed is a permit dated this date authorizing dredging to maintain access channels and installation and maintenance of nine earthen, shell, and timber plugs to implement the Point au Fer Island Hydrologic Restoration Project (CWPPRA Project PTE-22/24), in Point au Fer Island, at a location central to a point approximately 30 miles southwesterly from Morgan City, Louisiana, in Terrebonne Parish.

You are again reminded of the information in the following paragraphs.

Work not in accordance with the 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.

I am directed by the Department of the Army to caution you that if any material changes in the location or plans of the work are found necessary on account of unforeseen or altered conditions or otherwise, revised plans should be submitted promptly to the District Engineer. These revised plans will be reviewed, and, if found unobjectionable from the viewpoint of navigation and other public interest factors, will receive the approval required by Federal law before the work is begun. Public interest factors considered include, but are not limited to, fish and wildlife, water quality, economics, conservation, esthetics, recreation, water supply, flood damage prevention, ecosystems, and, in general, the needs and welfare of the people.

Your attention is directed to all the terms and conditions of the approval, especially those conditions relative to supervision and approval of work by the District Engineer. In order to have the work finally approved and declared legal, 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: Surveillance and Enforcement Section, in writing, prior to commencement of work and also upon its completion. The enclosed Notice of Authorization, ENG Form 4336, is to be conspicuously displayed at the site of work.

Sincerely,

Ronald J. Ventola

Ronald J. Ventola
Chief, Regulatory Functions Branch

Enclosure

LMN FL 215-1
25 Oct 73

DEPARTMENT OF THE ARMY PERMIT

Permittee National Marine Fisheries Service
Habitat Conservation Division

Permit No. SW(Terrebonne Parish Wetlands(1044)

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: Dredge to maintain access channels and install and maintain nine earthen, shell, and timber plugs to implement the Point au Fer Island Hydrologic Restoration Project (CWPPRA Project PTE-22/24), in accordance with the drawings attached in nine sheets, dated June 30, 1994, and revised March 6, 1995.

Project Location: In Point au Fer Island, at a location central to a point approximately 30 miles southwesterly from Morgan City, Louisiana, in Terrebonne Parish.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on July 31, 1998. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

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

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

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

Special Conditions:

Special conditions continued on pages 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.

Ricky N. Ruckman — 7-24-95

(PERMITTEE) (DATE)

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

Ronald J. Ventola — 9 August 95

(DATE)

Ronald J. Ventola, Chief, Regulatory Functions Branch
for Kenneth H. Clow, District Engineer

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)

☆U.S GOVERNMENT PRINTING OFFICE: 1986 — 717-425

SPECIAL CONDITIONS
SW(Terrebonne Parish Wetlands)1044

7. Barriers will be visible to the boating public both day and night so as to reduce the possibility of boat collision with the structures.

8. That the permittee is aware that under 33 CFR 330.5(a)(1), signs may be placed as aids to navigation warning boaters of upcoming barriers in the waterways provided they are approved and installed with the requirements of the U.S. Coast Guard.

9. The permittee must install and maintain, at his expense, any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on the authorized facilities.

10. Structures will not be placed on any state-owned water bottoms without the approval of the Louisiana Division of Administration, State Land Office. The permittee will be responsible for contacting the State Land Office to ascertain if any structure will be placed over state-owned water bottoms.

11. Prior to initiation of construction activities, the permittee shall survey the Point au Fer Island beachfront to determine the presence of seabird nesting colonies or occurrence of nesting activity. If it is determined that active seabird nesting or brood rearing is occurring on the beachfront during the planned construction period, the permittee shall notify the New Orleans District Corps of Engineers, Regulatory Functions Branch (NOD), U.S. Fish and Wildlife Service, and Louisiana Department of Wildlife and Fisheries. Construction shall be delayed until an appropriate course of action to minimize impacts to nesting seabirds is developed in consultation with State and Federal resource agencies, and approved by the NOD.

12. The permittee shall provide to the NOD written notification of completion of work in each area immediately following cessation of construction activities.

13. The permittee shall monitor vegetative community types, marsh to water ratio, and shoreline erosion to evaluate ecosystem response to the proposed structures in accordance with the final monitoring plan dated November 23, 1994. Monitoring reports shall be submitted to the NOD for review within one year of completion of data analysis.

14. The permittee is made aware that any deviation from the permitted project design may require prior review and approval by the District Engineer.

This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers

August 9, 19 95

A permit to dredge to maintain access channels and install and maintain nine earthen, shell, and timber plugs to implement the Point au Fer Island Hydrologic Restoration Project (CWPPRA Project PTE-22/24), in Point au Fer Island, at a location central to a point approximately 30 miles southwesterly from Morgan City, Louisiana, in Terrebonne Parish,

has been issued to National Marine Fisheries Service ~~Habitat Conservation Division~~ on Aug. 9, 19 95

Address of Permittee c/o LSU Center for Coastal Energy ~~and Environmental Resources~~
Baton Rouge, Louisiana 70803-7535

Permit Number

SW(Terrebonne Parish Wetlands) 1044

Ronald J. Ventola

for the *District Commander*

ENG FORM 4336 , Jul 81 (33 CFR 320-330) EDITION OF JUL 70 MAY BE USED

(Proponent CECW O)

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

REPLY TO ATTENTION OF:

December 23, 1996

Operations Division
Western Evaluation Section

SUBJECT: WH-19-970-0171
SW(Terrebonne Parish Wetlands)1044

RECEIVED
JAN - 2 1997

National Marine Fisheries Service
Habitat Conservation Division
c/o LSU Center for Coastal Energy
and Environmental Resources
Baton Rouge, Louisiana 70803-7535

Gentlemen:

Revised drawings attached in ten sheets, furnished with your application dated October 8, 1996, covering the installation and maintenance of two riprap breakwater structures associated with the implementation of Phase II of the Point au Fer Island Hydrologic Restoration Project, in Point au Fer Island, at a location central to a point about 30 miles southwesterly from Morgan City, Louisiana, in Terrebonne Parish, are approved and will be included in your plans for the work authorized by the Secretary of the Army in permit dated August 9, 1995. These drawings supersede drawings shown on Sheets 5 and 6 of your plans.

The conditions to which the work is made subject, remain in full force and effect.

The following condition is included with the modifications authorized herein:

15. The permittee shall ensure that the project monitoring plan be amended as necessary to measure and evaluate changes in beach configuration in the areas immediately updrift and downdrift of the structures authorized herein. Any revisions to the approved monitoring plan resulting from this modification shall be furnished to the NOD prior to initiation of construction.

The attached Notice of Authorization, ENG Form 4336, is to be conspicuously displayed at the site of work.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

William L. Conner
Colonel, U.S. Army
District Engineer

Attachments

This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers

December 23, 19 96

A permit to install and maintain two riprap breakwater structures associated with the implementation of Phase II of Point au Fer Island Hydrologic Project, in Point au Fer Island, at a location central to a point about 30 miles ~~at~~ southwesterly from Morgan City, Louisiana, in Terrebonne Parish,

has been issued to National Marine Fisheries Service on Dec. 23, 19 96

Address of Permittee Habitat Conservation Division
~~c/o LSU Center for Coastal Energy and~~
Environmental Resources
Baton Rouge, Louisiana 70803-7535

Permit Number
~~SWF-Terrebonne Parish Wetlands~~
WH-19-970-0171 1044

for William L. Conner
District Commander

ENG FORM 4336, Jul 81 (33 CFR 320-330) EDITION OF JUL 70 MAY BE USED

(Proponent CECW-O)

Cook-Fy FIN
TE-22

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Habitat Conservation Division
c/o Louisiana State University
Baton Rouge, Louisiana 70803-7535

July 28, 1995 F/SE024/RR:jk
504/389-0508

Mr. Ronald J. Ventola, Chief
Regulatory Functions Branch, New Orleans District
Department of the Army, Corps of Engineers
Post Office Box 60267
New Orleans, Louisiana 70160-0267

Dear Mr. Ventola:

Per your request, enclosed is a signed copy of draft permit SW (Terrebonne Parish Wetlands)1044. The work to be implemented is designed to provide wetland protection benefits on Point au Fer Island and is being planned and funded through the Coastal Wetlands Planning, Protection, and Restoration Act.

The advice and assistance provided by Mr. Mayer in processing the application for this activity is greatly appreciated.

Sincerely,

Rickey N. Ruebsamen

Rickey N. Ruebsamen
Branch Chief

bc:
LDNR, Van Cook
F/HP5, Zobrist
F/SEO2
Riles

State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

JACK McCLANAHAN
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

April 20, 1995

Rickey Ruebsamen
National Marine Fisheries Service
Habitat Conservation Division
c/o Louisiana State University
Baton Rouge, LA 70803-7535

RE: **C940289**, Coastal Zone Consistency
National Marine Fisheries Service
Direct Federal Action
Modification to Point au Fer Hydrologic Restoration Project
CWPPRA TE-22
Terrebonne Parish, Louisiana

Dear Mr. Ruebsamen:

The above referenced project has been reviewed for consistency with the approved Louisiana Coastal Resource Program (LCRP) as required by Section 307 of the Coastal Zone Management Act of 1972, as amended. The project, as proposed in the application, is consistent with the LCRP. If you have any questions concerning this determination please contact Mr. Ben Kropog of the Consistency Section at (504)342-7939.

Sincerely,

Terry W Howey

Terry W. Howey,
Administrator

TWH/JDH/bjk

cc: Ronald Ventola, COE-NOD
Fred Dunham, LDWF
Bob Jones, Terrebonne Parish
Charlie Mestayer, CMD/FC
Van Cook, DNR-CRD

Coastal Management Division

Office of Coastal Restoration and Management
Department of Natural Resources

625 North Fourth Street, P. O. Box 44487
Baton Rouge, Louisiana 70804-4487
Phone: (504) 342-7591
FAX: (504) 342-9439

TO:

- ✓ George Robichaux, DHH
- ✓ Fred Dunham, LDWF
- ✓ Larry Wiesepape, DEQ
- ✓ Glen Kent, State Land Office
- ✓ Curtis Patterson, DOTD
- ✓ Jerri Hobdy, Culture Recreation, and Tourism
- ✓ Jan Wilson, CRD
- ____ Dennis Falk, EPA
- ✓ Rick Ruebsamen, National Marine Fisheries Service
- ✓ Patti Holland, U. S. Fish and Wildlife Service
- ✓ Other CHARLES MESTAYER, CMD/EE

- ____ Tina Horn, Cameron Parish
- ____ Marnie Winter, Jefferson Parish
- ____ Roy Francis, LaFourche Parish
- ____ Patricia Thompson, Orleans Parish
- ____ Martha Cazaubon, St. Bernard Parish
- ✓ James Emy, STTCD
- ____ Jody Chenier, St. James Parish
- ____ Paul Rainwater, Calcasieu Parish
- ____ Brian Fortson, St. Tammany Parish
- ____ James Thompson, Scenic Streams
- ✓ Don Hebert, DNR Pipeline Operations

Renewed 5-11-95

****** SPECIAL AGENCY NOTICE *******

____	Possible GP-5	5 Calendar Day Notification
P950500	Possible GP-6	5 Calendar Day Notification
____	Possible GP-7	5 Calendar Day Notification
____	Possible GP-10	15 Calendar Day Notification
____	OTHER	5-11-95

It will impact our project to some extent but we will be able to work around it and the TE-22 project will be able to go forward

JRC 5/18/95

Message/Comments: Van - Please review

TE-22 Dirt Work for Plugs

FROM: Jim R. Roberson

NUMBER OF PAGES (INCLUDING COVER SHEET) 2 pgs

RV 3-31-94

State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

JACK McCLANAHAN
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

May 10, 1995

CERTIFIED MAIL
NO. 248829

C.H. Fenstermaker & Associates, Inc.
P.O. Box 52106
Lafayette, LA 70505
Attn: Robert J. Ganczak

RE: **P950500, Coastal Use Permit Application**
Shell Western E&P Inc.
Proposal to install a 1115.11' of one (1) 4" flowline and one (1) 2" gas lift line to serve the SL 14762 Well No. 1. Approximately 826 cu. yds. of material will be excavated, stockpiled and used as backfill upon completion of the project. Location: POB at Lat. 29°15'56"N, Long. 91°17'57"W and POE at Lat. 29°15'57"N, Long. 91°17'49"W; Sec. 2, T21S-R11E; ±30.5 miles SW from Morgan City;
Terrebonne Parish, LA.

Dear Mr. Ganczak:

You are hereby notified that the referenced activity is being considered for approval under Coastal Management Division General Permit 6 (GP-6).

A copy of this letter along with the application and plan drawings will be sent to the following for their review and comment: the LA Department of Environmental Quality, Office of Water Resources; the LA Department of Wildlife and Fisheries, Environmental Branch; the LA Department of Culture, Recreation and Tourism; the LA Department of Transportation and Development; the LA Division of Administration, State Lands Office; and the LA Department of Health and Hospitals.

The various state agencies shall have five (5) **calendar days** from the date of this letter to comment on the proposed activity. Lack of comment by these agencies within the 5-day period shall be considered as no objection or no position. After receipt of comments by the

state agencies, or after five (5) days from the date of this letter, a decision will be made to issue approval under the authority of this General Permit; to issue approval with modifications, or additional operating conditions; or to deny approval for the proposed work. The applicant shall be notified of Coastal Management's decision by letter.

If you have any questions, please contact me at (504) 342-7591.

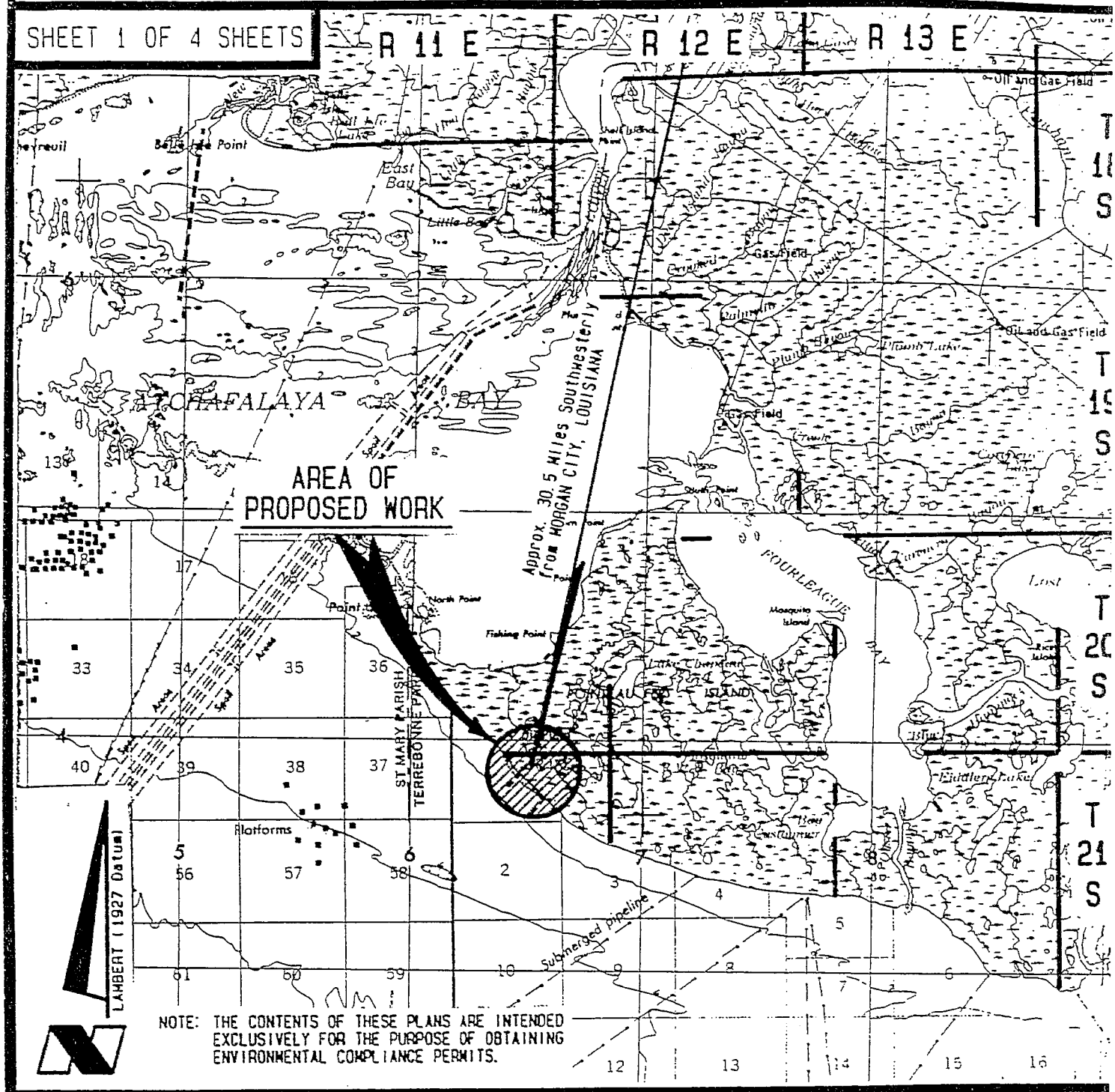
Sincerely

Tim R. Robertson
Permit Analyst

TRR

cc: Fred Dunham, LDWF w/attachments
Larry Wiesepape, DEQ w/attachments
Charles Mestayer, CMD/FI w/attachments
Don Hebert, Pipeline Operations w/attachments
Glen Kent, State Land Office w/attachments
Jerri Hobdy, Culture, Recreation, and Tourism w/attachments
Curtis Patterson, DOTD w/attachments
George Robichaux, DHH w/attachments
James Erny, S. Terrebonne Tidewater District w/attachments
Jan Wilson, CRD w/attachments
Patti Holland, USFWS w/attachments
Rick Ruebsamen, NMFS w/attachments

SHEET 1 OF 4 SHEETS



REVISED:

Topography obtained from U.S. Geological Survey Map "NEW ORLEANS, LOUISIANA" 1963 Edition, Revised 1972.

VICINITY MAP

Scale: 1:250,000

Drawn By: K

Application By:

SHELL WESTERN E&P, INC.

PROPOSED FLOWLINES

For Producing SL 14762 No. 1 Well

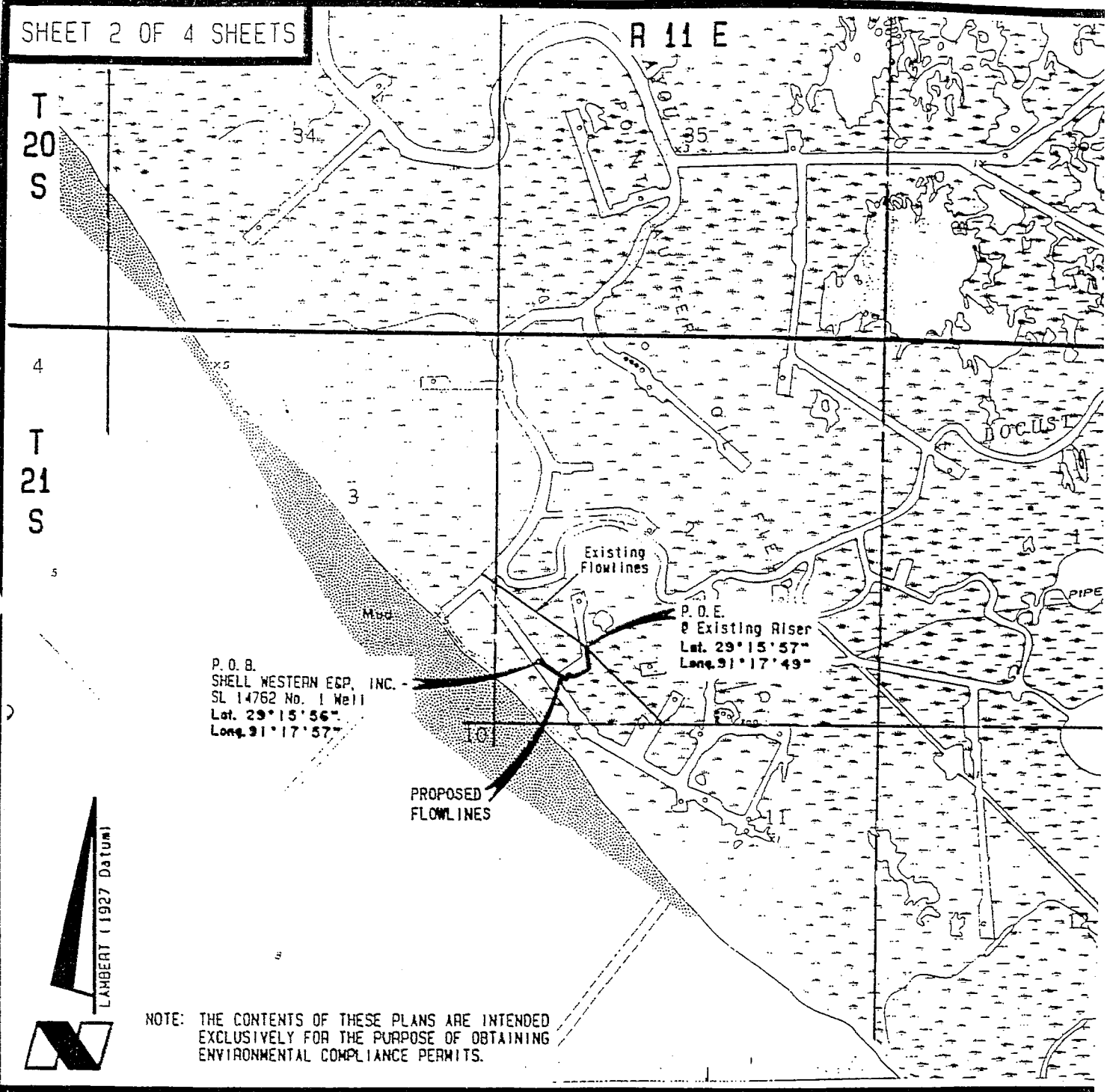
Section 2, T21S-R11E

Terrebonne Parish, Louisiana

April 25, 1995

PREPARED BY: C.H. Fenstermaker & Associates, Inc., Lafayette & New Orleans, Louisiana

SHEET 2 OF 4 SHEETS



REVISED:

Topography obtained from U.S. Geological Survey Quadrangle "POINT AU FER, LA." 1980 Edition.

VICINITY MAP
Scale: 1"=2000'

Application By:

SHELL WESTERN E&P, INC.

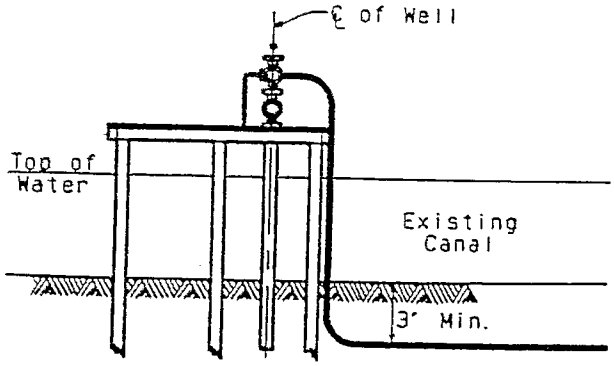
April 25, 1995

PROPOSED FLOWLINES

For Producing SL 14762 No. 1 Well
Section 2, T21S-R11E
Terrebonne Parish, Louisiana

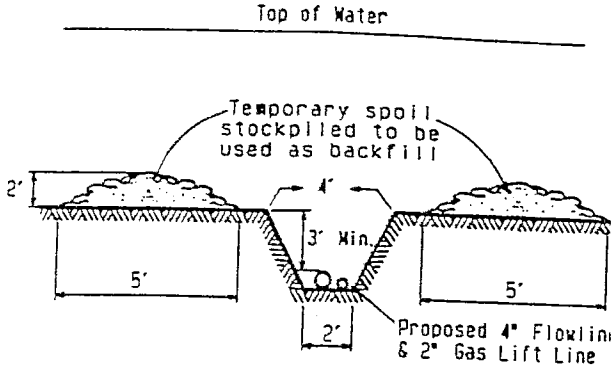
PREPARED BY: C. H. Fenstermaker & Associates, Inc., Lafayette & New Orleans, Louisiana

SHEET 3 OF 4 SHEETS



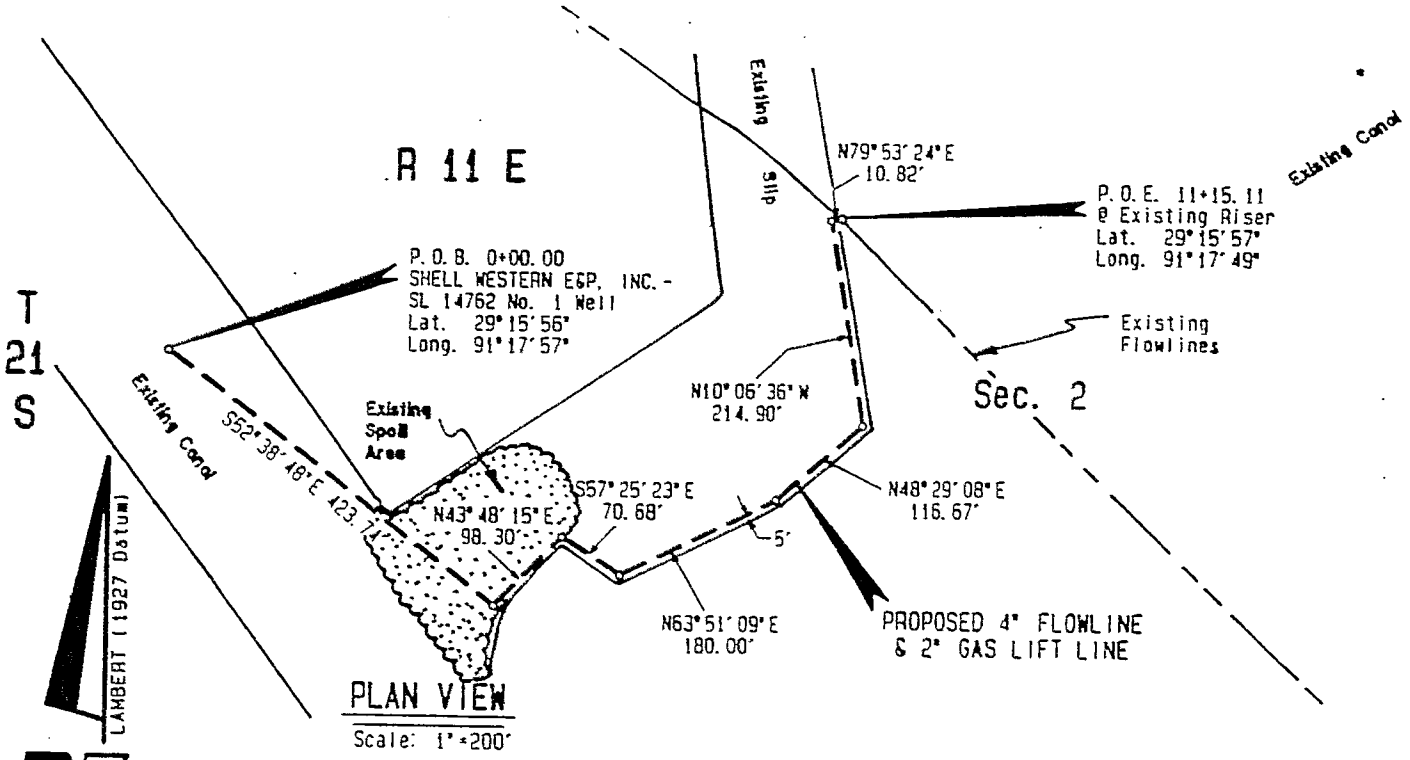
TYPICAL PROFILE OF PROPOSED FLOWLINE

No Scale



TYPICAL FLOWLINE TRENCH

No Scale



PLAN VIEW

Scale: 1"=200'

NOTE: THE CONTENTS OF THESE PLANS ARE INTENDED EXCLUSIVELY FOR THE PURPOSE OF OBTAINING ENVIRONMENTAL COMPLIANCE PERMITS.

EXCAVATION REQUIRED . . . . 826 Cu. Yds.

REVISED:

Application By:

SHELL WESTERN E&P, INC.

April 25, 1995

PROPOSED FLOWLINES

For Producing *SL 14762* No. 1 Well

Section 2, T21S-R11E

Terrebonne Parish, Louisiana

PREPARED BY: C. H. Fenstermaker & Associates, Inc., Lafayette & New Orleans, Louisiana

SHEET 4 OF 4 SHEETS

NOTES

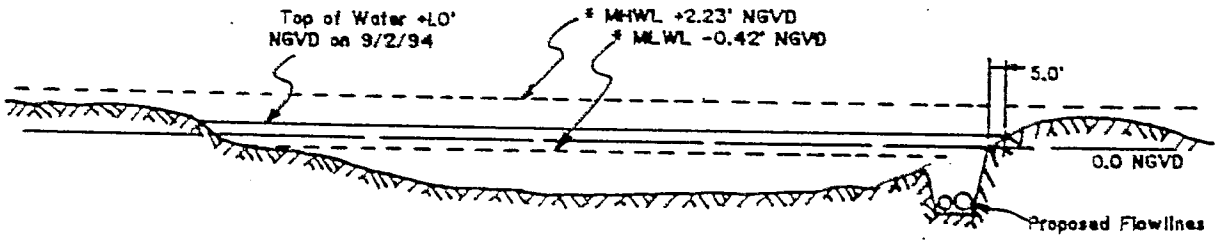
1. All structures, facilities, well and pipelines/flowlines occurring in open water areas or in oil field canals or slips shall be removed within 120 days of abandonment of the facilities for the herein permitted use unless prior written approval to leave such structures in place is received from the Coastal Management Division. This condition does not preclude the necessity for revising the current permit or obtaining a separate Coastal Use Permit, should one be required, for such removal activities.

2. As-built drawings shall be submitted within 30 days of completion of this project to the Louisiana Department of Natural Resources, Coastal Management Division, P.O. Box 44487, Baton Rouge, LA 70804-4487.

3. Structures must also be marked/lighted in accordance with U.S. Coast Guard regulations.

4. In order to insure the safety of all parties, the permittee shall contact the Louisiana ONE CALL System (1-800-272-3020), a minimum of 48 hours prior to the commencement of any excavation (Digging, Dredging, Jetting, etc.) or demolition activity.

* Atchafalaya Bay near Eugene Island, La. (Sta. 8855010) 0990.



THE CONTENTS OF THESE PLANS ARE INTENDED EXCLUSIVELY FOR THE USE IN OBTAINING ENVIRONMENTAL COMPLIANCE PERMITS.

CROSS SECTION FLOWLINES

Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 20'

REVISED:

Application By:

SHELL WESTERN E & P, INC.

April 25, 1995

PROPOSED FLOWLINES

For Producing SL 14762 No. 1 Well
Section 2, T21S-R11E
Terrebonne Parish, Louisiana

PREPARED BY: C.H. Fenstermaker & Associates, Inc., Lafayette & New Orleans, Louisiana

State of Louisiana

EDWIN W. EDWARDS
GOVERNOR

JACK McCLANAHAN
SECRETARY

DEPARTMENT OF NATURAL RESOURCES
April 19, 1995

To: Ben Kropog
Consistency Section, CMD

Through: Jeff Harris
Consistency Section Manager, CMD

Through: Terry Howey
Administrator, CMD

Through: Bill Good
Administrator, CRD

From: Van Cook VRC
Engineer Supervisor, CRD

Subject: C940289, Coastal Zone Consistency
National Marine Fisheries Service
Comments related to the modification of CWPPRA project Point au Fer Island Hydrologic Restoration (TE-22).

The comments below are in answer to your letter to Mr. Clark of March 7, 1995. I am responding as project manager for the referenced project.

The modified project essentially conforms to the project as approved by the CWPPRA Task Force, however some changes related to plug design and access routing have been made. One of the seven plugs originally planned (Plug No. 5) has been deleted and two plugs (Plugs Nos. 3A and 4) will be constructed of shell only instead of the more complex structures originally planned. Access routing has been changed to avoid oyster beds and the new access route requires some dredging. These changes do not affect the functions or objectives of the project.

cc: Carrol Clark
George Boddie

COASTAL RESTORATION DIVISION
P.O. Box 94396 · Baton Rouge, Louisiana 70804-9396 · Telephone (504) 342-7308 · Fax (504) 342-9417

An Equal Opportunity Employer

Van Cook 7/25 J. Wilson

JOINT PUBLIC NOTICE

To Import (Odum)

March 27, 1995

Our Project
Copy to Van Cook
Reviewed 3-20-95
Jean

United States Army
Corps of Engineers
New Orleans District
Regulatory Functions Branch
Post Office Box 60267
New Orleans, Louisiana 70160-0267

(504) 862-2276
Project Manager
Mr. Martin S. Mayer
Permit Application Number
SW(Terrebonne Parish Wetlands)1044

State of Louisiana
Department of Environmental Quali
Office of Water Resources
Water Pollution Control Division
Post Office Box 82215
Baton Rouge, Louisiana 70884-221

(504) 765-0664
Project Manager
Mr. James Little
WQC Application Number
WQC 940720-01

Interested parties are hereby notified that a permit application has been received by the New Orleans District of the U.S. Army Corps of Engineers pursuant to: [X] Section 10 of the Rivers and Harbors Act of March 3, 1899 (30 Stat. 1151; 33 USC 403); and/or [X] Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344).

Application has also been made to the Louisiana Department of Environmental Quality, Office of Water Resources, for a Water Quality Certification (WQC) in accordance with statutory authority contained in Louisiana Revised Statutes of 1950, Title 30, Chapter 11, Part IV, Section 2074 A(3) and provisions of Section 401 of the Clean Water Act (P.L. 95-217).

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

NAME OF APPLICANT: NATIONAL MARINE FISHERIES SERVICE, c/o Louisiana State University Center for Coastal Energy and Environmental Resources, Baton Rouge, Louisiana 70803-7535.

LOCATION OF WORK: The proposed work is located at two areas on Point au Fer Island, IN TERREBONNE PARISH, central to a point approximately 30 miles southwesterly from Morgan City, Louisiana. Area 1 is located on the southeast portion of the island between Four League Bay and the Gulf of Mexico. Area 2 is located on the southwest portion of the island near the Gulf of Mexico.

CHARACTER OF WORK: The applicant has requested Department of the Army authorization to perform various dredge, fill, and construction activities in the two areas identified above to reduce saltwater intrusion into and tidal flushing of interior marshes. Work in Area 1A consists of installing four plugs in Hester Canal and two in Transco Canal. Structures 1, 2, 6, 7, and 8 will be shell-reinforced timber bulkheads, whereas Structure 3A will be constructed from shell alone. These structures have been sited so as to redirect water movement to natural channels and restore flowage patterns that existed prior to canal construction. Work in Area 1B consists of installing a shell plug at the south end of Transco Canal, about 200 feet inland from the Gulf of Mexico. An estimated 8,500 cubic yards of shell will be deposited to construct the Area 1 structures. Approximately 155,000 cubic yards of waterbottom material will be excavated from 10,700 feet of existing channel by

TE-22 Point-au-Fer Plugs

bucket dredge and/or propwash methods to facilitate access for floating equipment to the work sites in Area 1. The maintained channels will have a maximum 70-foot bottom width and minus 8-foot NGVD depth. Dredged material will be placed on existing dredged material embankments adjacent to the access route, as shown in the attached drawings.

Work in Area 2 consists of hydraulically excavating waterbottom material from the Gulf of Mexico for use as backfill to repair two points where beach cut-through to the interior canal system is imminent. Approximately 2,000 cubic yards of material will be used to backfill the terminus of an abandoned oil field canal extending perpendicular from the beach. Approximately 125,000 cubic yards of material will be utilized to backfill a 1,600-foot segment of canal that is parallel to the beach. The inland limits of backfill in Area 2 will be a minimum of 200 feet from the beach. The fill sites are planned to have a post-compaction height approximate to marsh elevation. In the event that inadequate and/or unsuitable material occurs in the primary borrow area, alternate sources in the secondary borrow area may be utilized. Dredging operations will be sited a minimum of one-half mile from the coast. This project, PTE-22/24, has been approved for funding under the Coastal Wetlands Planning, Protection and Restoration Act for the purposes of protection, maintenance, and enhancement of vegetated wetlands.

This is a revision to public notice dated August 15, 1994, incorporating maintenance dredging existing channels to access Area 1 and the use of shell rather than material dredged from the Gulf of Mexico to construct Structure 4.

The comment period for the Department of the Army Permit and the Louisiana Department of Environmental Quality WQC will close 20 days from the date of this joint public notice. Written comments, including suggestions for modifications or objections to the proposed work, stating reasons thereof, are being solicited from anyone having interest in this permit and/or this WQC request and must be mailed so as to be received before or by the last day of the comment period. Letters concerning the Corps of Engineers permit application must reference the applicant's name and the Permit Application Number, and be mailed to the Corps of Engineers at the address above, **ATTENTION: REGULATORY FUNCTIONS BRANCH**. Similar letters concerning the Water Quality Certification must reference the applicant's name and the WQC Application number and be mailed to the Louisiana Department of Environmental Quality at the address above.

The application for this proposed project is on file with the Louisiana Department of Environmental Quality and may be examined during weekdays between 8:00 a.m. and 5:00 p.m. Copies may be obtained upon payment of costs of reproduction.

Corps of Engineers Permit Criteria

The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation,

economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The U.S. Army Corps of Engineers is soliciting comments from the public, Federal, state, and local agencies and officials, Indian Tribes, and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the U.S. Army Corps of Engineers to determine whether to make, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

No properties listed on the National Register of Historic Places are near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, historical sites, or data. Copies of this notice are being sent to the State Archeologist and the State Historic Preservation Officer.

Our initial finding is that the proposed work would neither affect any species listed as endangered by the U.S. Departments of Interior or Commerce, nor affect any habitat designated as critical to the survival and recovery of any endangered species.

If the proposed work involves deposits of dredged or fill material into navigable waters, the evaluation of the probable impacts will include the application of guidelines established by the Administrator of the Environmental Protection Agency. Also, a certification that the proposed activity will not violate applicable water quality standards will be required from the Department of Environmental Quality, Office of Water Resources before a permit is issued.

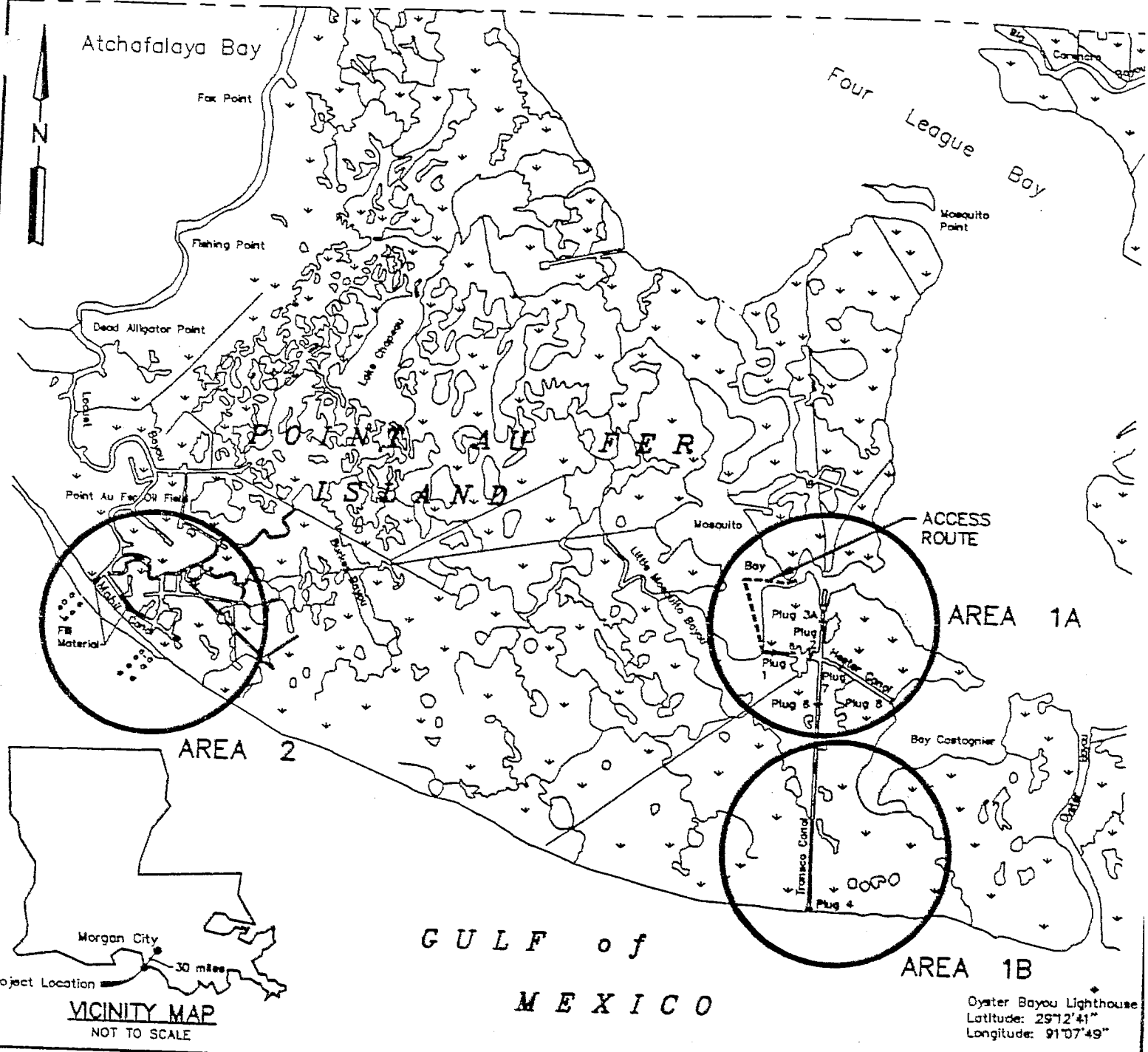
Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

You are requested to communicate the information contained in this notice to any other parties whom you deem likely to have interest in the matter.

The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program. The Corps of Engineers permit will not be issued unless the applicant has received approval or a waiver of the Coastal Use Permit by the Department of Natural Resources.

P.J. Serio
Chief, Western Evaluation Section
Regulatory Functions Branch

Attachments



LOCATION MAP

8000 0 8000 16000

SCALE–FEET

SHEET 1 OF 9

NOTE:

Base Information Taken From Digitized Quadrangle Maps on Diskette in 'ocad format. Provided By American Digital Cartography, Inc.

PROPOSED STRUCTURES

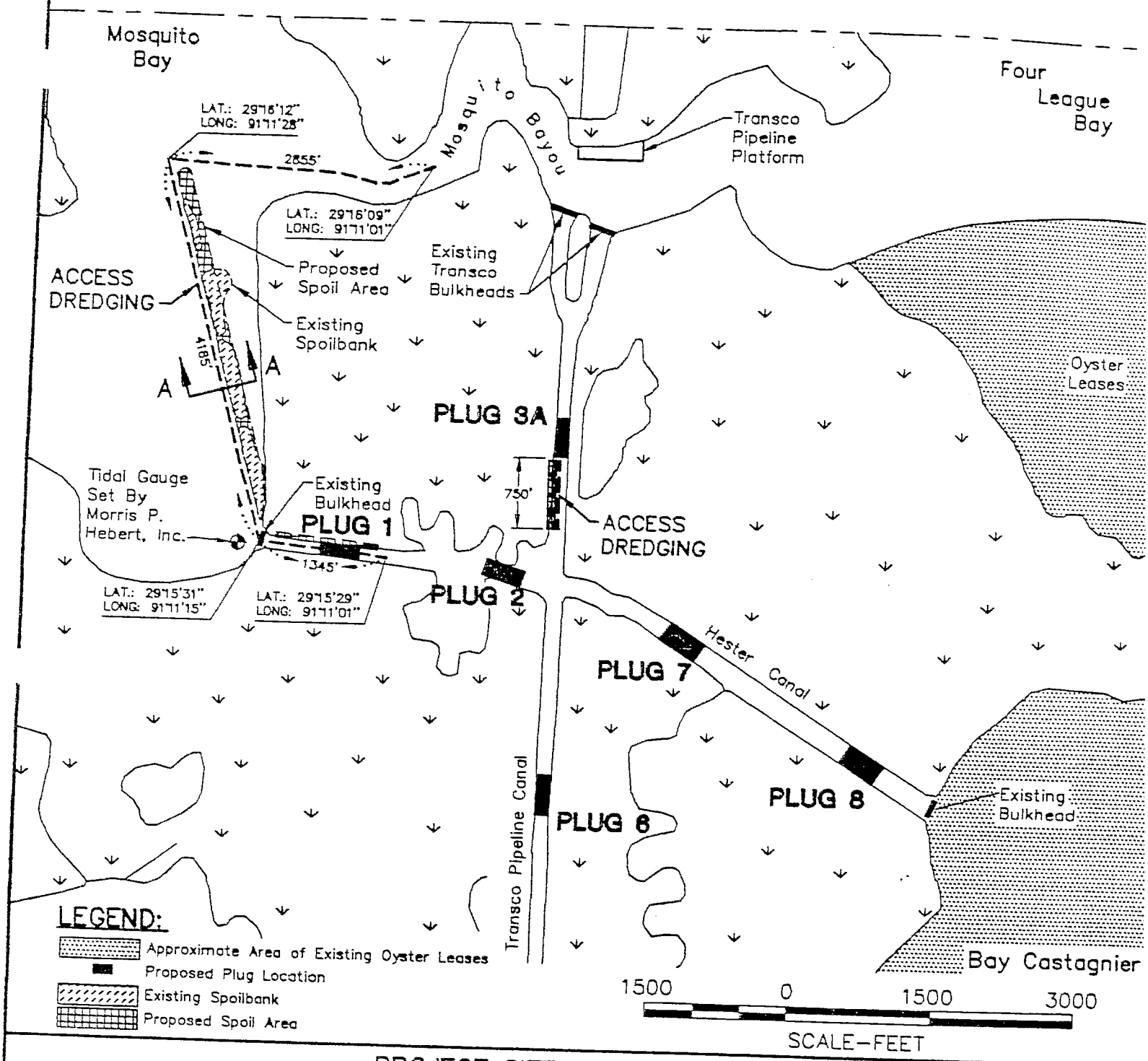
POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION BATON ROUGE, LOUISIANA Date 6/30/94

MAR 6 1995

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-32
1 OF 9

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



PROJECT SITE PLAN, AREA 1A

NOTES:

Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

Dredging Operations to Include Either Propwashing and/or Bucket Dredging.

Oyster Lease Holders Within 1,500 feet of the Proposed Activities Will be Notified Prior to Conducting Operations.

Access Dredgeing Within Canals Not to Exceed -6.0' Elevation.

S[illegible]heet 4 of 9 for Cross-Section Details.

[illegible]tal Distance to be Dredged For Access Route is Approximately 10,700 Feet Which Equates to Approximately 155,000 Cubic Yards of Dredged Material.

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-33
2 of 9

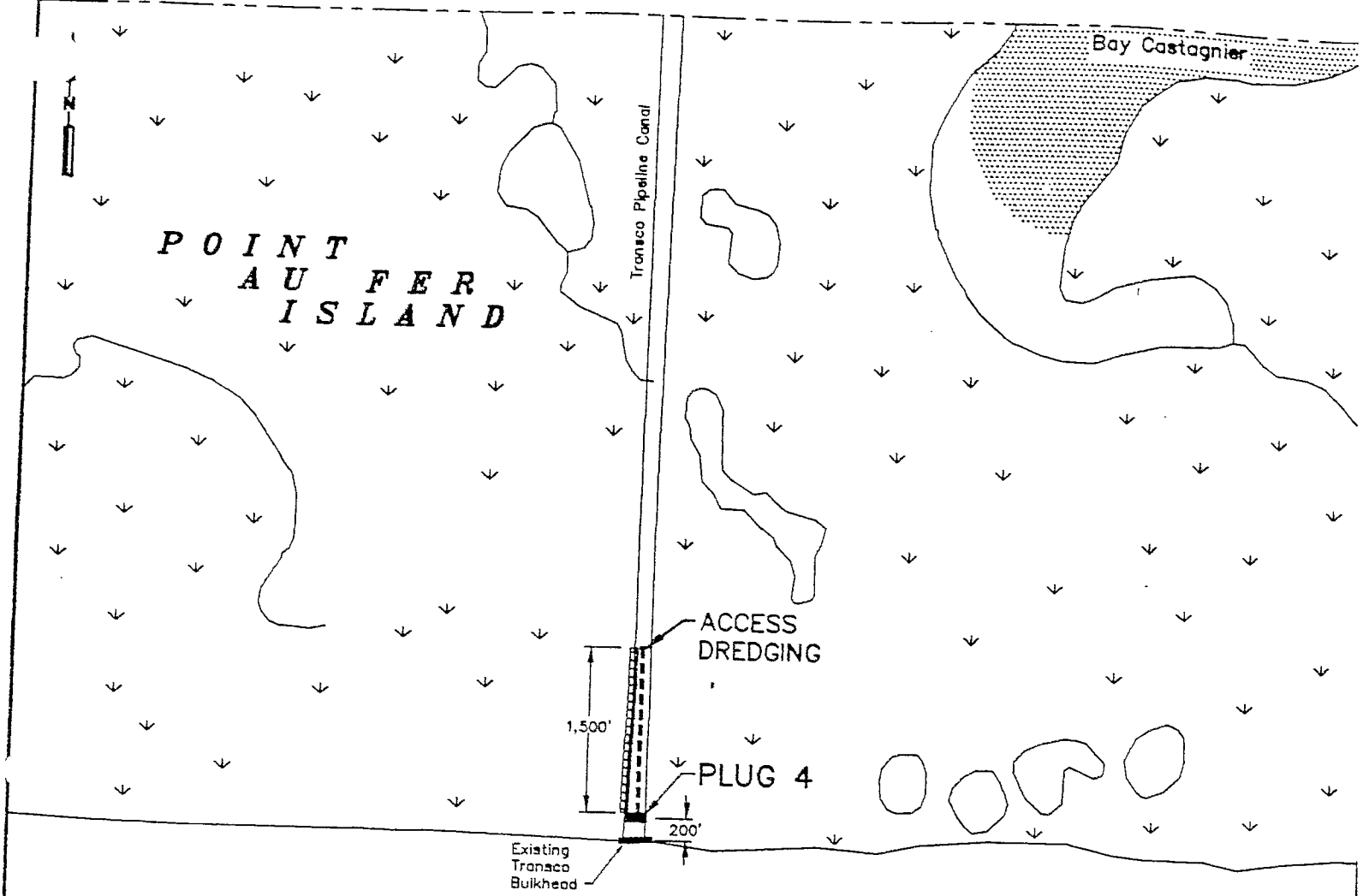
DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM

SHEET 2 OF 9

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

MAR 6 1995



LEGEND:

- Approximate Area of Existing Oyster Leases
- Proposed Plug Location
- Existing Spoilbank
- Proposed Spoil Area

1500 0 1500 3000

SCALE–FEET

PROJECT SITE PLAN, AREA 1B

NOTES:

Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

Dredging Operations to Include Either Propwashing and/or Bucket Dredging.

Oyster Lease Holders Within 1,500 feet of the Proposed Activities Will be Notified Prior to Conducting Operations.

Dredgeing Within Canals Not to Exceed –6.0' Elevation.

Total Distance to be Dredged For Access Route Is Approximately 10,700 Feet Which Equates to Approximately 155,000 Cubic Yards of Dredged Material.

SHEET 3 OF 9

PROPOSED STRUCTURES

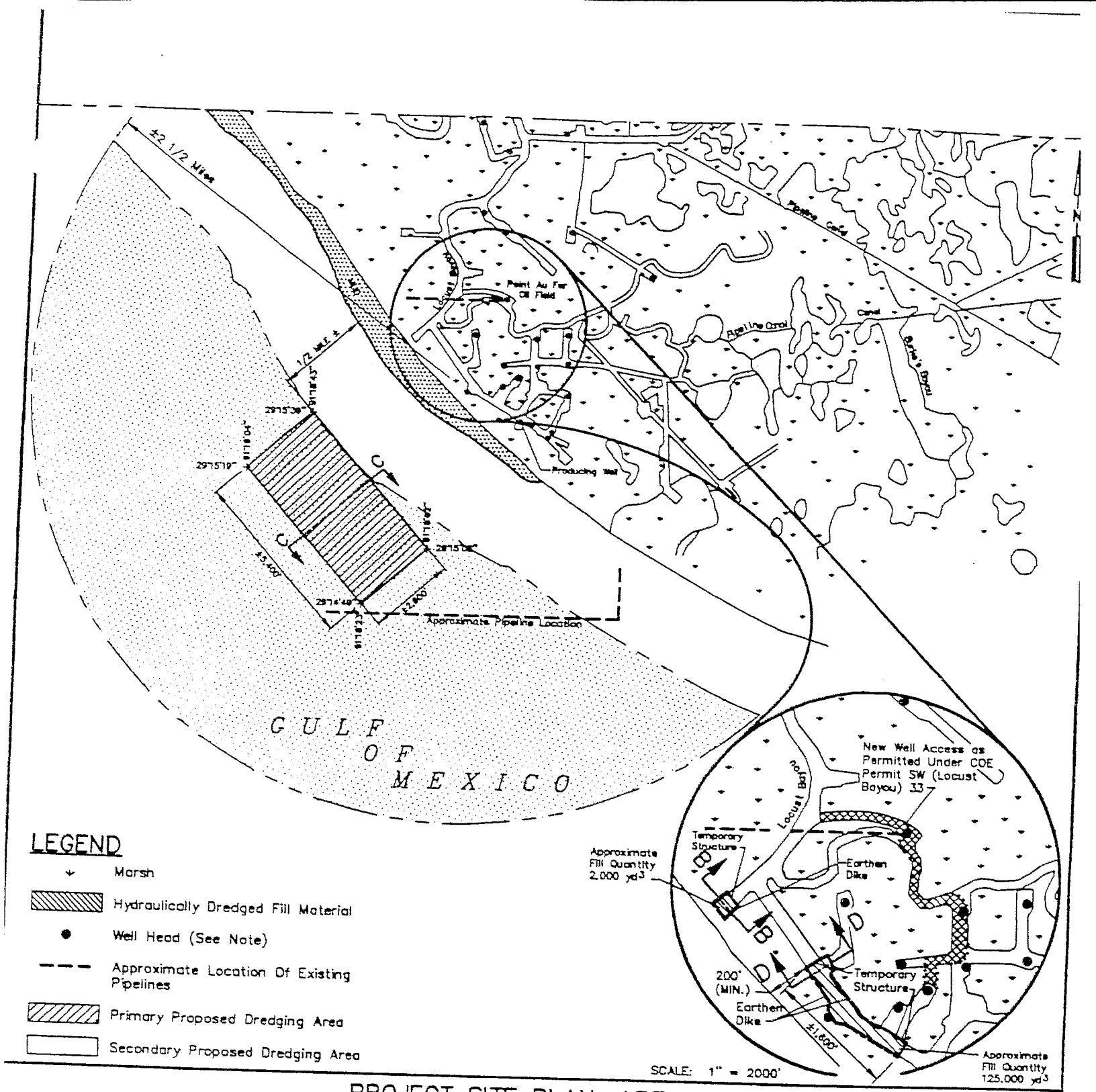
POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

MAR 6 1995

PREPARED BY C–K ASSOCIATES, INC. B.R., LA.

A24–800–36
3 OF 9

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



LEGEND

- Marsh
- Hydraulically Dredged Fill Material
- Well Head (See Note)
- Approximate Location Of Existing Pipelines
- Primary Proposed Dredging Area
- Secondary Proposed Dredging Area

PROJECT SITE PLAN, AREA 2

4000 0 4000 8000

SCALE–FEET

SHEET 5 OF 9

NOTES:

Pipeline Locations are Approximate. Field Verification Required Prior To Construction.

All Y Are Not Producing Unless Otherwise Noted.

S Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

See Sheet 6 of 9 for Cross–Section Details.

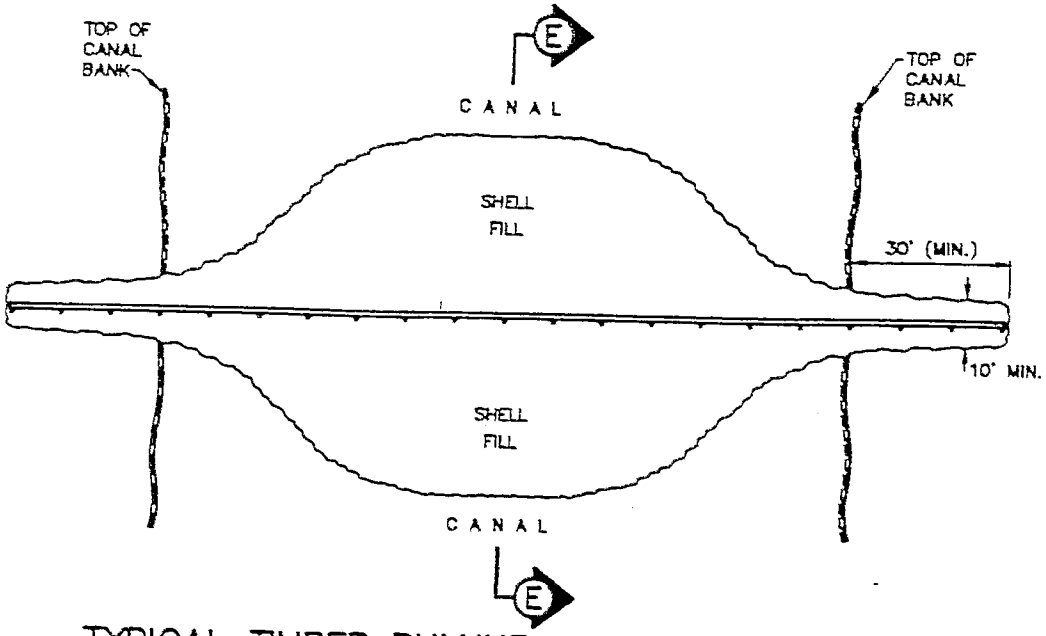
PREPARED BY C–K ASSOCIATES, INC. B.R., LA. A24–800–12 5 OF 9

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM

PROPOSED STRUCTURES

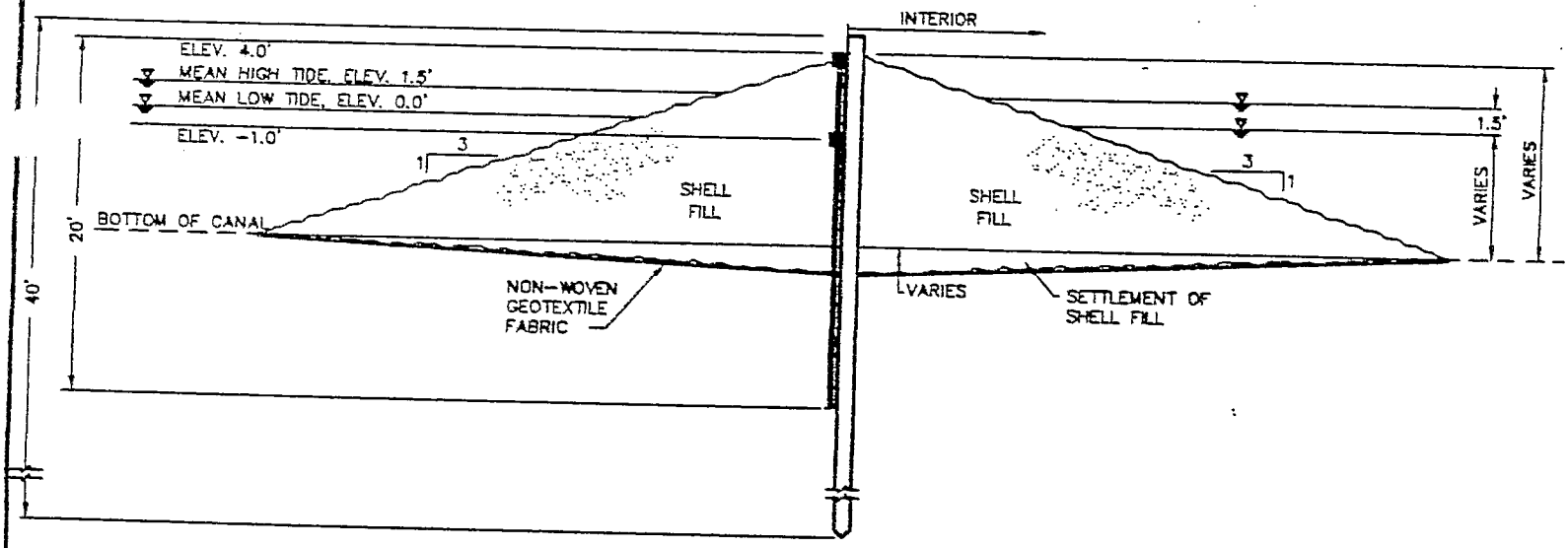
POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

MAR 6 1995



TYPICAL TIMBER BULKHEAD PLUG PLAN VIEW

SCALE: 1" = 40'



SECTION E-E

SCALE: 1" = 12'

CONCEPTUAL PLUG DESIGN

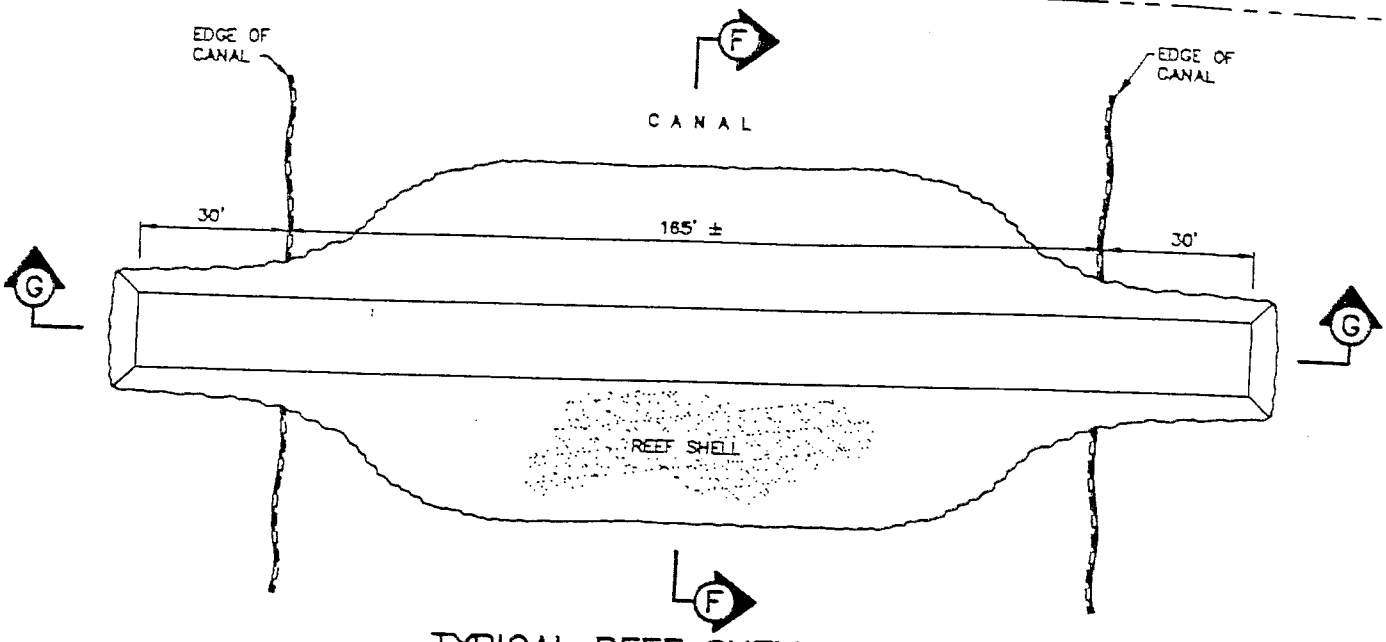
NOTE:
All Elevations are N.G.V.D.

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

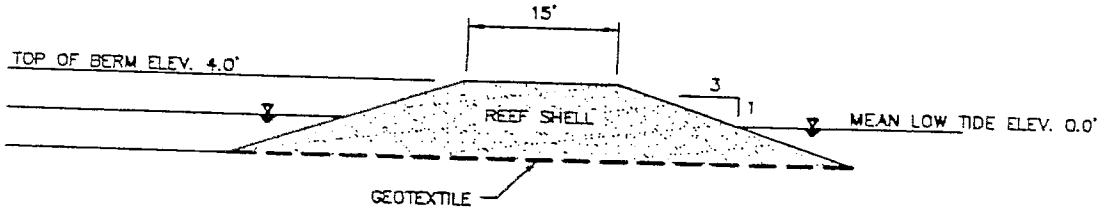
MAR 6 1995

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.
A24-800-13
8 OF 9
DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



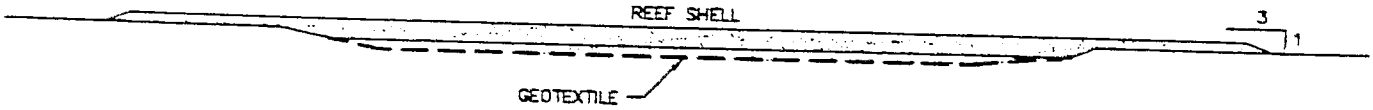
TYPICAL REEF SHELL PLUG

SCALE: 1" = 40'



SECTION F–F

SCALE: 1" = 20'



SECTION G–G

SCALE: 1" = 40'

PLUG #4

NOTE:
All Elevations are N.G.V.D.

SHEET 7 OF 9

PROPOSED STRUCTURES

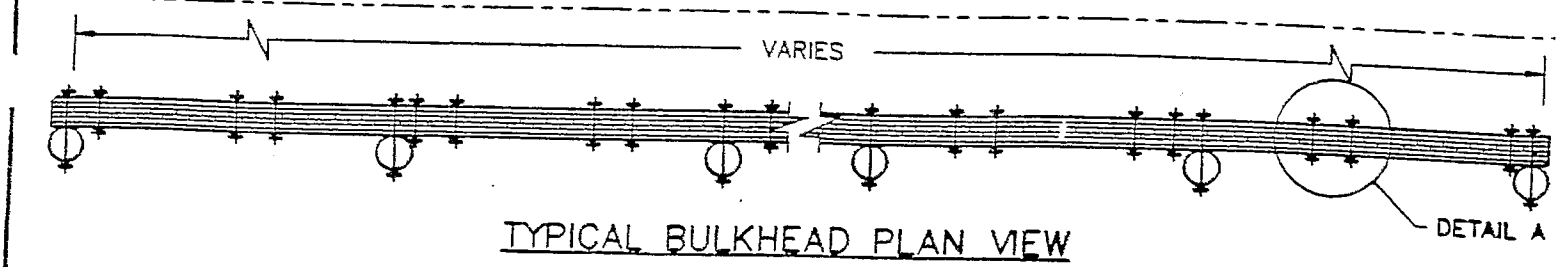
POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

MAR 6 1995

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

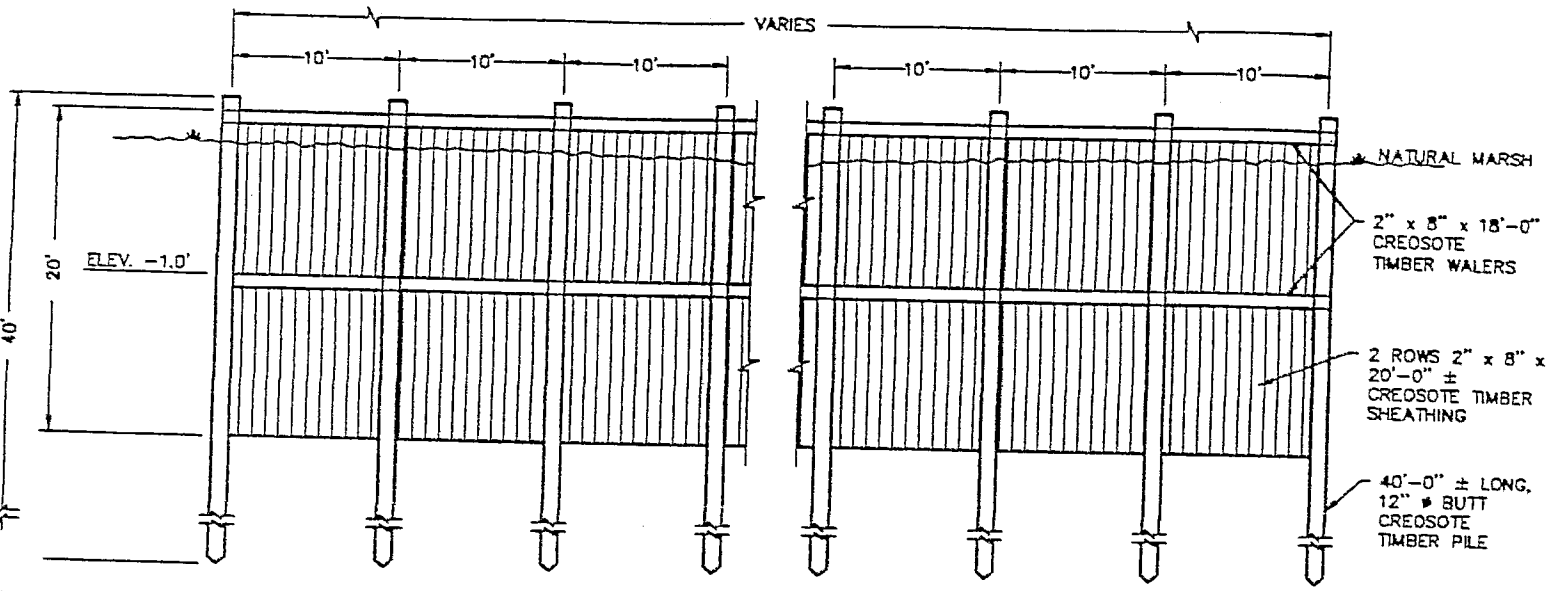
A24-800-35
7 OF 9

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



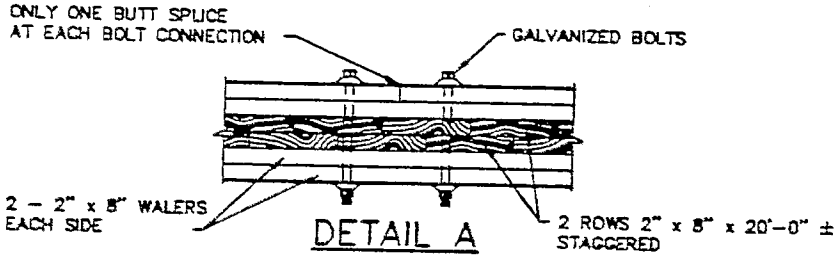
TYPICAL BULKHEAD PLAN VIEW

SCALE: 1" = 6'



TYPICAL BULKHEAD ELEVATION VIEW

SCALE: 1" = 12'



DETAIL A

SCALE: 1" = 2'

CONCEPTUAL PLUG DESIGN

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

MAR 6 1995

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-14
9 OF 9

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM

Cook - fyi & in
Jan - fyi
May - fyi

C-K
SSOCIATES • INC
.VIRONMENTAL & ENGINEERING
CONSULTANTS

17170 PERKINS ROAD
BATON ROUGE, LA 70810
PH (504) 755-1000
FAX (504) 751-2010

1717 EAST PRIEN LAKE ROAD
LAKE CHARLES, LA 70601
PH (318) 479-0303
FAX (318) 479-1145

2001 EAST 70TH STREET, SUITE 503
SHREVEPORT, LA 71105
PH (318) 797-8636
FAX (318) 798-0478

4820 WARD DRIVE
BEAUMONT, TEXAS 77705
PH (409) 842-2265
FAX (409) 840-9116

11615 ANGUS ROAD, SUITE 119
AUSTIN, TX 78759
PH (512) 346-1048
FAX (512) 346-7320

COASTAL
RESTORATION

95 MAR 1 AM 10 : 56

February 27, 1995

Louisiana Department of Natural Resources
Coastal Restoration Division
P.O. Box 94396
Baton Rouge, Louisiana 70804-9396
Attn: Mr. Van Cook, P.E.
Engineer Supervisor

Ref: Point au Fer Island Hydrologic Restoration Project
U.S. Army Corps of Engineers Permit Application Modification
C-K Associates' Project No. 24-800

Dear Mr. Cook:

Enclosed is a copy of the modified permit application for the above referenced project which incorporates the changes made due to the redesign of Plug No. 4. We have also forwarded a copy of this information directly to Mr. Rickey Ruebsamen with the National Marine Fisheries Service.

If you have any questions concerning this information, please contact either myself or Mr. Jonathan Hopkins, P.E. at (504) 755-1000.

Very truly yours,
C-K Associates, Inc.

Rich Major

Rich Major, P.E.
Engineering Division Manager

ARM/mcr

Enc: As stated

cc w/enc.: Mr. Rickey N. Ruebsamen
Area Supervisor
National Marine Fisheries Service
Habitat Conservation Division
c/o LSU Center for Wetland Resources
Baton Rouge, Louisiana 70803-7535

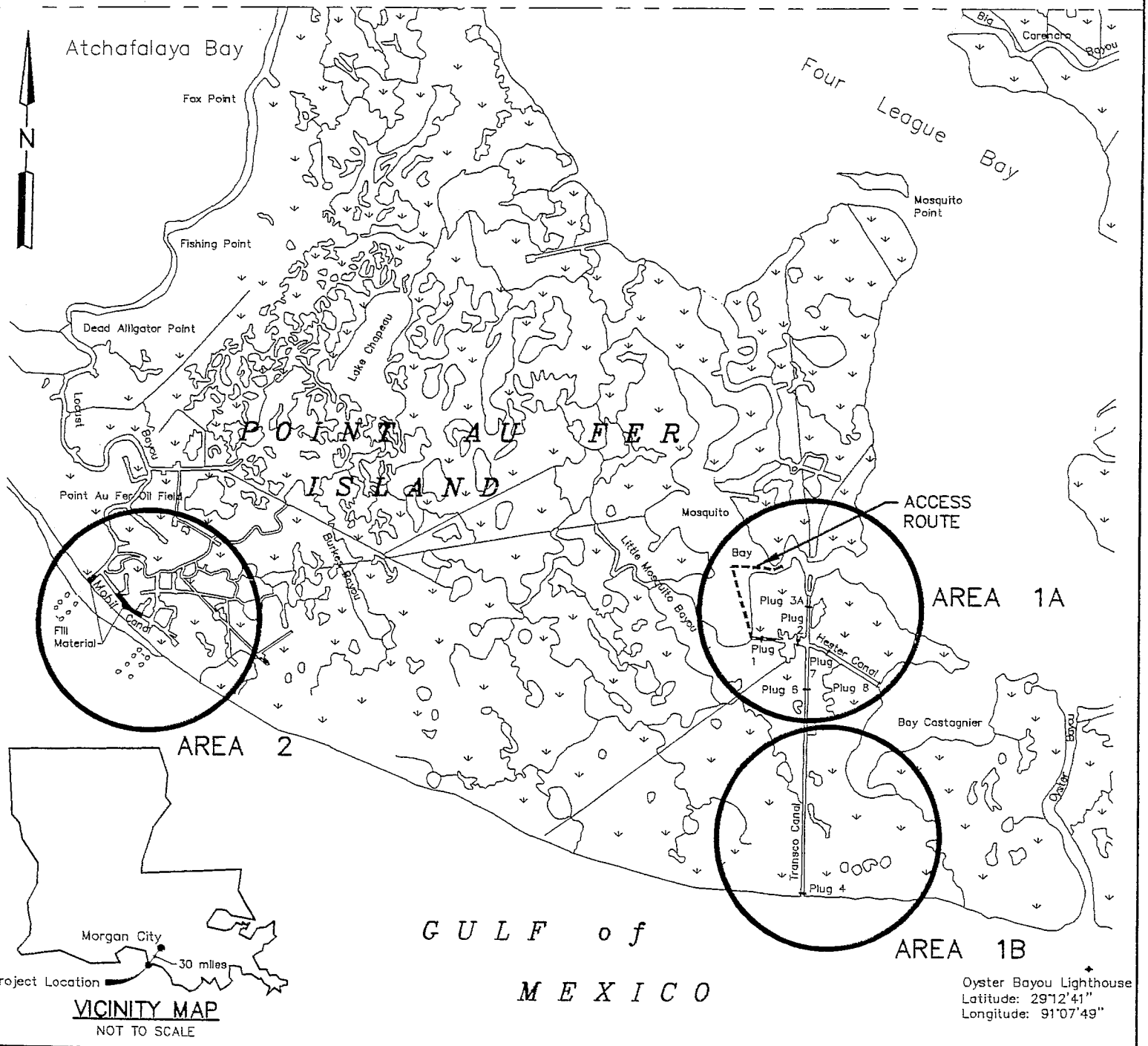
24A01L09.ARM

ATTACHMENT A
Discharge of Dredged or Fill Material

As shown on Sheet 2 and 3 of the attached prints, approximately 155,000 yd^3 of material will be required to be removed to access the site. As shown on Sheet 5, approximately 125,000 yd^3 and 2,000 yd^3 of dredged material also from the Gulf of Mexico will be used to construct two earthen plugs in Area 2.

Plugs 1, 2, 6, 7, and 8 will consist of a timber bulkhead with reef shell (or equivalent) backfill (see Sheets 2, 8, and 9). Due to the shallow depths at the location of Plug 3A and Plug 4, a timber bulkhead will not be structurally necessary. As an alternative to the timber/shell structure at Plug 3A and 4, a plug consisting of shell only will be sufficient (see Sheet 7). The following table presents the approximate quantities of shell backfill which will be required for Plugs 1, 2, 3A, 4, 6, 7, and 8.

Plug	Shell Backfill (yd^3)
1	800
2	500
3A (w/o timber bulkhead)	1,100
4 (w/o) timber bulkhead)	1,100
6	2,200
7	1,800
8	1000
Total	**8,500 yd^3**



LOCATION MAP

8000 0 8000 16000

SCALE–FEET

SHEET 1 OF 9

NOTE:

Information Taken From Digitized Quadrangle Maps on Diskette in Autocad format. Provided By American Digital Cartography, Inc.

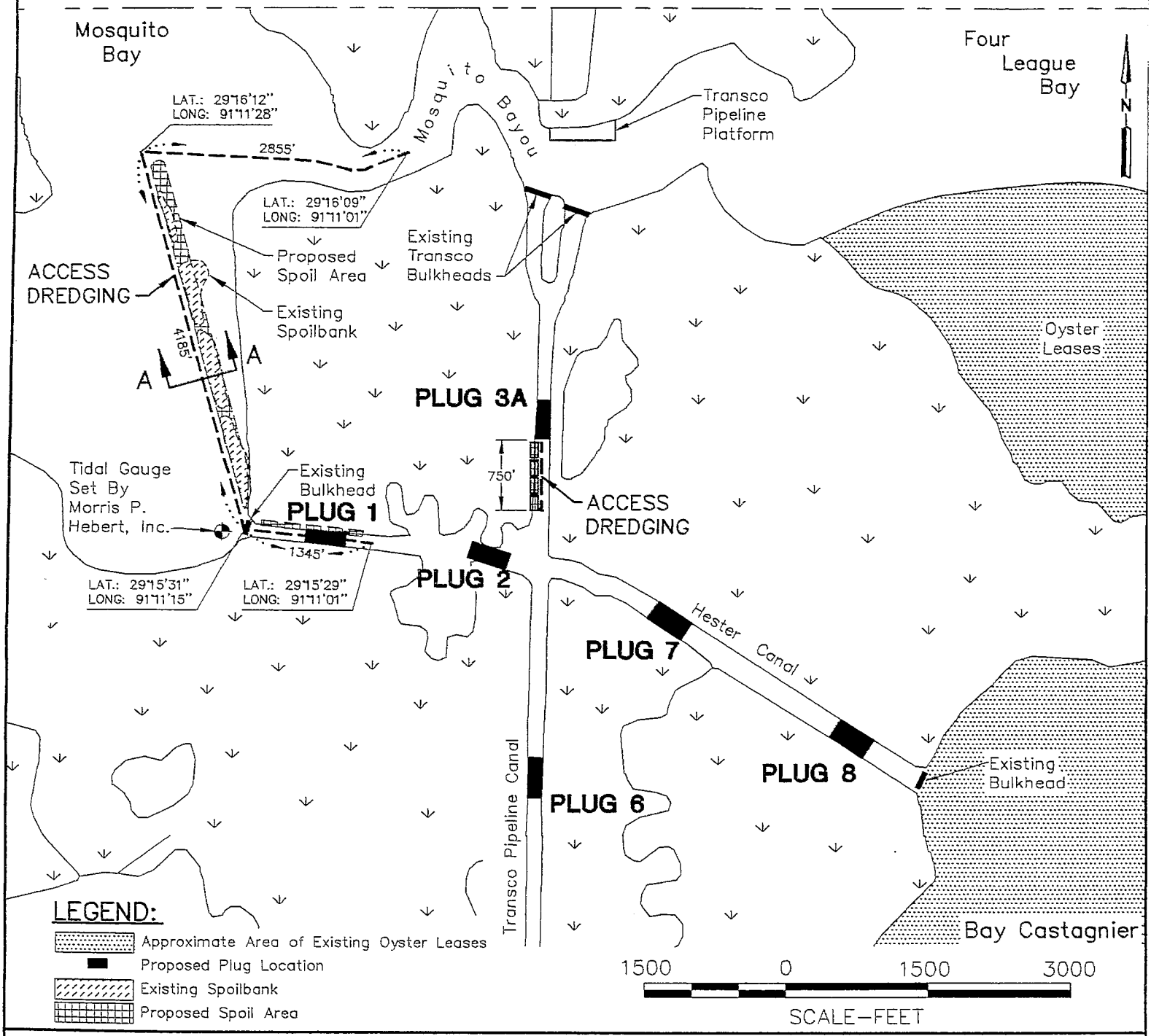
PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-32
1 OF 9

DWN. BY: LHB CHKD. BY: ANV APPRVD. BY: ARH



PROJECT SITE PLAN, AREA 1A

NOTES:

Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

Dredging Operations to Include Either Propwashing and/or Bucket Dredging.

Oyster Lease Holders Within 1,500 feet of the Proposed Activities Will h lotified Prior to Conducting Operations.

ess Dredgeing Within Canals Not to Exceed −6.0' Elevation.

See Sheet 4 of 9 for Cross-Section Details.

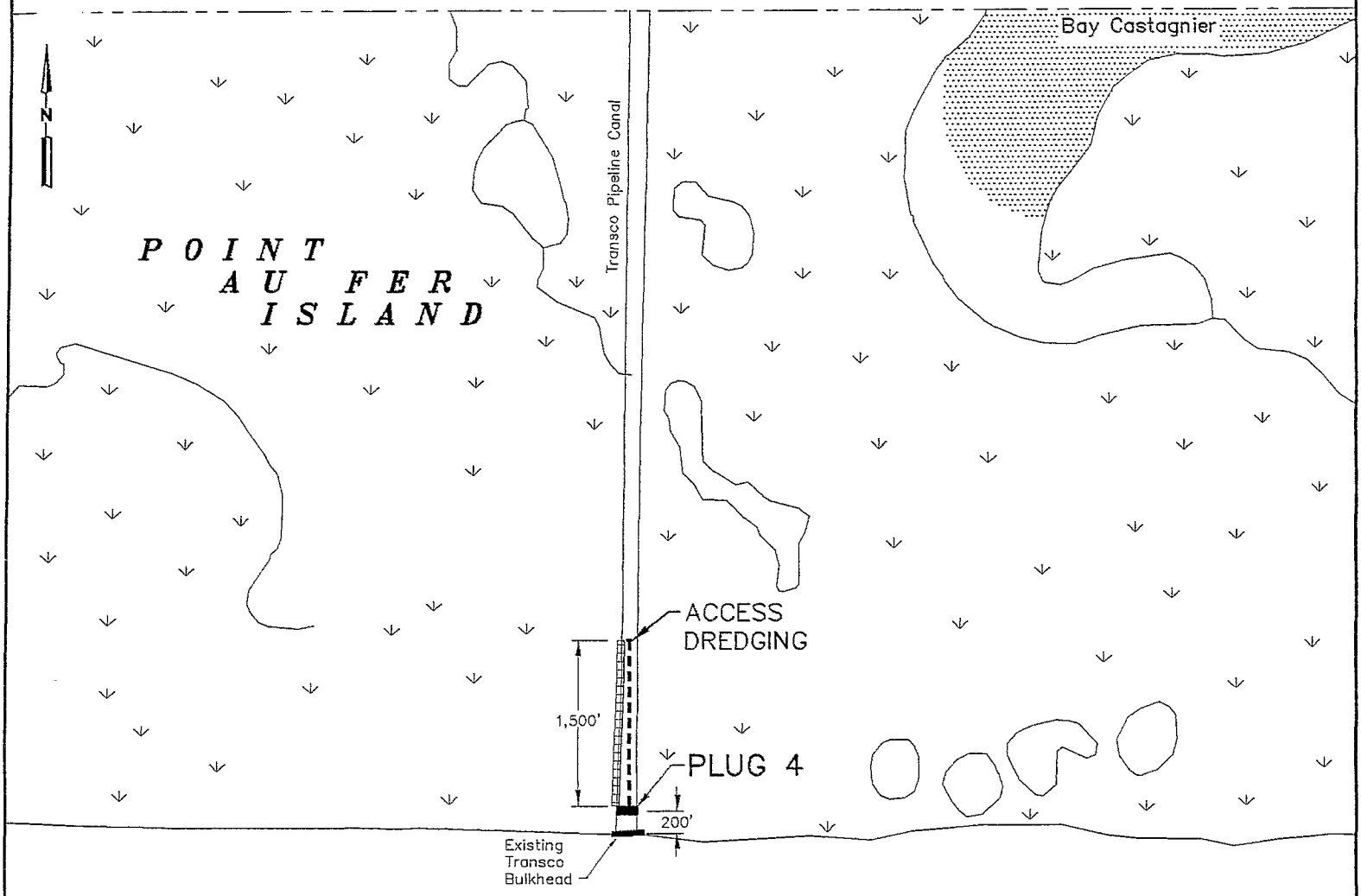
Total Distance to be Dredged For Access Route Is Approximately 10,700 Feet Which Equates to Approximately 155,000 Cubic Yards of Dredged Material.

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-33
2 of 9

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94



LEGEND:

- Approximate Area of Existing Oyster Leases
- Proposed Plug Location
- Existing Spoilbank
- Proposed Spoil Area

1500 0 1500 3000

SCALE–FEET

PROJECT SITE PLAN, AREA 1B

NOTES:

Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

Dredging Operations to Include Either Propwashing and/or Bucket Dredging.

:r Lease Holders Within 1,500 feet of the Proposed Activities Will t .Notified Prior to Conducting Operations.

Access Dredgeing Within Canals Not to Exceed –6.0' Elevation.

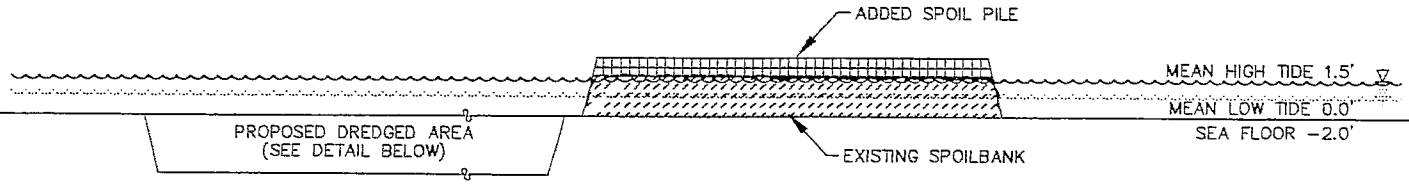
Total Distance to be Dredged For Access Route Is Approximately 10,700 Feet Which Equates to Approximately 155,000 Cubic Yards of Dredged Material.

PREPARED BY C–K ASSOCIATES, INC. B.R., LA.

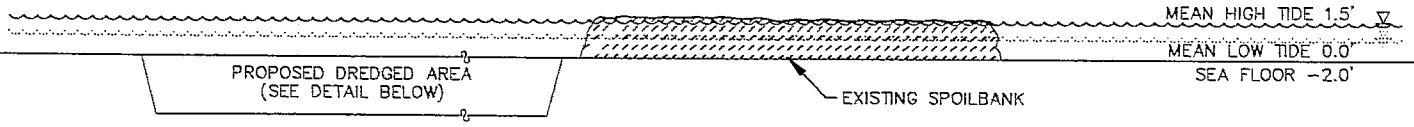
A24–800–36
3 OF 9

PROPOSED STRUCTURES

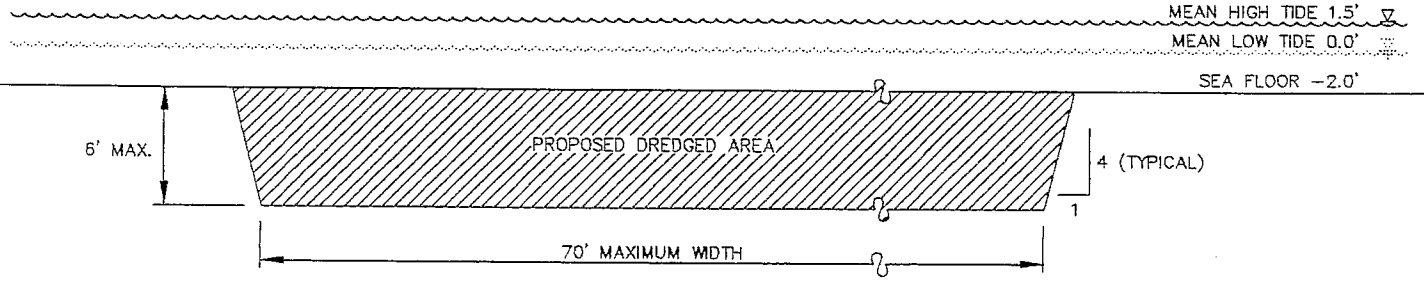
POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94



SECTION A–A
DREDGING AREA AND SPOILBANK
(FOR BUCKET DREDGING OPERATIONS)
SCALE: 1" = 20'



SECTION A–A
DREDGING AREA AND SPOILBANK
(FOR PROPWASH DREDGING OPERATIONS)
SCALE: 1" = 20'



PROPOSED DREDGING AREA DETAIL
SCALE: 1" = 10'

PROPOSED DREDGING CROSS SECTION, AREA 1A

SHEET 4 OF 9

NOTES:

levations are N.G.V.D.

Propwashing Will Not Alter Sea Floor Elevations Greater Than Six Inches.

See Sheet 2 of 9 For Cross–Section Location.

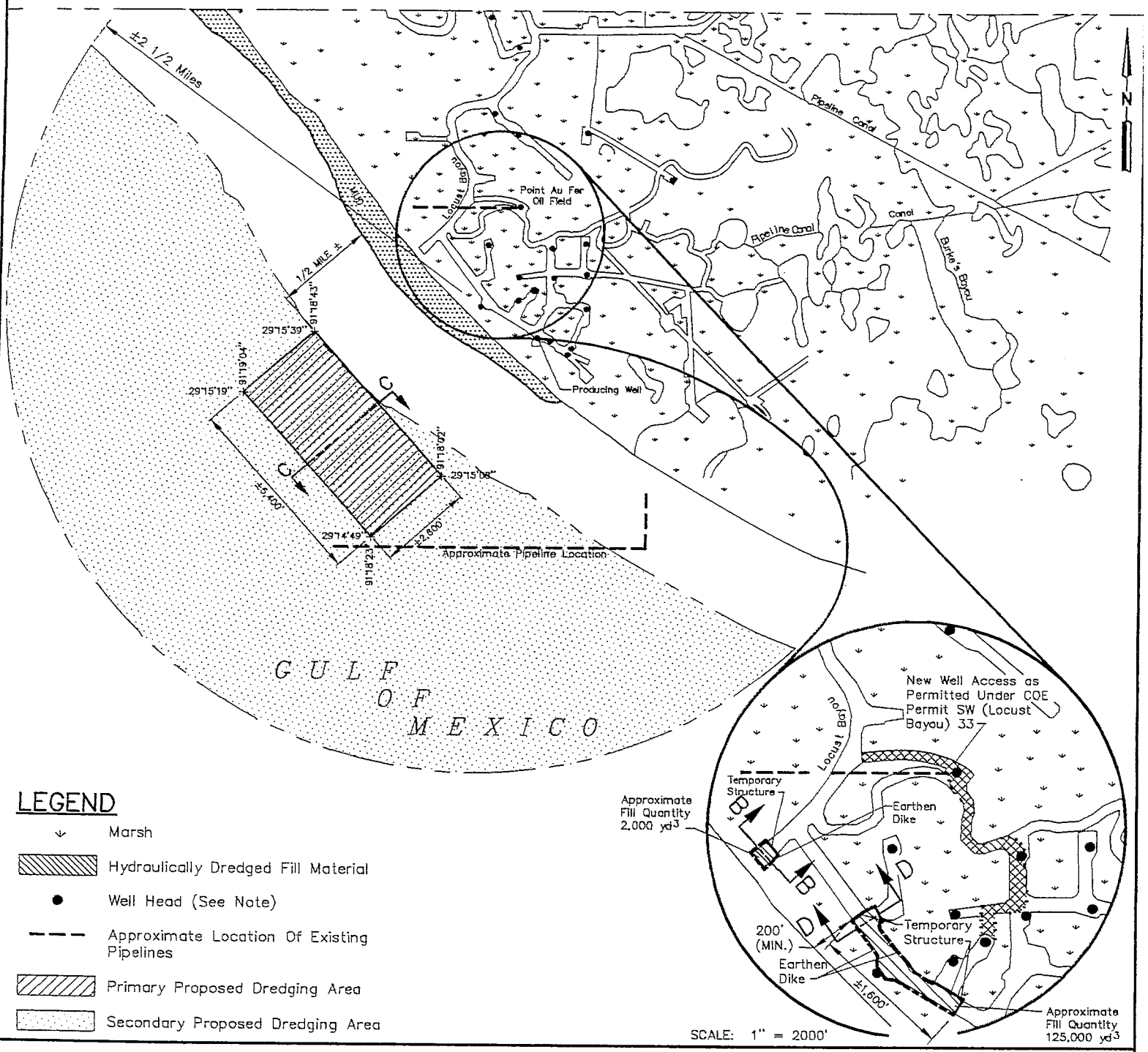
PREPARED BY C–K ASSOCIATES, INC. B.R., LA.

A24–800–34
4 of 9

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

07/94/95C



LEGEND

- Marsh
- Hydraulically Dredged Fill Material
- Well Head (See Note)
- Approximate Location Of Existing Pipelines
- Primary Proposed Dredging Area
- Secondary Proposed Dredging Area

PROJECT SITE PLAN, AREA 2

4000 0 4000 8000

SCALE–FEET

SHEET 5 OF 9

NOTES:

Pi[illegible]ne Locations are Approximate. Field Verification Required Prior To C[illegible]ruction.

All Wells Are Not Producing Unless Otherwise Noted.

Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

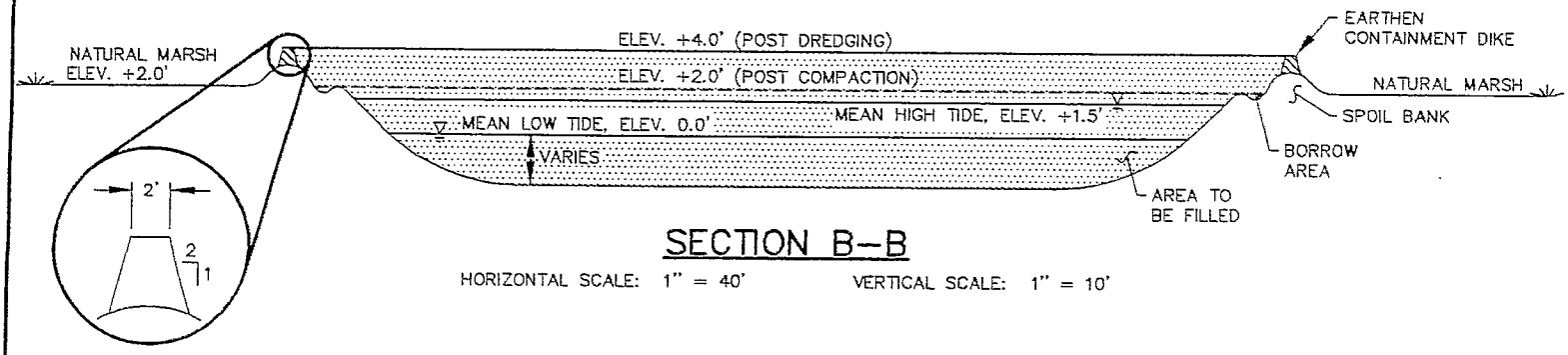
See Sheet 6 of 9 for Cross–Section Details.

PREPARED BY C–K ASSOCIATES, INC. B.R., LA.

A24–800–12
5 OF 9

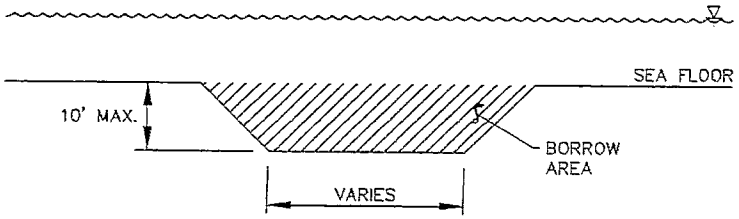
PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94



SECTION B–B

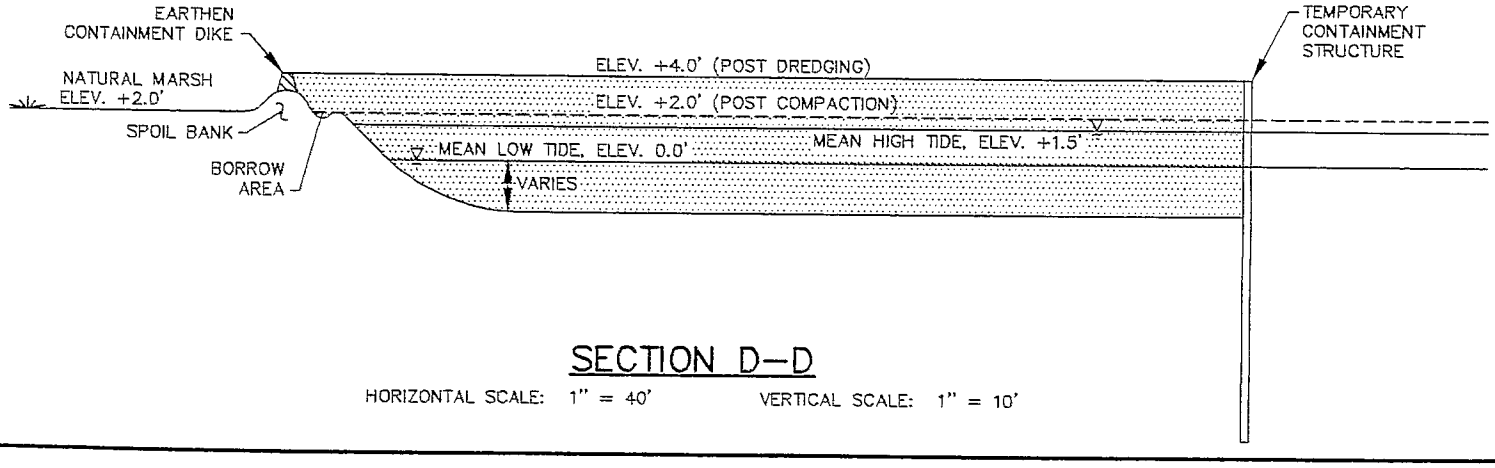
HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 10'



SECTION C–C

TYPICAL PROPOSED DREDGING AREA

SCALE: 1" = 20'



SECTION D–D

HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 10'

CROSS–SECTIONS

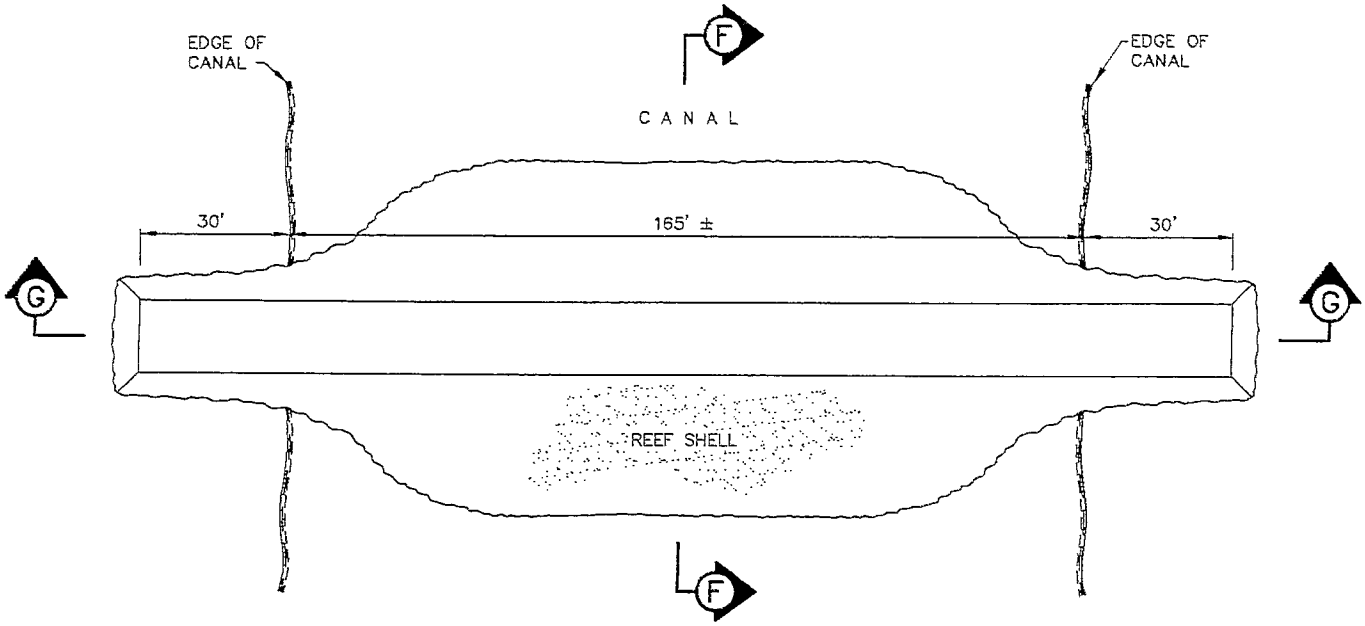
NOTE:

All Elevations are N.G.V.D.

See Sheet 5 of 9 For Cross–Section Location.

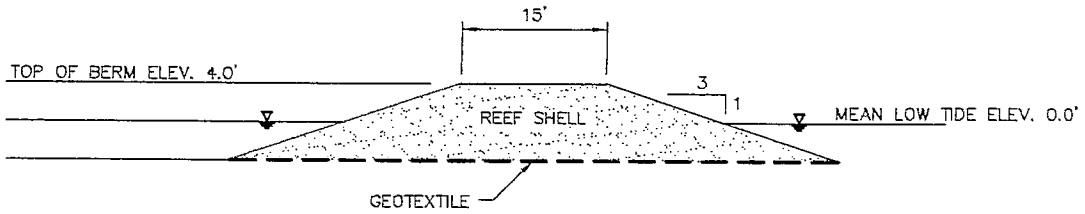
PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94



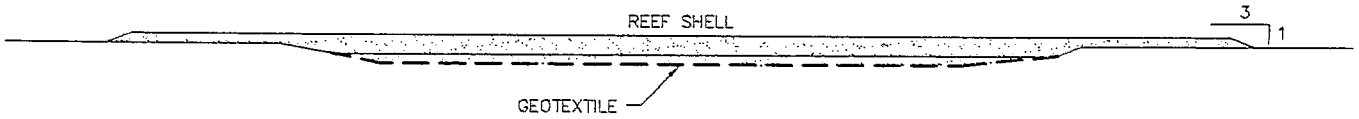
TYPICAL REEF SHELL PLUG

SCALE: 1" = 40'



SECTION F–F

SCALE: 1" = 20'



SECTION G–G

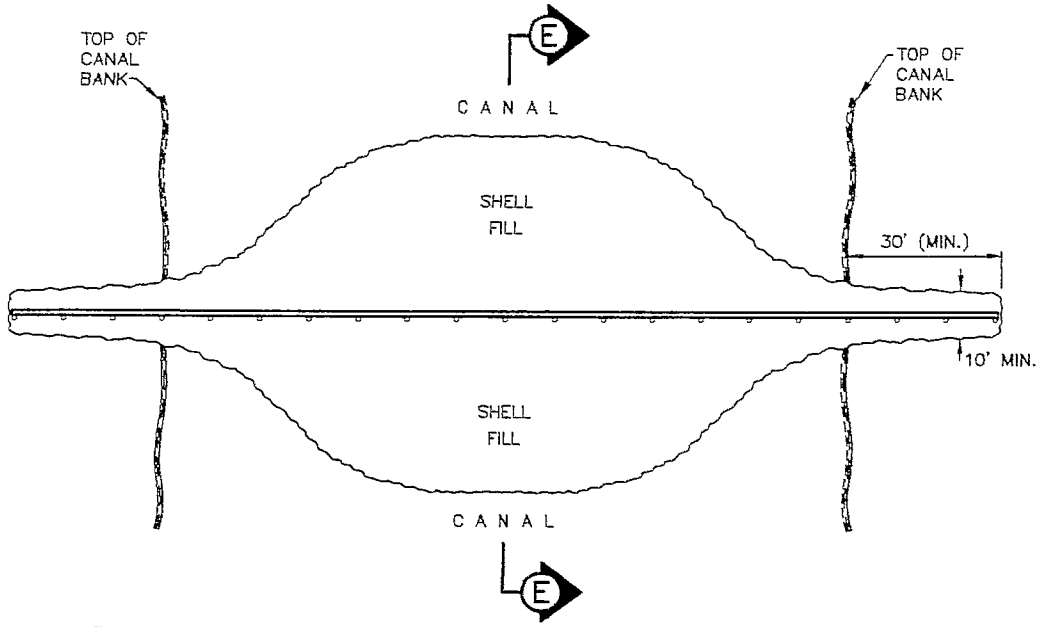
SCALE: 1" = 40'

PLUG #4

NOTE:
All Elevations are N.G.V.D.

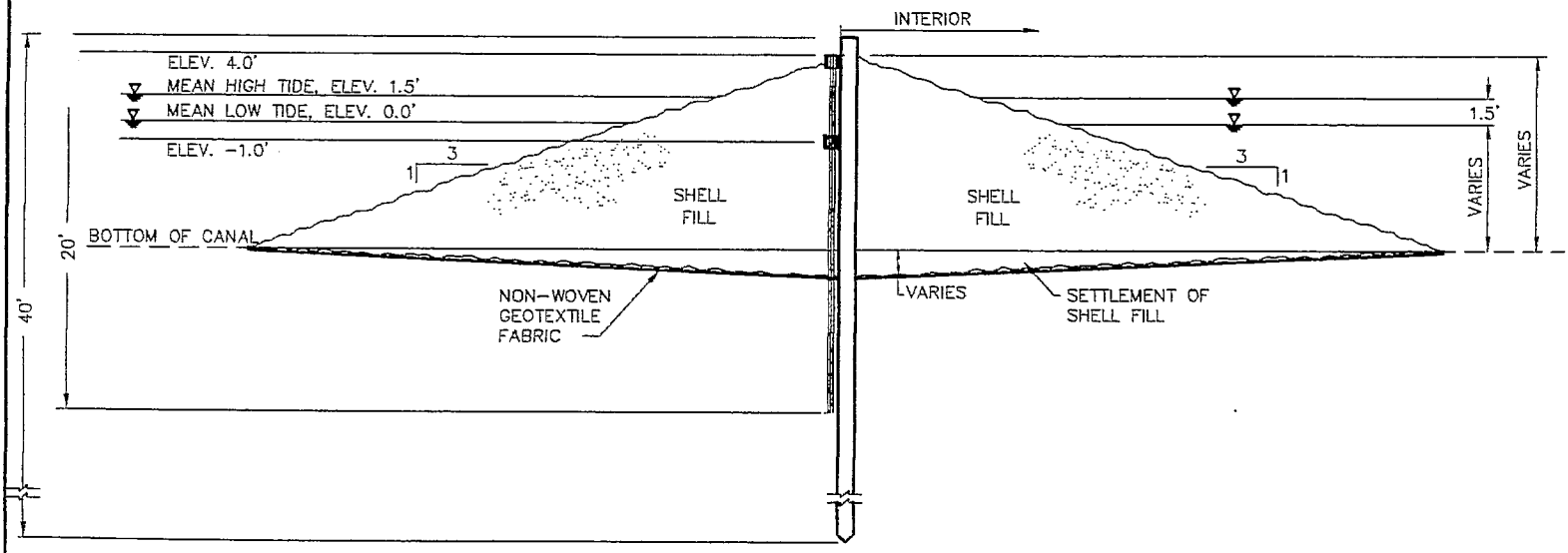
PROPOSED STRUCTURES

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Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94



TYPICAL TIMBER BULKHEAD PLUG PLAN VIEW

SCALE: 1" = 40'



SECTION E-E

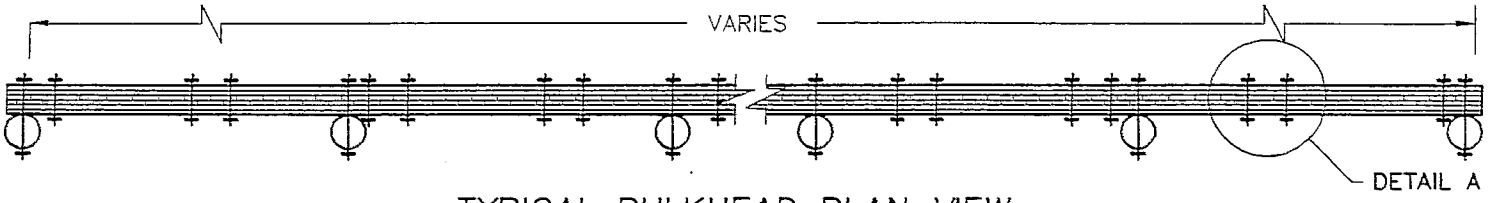
SCALE: 1" = 12'

CONCEPTUAL PLUG DESIGN

NOTE:
All Elevations are N.G.V.D.

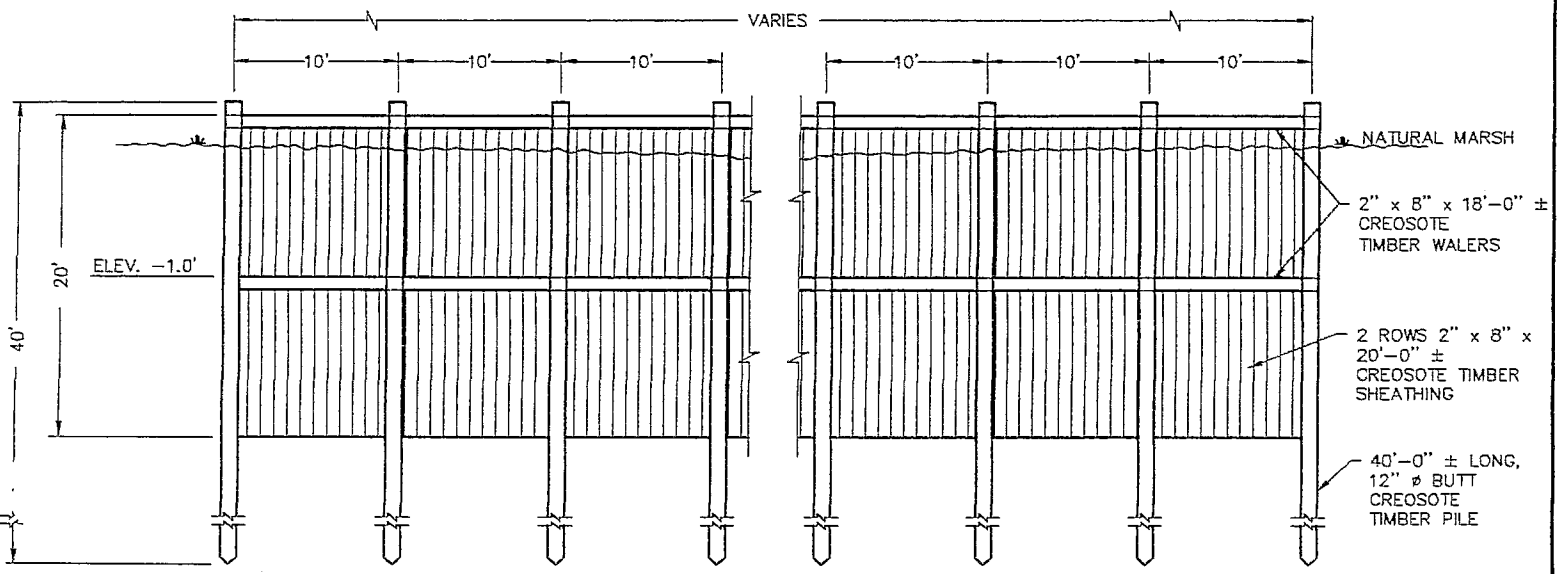
PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94



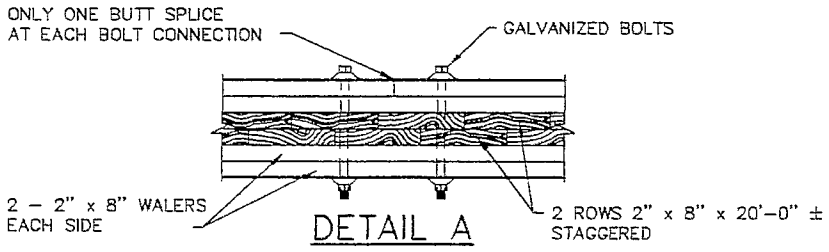
TYPICAL BULKHEAD PLAN VIEW

SCALE: 1" = 6'



TYPICAL BULKHEAD ELEVATION VIEW

SCALE: 1" = 12'



DETAIL A

SCALE: 1" = 2'

CONCEPTUAL PLUG DESIGN

SHEET 9 OF 9

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-14
9 OF 9

DWN. BY: LMB CHKD. BY: ANM APPRVD. BY: ARM

EDWIN W. EDWARDS
GOVERNOR

State of Louisiana

JACK McCLANAHAN
SECRETARY

DEPARTMENT OF NATURAL RESOURCES

March 7, 1995

To: Carroll Clark
Federal Assistance Section, CRD

Through: Bill Good
Administrator, CRD BGG

Through: Terry Howey
Administrator, CMD

Through: Jeff Harris JDH
Consistency Section Manager, CMD

From: Ben Kropog BK
Consistency Section, CMD

Subject: C940289, Coastal Zone Consistency
National Marine Fisheries Service
Request for comments relating to the modification of CWPPRA project Point au Fer Island Hydrologic Restoration (TE-22)

Coastal Management Division is presently reviewing the referenced modified project for consistency with the Louisiana Coastal Resources Program. We would appreciate comments from Coastal Restoration as to whether the proposed activity, as described in the enclosed applications, conforms with the project as approved by the CWPPRA Task Force.

Thank you very much. Please contact me at 342-7939 if there are any questions.

Enclosures

COASTAL MANAGEMENT DIVISION P.O. BOX 44487 BATON ROUGE, LOUISIANA 70804-4487
TELEPHONE (504) 342-7591 FAX (504) 342-9439
AN EQUAL OPPORTUNITY EMPLOYER

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Habitat Conservation Division
c/o Louisiana State University
Baton Rouge, Louisiana 70803-7535

March 3, 1995

F/SE024/RR:jk
504/389-0508

RECEIVED
MAR 06 1995
COASTAL MANAGEMENT DIVISION

Dr. Terry Howey, Administrator
Louisiana Department of Natural Resources
Coastal Management Division
Post Office 44487
Baton Rouge, Louisiana 70804-4487

Dear Dr. Howey:

Attached, please find revised plans for the National Marine Fisheries Service's Point au Fer Hydrologic Restoration project located in Terrebonne Parish, Louisiana. Plan revisions include the access route to the Transco/Hester Canal area through Mosquito Bay and an alternative plug design at the south end of the Transco Canal (plug #4). Access will now require dredging by propwashing or bucket dredge and dredged material deposition in open water or on existing spoil banks.

By letter dated August 31, 1994, you provided a determination of coastal zone consistency, number C940289, for this restoration project. We are requesting your reassessment to determine whether the project, as revised, would still be consistent with the Louisiana Coastal Resources Program.

Thank you for your attention to this matter.

Sincerely,

Rickey N. Ruebsamen

Rickey N. Ruebsamen
Branch Chief

Enclosure

ATTACHMENT A
Discharge of Dredged or Fill Material

As shown on Sheet 2 and 3 of the attached prints, approximately 155,000 yd^3 of material will be required to be removed to access the site. As shown on Sheet 5, approximately 125,000 yd^3 and 2,000 yd^3 of dredged material also from the Gulf of Mexico will be used to construct two earthen plugs in Area 2.

Plugs 1, 2, 6, 7, and 8 will consist of a timber bulkhead with reef shell (or equivalent) backfill (see Sheets 2, 8, and 9). Due to the shallow depths at the location of Plug 3A and Plug 4, a timber bulkhead will not be structurally necessary. As an alternative to the timber/shell structure at Plug 3A and 4, a plug consisting of shell only will be sufficient (see Sheet 7). The following table presents the approximate quantities of shell backfill which will be required for Plugs 1, 2, 3A, 4, 6, 7, and 8.

Plug	Shell Backfill (yd^3)
1	800
2	500
3A (w/o timber bulkhead)	1,100
4 (w/o) timber bulkhead)	1,100
6	2,200
7	1,800
8	1000
Total	**8,500 yd^3**

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
(33 CFR 325)

OMB APPROVAL NO. 0710-00
Expires 30 September 1992

...lic reporting burden for this collection of information is estimated to average 5 hours per response for the majority of cases, including the time for reviewing instructions, ...rching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Applications for larger or more complex projects, or those in ecologically sensitive areas, could take up to 500 hours. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Please DO NOT RETURN your completed form to either of these addresses. Send your completed form to: Department of Defense, U.S. Army Corps of Engineers, Attn: CECW-OR, 20 Mass. Ave., N.W. Washington, DC 20314-1000.

The Department of the Army permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine, Protection, Research and Sanctuaries Act. These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping into ocean waters. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application *(see sample drawings and instructions)* and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. APPLICATION NUMBER *(To be Assigned by Corps)*

2. NAME AND ADDRESS OF APPLICANT

Rickey N. Ruebsamen
National Marine Fisheries
Habitat Conservation Division
c/o LSU Center for Coastal Energy and Environmental Resources
Baton Rouge, Louisiana 70803-7535

Telephone no. during business hours

A/C ( ) _____ (Residence)
A/C (504) 389-0508 (Office)

3. NAME, ADDRESS, AND TITLE OF AUTHORIZED AGENT

Telephone no. during business hours

A/C ( ) _____ (Residence)
A/C ( ) _____ (Office)

Statement of Authorization: I hereby designate and authorize _____ to act in my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of the application.

SIGNATURE OF APPLICANT

DATE

4. DETAILED DESCRIPTION OF PROPOSED ACTIVITY

4a. ACTIVITY

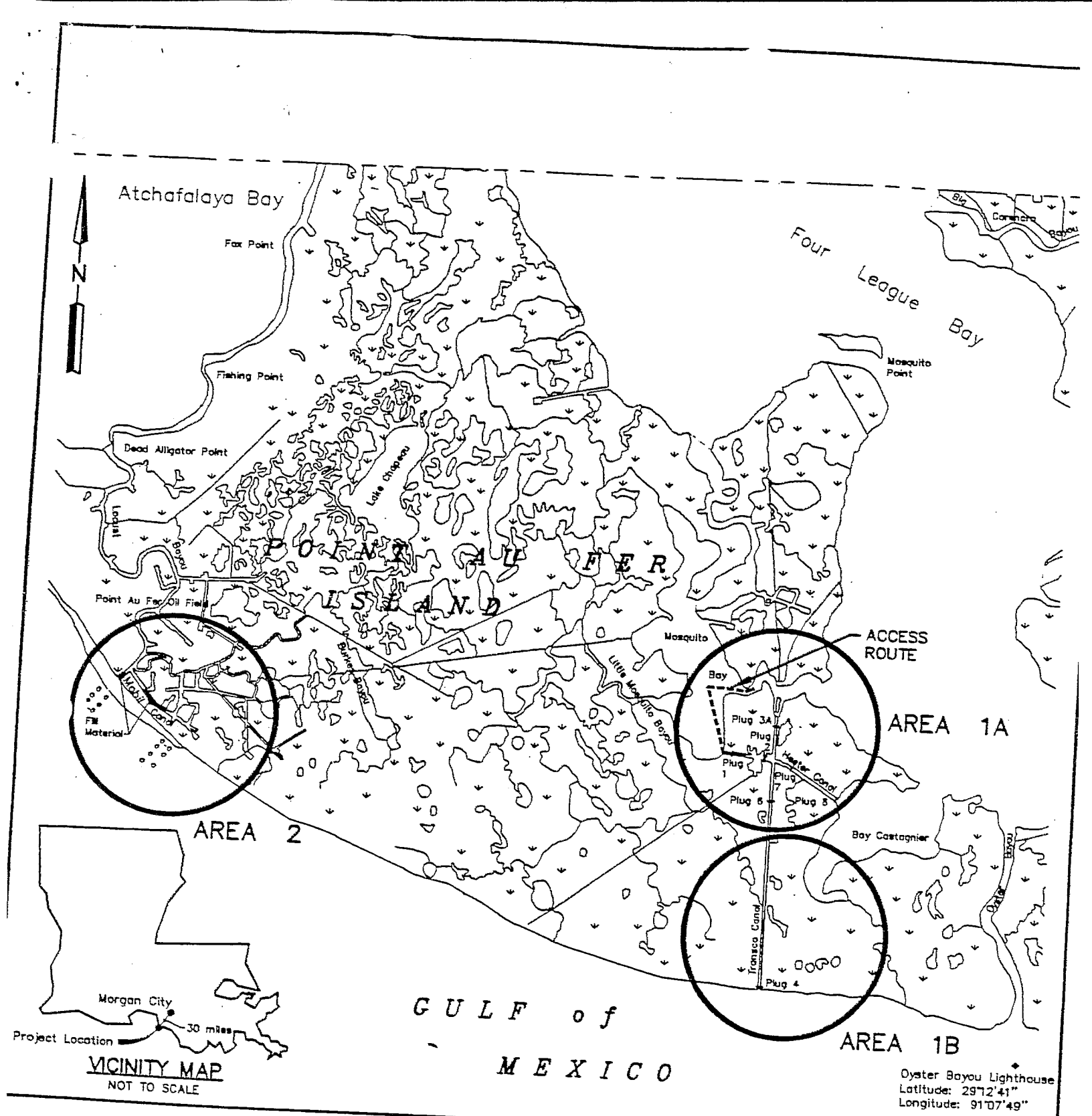
The proposed activity consists of constructing and maintaining timber bulkheads and earthen/reef shell plugs. The structures are to be constructed across canals on Point au Fer Island, Louisiana. The location and details of the structures are shown on the attached prints (in nine sheets).

4b. PURPOSE

The purpose of the Point au Fer Island Hydrologic Restoration Project is to reduce saltwater intrusion and tidal flushing in the Point au Fer marshes due to manmade canals and beach overwash without reducing fresh backwater flooding from the Atchafalaya River. It was determined that constructing timber structures and earthen/reef shell plugs (consisting of fill material hydraulically dredged from the Gulf of Mexico) across the canals at strategic locations would reduce the adverse impacts to beachfront and interior brackish-intermediate marsh. Plug locations have been selected so that the interior surface hydrology will once again be maintained by low energy processes such as tidal overbank flooding and sheetflow between indigenous bayous and inland marshes.

4c. DISCHARGE OF DREDGED OR FILL MATERIAL

See Attachment A for a discussion concerning the discharge of dredged or fill material.



LOCATION MAP

8000 0 8000 16000

SCALE–FEET

SHEET 1 OF 9

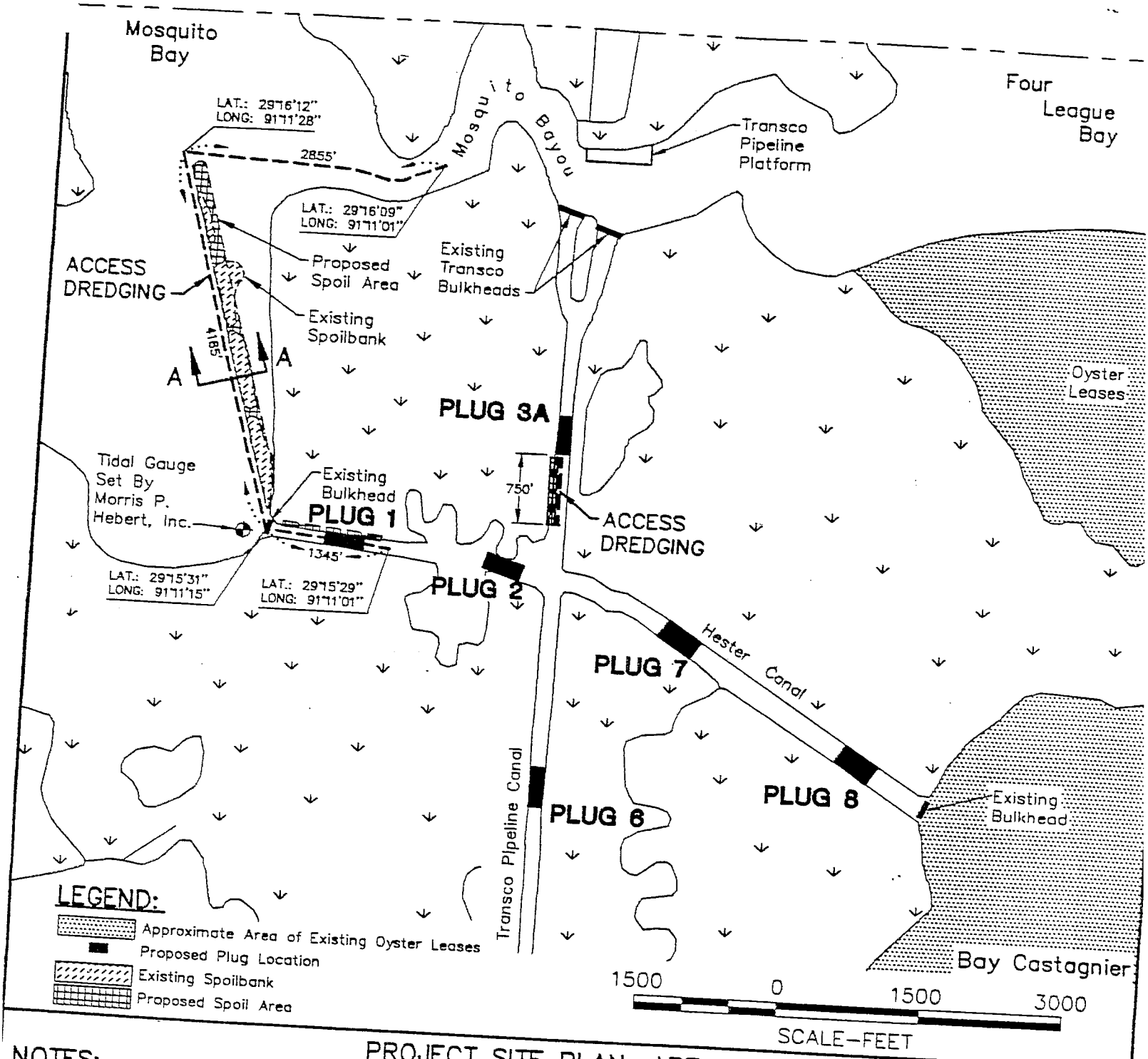
Base ...rmation Taken From Digitized Quadrangle Maps on Diskette ...n Autocad format. Provided By American Digital Cartography, Inc.

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-32
1 OF 9



PROJECT SITE PLAN, AREA 1A

SHEET 2 OF 9

NOTES:

Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

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See Sheet 4 of 9 for Cross-Section Details.

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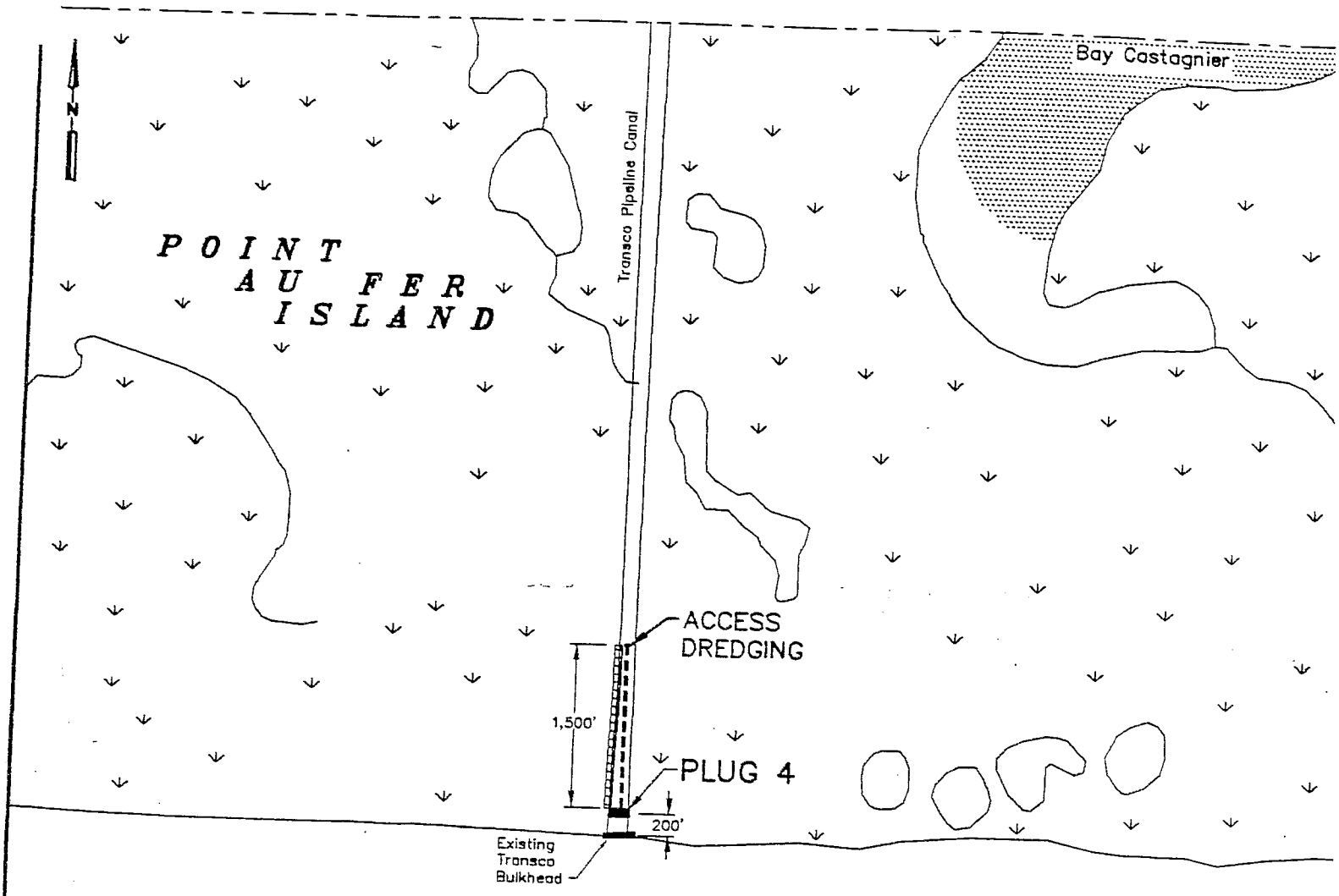
PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-33
2 of 9

DWN. BY: LMP CHKD BY:

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94



LEGEND:

- Approximate Area of Existing Oyster Leases
- Proposed Plug Location
- Existing Spoilbank
- Proposed Spoil Area

1500 0 1500 3000

SCALE–FEET

PROJECT SITE PLAN, AREA 1B

NOTES:

Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

...ging Operations to Include Either Propwashing and/or Bucket Dredging.

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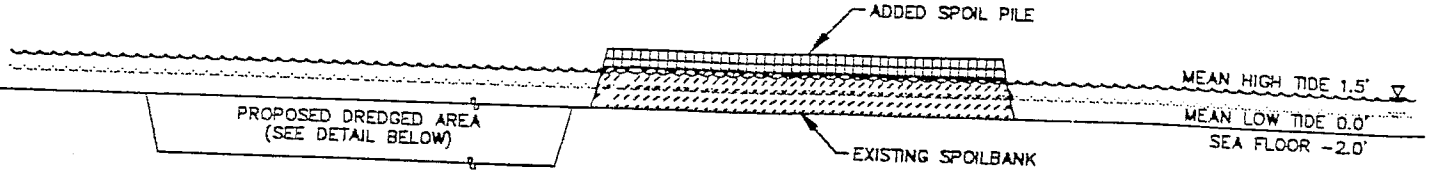
PREPARED BY C–K ASSOCIATES, INC. B.R., LA.

A24–800–36
3 OF 9

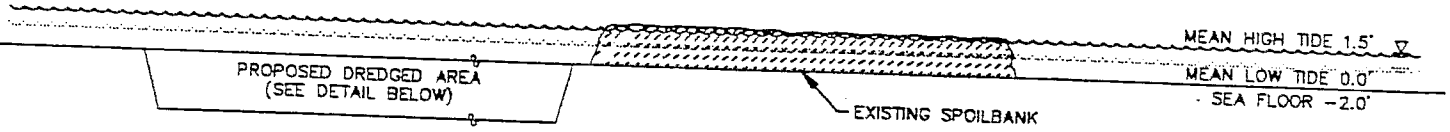
SHEET 3 OF 9

PROPOSED STRUCTURES

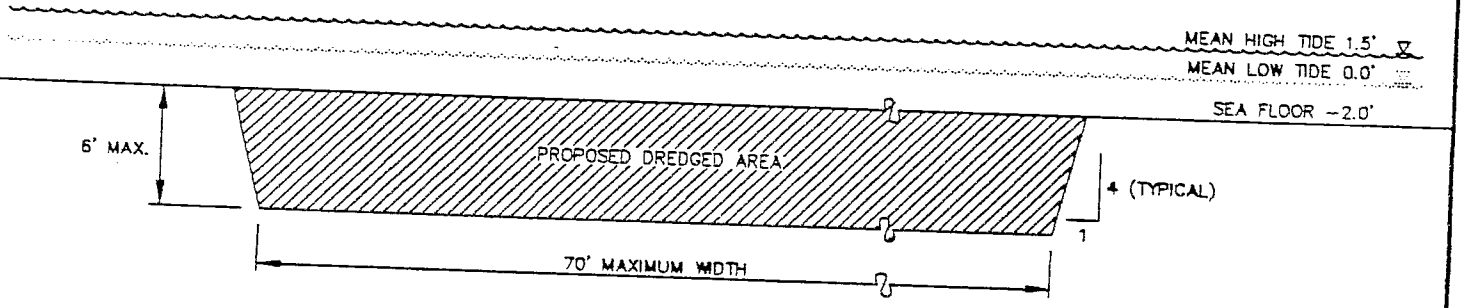
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BATON ROUGE, LOUISIANA Date 6/30/94



SECTION A–A
DREDGING AREA AND SPOILBANK
(FOR BUCKET DREDGING OPERATIONS)
SCALE: 1" = 20'



SECTION A–A
DREDGING AREA AND SPOILBANK
(FOR PROPWASH DREDGING OPERATIONS)
SCALE: 1" = 20'



PROPOSED DREDGING AREA DETAIL
SCALE: 1" = 10'

PROPOSED DREDGING CROSS SECTION, AREA 1A

N TES:
All ations are N.G.V.D.

Propwashing Will Not Alter Sea Floor Elevations Greater Than Six Inches.

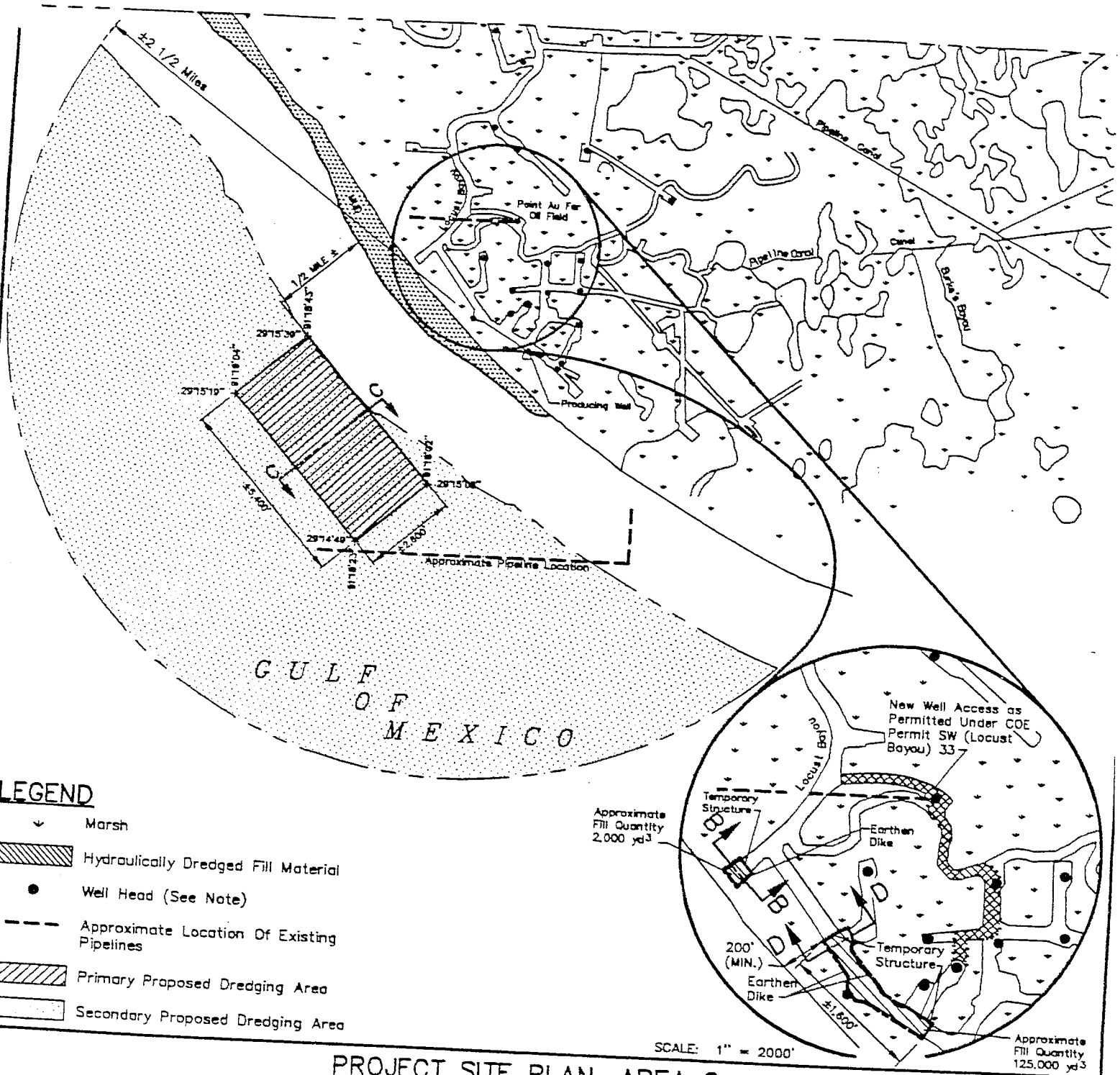
See Sheet 2 of 9 For Cross-Section Location.

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-34
4 of 9



LEGEND

- Marsh
- Hydraulically Dredged Fill Material
- Well Head (See Note)
- Approximate Location Of Existing Pipelines
- Primary Proposed Dredging Area
- Secondary Proposed Dredging Area

PROJECT SITE PLAN, AREA 2

4000 0 4000 8000

SCALE–FEET

SHEET 5 OF 9

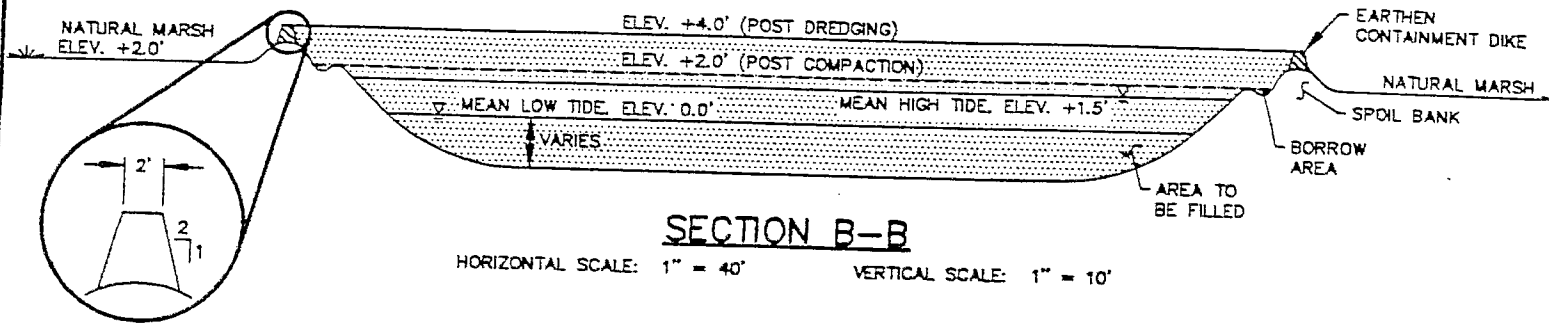
NOTES:

1. Pipeline locations are Approximate. Field Verification Required Prior To Construction.
2. All Wells Are Not Producing Unless Otherwise Noted.
3. Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.
4. See Sheet 6 of 9 for Cross–Section Details.

PREPARED BY C–K ASSOCIATES, INC. B.R., LA. A24–800–12

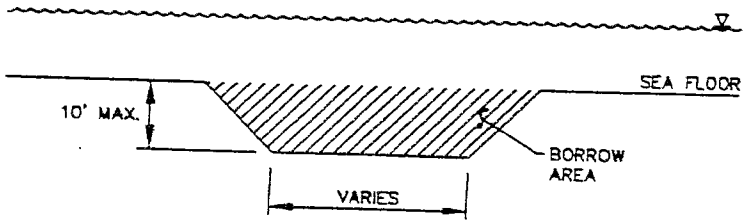
PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94



SECTION B–B

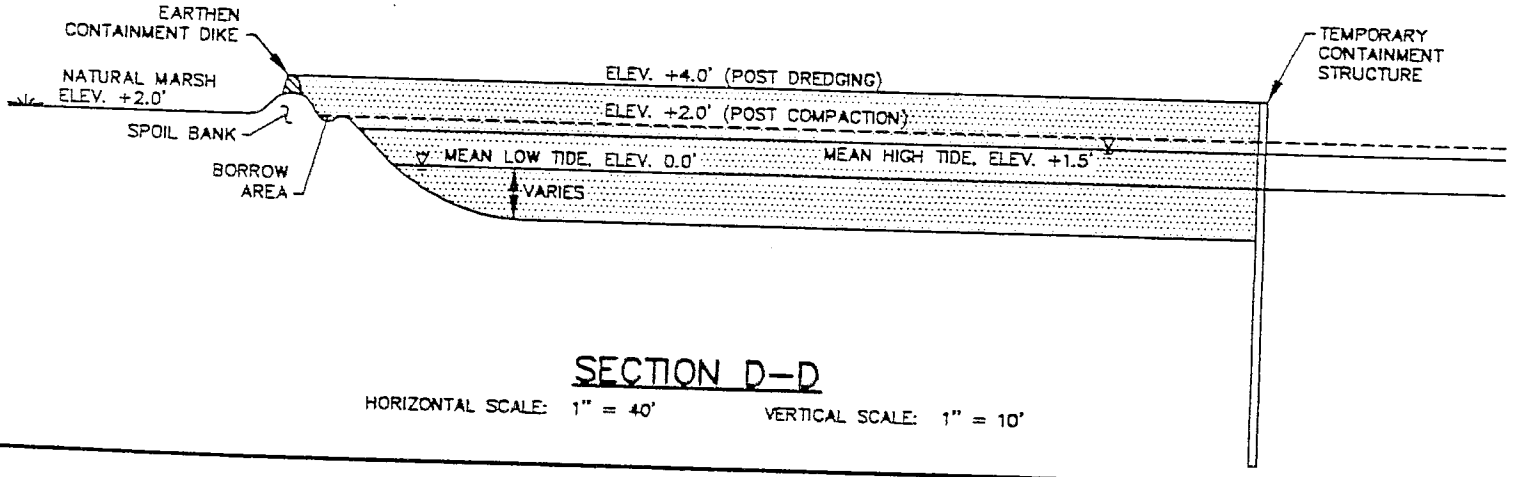
HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 10'



SECTION C–C

TYPICAL PROPOSED DREDGING AREA

SCALE: 1" = 20'



SECTION D–D

HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 10'

CROSS–SECTIONS

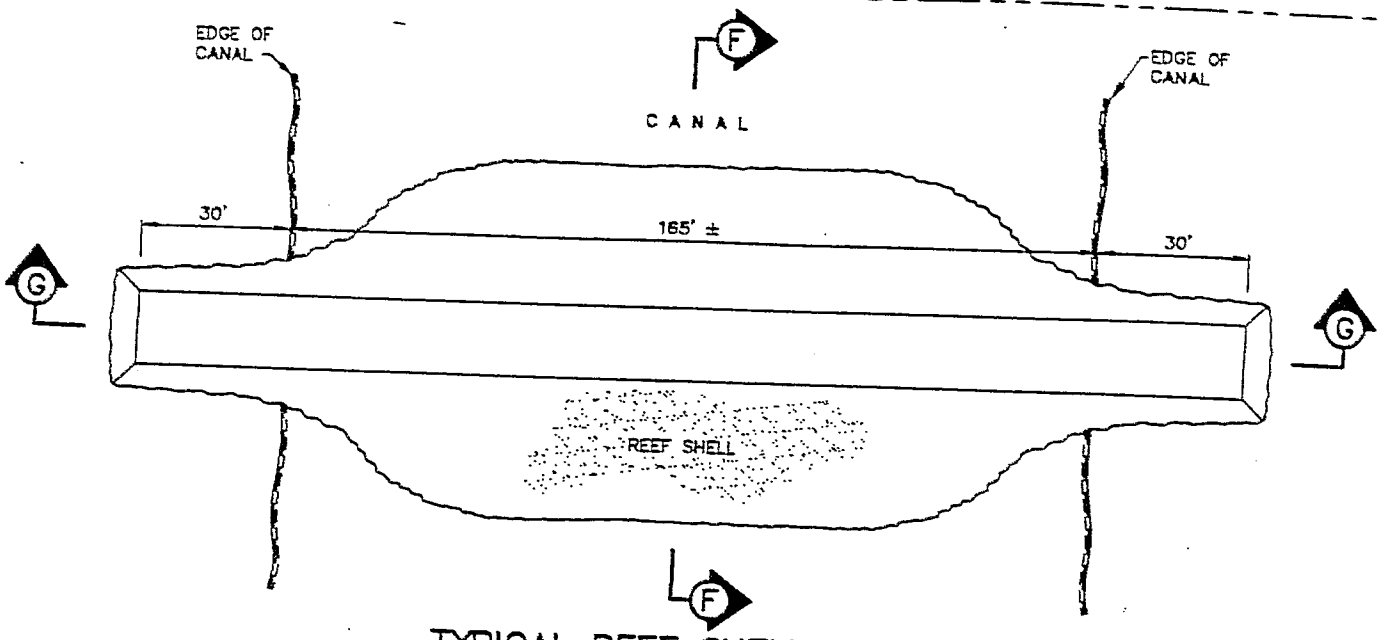
NOTE:

All Elevations are N.G.V.D.

Sheet 5 of 9 For Cross–Section Location.

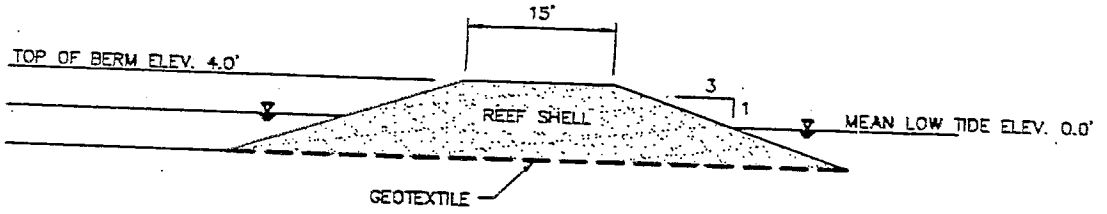
PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94



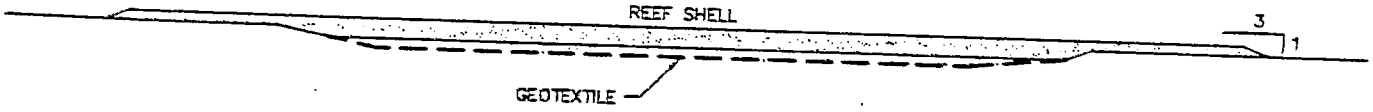
TYPICAL REEF SHELL PLUG

SCALE: 1" = 40'



SECTION F–F

SCALE: 1" = 20'



SECTION G–G

SCALE: 1" = 40'

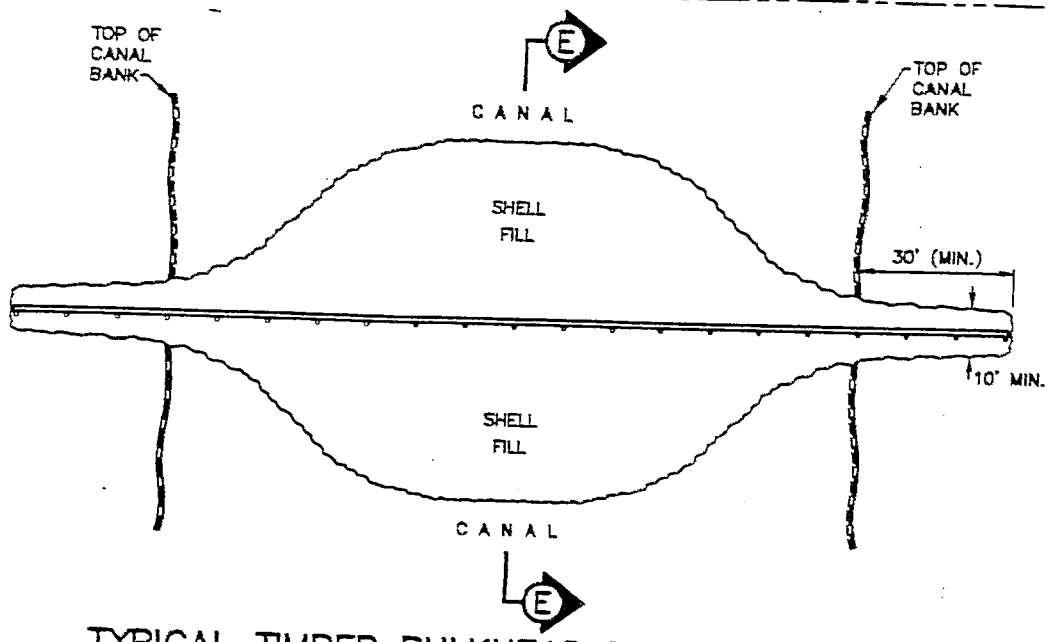
PLUG #4

NOTE:
All Elevations are N.G.V.D.

PROPOSED STRUCTURES

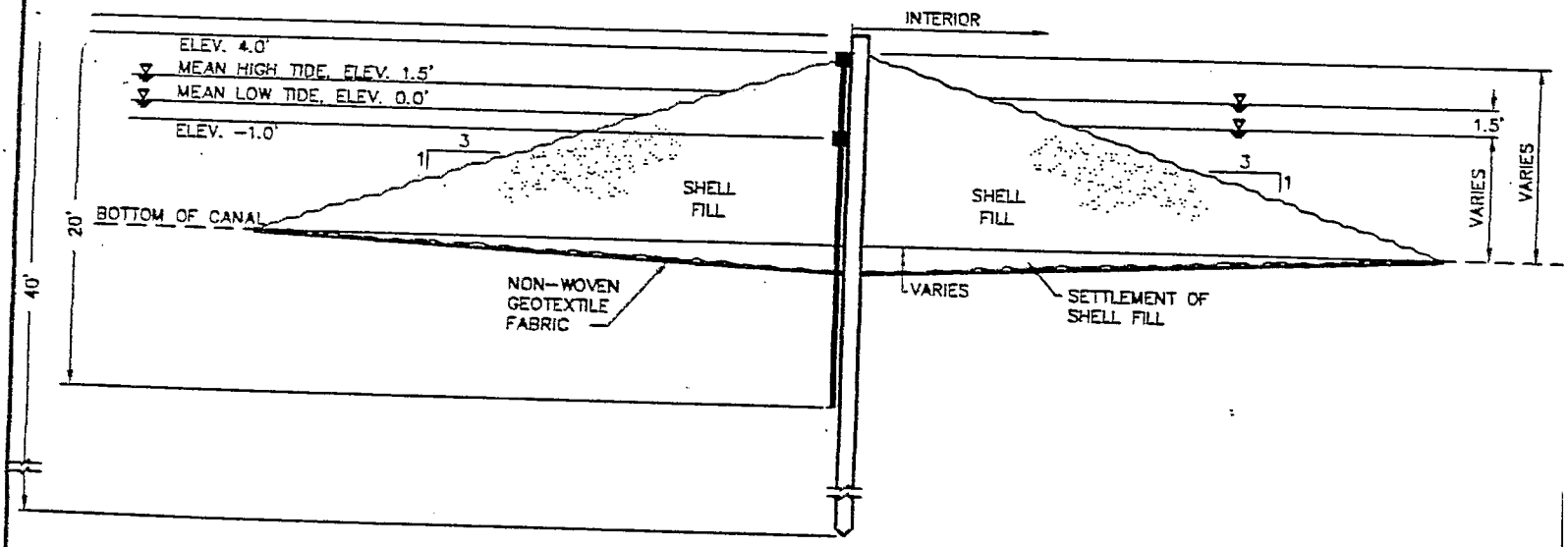
POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C–K ASSOCIATES, INC. B.R., LA.
A24–800–35
7 OF 9



TYPICAL TIMBER BULKHEAD PLUG PLAN VIEW

SCALE: 1" = 40'



SECTION E-E

SCALE: 1" = 12'

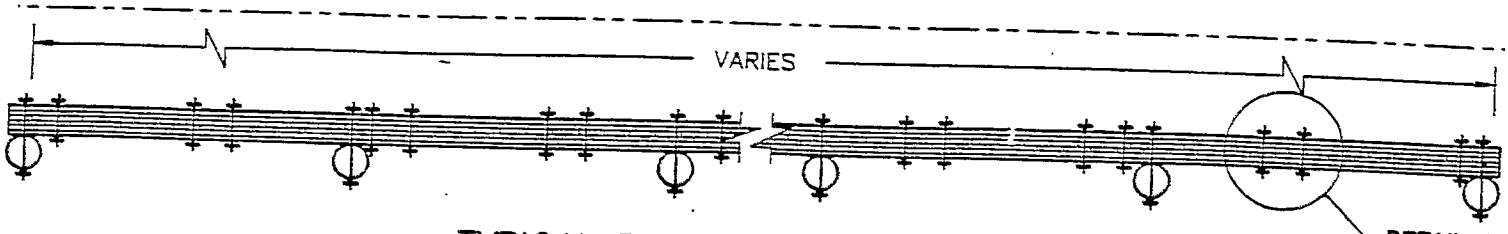
CONCEPTUAL PLUG DESIGN

NOTE:
All Elevations are N.G.V.D.

PROPOSED STRUCTURES

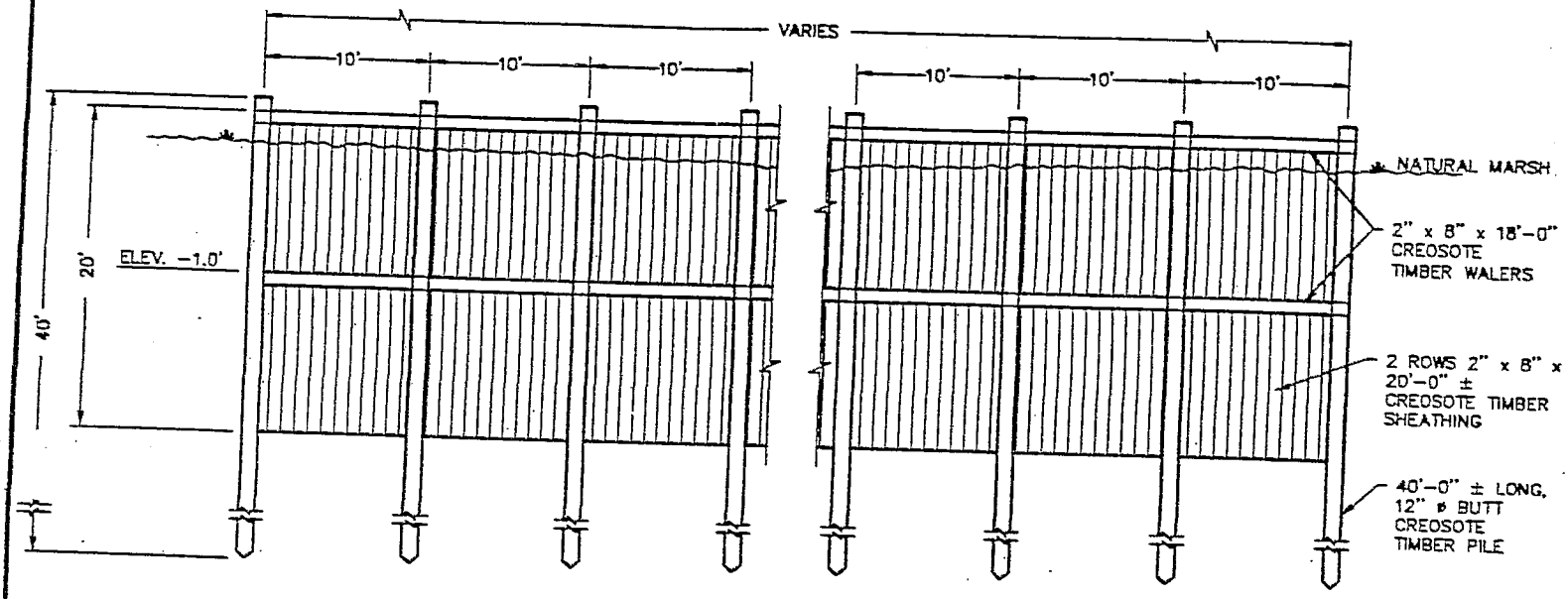
POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.



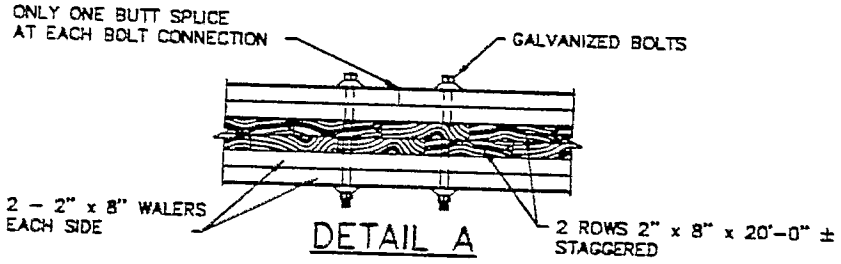
TYPICAL BULKHEAD PLAN VIEW

SCALE: 1" = 6'



TYPICAL BULKHEAD ELEVATION VIEW

SCALE: 1" = 12'



DETAIL A

SCALE: 1" = 2'

CONCEPTUAL PLUG DESIGN

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

Cook fyi on TE-22 Mary-fy

C-K ASSOCIATES, INC
ENVIRONMENTAL & ENGINEERING CONSULTANTS

17170 PERKINS ROAD
BATON ROUGE, LA 70810
PH (504) 755-1000
FAX (504) 751-2010

1717 EAST PRIEN LAKE ROAD
LAKE CHARLES, LA 70601
PH (318) 479-0303
FAX (318) 479-1145

2001 EAST 70TH STREET, SUITE 503
SHREVEPORT, LA 71105
PH (318) 797-8636
FAX (318) 798-0478

4820 WARD DRIVE
BEAUMONT, TEXAS 77705
PH (409) 842-2265
FAX (409) 840-9116

11615 ANGUS ROAD, SUITE 119
AUSTIN, TX 78759
PH (512) 346-1048
FAX (512) 346-7320

COASTAL RESTORATION

95 FEB 9 P3:32

February 7, 1995

State of Louisiana Department of Natural Resources
Coastal Restoration Division
P. O. Box 94396
Baton Rouge, Louisiana 70804-9396
Attn: Van Cook, P.E.

Ref: Point au Fer Hydrolic Restoration Project
C-K Associates' Project No. 24-800

Dear Mr. Cook:

As discussed previously, and due to additional modifications with regard to the U.S. Army Corps of Engineers Permit, as well as significant revisions to the final plans and specifications, I am hereby respectfully requesting that the funding originally budgeted to perform the oyster survey for the above referenced project to be utilized for finalization of plans and specifications.

Please feel free to contact me to further discuss this matter as it will effect budgetary considerations on this project. I can be reached at (504) 755-1000.

Very truly yours,
C-K Associates, Inc.

Rich Major, P.E.
Engineering Division Manager

ARM/mcr

C-K
SSOCIATES • INC
NVIRONMENTAL & ENGINEERING
CONSULTANTS

17170 PERKINS ROAD
BATON ROUGE, LA 70810
PH (504) 755-1000
FAX (504) 751-2010

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BEAUMONT, TEXAS 77705
PH (409) 842-2265
FAX (409) 840-9116

11615 ANGUS ROAD, SUITE 119
AUSTIN, TX 78759
PH (512) 346-1048
FAX (512) 346-7320

December 16, 1994

Louisiana Department of Natural Resources
Coastal Restoration Division
P.O. Box 94396
Baton Rouge, Louisiana 70804-9396
Attn: Mr. Van Cook, P.E.
Engineer Supervisor

Ref: Point au Fer Island Hydrologic Restoration Project
U.S. Army Corps of Engineers Permit Application Modification
C-K Associates' Project No. 24-800

Dear Mr. Cook:

As discussed, enclosed is a copy of the modified permit application for the above referenced project as well as a suggested draft letter which can be used for the transmittal of this information to the U.S. Army Corps of Engineers. As requested, we have also forwarded a copy of this information directly to Mr. Rickey Ruebsamen with the National Marine Fisheries Service.

If you have any questions concerning this information, please contact either myself or Mr. Andrew Milanes at (504) 755-1000.

Very truly yours,
C-K Associates, Inc.

Rich Major, P.E.
Engineering Division Manager

ARM/ANM/mcr

Enc: As stated

cc w/enc.: Mr. Rickey N. Ruebsamen
Area Supervisor
National Marine Fisheries Service
Habitat Conservation Division
c/o LSU Center for Wetland Resources
Baton Rouge, Louisiana 70803-7535

24A01L04.ARM

"SUGGESTED DRAFT"

July ____, 1994

U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, Louisiana 70160-0267
Attn: Mr. Martin S. Mayer
Environmental Resources Specialist

Ref: Permit Application
Point au Fer Island Plugs Hydrologic Restoration Project

Dear Mr. Mayer:

The National Marine Fisheries Service, Habitat Conservation Division (NMFS), previously submitted a permit application to construct earthen and timber plugs along the Transco, Hester, and Mobil Canals on Point au Fer Island, Louisiana. As a result of problems associated with obtaining access to the project site, modifications to the permit application are being requested. This transmittal documents these changes and presents the modified application in its entirety.

As stated in the attached ENG FORM 4345, the purpose of the Point au Fer Island Plugs Restoration Project is to reduce saltwater intrusion and tidal flushing in the Point au Fer marshes due to manmade canals and beach overwash without reducing fresh backwater flooding from the Atchafalaya River. It was determined that constructing timber structures and earthen plugs (consisting of fill material hydraulically dredged from the Gulf of Mexico) across the canals at strategic locations would reduce the adverse impacts to beachfront and interior brackish-intermediate marsh. Plug locations have been selected so that the interior surface hydrology will once again be maintained by low energy processes such as tidal overbank flooding and sheetflow between indigenous bayous and inland marshes.

Additionally, in an effort to avoid the oyster leases known to exist in Four League Bay (areas east of the project site) we are requesting approval to utilize a previously constructed access canal to allow construction equipment passage to the site. The canal provides access to the site from the west. Due to sediment placement over time, the canal will be required to be dredged to provide proper depth for this access.

The following items are enclosed with this letter:

- Modified ENG FORM 4345; and
- Copies of the associated modified prints, in eight sheets, showing the locations and details of the proposed canal plugs and site access.

We appreciate your assistance in the timely processing of this permit application.

Please contact us at (504) 389-0508 if you require any additional information.

Very truly yours,

National Marine Fisheries Service
Habitat Conservation Division

Rickey N. Ruebsamen

24A04L02.ANM

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
(33 CFR 325)

OMB APPROVAL NO. 0710-0003
Expires 30 September 1992

Public reporting burden for this collection of information is estimated to average 5 hours per response for the majority of cases, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Applications for larger or more complex jects, or those in ecologically sensitive areas, could take up to 500 hours. Send comments regarding this burden estimate or any other aspect of this collection of information, ding suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 20503. Please DO NOT RETURN your completed form to either of these addresses. Send your completed form to: Department of Defense, U.S. Army Corps of Engineers, Attn: CECW-OR, 20 Mass. Ave., N.W. Washington, DC 20314-1000.

The Department of the Army permit program is authorized by Section 10 of the Rivers and Harbors Act of 1899, Section 404 of the Clean Water Act and Section 103 of the Marine, Protection, Research and Sanctuaries Act. These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided on this form will be used in evaluating the application for a permit. Information in this application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of the original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (*see sample drawings and instructions*) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. APPLICATION NUMBER *(To be Assigned by Corps)*

2. NAME AND ADDRESS OF APPLICANT

Rickey N. Ruebsamen
National Marine Fisheries
Habitat Conservation Division
c/o LSU Center for Coastal Energy and Environmental Resources
Baton Rouge, Louisiana 70803-7535

Telephone no. during business hours

A/C ( ) _____ (Residence)
A/C (504) 389-0508 (Office)

3. NAME, ADDRESS, AND TITLE OF AUTHORIZED AGENT

Telephone no. during business hours

A/C ( ) _____ (Residence)
A/C ( ) _____ (Office)

Statement of Authorization: I hereby designate and authorize _____ to act in my behalf as my agent in the processing of this permit application and to furnish, upon request, supplemental information in support of the application.

SIGNATURE OF APPLICANT | DATE

4. DETAILED DESCRIPTION OF PROPOSED ACTIVITY

4a. ACTIVITY

The proposed activity consists of constructing and maintaining timber bulkheads and earthen plugs. The structures are to be constructed across canals on Point au Fer Island, Louisiana. The location and details of the structures are shown on the attached prints (in eight sheets).

4b. PURPOSE

The purpose of the Point au Fer Island Hydrologic Restoration Project is to reduce saltwater intrusion and tidal flushing in the Point au Fer marshes due to manmade canals and beach overwash without reducing fresh backwater flooding from the Atchafalaya River. It was determined that constructing timber structures and earthen plugs (consisting of fill material hydraulically dredged from the Gulf of Mexico) across the canals at strategic locations would reduce the adverse impacts to beachfront and interior brackish-intermediate marsh. Plug locations have been selected so that the interior surface hydrology will once again be maintained by low energy processes such as tidal overbank flooding and sheetflow between indigenous bayous and inland marshes.

4c. DISCHARGE OF DREDGED OR FILL MATERIAL

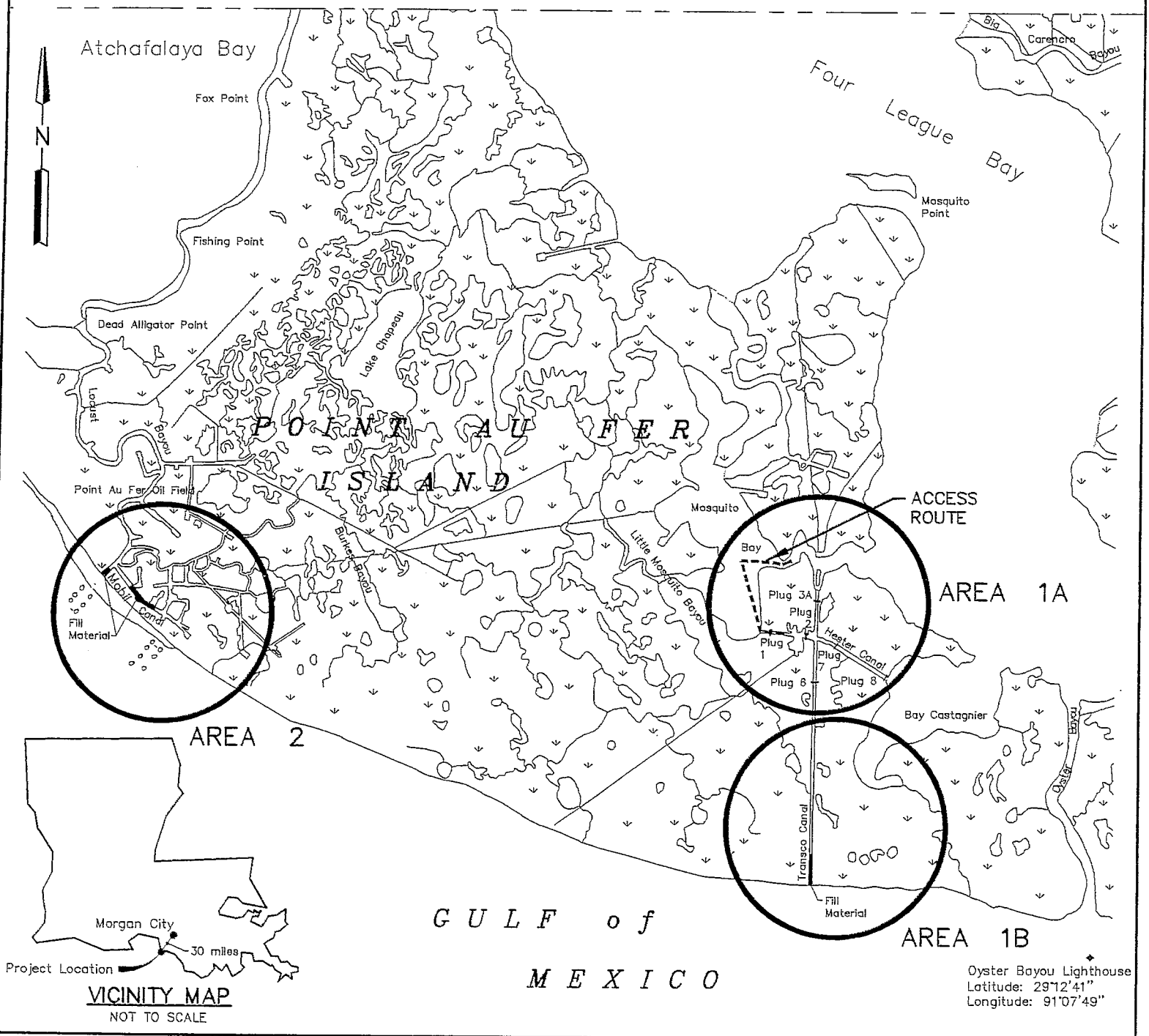
See Attachment A for a discussion concerning the discharge of dredged or fill material.

ATTACHMENT A
Discharge of Dredged or Fill Material

As shown on Sheet 4 of the attached prints, approximately 80,000 yd^3 of hydraulically dredged material from the Gulf of Mexico will used to construct an earthen plug in Area b. In addition, as illustrated on Sheet 2 approximately 190,000 yd^3 of material will be required to be removed to access the site. As shown on Sheet 5, approximately 125,000 yd^3 and 2,000 yd^3 of dredged material also from the Gulf of Mexico will be used to construct two earthen plugs in Area 2.

Plugs 1, 2, 6, 7, and 8 will consist of a timber bulkhead with reef shell (or equivalent) backfill (see Sheets 2, 7, and 8). Due to the shallow depths at the location of Plug 3A, a timber bulkhead will not be structurally necessary. As an alternative to the timber/shell structure at Plug 3A, a plug consisting of shell only will be sufficient. The following table presents the approximate quantities of shell backfill which will be required for Plugs 1, 2, 3A, 6, 7, and 8:

Plug	Shell Backfill (yd^3)
1	430
2	337
3A (w/o timber bulkhead)	289
6	2,162
7	1,771
8	220
Total	**5,209 yd^3**



LOCATION MAP

8000 0 8000 16000

SCALE–FEET

SHEET 1 OF 8

NOTE:

Information Taken From Digitized Quadrangle Maps on Diskette
Autocad format. Provided By American Digital Cartography, Inc.

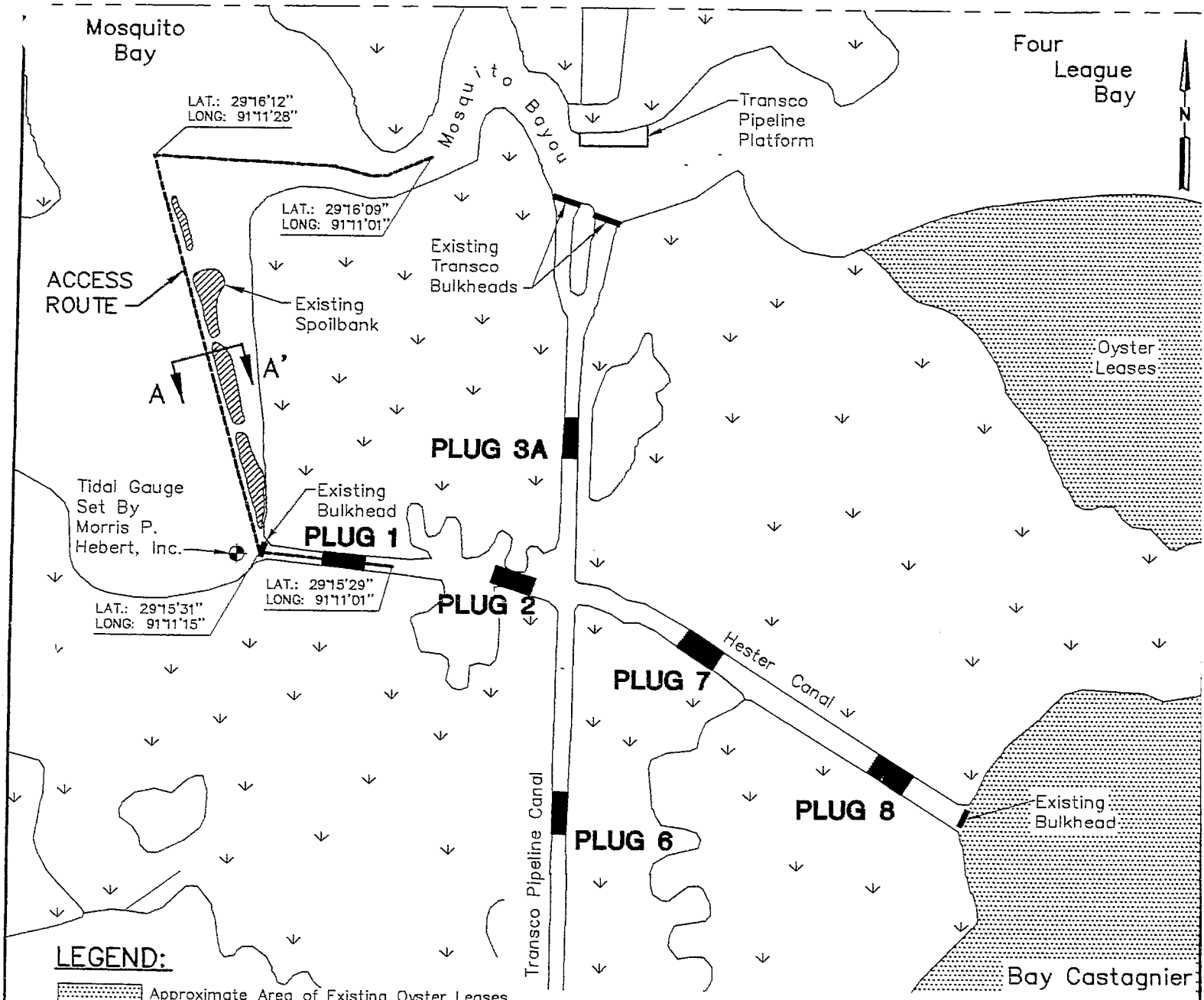
PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-32
1 OF 8

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



PROJECT SITE PLAN, AREA 1A

1500 0 1500 3000

SCALE–FEET

SHEET 2 OF 8

NOTES:

1. ...e Information Taken From Digitized Quadrangle Maps On Diskette In ...oad Format Provided By American Digital Cartography, Inc.
2. Oyster Lease Holders Within 1,500 feet of the Proposed Activities and Access Route will be Notified Prior to Conducting Operations.
3. See Sheet 3 of 8 for Cross–Section Details.

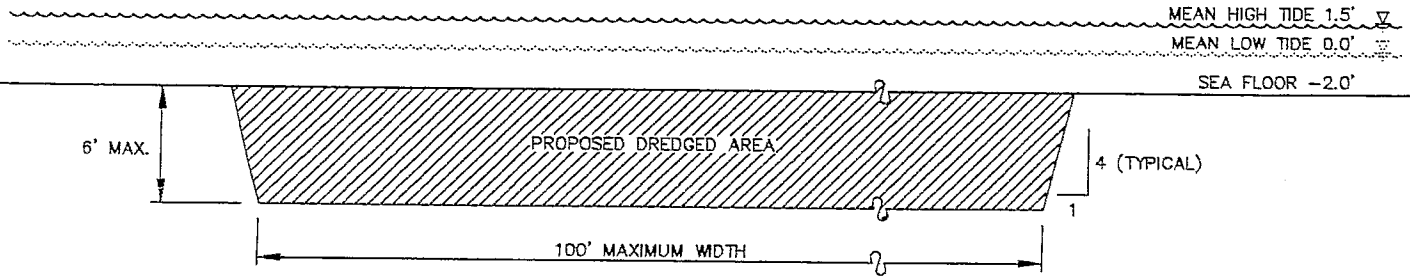
PREPARED BY C–K ASSOCIATES, INC. B.R., LA.

A24–800–33
2 of 8

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



SECTION A–A'

TYPICAL PROPOSED DREDGING AREA

SCALE: 1" = 10'

PROPOSED DREDGING CROSS SECTION, AREA 1A

NOTES:

Elevations are N.G.V.D.

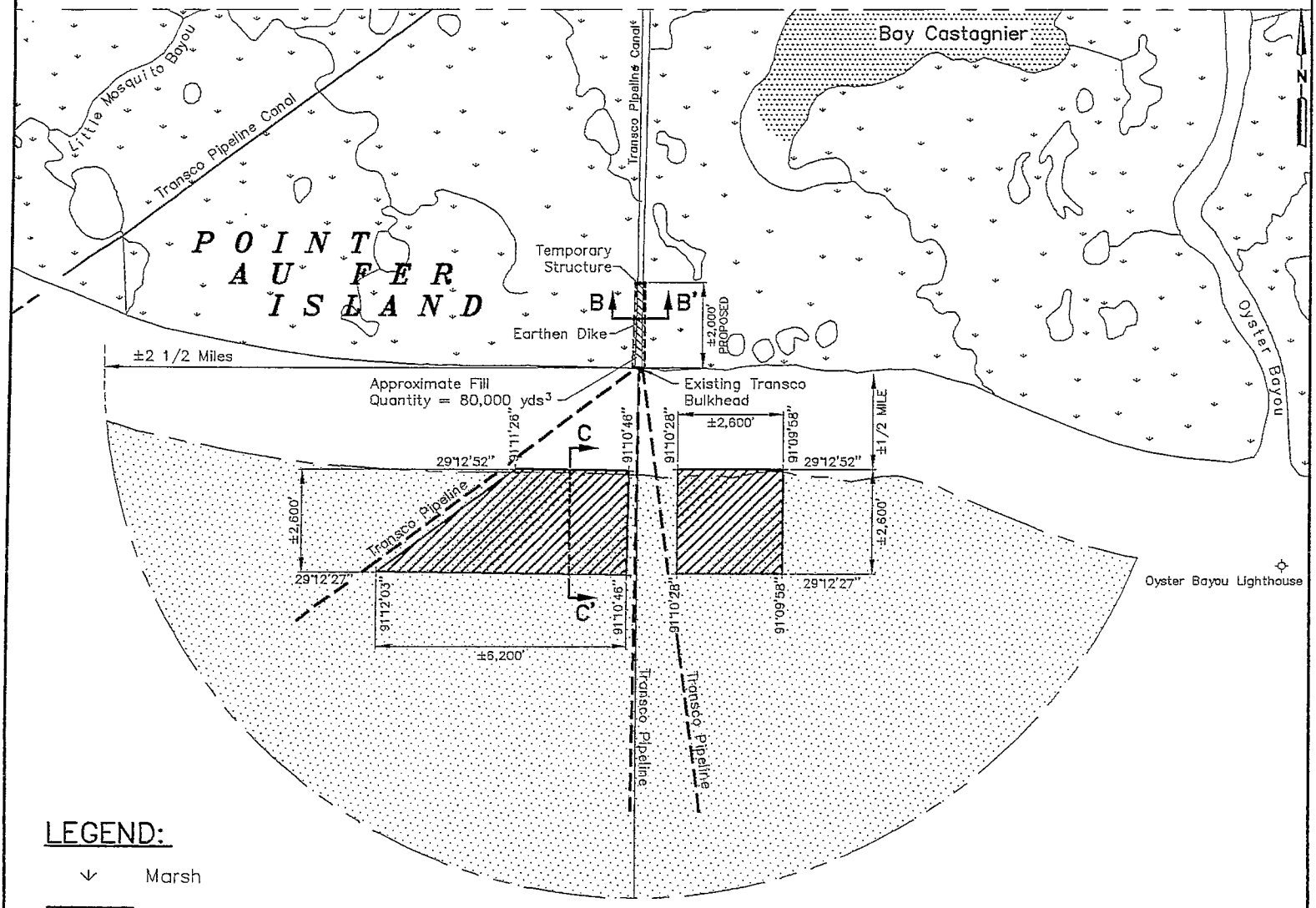
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PREPARED BY C–K ASSOCIATES, INC. B.R., LA.

A24–800–34
3 of 8

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



LEGEND:

- Marsh
- Primary Proposed Dredging Area
- Secondary Proposed Dredging Area
- Approximate Locations of Existing Pipelines
- Hydraulically Dredged Fill Material
- Approximate Area of Existing Oyster Leases

GULF OF MEXICO

PROJECT SITE PLAN, AREA 1B

4000 0 4000 8000

SCALE–FEET

SHEET 4 OF 8

NOTES:

1. Pipeline Locations Are Approximate. Field Verification Required Prior To Construction.
2. Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format By American Digital Cartography, Inc.
3. See Sheet 6 of 8 for Cross–Section Details.

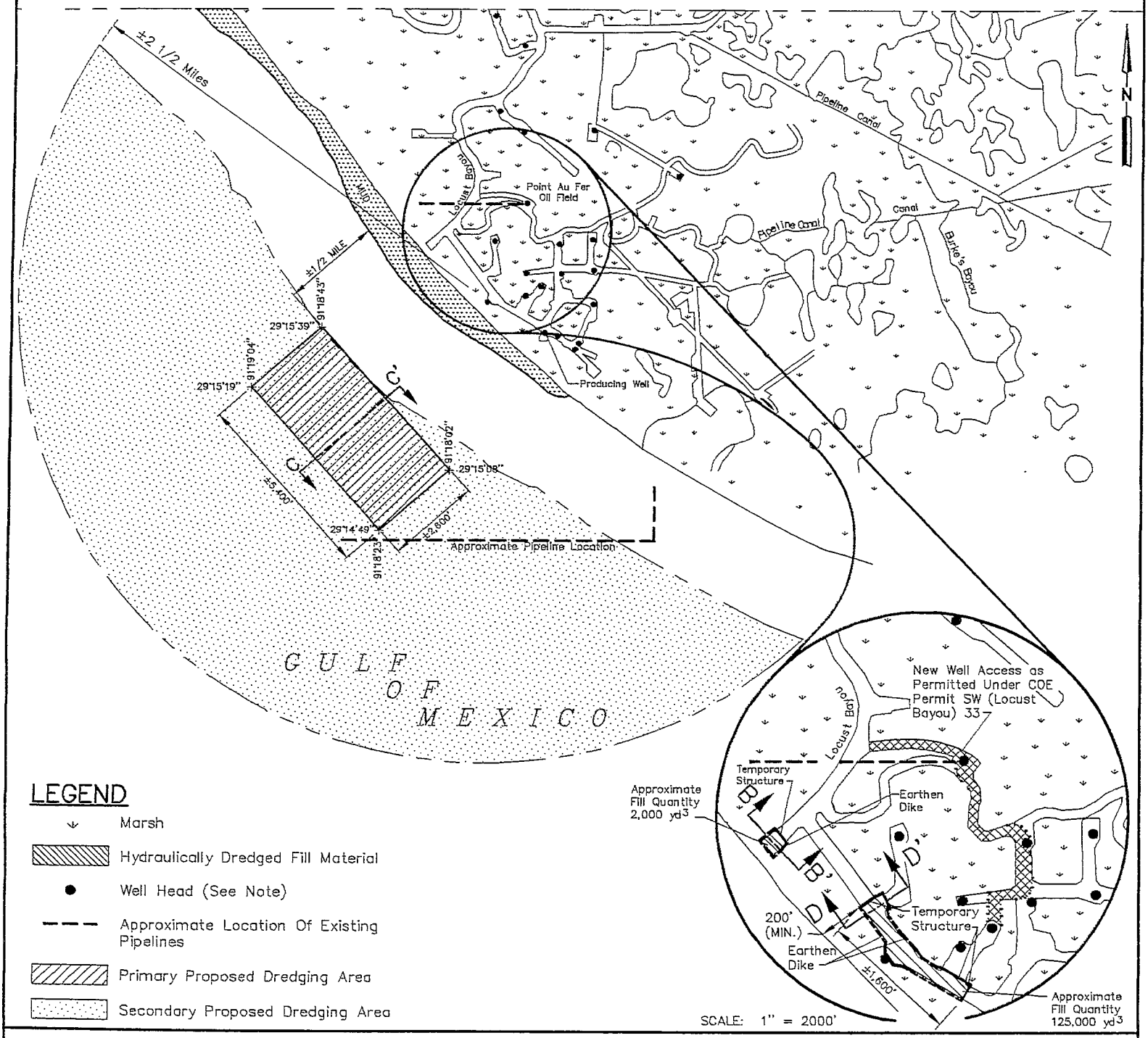
PREPARED BY C–K ASSOCIATES, INC. B.R., LA.

A24–800–10
4 OF 8

PROPOSED STRUCTURES

POINT AU FER ISLAND
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BATON ROUGE, LOUISIANA Date 6/30/94

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



LEGEND

- Marsh
- Hydraulically Dredged Fill Material
- Well Head (See Note)
- Approximate Location Of Existing Pipelines
- Primary Proposed Dredging Area
- Secondary Proposed Dredging Area

PROJECT SITE PLAN, AREA 2

4000 0 4000 8000

SCALE—FEET

SHEET 5 OF 8

NOTES:

Pipeline Locations are Approximate. Field Verification Required Prior To C ruction.

All s Are Not Producing Unless Otherwise Noted.

Base Information Taken From Digitized Quadrangle Maps On Diskette In Autocad Format Provided By American Digital Cartography, Inc.

See Sheet 6 of 8 for Cross—Section Details.

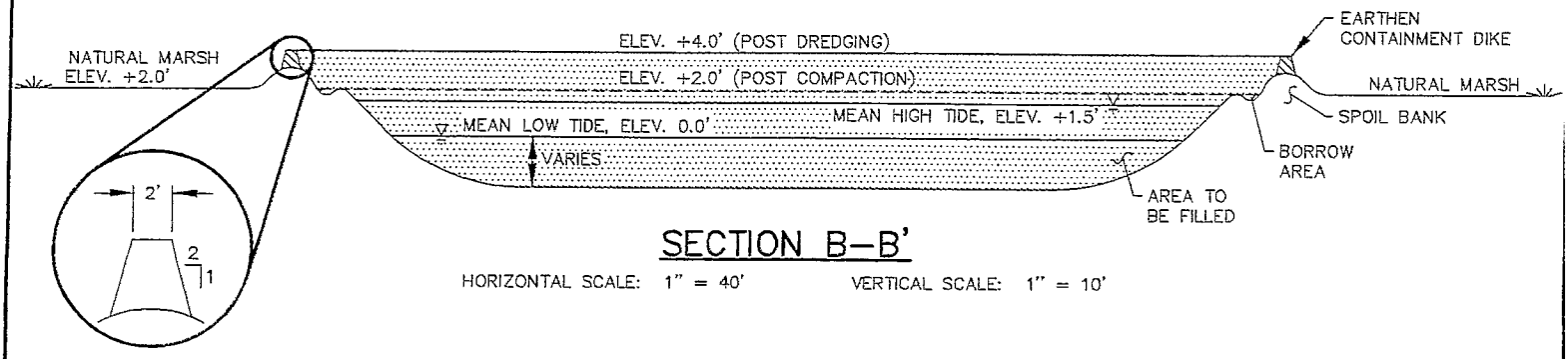
PREPARED BY C—K ASSOCIATES, INC. B.R., LA.

A24—800—12
5 OF 8

PROPOSED STRUCTURES

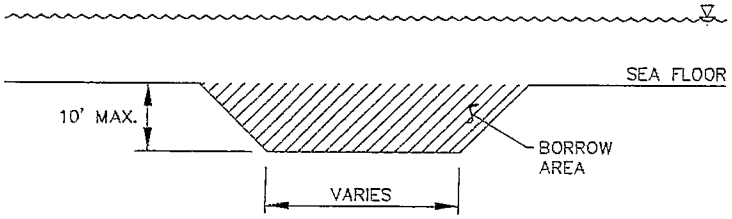
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DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



SECTION B–B'

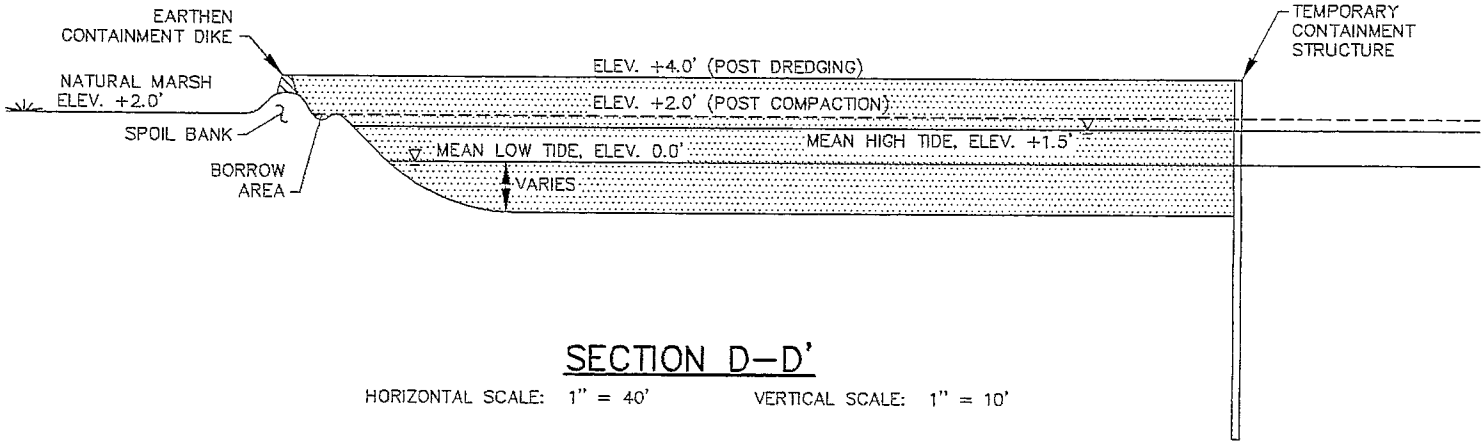
HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 10'



SECTION C–C'

TYPICAL PROPOSED DREDGING AREA

SCALE: 1" = 20'



SECTION D–D'

HORIZONTAL SCALE: 1" = 40' VERTICAL SCALE: 1" = 10'

CROSS–SECTIONS

NOTE:
All Elevations are N.G.V.D.

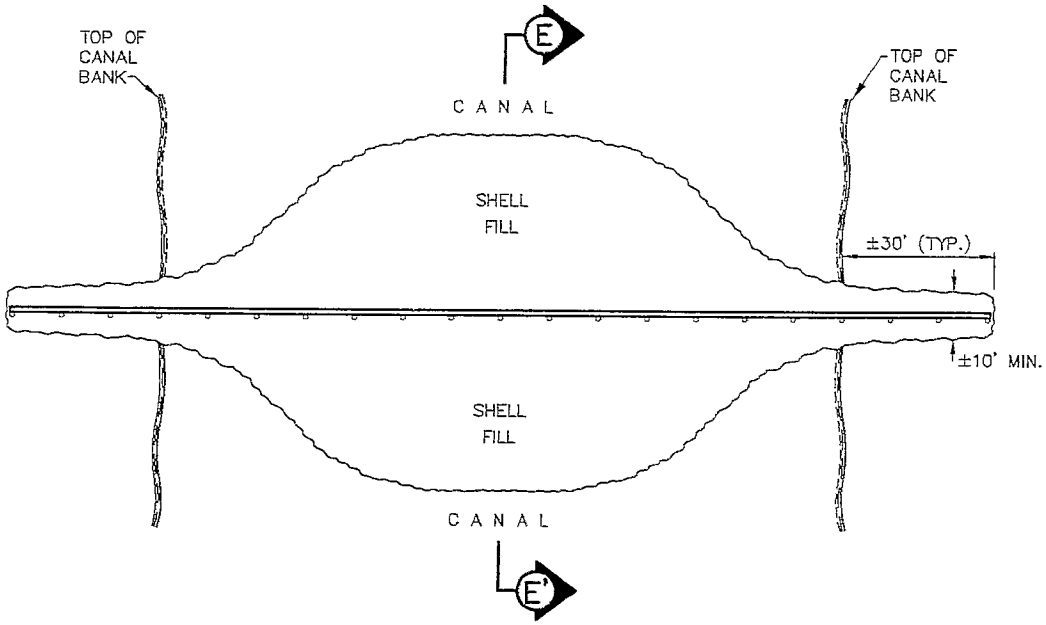
PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C–K ASSOCIATES, INC. B.R., LA.

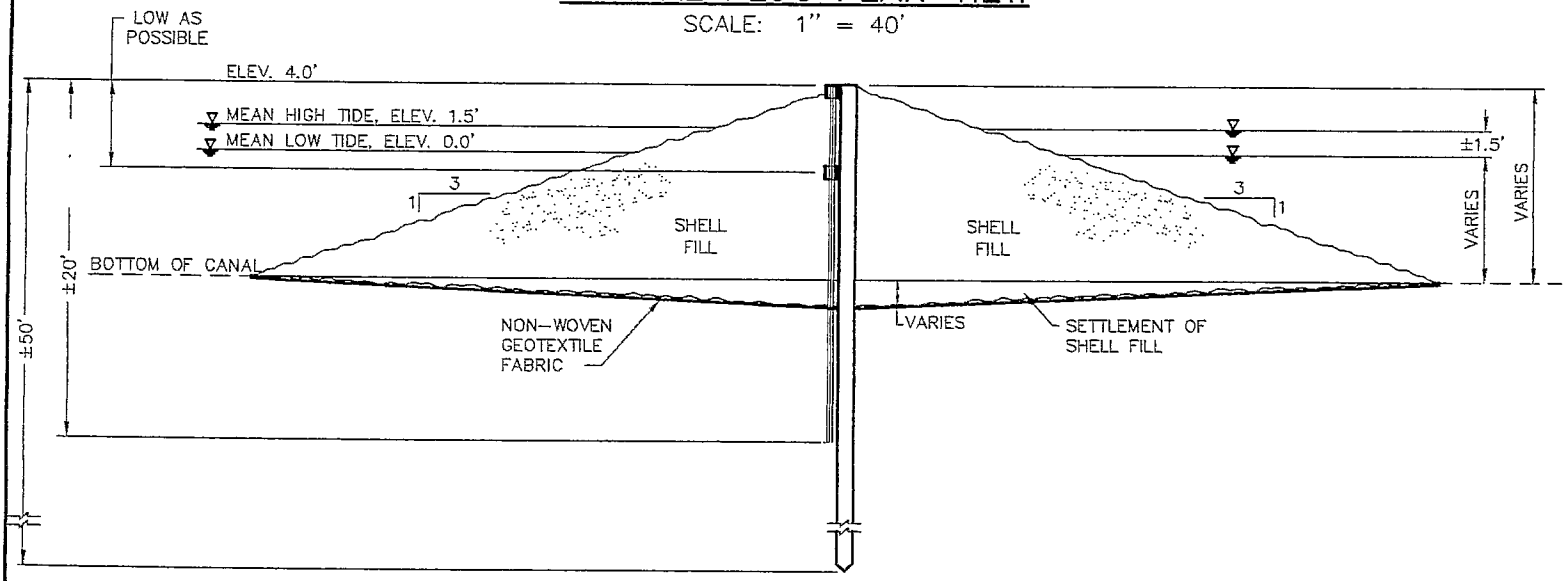
A24–800–20
6 OF 8

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



TYPICAL PLUG PLAN VIEW

SCALE: 1" = 40'



SECTION E-E'

SCALE: 1" = 12'

CONCEPTUAL PLUG DESIGN

NOTE:
All Elevations are N.G.V.D.

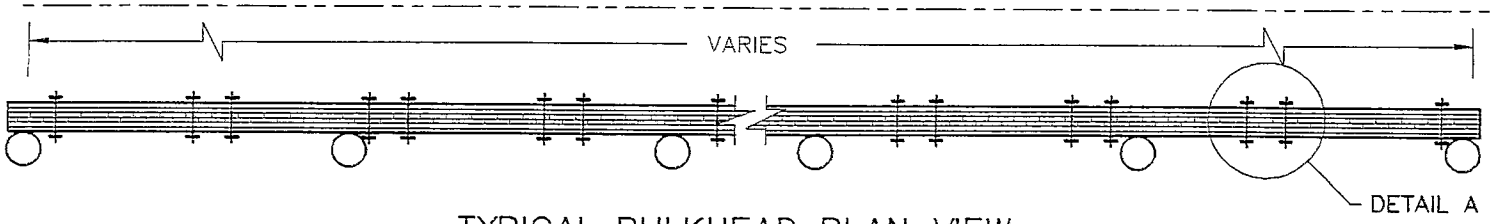
PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

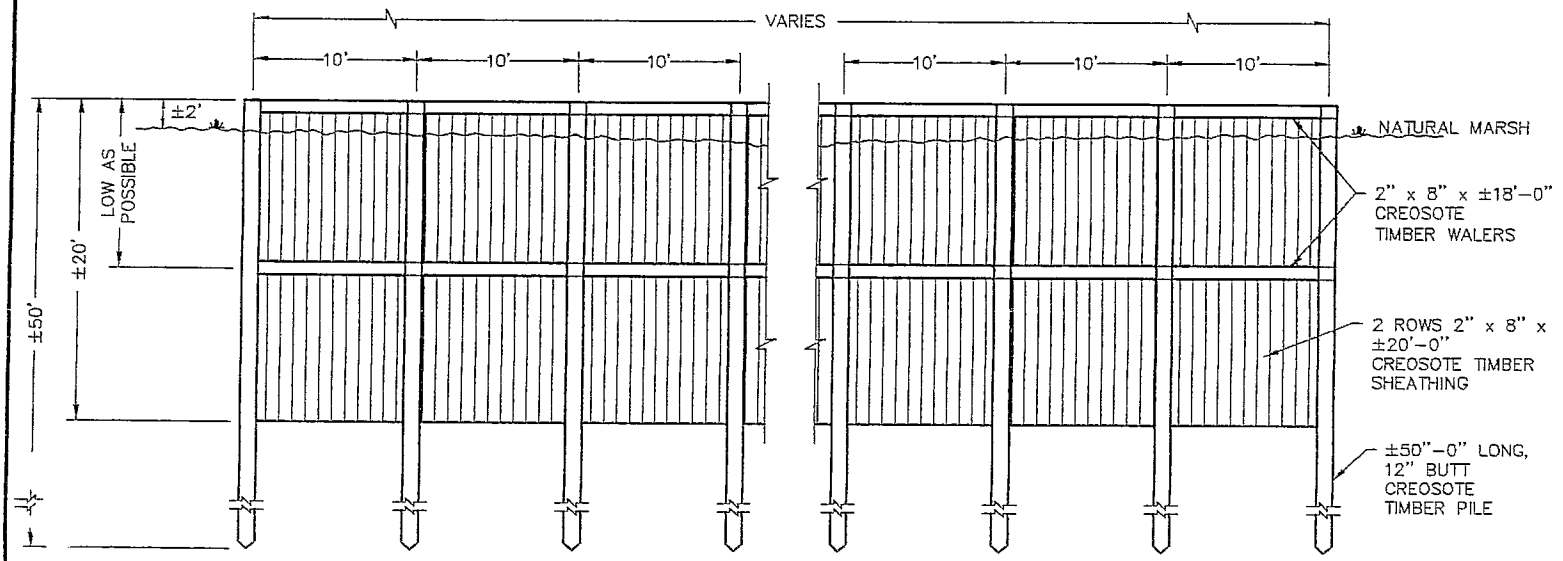
A24-800-13
7 OF 8

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM



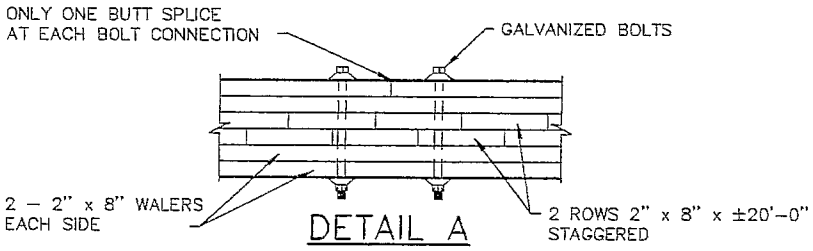
TYPICAL BULKHEAD PLAN VIEW

SCALE: 1" = 6'



TYPICAL BULKHEAD ELEVATION VIEW

SCALE: 1" = 12'



DETAIL A

SCALE: 1" = 2'

CONCEPTUAL PLUG DESIGN

SHEET 8 OF 8

PROPOSED STRUCTURES

POINT AU FER ISLAND
PARISH of TERREBONNE State of LOUISIANA
Application by NATIONAL MARINE FISHERIES SERVICE, HABITAT CONSERVATION DIVISION
BATON ROUGE, LOUISIANA Date 6/30/94

PREPARED BY C-K ASSOCIATES, INC. B.R., LA.

A24-800-14
8 OF 8

DWN. BY: LMP CHKD. BY: ANM APPRVD. BY: ARM

ATTACHMENT VII

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

MAINTENANCE AND REHABILITATION BUDGET

OPERATION AND MAINTENANCE BUDGET (APPROVED BY CWPPRA)

TE-22 PT. AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

LEAD AGENCY: National Marine Fisheries Service

DESIGN BASIS:

Budget: $1,567,000

Amended Operation and Maintenance (O&M) Budget $220,000

PROJECT FEATURES:

The principle project features include:

- Phase I Canal Plugs: One (1) timber bulkhead with reef shell backfill and two (2) shell-only canal plugs in the north-south Transco Canal; four (4) timber bulkheads with reef shell backfill in the east-west Hester Canal.

- Phase II Shoreline Protection: 3,600 feet of 32" rip rap, 250 lb. class, shore and breach protection along the shoreline parallel to the Mobile Canal.

MAINTENANCE AND REHABILITATION ASSUMPTIONS:

Of the shell plugs, plug 4 is in need of rehabilitation. The rip-rap shore protection at Mobile Canal will also need to be inspected and will require repairs if damaged by a storm.

1. Reshape the shell at Plug 4 and cover it with 18" rock cover, in year 3

2. Replace 3,000 tons of rip-rap at Mobile Canal in year 10

OPERATION AND MAINTENANCE COST CONSIDERATIONS:
(Based on a 20 year project life; cost include inflation)

A.	ANNUAL INSPECITONS: (1 field day with 3 team members including federal participant, boat and report from Schedule A-1)	**$63,580**
B.	ANNUAL COST OF OPERATIONS: (No operations required for this project)	**$ 0**
C.	PREVENTATIVE MAINTENANCE	**$ 0**

(Not required for this project)

D. COST FOR MAINTENANCE / REHAB PROJECT AT YEAR 3:
(Includes construction contingency (cc) of ten percent).

1.	Contractor Mobilization/Demobilization ($35,000 x 1.1 cc)	$38,500	
2.	Reshape shell plug ($10,000 x 1.1 cc)	$11,000	
3.	Place 18" rock cover (1,500 tons x $35/ton x 1.1 cc)	$57,750	
	Contractor Subtotal:	$107,250	
	Contractor Cost with Inflation: ($107,250 tons x 1.026 inflation factor at year 3)		**$110,039**
4.	Design Cost / Administration: (2 week project, $9,060 x 1.026 inflation Factor from Schedule C-2)		**$ 9,295**
5.	Engineering Consultant Design, Surveying And Inspection:		**$ 26,184**
	Basic Services: ($107,250 x 12% x 1.026 from Schedule E-1)	$13,205	
	Survey Supplemental Services: (4 days at $1,250/day x 1.026 inflated for Year 3 from Schedule E-2)	$ 5,130	
	Resident Inspection: (10 workdays x $765/day x 1.026 inflated for Year 3 from Schedule E-3)	$ 7,849	
	TOTAL FOR MAINTENANCE YEAR 3:		**$145,518**

E. COST FOR MAINTENANCE / REHABILITATION PROJECT YEAR 10
(Includes construction contingency (cc) ten percent)

1.	Contractor Mobilization/Demobilization: ($35,000 x 1.1 cc)	$38,500	
2.	Replace 3,000 tons rock at Mobile Canal: (3,000 tons x $35/ton x 1.1 cc)	$115,500	
	Contractor Subtotal:	$154,000	
	Contractor Cost with Inflation: ($154,000 tons x 1.228 inflation factor)		**$189,104**
4.	Design Cost / Administration: (2 week project, $9,060 x 1.228 inflation Factor from Schedule C-2)		**$ 11,125**
5.	Engineering Consultant Design, Surveying And Inspection:		**$ 30,103**
	Basic Services: ($154,000 x 11% x 1.228 from Schedule E-1)	$20,801	
	Survey Supplemental Services: (3 days at $1,250/day x 1.228 inflated for Year 10 from Schedule E-2)	$ 4,605	
	Resident Inspection: (5 workdays x $765/day x 1.228 inflated for Year 10 from Schedule E-3)	$ 4,697	
	TOTAL FOR MAINTENANCE YEAR 10:		**$230,332**
Previous Expended Funds (Through February 28, 1998)			**$ 245.60**
TOTAL ESTIMATED OPERATION AND MAINTENANCE COST			**$ 439,675**

OPERATION AND MAINTENANCE (O&M) BUDGET SUMMARY
TE-22 PT. AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

Original O&M Budget	**$ 220,000**
Revised O&M Budget	**$ 439,675**
Budget Variance	**$ 219,675**

ATTACHMENT VIII

POINT AU FER ISLAND HYDROLOGIC RESTORATION PROJECT

ANNUAL INSPECTIONS

The purpose of the annual inspections is to inspect and evaluate the condition of all project features to determine if structures are operating correctly and identify any deficiencies which require maintenance. An annual inspection report outlining these field observations will be drafted by LDNR. This report shall include the type of structure and description, date and time of inspection, personnel present for inspection, weather conditions, water levels at the time of inspection, general condition and observed damages to structures. These reports may be compiled under attachment VII - Annual Inspections.

In the case of severe storms and tidal events, additional inspections may be required during the annual inspection period to assess potential damage from such weather conditions.

LA Department of Natural Resources | Coastal Restoration Division | P.O. Box 2079 Thibodaux, LA 70310

ANNUAL INSPECTION REPORT
1999

Project: Point au Fer Island (TE-22), Phase I

Location: Terrebonne Parish

DNR/CRD Investigators: Douglas Morgan, John Rapp, and Arthur Long

Inspection Type: ANNUAL OPERATION AND MAINTENANCE

Trip Date: 17 June 1999

Weather Conditions: Clear, 85^0 F.

Last Inspected: 10 March 1998

Prepared By: Arthur Long

General

The inspection was performed during the late morning and early afternoon hours. There was difficulty in accessing and leaving Point au Fer Island because of extensive and heavy water hyacinth growth in the channel areas of Four League Bay. A localized thunder storm was encountered on the return trip across the southern part of Four League Bay.

Because of the very shallow water depths within and around Point au Fer Island, a tunnel hulled boat was towed to the site to permit access to the five project structures located in the Hester Pipeline Canal and the Transco Pipeline Canal.

History

Phase I of the project was limited to the eastern portion of Point au Fer Island and included the plugging of the Hester Canal and the Transco Canal. The Hester Canal is orientated in an east-west direction and allowed access to the Transco Canal from Bay Castagnier from the east and Mosquito Bay from the west. The Transco Canal is orientated in a north-south direction and was dredged during the construction of four oil and gas transmission pipelines from the Gulf of Mexico to on-shore facilities in Mosquito Bayou.

Both the Hester Canal and the Transco Canal have allowed saltwater intrusion into the interior intermediate marshes of Point au Fer Island. Approximately 3,500 acres of wetlands were adversely affected by these two canals. Phase I of the project was completed in December 1995.

ENGINEERING, DESIGN, AND CONSTRUCTION

Final Engineering for Phase I was completed by C-K Associates in April, 1995. Final engineering included the design of timber canal plugs in both the Hester Canal and the Transco Canal and the design of an oyster reef shell plug in the northern portion of the Transco Canal and one in the southern portion of the Transco Canal. The timber canal plugs were constructed using creosote treated pilings and lumber and were reinforced using oyster reef shell underlain with geotextile fabric. Other details regarding access dredging to the construction sites and details for the construction of the plugs were addressed and provided by the Contractor.

During construction, two additional items were added by field design modification to Plug No. 1 (timber) to prevent potential deflection of the structure; an extra 107 cubic yards of reef shell was added to Plug No. 3A due to greater than expected settlement; battered piles were added to Structure No. 7 to prevent possible deflection, and additions were made to Structure No. 8 because the actual required length was greater than the design length.

Phase 1 cost was $895,000 and resulted in a cost per acre protected of approximately $238/acre.

STRUCTURES

Photographs and individual Maintenance Inspection Report Check Sheets of each structure constructed under Phase I are included with this Report.

STRUCTURE NO. 1: Plug. Timber Construction. West end of Hester Canal.

This structure is in very good condition. There is no physical damage nor is there any appreciable corrosion of metal components.

STRUCTURE NO. 2: Plug. Timber Construction. Hester Canal just west of Transco Canal.

This structure is in very good condition. There is no physical damage to the structure, but one galvanized pile cap was torn.

STRUCTURE No. 3: Plug. Reef Shell Construction. Transco Canal north of Hester Canal.

This structure has been virtually destroyed and affords no protection from Mosquito Bayou to the marsh areas north of Hester canal. 75% of the structure has been washed away.

Replacement of the structure with reef shell does not appear to be practical because of the inaccessible location of the plug. Replacement with a timber structure using marsh type equipment is practical and would have a longer life, but it's cost would be high.

STRUCTURE NO. 4: Plug. Reef Shell Construction. Transco Canal at Gulf of Mexico end.

This structure has also been virtually destroyed and allows direct access of waters from the Gulf of Mexico into Transco Canal and the marsh areas south of Hester Canal. Approximately 75% of the structure has been washed away, but the reef shell appears to have been retained in the canal.

Because of the seriousness of the condition, the structure is to be reconstructed as a part of the authorized Phase III project using O&M funds. The work is under contract and is scheduled to start in April 2000.

Replacement will involve reconstruction of the plug using the reef shell remaining in Transco Canal and armoring the completed plug with articulated concrete mats to protect against erosion. The concrete mats are currently being fabricated.

STRUCTURE NO. 6: Plug. Timber Construction. Transco Canal just South of Hester Canal.

The structure is in an advanced stage of failure. It is bowed approximately 7 feet 7 inches; sheet piles have separated; and the structure and piles have dropped up to 6 inches in elevation in at least two locations. Timber walers have broken, and it is likely that additional walers, sheet piling, and some timber piles will also break because of the stresses placed upon them.

STRUCTURE NO. 7: Plug. Timber Construction. Hester Canal just east of Transco Canal.

The structure has a slight bow at the north end, but it is in good condition without deterioration or corrosion.

STRUCTURE NO. 8: Plug. Timber Construction. Hester Canal at Bay Castagnier.

The structure does not have batter piles, and a bow has developed on the south quarter of the structure. The potential for partial failure is present, and the structure needs to be monitored on a regular basis. Repairs and the addition of batter piling is practical and at a reasonable cost, because the structure is accessible by marine equipment.

A more serious immediate problem is that water can bypass the structure at both ends. At the south end, there is a tidal channel 48 inches wide and 30 inches deep. At the north end there is a smaller channel that will pass water only at or above normal high tides. The condition will worsen with time and could become very expensive to correct. To correct adequately and with better assurance of success, the bulkhead piling and sheeting should be extended into the marsh at both ends. Placement of concrete bags or mats within the channel and on the marsh is also being considered. This weir structure would reduce further erosion and allow water to flow into and out of Hester Canal that

is currently being trapped between structures 7 and 8

CONCLUSION

TRANSCO PIPELINE CANAL STRUCTURES:

The loss of oyster reef shell Plug 3A and Plug 4 permit high salinity waters to freely enter the central area of the protected marsh and move with little restriction into the areas east and west of the canal. Flow velocities are also expected to increase. Plug 6, although close to the point of failure, continues to prevent the interchange of water between that section north of Hester Canal and the section south of Hester Canal. It would appear that a significant percentage of the total protected marsh area of 3,764 acres is being adversely impacted. The rehabilitation of Plug 4 should restore protection to the impacted marsh. This interchange of water should be significantly reduced and possibly eliminated.

HESTER CANAL STRUCTURES:

Plugs 1, 2, and 7 are in good condition and are functioning properly. Plug 8 is in good condition; however, the erosion at the ends of the structure allow some interchange of water between the canal and Bay Castagnier, and this has some adverse impact upon the adjacent marsh to the north and south of the canal.

GENERAL:

Serious consideration should be given to replacement of Plug 3A, rebuilding or replacement of Plug 6, plugging the channels at each end of Plug 8, and adding batter piles to Plug 8 to stop the bowing action that was observed.

LA Department of Natural Resources | Coastal Restoration Division | P.O. Box 2079 Thibodaux, LA 70310

INSPECTION REPORT

Project: Point au Fer Island (TE-22), Phase I

Location: Terrebonne Parish, Louisiana

DNR/CRD Investigators: Brian Kendrick, Arthur Long, Douglas Morgan, John Rapp

Inspection Type: Annual Operation and Maintenance

Trip Date: 17 June 1999

Weather Conditions: Partly Cloudy, mid 90's

Last Inspected: May 1997

Comments:

Point au Fer Island is located approximately 6.2 miles (10 kilometers) southeast of the Atchafalaya River delta and is bordered by the Gulf of Mexico to the south, Atchafalaya Bay to the west, Four League Bay to the north and northeast, and Oyster Bayou to the east. The Point au Fer Island Hydrologic Restoration project (TE-22) consists of two phases. Phase I is designed to restore the natural hydrology of the project area by placement of seven new canal plugs and maintenance of one existing plug along two oil and gas access canals. Phase II is a shoreline protection project and requires the placement of riprap along 3,600 linear feet (1,100 meters) of shoreline located in the southwestern portion of the island.

The objective of the trip was to perform an annual operation and maintenance inspection of the Phase I portion of the project. Inspection of the water control structures included all of the following seven (7) structures.

LA Department of Natural Resources | Coastal Restoration Division | P.O. Box 2079 Thibodaux, LA 70310

INSPECTION REPORT

Project: Point au Fer Island (TE-22), Phase II

Location: Terrebonne Parish

DNR/CRD Investigators: David Burkholder and Douglas Morgan

Inspection Type: Annual Operation and Maintenance

Trip Date: 21 June 1999

Weather Conditions: Partly cloudy, mid 90's

Last Inspected: 10 March 1998

On 18 June 1999, I learned that David Burkholder and Jose' Galeas, an engineer with Burk-Kleinpeter, were taking a trip to Point au Fer Island on Monday, the 21st, to survey a shoreline breach at the dredge pipeline corridor of project TE-26 (Lake Chapeau). Since they would be in the area near Phase II of TE-22 (Point au Fer Island), I asked David if it would be okay for me to accompany them in order to perform an annual inspection of the Phase II portion of TE-22. David agreed, and we planned the trip for 21 June 1999.

We left the Berwick landing at 9:30 a.m. and arrived at Point au Fer Island at 10:45 a.m. David and Jose' started their survey around 11:00 a.m. and completed it by 11:30. We then proceeded to the Phase II area of the island, arriving at 11:45 a.m. Inspection of the shoreline protection system was performed between 11:50 a.m. and 1:00 p.m. We arrived back at Berwick landing at approximately 2:30 p.m.

Discussion:

Phase II of the project included approximately 600 yards of a narrow beach on the western portion of Point au Fer Island. The beach separated the Gulf of Mexico from an oil well access canal, known as the Mobil Canal. The beach is experiencing overwash from the Gulf of Mexico allowing saltwater intrusion

into the intermediate marsh. Approximately 1,900 acres of wetlands would be protected by filling in Mobil Canal. However, further development of Phase II proved that filling Mobil Canal was economically unfeasible. Therefore, the project changed to a shoreline protection system. Approximately 2200 linear feet of shoreline has been armored with stone rip-rap to prevent the continued erosion of the shore. During construction, Mobil Oil and Exploration Company offered to construct a concurrent shoreline protection project in an effort to increase the amount of protection offered by this work. The Mobil project was designated "Area 3" and encompassed an additional 1400 linear feet of shoreline, resulting in a total of 3600 linear feet of shoreline protected.

The Phase II shoreline protection system consists of a continuous 3600-foot shoreline breakwater, constructed of 200 pound class stone, underlain by either a geotextile grid and filter cloth or geotextile woven fabric. The structure width is typically 25 or 33 feet with an average thickness of 32 inches. The project is comprised of three areas, designated: Areas 1, 2 and 3. Figures 1 and 2 presents a vicinity map and project layout, respectively.

AREA 1

Area 1 is located on the eastern end of the project and is 1800 feet in length (station 91+00 to 109+00). This segment was determined to be the critical segment because it contained the section which had initially breached during Hurricane Andrew. Mobil Oil had repaired the breach, but the segment remained a weak spot and ultimately breached again just prior to construction. The breakwater is 25 feet wide from station 91+00 to 93+00, then is typically 33 feet wide to station 109+00, excluding a 300-foot section commonly referred to as the Breach Area, which runs from station 98+00 to 101+00. The breach area is 35 to 45 feet wide and varies in section thickness between 3 and 4 feet.

Based on our field observations, there has been little or no erosion along the very eastern end of the project. The rock structure located within Area 1 was observed to be in good condition and no major changes were recorded when compared to the annual inspection report performed in March, 1998. The only change in the Breach Area was that it was easier to recognize that during severe storm events the waves from the Gulf are over-topping the structure and flowing into Mobil Canal. This was apparent due to the increased amount of sand and debris atop the structure. The Breach Area is approximately one (1) to two (2) feet lower than the rest of the structure. Photos 1 through 7 present current conditions in Area 1, including the Breach Area.

AREA 2

Area 2 is located on the western end of the project at the end of the north-south pipeline canal and is 400 feet in length (station 123+00 to 127+00). This rock structure is 33 feet wide, 32 inches thick and protects a 200-foot wide stub canal running perpendicular to the Gulf. A wooden bulkhead, approximately 150 feet in length, was constructed several years prior to the rock placement to protect the canal end. The bulkhead is parallel to the shoreline and is located approximately 15 feet south of the rock

structure. Erosion of the shoreline, on both sides of the bulkhead, was observed prior to construction of the rock structure; particularly west of the bulkhead where a small cove had formed.

Visual observations made during our sight visit revealed further erosion occurring along the west end of the structure. The shortest distance from the Gulf to the stub canal was approximately 100 feet immediately following construction in April 1997. By April, 1998, this distance had decreased to 85 feet resulting in a loss of 15 feet of shoreline over the one year period. After another 15 months approximately another 15 feet has been lost. We observed some overtopping between the Gulf and stub canal west of the structure that probably occurred during last year's severe storm events.

Overall, the rock structure located within Area 2 was observed to be in good condition and no change was recorded when compared to the annual inspection performed in 1998, with the exception of the erosion noted west of the structure. Photos 11 through 17 present current conditions in Area 2.

AREA 3

The rock structure in Area 3 is 1400 feet long and ties into both ends of rock structures located in Area 1 and Area 2, thereby forming a continuous rock protection for 3600 linear feet of shoreline. This rock structure is 25 feet wide, 32 inches thick and is located between stations 109+00 and 123+00. The structure was constructed by Mobil Oil Corporation and is technically not part of the TE-22 project. However, DNR is responsible for maintenance and monitoring since we incorporated Mobil's project into our permit.

Visual observations made during our sight visit revealed little or no erosion occurring along this structure. The rock structure located within Area 3 was observed to be in good condition and no change was recorded when compared to the annual inspection performed in March, 1998. Photos 8 through 10 present current conditions in Area 3.

FINDINGS:

Overall, the structure is performing as expected. The structure itself is in excellent condition. However, another phase of this project is being planned to prevent possible breaches. This phase, referred to as Phase III, will see an additional 600 linear feet of rock placed on the west end of the project, 3000 linear feet are planned for the east end and also, an additional placement of rock atop the Breach Area. The placement of rock, at the ends of the project, was recommended so that a breach does not form between the Gulf and the stub canals found at either end. The placement of additional rock atop the Breach Area will increase the elevation and reduce the potential of waves breaking into Mobil Canal during moderate to severe storm events.

Erosion was not observed (behind the rock structures) on either the 25 or 33' (foot) wide structures. It appears that a 25' (foot) wide structure is adequate to protect the shoreline.